2026 Unified Local Mitigation Strategy

ST. LUCIE COUNTY

April 2026

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Executive Summary

St. Lucie County, Florida, is susceptible to numerous hazards, including flooding, hurricanes, tornadoes, wildland fire, and severe thunderstorms – these being an abbreviated list. Florida is one of the most hazard-prone states in the nation. In Florida, the goals of the mitigation program are being achieved through the Unified Local Mitigation Strategy (LMS) and a comprehensive planning process that is the same across the board for all jurisdictions, special districts, and agencies from the private and public sectors that are members of the LMS Working Group. The LMS is a pre-disaster mitigation planning initiative of the Florida Division of Emergency Management (FDEM) and is intended to reduce the disruption effects of natural, human-caused, and technological disasters on the economic and social fabric of the community. As part of FEMA's National Mitigation Framework, pre-disaster mitigation is defined as "sustained action that reduces or eliminates long-term risk to people and property from hazards and their effects." This definition generally distinguishes between actions that have long-term and sustainable effects from those that are more closely associated with preparedness for, immediate response to, and short-term recovery from a specific hazard event.

The LMS intends to focus on practices that have cumulative benefits over time and ensure that fewer of the state's citizens and communities are victims of disasters. One of the most important elements is the idea that the resulting mitigation practices are instituted prior to the disaster occurring.

The purpose of a unified comprehensive mitigation planning process is to update the St. Lucie County LMS to develop and continue an engaged approach and mitigate hazard risk to better protect the residents, visitors, and businesses within St. Lucie County's Whole Community from the effects of natural, technological, and human-caused hazards. This plan serves as an ongoing process of existing LMS efforts, updates the previous plan to reflect current conditions, and identifies and outlines strategies the County and participating jurisdictions will use to decrease vulnerability to all types of hazards.

As such, the Unified Local LMS is defined as a document with a comprehensive description of mitigation planning strategies, programs, and projects that institute an engaged multi-jurisdictional multi-agency approach across horizontal and vertical levels of government, as well as other public and private sectors to hazard mitigation planning.

The LMS clearly defines mitigation strategies and implementation of mitigation projects identified by way of a Prioritized Project List (PPL), hazards and vulnerabilities of risk assessment and outreach and education or the public. The planning effort has been conducted through coordinated, cooperative efforts of the local governments within St. Lucie County. Participation is defined by jurisdictional adoption and Working Group agency membership, as shown in Table 1.

Table 1: Status of Jurisdictions in St. Lucie County LMS

Jurisdiction	Status
St. Lucie County	Adoption 2005, 2010, 2016, 2021
City of Port St. Lucie	Adoption 2005, 2010, 2016, 2021
City of Fort Pierce	Adoption 2005, 2010, 2016, 2021
Town of St. Lucie Village	Adoption 2010, 2016, 2021

This plan will be distributed to the jurisdictions and special districts within the County and all agency members of the LMS Working Group for consideration of adoption. Jurisdictions have one (1) year to adopt the LMS, as this occurs, copies of the adopted resolutions will be entered into Appendix B. Jurisdictions and Special Districts include the following:

1. City of Fort Pierce
2. City of Port St. Lucie
3. Fort Pierce Farms Water Control District
4. Ft. Pierce Utility Authority
5. North St. Lucie Water Control District
6. Office of Congressman Brian Mast
7. School Board of St. Lucie County
8. SLC Property Appraiser
9. SLC Sheriff's Office
10. South Florida Water Management District
11. St. Lucie County
12. St. Lucie County Chamber of Commerce
13. St. Lucie County Fire District
14. St. Lucie Transportation Organization
15. St. Lucie West Services District
16. Town of St. Lucie Village
17. Treasure Coast Regional Planning Council

Adoption of this strategy will provide the following benefits to both County and municipal governmental entities:

- Compliance with Florida Administrative Code (F.A.C.), Administrative Rules Chapter 27P-6, requirements for the local Comprehensive Emergency Management Plans (CEMP) to identify problem

areas and planning deficiencies relative to severe and repetitive weather hazards, and to identify pre- and post-disaster strategies for correcting and/or managing problems

- Compliance with FEMA's Disaster Mitigation Act of 2000 (DMA2K) and all updated planning guidance thus sustaining eligibility for pre- and post-disaster State and federal funding programs such as the Pre-Disaster Mitigation (PDM) grant and the Hazard Mitigation Grant Program (HMGP)
- Credit from the National Flood Insurance Program's Community Rating System (CRS) Program for developing a Floodplain Management Program, which will help further reduce flood insurance premium rates for property owners
- Access to FEMA's Flood Mitigation Assistance (FMA) Grant Program, which provides funding for pre-disaster mitigation projects and activities
- Identification and prioritization of projects for funding under the State of Florida's Residential Construction Mitigation Program (RCMP) to help reduce losses from properties subject to repetitive flooding damages
- Eligibility for local government public safety offices to receive funding from the Emergency Management Preparedness and Assistance (EMPA) Grant Program

Mitigation practices can be applied to strengthen homes, so people and their belongings are better protected from hurricanes, tropical storms, and inland floods, promoting faster return to normalcy after a disaster. Pre-disaster mitigation planning is used to identify and protect at-risk critical facilities such as hospitals, fire and police stations, water and wastewater treatment facilities, and other essential services facilities, increasing operational recovery in the wake of a disaster. Mitigation planning allows communities to consider current and future land use and vulnerabilities of developed and undeveloped land, as well as the risk to people and property with existing developments. The ultimate goal is the consideration of potential damage to property in vulnerable areas and the implementation of actions to reduce impacts, thereby eliminating disruptions that disaster occurrences create in communities.

In the year 2000, the Federal Emergency Management Agency's (FEMA's) recognition of growing costs of response and recovery from disasters materialized in the DMA2K. DMA2K created a new Pre-Disaster Mitigation (PDM) program aimed at reducing the cost of disasters as well as risk through comprehensive planning before disasters occur.

DMA2K requires that all communities, tribes, and states have a FEMA approved hazard mitigation plan consistent with the DMA2K requirements in place to retain eligibility for PDM project funds and post-disaster Hazard Mitigation Grant Program (HMGP) funds.

The planning process for preparing the St. Lucie County LMS was based on DMA planning requirements and FEMA's associated guidance. The LMS describes an in-depth process in the following chapters, annexes and appendices:

1. Planning Process
2. Risk Assessment

3. Mitigation Strategy
4. Plan Maintenance

Public input also played a critical role in shaping the St. Lucie County Unified Local Mitigation Strategy. As part of the LMS update, the County conducted a comprehensive, multilingual public survey available in English, Spanish, and Haitian Creole to capture resident and stakeholder perspectives on hazard awareness, perceived risk, vulnerabilities, and mitigation priorities. A total of 148 respondents representing incorporated and unincorporated areas of the county, including Port St. Lucie, Fort Pierce, St. Lucie Village, and surrounding communities, participated in the survey, providing valuable insight into lived experiences and community concerns.

Survey results indicate that the majority of respondents possess at least a basic understanding of hazard mitigation, with more than four out of five participants reporting some level of familiarity with the concept. However, the findings also revealed notable gaps in awareness and preparedness, underscoring the continued need for targeted outreach and education. Flooding, hurricanes and tropical storms, severe weather, extreme heat, and cascading failures such as power and communications outages consistently ranked among the greatest concerns. Respondents emphasized particular vulnerability among elderly residents, low-income households, mobile home communities, coastal and low-lying neighborhoods, and areas with recurring drainage and infrastructure challenges. The survey further highlighted strong public support for mitigation actions that protect critical infrastructure and community lifelines.

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Community Overview

St. Lucie County, along with its municipalities, districts, and a range of public and private partners, has been actively engaged in mitigation planning since 1998 to strengthen the resilience of residents, neighborhoods, businesses, and institutions against future disasters. The community has undertaken a thorough assessment of potential hazards and vulnerabilities through the coordination of the Local Mitigation Strategy (LMS) Working Group. This effort follows an all-hazards framework with the goal of identifying strategies to enhance the resilience of all communities in the planning area. This effort considers risks from natural, technological, and human-caused events.

Location and Geography

St. Lucie County encompasses approximately 688 square miles in total, of which 572 square miles are land and 116 square miles are water. St. Lucie County is nearly a rectangular shape, which measures approximately 24 miles north to south and 29 miles east to west at its widest point geographically. Located along Florida's east-central Atlantic coast, the county includes approximately 21 miles of coastline and two inhabited barrier islands–North Hutchinson Island and South Hutchinson Island–separated by the federally maintained Fort Pierce Inlet, the county's only direct navigational connection between the Atlantic Ocean and the Indian River Lagoon.

The county is situated along Florida's Treasure Coast region, bordered by Indian River County to the north, Martin County to the south, Okeechobee County to the west, and the Atlantic Ocean to the east. The incorporated municipalities in St. Lucie County include the City of Port St. Lucie, the City of Fort Pierce, and the Town of St. Lucie Village, with the remaining land area consisting of unincorporated communities, agricultural lands, conservation areas, and water management districts.

St. Lucie County is characterized by low-lying coastal and inland terrain, with elevations generally ranging from sea level along the barrier islands and estuarine areas to approximately 85 feet above mean sea level in inland portions of the county. Much of the landscape is relatively flat, shaped by historic wetlands, drainage canals, and managed surface water systems. These topographic characteristics, combined with extensive estuarine and lagoonal waters, contribute to the county's heightened exposure to flooding, storm surge, and sea level rise.

The county's transportation network provides important regional and statewide connectivity. Interstate 95 runs north–south through the eastern portion of the county, while Florida's Turnpike serves as a parallel limited-access corridor further inland. U.S. Highway 1 traverses coastal communities, and State Road 70 provides a major east–west connection between the Atlantic coast, inland communities, and central Florida. Table 2 outlines the distribution of land and water areas in St. Lucie County.

Table 2: St. Lucie County Area Distribution

Area Type	Square Miles	Acres	Notes
Total County Area	688	358,460	Combined land and water area
Land Area	572	330,020	Includes incorporated and unincorporated areas
Water Area	116	38,400	Coastal and inland water bodies

Most land area in St. Lucie County, approximately 428 square miles, remains unincorporated. The remaining area in the county is divided among three incorporated municipalities that include the City of Fort Pierce, the City of Port St. Lucie, and the Town of St. Lucie Village. The municipalities vary in size and characteristics, ranging from the small, historic St. Lucie Village to the rapidly growing urban center of Port St. Lucie. Table 3 provides an overview of the land area for each municipality and the unincorporated areas of St. Lucie County.

Table 3: Jurisdictional Land Area

Municipality or Area	Square Miles	Notes
Unincorporated Area	~428	Most of the county area
City of Fort Pierce	~23.8	Historic coastal city and port hub
Port St. Lucie	120	Largest municipality; suburban/urban
St. Lucie Village	~1	Small, primarily residential

Figure 1 illustrates the geographic scope of the LMS planning area, including the incorporated jurisdictions of the City of Fort Pierce, City of Port St. Lucie, and St. Lucie Village along with the unincorporated areas of St. Lucie County.

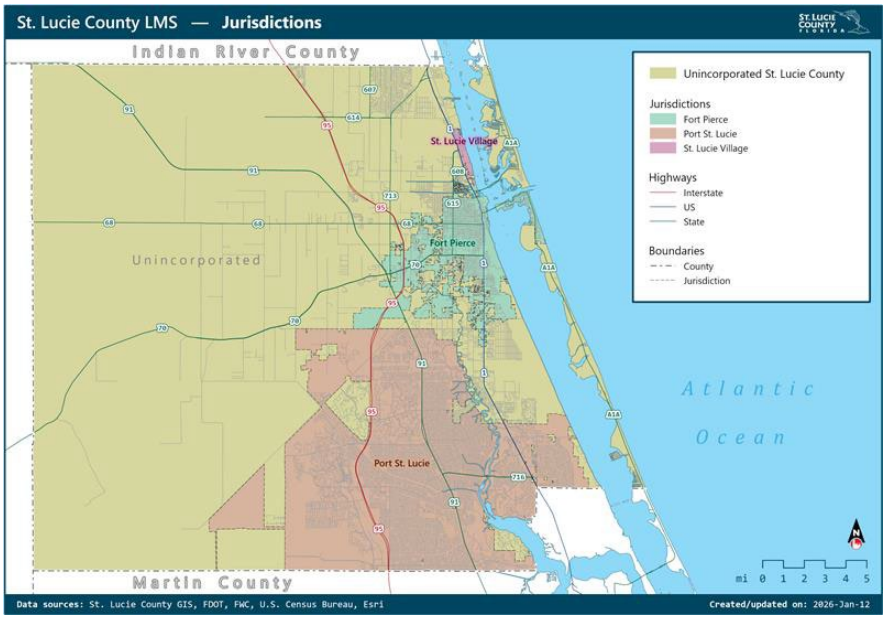


Figure 1: Jurisdictional Boundaries in St. Lucie County, Florida

History

The area now known as St. Lucie County has been inhabited for thousands of years by Indigenous peoples, most notably the Ais, Jeaga tribes, and related groups who occupied Florida's central and southeastern Atlantic coast. These communities developed sophisticated subsistence and trade systems adapted to the region's coastal estuaries, rivers, and wetlands, relying on fishing, shellfish harvesting, hunting, and seasonal mobility. Archaeological evidence indicates long-term settlement along the Indian River Lagoon, St. Lucie River, and associated waterways, which served as critical transportation and food resources.

European contact in the region began in the early 16th century, with Spanish explorers navigating Florida's Atlantic coastline. The name "St. Lucie" is generally attributed to Spanish explorers who encountered the area on December 13, 1565, the feast day of Saint Lucia. Unlike some coastal areas, permanent European settlement remained limited for centuries due to harsh environmental conditions, including mosquitoes, flooding, and isolation.

During the 19th century, the region became part of the United States following Florida's transfer from Spain in 1821 and its admission as a state in 1845. Early American settlement remained sparse, centered on fishing, farming, and small trading outposts. The construction of the Florida East Coast Railway in the late 1890s marked a turning point, improving access to coastal communities and accelerating population growth, agriculture, and commerce.

The City of Fort Pierce, established as one of the region's earliest permanent settlements, became a key port and agricultural center, supporting citrus production, fishing, and maritime trade. Over time, drainage projects, canal construction, and water management infrastructure transformed much of the county's

landscape, enabling expanded development while altering natural hydrologic systems–a legacy that continues to influence flood risk today.

St. Lucie County was officially established in 1905, separating from Brevard County. Throughout the mid-20th century, the county experienced steady growth tied to agriculture, military activity during World War II, and postwar population expansion. The development of planned communities, most notably Port St. Lucie, beginning in the 1950s, drove significant residential growth inland, while coastal areas continued to support tourism, fishing, and port-related activity.

From the early 1990s through the mid-2000s, St. Lucie County experienced a period of sustained transformation from a predominantly agricultural and small-city coastal county into a major residential growth area along Florida's Treasure Coast. Population increased rapidly during this period, rising from approximately 170,000 residents in 1990 to more than 245,000 by 2005, driven largely by new residential development and in-migration rather than natural increase. Growth was concentrated in Port St. Lucie, which expanded from a largely undeveloped planned community into a suburban city with extensive single-family neighborhoods, commercial corridors, and civic facilities. Fort Pierce continued to serve as the county's historic urban center and port, supporting employment in agriculture, marine industries, education, healthcare, and government.

A defining feature of this growth era was domestic migration from the northern and midwestern United States. Census and American Community Survey data indicate that, beginning in the 1990s and continuing through the 2010s, a substantial share of new residents relocating to St. Lucie County originated from states, such as New York, New Jersey, Pennsylvania, Ohio, Michigan, and Illinois. By the early 2010s, more than one-third of adult residents in St. Lucie County had been born outside Florida, with the largest shares coming from the Northeast and Midwest. Retirees were a significant component of this migration, but working-age households and families increasingly followed, drawn by housing affordability, climate, and improved transportation access. These migration patterns contributed to the county's relatively high median age and shaped long-term demand for housing, healthcare, and community services.

The late 2000s marked a period of economic disruption as the national housing market collapsed. St. Lucie County experienced sharp declines in residential construction, rising unemployment, and elevated foreclosure rates, particularly in recently developed neighborhoods. Population growth slowed temporarily, and development activity paused across much of the county. Recovery during the early to mid-2010s was gradual, with renewed growth occurring alongside greater diversification of the local economy. Healthcare, education, logistics, and service industries expanded, and the county continued to attract new residents from both within Florida and other states. By 2020, the county's population exceeded 320,000, reflecting the cumulative impact of three decades of suburban expansion and migration-driven growth.

In recent years, the cumulative effects of this growth trajectory–extensive residential development, a large in-migrant population, and infrastructure systems closely tied to water management and coastal conditions–have increasingly shaped how the community experiences environmental and weather-related challenges. Since 2020, continued in-migration, including accelerated relocation during and after the

COVID-19 pandemic, has occurred alongside greater public awareness of flooding, heavy rainfall, and coastal impacts.

Climate

St. Lucie County is located along Florida's east-central Atlantic coast and experiences a humid subtropical climate (Cfa) under the Köppen climate classification system. The county's coastal setting, proximity to the Atlantic Ocean, and low-lying terrain strongly influence local weather patterns, producing warm temperatures year-round, high humidity, and a pronounced wet season. The climate is characterized by long, hot summers, mild winters, and frequent convective rainfall during the summer and early fall.

Summers in St. Lucie County are typically hot and humid, with average high temperatures ranging from 89°F to 92°F between June and September. Heat index values frequently exceed 100°F due to elevated humidity, particularly during afternoon hours. Overnight low temperatures during the summer generally remain in the mid to upper-70s°F, limiting nighttime cooling. Winters are comparatively mild and dry, with average high temperatures of approximately 73°F to 76°F in January and February and average lows in the mid-50s. Freezing temperatures are rare, and frost events occur infrequently. Table 4 lists the average high, mean, and low temperatures in St Lucie County by month.

Table 4: Average Monthly Temperature[1]

Month	Avg High (°F)	Mean (°F)	Avg Low (°F)
January	72.4	62.7	53.0
February	74.3	64.9	55.4
March	77.0	67.8	58.5
April	80.8	72.3	63.9
May	84.4	76.7	69.0
June	87.6	80.3	72.9
July	89.2	81.7	74.1
August	89.2	81.9	74.6
September	87.5	80.8	74.0
October	83.8	76.7	69.6
November	78.3	70.3	62.2
December	74.4	65.5	56.5
Annual	**81.6**	**73.5**	**65.3**

[1] Source: Florida Climate Center, Fort Pierce Station (COOP 083207) 1991–2020 Normals.

Precipitation in St. Lucie County is highly seasonal, with an average annual rainfall of approximately 50 to 55 inches. Roughly 60 percent of annual rainfall occurs between May and October, coinciding with Florida's wet season and peak thunderstorm activity. June through September are typically the wettest months, each averaging 6 to 8 inches of rainfall, while winter months are considerably drier, often averaging 2 to 3 inches per month. Rainfall during the wet season commonly occurs as short-duration, high-intensity storms, which can produce localized flooding even outside major storm events. Table 5 lists the average precipitation in the county by month.

Table 5: Average Precipitation[2]

Month	Avg Precipitation (inches)
January	3.04
February	2.80
March	3.03
April	3.62
May	4.20
June	6.22
July	6.19
August	7.25
September	8.21
October	5.72
November	3.20
December	2.41
Annual	**55.89**

St. Lucie County is periodically affected by tropical storms and hurricanes, most often between June and November, with peak activity from August through October. Although not every year includes a direct storm impact, the county's climate is shaped by these systems through heavy rainfall, elevated winds, storm surge, and coastal wave action. In addition, seasonal easterly winds and sea breezes moderate temperatures along the coast, but they can also contribute to localized convergence and intense afternoon rainfall.

Population Trends

St. Lucie County is the state of Florida's 20th most populous county, which represents about 1.7% of the state's total population. St. Lucie County's population continues to grow exponentially, climbing rapidly

[2] Source: Florida Climate Center, Fort Pierce Station (COOP 083207) 1991–2020 Normals.

from a population of 329,226 in 2020 to a population of 385,746 in 2024.[3] This represents a growth of approximately 17% over the four years. This interest represents continued interest in the areas from both new residents and expanding development. Table 6 displays the population growth of St. Lucie County and the municipalities located within it.

Table 6: St. Lucie County Population Growth

Municipality or Area	2000	2010	2015	2020	2024 Estimate	2030 Projection
Port St. Lucie	88,769	164,603	174,132	204,851	231,790	284,133
Fort Pierce	37,516	41,590	42,119	47,297	48,621	55,853
St. Lucie Village	647	590	597	613	642	688
Total County Population	**198,528**	**277,789**	**287,749**	**329,226**	**385,746**	**423,946**

These data highlight the consistent population growth in St. Lucie County over the past two decades, with Port St. Lucie emerging as one of the primary drivers of this growth. The city more than doubled in population between 2000 and 2010 and has continued to grow steadily. Fort Pierce shows more modest growth in population when compared with Port St. Lucie, but still demonstrates a steady increase, climbing from about 37,500 in 2000 to over 47,000 by 2020. St. Lucie Village has maintained relative stability with only minor fluctuations over the same period. St. Lucie County has also surged in population from 198,525 in 2000 to an estimated 385,746 in 2024. This is nearly double the population in less than 25 years. The county also has population projections toward 2030 that show continuous growth. This includes reaching population estimates of 423,946 by the year 2030 under medium-growth scenarios.[4]

Demographics Characteristics: Population

The median age in St. Lucie County is 45.3 years, which is higher than the statewide median of 43.0. Roughly 24.7% of residents are aged 65 or older compared with 21.2% statewide. This underscores the county's role as a retirement destination and the potential vulnerability of seniors if a disaster occurs. Conversely, only 19.5% of county residents are under the age of 18, which closely aligns with state averages.[5] Table 7 outlines the age and gender characteristics for St. Lucie County and for the State of Florida.

[3] Office of Economic & Demographic Research. St. Lucie County. https://edr.state.fl.us/content/area-profiles/county/stlucie.pdf.
[4] Office of Economic & Demographic Research. St. Lucie County. https://edr.state.fl.us/content/area-profiles/county/stlucie.pdf.
[5] Florida Legislature, Office of Economic and Demographic Research (EDR), *St. Lucie County Profile 2025.*

Table 7: Age and Gender Characteristics

Indicator	St. Lucie County	Florida Statewide
Median Age	45.3	43.0
Under 5 Years	5.0%	5.3%
5–17 Years	14.5%	14.2%
18–24 Years	6.8%	8.8%
25–44 Years	22.0%	25.6%
45–64 Years	27.0%	25.0%
65 Years and Older	24.7%	21.2%
Male	48.5%	48.6%
Female	51.5%	51.4%

Racial and ethnic diversity help shape the county's demographic profile. As of 2024 American Community Survey (ACS) 5-year estimates, 52.6% of residents in the county identify as non-Hispanic White, while 20.1% identify as non-Hispanic Black or African American. Other represented groups include Asian at 1.95%, American Indian and Alaska Native at 0.12%, and individuals of two or more races at 3.48%. County residents who identify as Hispanic or Latino are 21.1% of the population which is a proportion slightly lower than the Florida statewide percentage of 26.5.[6] Table 8 provides the race and ethnicity characteristics for St. Lucie County in comparison with the entire state of Florida.

Table 8: Race and Ethnicity

Race/Ethnicity	St. Lucie County	Florida Statewide
White (Not Hispanic)	52.6%	51.5%
Black or African American (Not Hispanic)	20.1%	14.5%
American Indian and Alaska Native	0.12%	0.3%
Asian	1.95%	2.9%
Native Hawaiian and Other Pacific Islander	0.04%	0.1%
Two or More Races	3.48%	3.7%
Hispanic or Latino (of any race)	21.1%	26.5%

According to 2024 ACS 5-year estimates, 76.2% of residents speak only English, while 23.8% speak a language other than English. This number has increased from 20.3% in 2015. Among those speaking

[6] U.S. Census Bureau, *American Community Survey (ACS), 2024 Estimates.*

multiple languages, the majority report speaking English "very well," indicates a significant share of residents who may require multilingual preparedness and emergency communication materials.[7]

St. Lucie County's median household income is $69,027, which is slightly below the state median of $71,711 BEA per capita personal income has grown substantially, reaching $54,842, but remains slightly below the Florida average of $68,703. Approximately 10.4% of all ages in St Lucie County live below the poverty level, which is slightly lower than Florida's statewide poverty rate of 12.4%.[8] Table 9 provides insight into the economic indicators compared with the state of Florida.

Table 9: County and State Economic Indicators

Race/Ethnicity	St. Lucie County	Florida Statewide
Median Household Income	$69,027	$71,711
Median Family Income	$79,218	$86,127
Per Capita Income	$54,842	$68,703
Poverty Rate – All Ages	10.4%	12.4%
Poverty Rate – Children <18	12.2%	16.0%
Poverty Rate – Seniors (65+)	~11%	~10%

St. Lucie County had 128,997 households at the 2020 Census with an average household size of 2.53 persons. Family households accounted for about 69% of all households, and 33.6% of families had children under the age of 18. Veterans account for 9.3% of the civilian population aged 18 and older, which is higher than the statewide share of 7.7%.

Housing and Development

St. Lucie County's housing stock reflects several distinct phases of growth tied to suburban expansion along Florida's Treasure Coast. Early development before the 1970s was concentrated in Fort Pierce and surrounding coastal areas and consisted largely of modest single-family homes, small multifamily buildings, and housing associated with agricultural and port-related employment. Beginning in the 1970s and accelerating through the 1990s, large-scale residential development expanded inland, particularly in Port St. Lucie, where master-planned subdivisions and automobile-oriented neighborhoods became the dominant development pattern. These areas were characterized by detached single-family homes on individual lots, designed to accommodate rapid population growth and in-migration.

Substantial residential expansion continued during the 1990s and early 2000s, when St. Lucie County emerged as one of the fastest-growing counties in Florida. Housing types diversified modestly during this period to include townhomes, condominiums, and apartment complexes, though single-family housing remained the predominant form. By 2000, the county had more than 105,000 housing units, and

[7] U.S. Census Bureau, *American Community Survey (ACS), 2024 Estimates.*
[8] Florida Legislature, Office of Economic and Demographic Research (EDR), *St. Lucie County Profile 2025.*

development activity accelerated to meet growing demand from retirees, working families, and seasonal residents. The pace of construction slowed significantly during the late 2000s housing market downturn, leaving some subdivisions partially built or vacant, before resuming gradually during the 2010s.

By 2024, St. Lucie County contained approximately 142,900 housing units, reflecting continued long-term growth. The housing stock includes a mix of single-family homes, manufactured housing, condominiums, and rental properties, with newer construction concentrated primarily in inland areas and older housing stock more prevalent in Fort Pierce and unincorporated coastal communities. Relative to South Florida's larger metropolitan counties, St. Lucie County has historically maintained a more affordable housing market, contributing to sustained demand and continued residential development.

Current Housing Market Trends (2024–2025)

As of early 2025, St. Lucie County's housing market reflects broader Florida trends, including elevated home prices compared with pre-pandemic levels, moderated sales activity, and ongoing affordability pressures. The median home value in St. Lucie County is estimated at approximately $375,000 to $390,000, representing an increase of roughly 45–50 percent since 2020, based on aggregated Zillow Home Value Index and regional market reports. Although prices have stabilized relative to peak increases seen in 2021–2022, limited housing supply and continued in-migration have sustained upward pressure on values. Despite these increases, St. Lucie County remains more affordable than coastal counties to the south, such as Palm Beach and Broward, supporting continued interest from first-time buyers and relocating households.

Rental Market and Tenure

The county's rental market remains active, supported by population growth, workforce demand, and seasonal residency. As of 2024, the average monthly rent for a one-bedroom apartment in St. Lucie County is approximately $1,500, with higher rents typically observed in newer developments and coastal areas. According to the 2024 ACS 5-Year Estimates, approximately 68.21 percent of occupied housing units in St. Lucie County are owner-occupied, while 31.79 percent are renter-occupied. Rental households are more prevalent in Fort Pierce and certain older neighborhoods, while owner-occupancy rates are higher in suburban and master-planned communities.

Housing Characteristics and Affordability

St. Lucie County's residential areas reflect a mix of older coastal and urban neighborhoods and extensive inland master-planned communities developed primarily from the 1980s onward. Housing stock is dominated by single-family detached homes, particularly in Port St. Lucie and unincorporated areas, with smaller concentrations of multifamily and manufactured housing. Newer subdivisions typically feature larger lot sizes, automobile-oriented layouts, and limited neighborhood-scale commercial services, while older housing stock in Fort Pierce and coastal communities includes smaller homes, duplexes, and low-rise multifamily structures.

Housing affordability has become an increasing concern in recent years as home values and rental costs have risen faster than incomes. According to the 2024 ACS 5-Year Estimates, the median selected monthly owner cost (SMOC) with a mortgage in St. Lucie County is $1,654, while the median gross rent is $1,397. Although these figures remain below those of many South Florida counties, they represent a substantial increase from pre-pandemic levels. Rising housing costs have placed pressure on moderate-income households, seniors on fixed incomes, and renter households, particularly in areas with limited housing choice.

Seasonal Housing and Vacancy

St. Lucie County contains a measurable share of seasonal and part-time residences, reflecting its long-standing role as a destination for retirees and seasonal residents from northern states. According to 2024 ACS 5-year estimates, approximately 8.94 percent of the county's housing units are classified as vacant, with a notable portion designated for seasonal, recreational, or occasional use. Seasonal housing is most prevalent in coastal communities and certain planned developments, while inland suburban areas are more heavily occupied by year-round residents. These occupancy patterns influence neighborhood stability, service demand, and housing market dynamics throughout the year (see Table 10).

Table 10: Housing and Occupancy Data – 2024 ACS 5-Year Estimates

Metric	Value
Total households	131,640
Owner-occupied housing rate	68.21%
Median home value (2024–2025 est.)	$390,000
Median selected monthly owner costs (with mortgage)	$1,654
Median gross rent	$1,489
Persons per household	2.6

Economy and Employment

St. Lucie County maintains a diverse and evolving economy shaped by its role as a regional population center along Florida's Treasure Coast. Although the county includes coastal tourism and port-related activity, its economy functions primarily as a residential, service, and employment hub, supporting a growing population and a broad range of industries. Economic activity is distributed across Port St. Lucie, Fort Pierce, and unincorporated areas, with inland growth corridors and coastal communities serving distinct but interconnected economic roles.

Historically, the county's economic base was rooted in agriculture, marine industries, and port activity, particularly in and around Fort Pierce. Over time, this foundation expanded to include construction, retail, healthcare, education, logistics, and professional services, reflecting long-term population growth and suburban development. The county's transportation infrastructure, including Interstate 95, Florida's

Turnpike, U.S. Highway 1, and the Port of Fort Pierce, supports regional commerce, commuting, and goods movement, reinforcing its position as an employment center for the central Treasure Coast.

Tourism and Hospitality

Tourism and hospitality contribute to St. Lucie County's economy, though the sector plays a more supporting role compared with destination-oriented counties to the south. Coastal recreation, fishing, boating, beaches, and cultural assets attract visitors, while seasonal residents contribute to local spending patterns. According to recent employment estimates, approximately 12.8 percent of the county's workforce is employed in accommodation and food services and arts, entertainment, and recreation, reflecting steady demand tied to both visitors and the resident population.

Retail and Commercial Services

Retail and commercial services are a significant component of the county's economic base, supported by population growth and regional draw. Major commercial corridors, shopping centers, and auto-oriented retail clusters are concentrated along U.S. Highway 1, State Road 70, and key arterial corridors in Port St. Lucie and Fort Pierce. Retail trade accounts for approximately 11.1 percent of total employment, providing both jobs and an important source of local sales tax revenue. Ongoing commercial development and redevelopment efforts are focused on expanding service offerings and accommodating continued residential growth.

Healthcare, Education, and Social Services

Healthcare and education represent some of the largest and fastest-growing employment sectors in St. Lucie County, reflecting demographic trends and regional service demand. Major employers include HCA Florida Lawnwood Hospital, Cleveland Clinic Tradition Hospital, St. Lucie Medical Center, and the St. Lucie Public School District, along with Indian River State College. Educational services, healthcare, and social assistance together account for approximately 15.4 percent of the county's workforce. Continued growth in these sectors is anticipated due to population aging and expanding healthcare infrastructure.

Construction, Logistics, and Manufacturing

The construction sector plays a central role in the local economy, driven by ongoing residential development, infrastructure investment, and commercial expansion. Construction employment represents approximately 8.6 percent of total jobs. In addition, transportation, warehousing, and utilities, along with manufacturing, form an important and growing segment of the county's employment base, supported by highway access, industrial land availability, and proximity to regional markets. Manufacturing and logistics-related industries together account for approximately 10.2 percent of employment and are expected to continue expanding as population growth and e-commerce demand increase.

Table 11: Industry Breakdown: St. Lucie County Economy (2024 Estimates)[9]

Industry	Number of Jobs	Percent of Workforce
Educational Services, and Healthcare and Social Assistance	26,900	15.4%
Accommodation and Food Services; Arts, Entertainment, and Recreation	22,300	12.8%
Retail Trade	19,400	11.1%
Construction	15,000	8.6%
Professional, Scientific, and Management Services	11,200	6.4%
Manufacturing	9,700	5.6%
Transportation, Warehousing, and Utilities	8,100	4.6%
Finance and Insurance; Real Estate and Rental and Leasing	8,800	5%
Public Administration	7,200	4.1%
Other Services (except Public Administration)	9,300	5.3%
Wholesale Trade	5,400	3.1%
Information	2,300	1.3%

Infrastructure

Electricity and Natural Gas

Electricity service in St. Lucie County is provided primarily by Florida Power & Light (FPL), which operates an extensive transmission and distribution network serving residential, commercial, and industrial customers throughout the county. The system includes multiple substations, transmission corridors, and a mix of overhead and underground distribution lines. FPL conducts regular system planning, vegetation management, and grid hardening activities to support reliability and accommodate continued population growth. Electric service is critical to supporting the county's residential development pattern, healthcare facilities, water and wastewater systems, and emergency services.

Natural gas service in St. Lucie County is less available than electricity; it and is provided in select areas by Florida City Gas through a network of underground distribution lines. Natural gas primarily serves commercial, institutional, and industrial customers, with more limited residential penetration. As a result, most households rely on electricity as their primary energy source for heating, cooling, and appliances, increasing overall dependence on the electric grid.

[9] *Source: U.S. Census Bureau, 2024 ACS 5-Year Estimates; regional employment summaries.*

Water Infrastructure

Potable water service in St. Lucie County is provided by a combination of municipal utilities and special districts, including Port St. Lucie Utilities, Fort Pierce Utilities Authority, and St. Lucie County Utilities, depending on location. Water supply is drawn primarily from the Floridan Aquifer System, supplemented by surface water withdrawals and treatment facilities where applicable. Infrastructure includes wellfields, treatment plants, elevated storage tanks, transmission mains, and booster stations distributed across the county.

Water utilities coordinate closely with the South Florida Water Management District (SFWMD) to manage withdrawals, protect water quality, and ensure long-term supply sustainability. Conservation programs, reclaimed water systems, and demand management strategies are used to support system reliability amid population growth. Major transmission corridors generally follow primary roadways and development corridors, reflecting the county's suburban growth pattern.

Wastewater Infrastructure

Wastewater collection and treatment services are provided by municipal utilities and St. Lucie County Utilities, depending on jurisdiction. Systems include gravity sewers, force mains, lift stations, and centralized wastewater treatment plants that serve both urban and suburban areas. Treatment facilities provide secondary and advanced wastewater treatment, with treated effluent discharged or reused in accordance with state and federal regulations.

In older neighborhoods and more rural areas, septic systems remain in use, particularly where centralized sewer service is not available. Ongoing expansion of sewer infrastructure has focused on reducing reliance on septic systems in areas with higher development density or environmental sensitivity. Wastewater infrastructure is closely linked to water quality protection efforts for the Indian River Lagoon and associated waterways.

Road and Highway Network

St. Lucie County's transportation infrastructure is anchored by major regional corridors, including Interstate 95, Florida's Turnpike, U.S. Highway 1, and State Road 70, which together support regional mobility, freight movement, and evacuation. Interstate 95 and the Turnpike provide north–south connectivity along Florida's east coast, while State Road 70 serves as the primary east–west corridor linking coastal communities with inland areas and central Florida.

Local and collector roadways support extensive suburban development, particularly in Port St. Lucie, where roadway networks are designed around automobile travel. Bridges, causeways, and low-lying roadway segments along coastal and riverine areas are essential for access to barrier islands and waterfront communities and represent critical transportation assets for daily travel and emergency response.

Stormwater and Flood Control

Stormwater management in St. Lucie County is a shared responsibility among municipal utilities, St. Lucie County, and regional water management agencies. Infrastructure includes roadside swales, canals, culverts, retention and detention basins, pumps, and control structures designed to manage rainfall and protect developed areas. Much of the county's stormwater system is integrated with historic drainage canals constructed to convert wetlands for agricultural and residential use.

Flood control and drainage functions are closely coordinated with the South Florida Water Management District, which operates major canals and water control structures influencing water levels throughout the county. Although the system provides regional flood protection, localized drainage challenges persist in low-lying areas and older neighborhoods, particularly during periods of heavy rainfall or when high groundwater levels limit system capacity. These conditions underscore the importance of continued investment in stormwater infrastructure and coordinated water management across jurisdictions.

Participating Jurisdictions for the 2026 LMS Update

City of Fort Pierce

Fort Pierce is the oldest continuously settled community in St. Lucie County, with origins tied to Indigenous Ais settlements and later Spanish exploration. Modern development began in the mid-19th century around the U.S. Army's Fort Pierce outpost, followed by growth as a port city supporting citrus agriculture, fishing, and maritime trade. The arrival of the Florida East Coast Railway in the late 1800s cemented Fort Pierce's role as the county's historic urban and economic center.

Today, Fort Pierce has a population of approximately 48,621 residents (2024 ACS 5-year estimate) and functions as a compact coastal city with a mix of residential neighborhoods, downtown commercial districts, industrial areas, and port facilities. The city includes a diverse housing stock, ranging from older historic neighborhoods to mid-century subdivisions and newer infill development. Fort Pierce serves as a regional hub for government, healthcare, marine industries, and cultural institutions.

Fort Pierce contains a high concentration of older housing and infrastructure, critical facilities, and economically vulnerable populations. Portions of the city are low-lying and adjacent to the Indian River Lagoon and St. Lucie River, increasing exposure to flooding, storm surge, and heavy rainfall. The presence of the Port of Fort Pierce, wastewater and water treatment facilities, and historic districts makes continuity of operations and infrastructure protection particularly important in the LMS.

City of Port St. Lucie

Port St. Lucie was established in 1961 as a master-planned residential community developed by General Development Corporation. Large-scale suburban growth accelerated from the 1970s through the early 2000s, transforming formerly agricultural and undeveloped lands into extensive single-family

neighborhoods. The city incorporated in 1961 and grew rapidly through domestic in-migration, becoming the county's largest municipality.

With a population of approximately 231,790 residents (2024 ACS 5-year estimate), Port St. Lucie is the largest city in St. Lucie County and one of Florida's fastest-growing municipalities. Development is predominantly suburban, characterized by low-density residential neighborhoods, commercial corridors, employment centers, and expanding civic infrastructure. The city has become a major center for healthcare, education, retail, and professional services.

Port St. Lucie's size and development pattern create significant infrastructure demand, particularly for transportation, stormwater management, and utilities. Although less exposed to coastal storm surge than Fort Pierce, portions of the city experience pluvial flooding due to flat topography, high groundwater levels, and intense rainfall. The city's large population, dispersed neighborhoods, and reliance on roadway networks elevate the importance of evacuation planning, power reliability, and continuity of essential services in the LMS.

Town of St. Lucie Village

St. Lucie Village is a small, historic coastal community that developed as a residential enclave north of Fort Pierce. The Town incorporated in 1961 to preserve its low-density character and local governance. Development has remained limited, with an emphasis on maintaining residential scale and community identity.

Today, St. Lucie Village has a population of approximately 642 residents (2024 ACS 5-year estimate) and consists almost entirely of single-family homes along the Indian River Lagoon. The Town has no commercial or industrial districts and relies on nearby Fort Pierce for employment, services, and emergency support.

St. Lucie Village's small size, coastal location, and limited infrastructure present unique resilience considerations. The Town is highly exposed to coastal flooding, storm surge, and sea level rise, and has limited redundancy in transportation access and utilities. Emergency response, evacuation coordination, and post-disaster recovery depend heavily on regional and county partnerships, making intergovernmental coordination a key LMS priority.

Unincorporated St. Lucie County

Unincorporated areas of St. Lucie County historically supported agriculture, ranching, and rural residential uses, with development shaped by drainage projects and transportation corridors. As population growth accelerated in the late 20th century, some unincorporated areas transitioned to suburban or semi-urban uses, while others retained rural and agricultural character.

Unincorporated St. Lucie County has an estimated population of approximately 53,130 residents (2024 ACS 5-year estimate) and includes a diverse mix of communities, ranging from suburban neighborhoods and manufactured housing developments to agricultural lands, conservation areas, and coastal

settlements. Population density varies widely, and service provision is shared between County departments and special districts. These areas account for a substantial share of the county's land area but a smaller proportion of its total population.

Unincorporated areas include rural roadways, drainage canals, septic systems, and dispersed development, which can complicate emergency response and infrastructure maintenance. Some communities face elevated vulnerability due to limited access to centralized utilities or proximity to flood-prone land. The diversity of land uses and settlement patterns makes tailored mitigation strategies and coordination across County agencies essential in the LMS framework.

Planning Process

In 1998, St. Lucie County, along with its municipalities, the local business community, and nonprofit organizations, such as the American Red Cross, came together to create a Unified Local Mitigation Strategy (LMS). This strategy aims to benefit the entire St. Lucie County community by establishing a consistent planning process across various jurisdictions, special districts, and both private and public sector agencies. The St. Lucie County LMS Working Group, which serves as the policy body for the program, along with the St. Lucie County Emergency Operations Manager, is responsible for developing the LMS. This group focused on achieving two key objectives:

- Creation of a long-term LMS planning process
- Development of the LMS document to coincide with a prioritized mitigation projects list (PPL)

The original St. Lucie County LMS was developed, approved, and adopted in 1998 with the involvement of stakeholder groups and community participation. Additional updates were approved and adopted in 2005, 2010, 2016, and 2021.

The Emergency Management Division, in conjunction with area partners, has completed a comprehensive update in 2026. The updated draft plan is currently under review and will be distributed to jurisdictional city halls, libraries, and County Administration offices to ensure public access for feedback and comments.

From 2016 to 2021, the LMS Working Group focused on developing its membership and programs to enhance the planning process for efficient and effective flood awareness management. This included evaluating and prioritizing projects and aligning hazard assessments and strategies to reduce risk for the entire St. Lucie County Community.

In 2016, the LMS Working Group, with guidance from its Steering Committee, drafted bylaws to set the group's direction. These bylaws outlined the meeting schedule, the criteria for member agencies to maintain good standing, and the voting process for project prioritization during updates to the Project Prioritized List (PPL).

In 2017, the Working Group decided to disband the Steering Committee, recognizing that it lacked sufficient members to support it. Consequently, the bylaws were amended to state that the LMS Working Group would operate independently under the chair, vice-chair, and LMS Coordinator. A Steering Committee was no longer deemed necessary for guiding the development of the group's programs and plans.

From 2018 to 2019, the bylaws were developed during meetings of the Working Group to clarify what constitutes a member agency's good standing for voting on project evaluation, scoring, and ranking in the PPL. The membership of the LMS Working Group grew from 25 to 44 member agencies between 2016 and 2021. In accordance with FEMA's Comprehensive Planning Guide (CPG) 101 and Florida Administrative Code (FAC) 27P-22, the bylaws of the LMS Working Group provided guidelines for conducting meetings that included the following objectives:

- Elect Chair and Vice Chair at least once a year
- Set up meetings at least on a quarterly basis
- Announce all meetings to the public via press release
- List public comments in every meeting agenda, and invite public to attend
- Evaluate new and existing projects at least once a year

The LMS Working Group established a quorum for its meetings by simple majority, allowing flexibility in directing and guiding the development of the PPL. The group also provides support for projects submitted to the state and FEMA for the Hazard Mitigation Grant Program (HMGP) through letters of support and prioritizes which projects should be considered for funding.

The LMS Working Group enhanced its membership and activities by incorporating several flooding awareness programs. In 2018, under the leadership of the St. Lucie County Emergency Management Division, updates to the St. Lucie County Community Rating System (CRS) program were included in the Working Group meetings. This provided members with information on the development and progress of the CRS program and allowed for their potential involvement in these initiatives.

As a result of this effort, the St. Lucie CRS User Group was formed. This independent group, separate from the LMS Working Group, consists of the St. Lucie County CRS Coordinator and CRS coordinators from the cities of Port St. Lucie and Fort Pierce. Although all three coordinators are members of the LMS Working Group, they chose not to serve as a subcommittee of the Working Group. This decision was intentional, aiming to foster new ideas and strategies that would benefit all three jurisdictions in line with the CRS guidelines. It also sought to align flood awareness strategies with those of the LMS and to reduce duplication of effort in promoting flood awareness throughout the community.

The CRS Coordinator liaised with the LMS Working Group to report on new developments and strategies established by the three jurisdictions and to request additional support from the LMS Working Group as needed.

In 2019, the Chair of the LMS Working Group requested the formation of the Program for Public Information (PPI) Subcommittee to develop a PPI Plan aimed at aligning the marketing strategies of the CRS programs for St. Lucie County, Fort Pierce, and Port St. Lucie. The PPI Plan was designed to help the three jurisdictions avoid duplicating efforts, plans, and resources. The subcommittee was chaired by the CRS Coordinator from Fort Pierce and included representatives from private insurance companies and real estate agencies. The subcommittee met several times to develop and review the draft PPI Plan, which was ultimately completed and submitted to the LMS Working Group for adoption in the 2021 Local Mitigation Strategy.

Besides the PPI Plan, the Flood Hazard Specific Plan and the Tsunami Plan were incorporated into the 2021 LMS. The unification of these plans earned points for the three jurisdictions in the CRS program and demonstrated a cohesive mitigation planning effort for all member agencies of the LMS Working Group. According to the CRS Coordinators Manual (2017), the components listed previously, along with the LMS, constituted a Floodplain Management Plan for the jurisdictions.

Between 2018 and 2019, the Chair of the LMS Working Group requested the formation of the Scoring Review Subcommittee to review and revise the scoring process for new projects that would be ranked in the Project Priority List (PPL). The subcommittee examined the scoring sheet and discussed the merits of adding weight points to specific areas in projects to better reflect the intent and logic behind the prioritization of projects for the St. Lucie Whole Community. The subcommittee was led by the representative from the St. Lucie School District, who was also a member of the LMS Working Group. Once the subcommittee completed its work, the LMS Working Group adopted a new scoring sheet. The projects' applications were subsequently reviewed, and adjustments were made to ensure alignment with the LMS's goals and objectives and with the strategies and plans incorporated into the jurisdiction's capital improvement plans.

In preparation for the five-year state review, the Chair of the LMS Working Group requested the formation of subcommittees to review and revise the 2016 LMS. Consequently, the Hazard-Vulnerability and Review subcommittees were established in 2020. In addition, the Emergency Management Division hired a planning consultant to assist in developing the new edition of the LMS. Members of the Division coordinated access to the draft LMS for members of the LMS Working Group for review through the Emergency Operations Center's File Transfer Protocol (FTP) site. The Hazard Vulnerability subcommittee reviewed the LMS chapter on Hazard Identification, Vulnerability, and Risk, while the Review subcommittee focused on the remainder of the LMS, specifically the planning process, community profile, and scoring process. The Hazard Vulnerability subcommittee also reviewed and developed a Threat Assessment, detailing the outcomes of the hazards that impacted St. Lucie and identifying those considered the highest threats based on risk and historical data.

Through the enhanced measures mentioned above, the St. Lucie Whole Community was expected to experience reduced impacts from the identified hazards presented in the LMS and to greatly minimize its community vulnerabilities.

The planning process used to develop and update the St. Lucie County LMS has been consistent across jurisdictions, special districts, and private and public sector agencies since the promulgation and adoption

of the 2016 LMS. The cities of Fort Pierce and Port St. Lucie, along with all other member agencies of the Working Group, had implemented the goals, objectives, and strategies developed in the LMS and Working Group meetings in their internal programs and planning processes to achieve results. The following is a description of that process:

- The 2016 LMS was presented on the St. Lucie County website to obtain public comment.
- The LMS Coordinator convened members of the LMS Working Group to oversee the LMS update process and update the PPL.
- The Working Group met at least quarterly to discuss mitigation initiatives, modifications to the Working Group composition, updates on projects in the PPL that received funding, announcements of new funding, and developments in mitigation measures (e.g., CRS updates, resilience program initiatives, and changes in the development of project and program implementation).
- The LMS Working Group included a public comment section in the agenda of every Working Group meeting since 2017 to include the public in all discussions. This was a consistent process with meetings of the St. Lucie Board of County Commissioners (BOCC).
- All LMS Working Group meetings were publicly announced. The public was invited to all LMS Working Group general meetings and subcommittee meetings to ensure engagement with new developments and changes to the LMS and mitigation strategies, projects, and updates.
- The LMS Working Group Chair, under recommendation from the LMS Coordinator, convened the following subcommittees from the Working Group to oversee the review and update of the LMS:
  - Scoring Review Sub-Committee
  - Hazards Vulnerability Review Sub-Committee
  - Review Sub-Committee
  - Program for Public Information (PPI) Sub-Committee
- Working Group members implemented projects from the PPL in their jurisdictions and agencies' planning and project processes; thus, ensured that LMS goals, objectives, plans, and program strategies were incorporated in plans, programs, and project management in their jurisdictions, special districts, and private and public sector agencies. This process ensured that the St. Lucie Whole Community benefited from mitigation efforts to reduce risks from all hazards and threats.
- The Working Group reviewed the PPL annually and updated the status of all projects.
- The Emergency Operations Manager, through the Emergency Management Division and the Public Safety Department, maintained the PPL and created a historical "completed and deleted" list separate from the active 2020 PPL to keep track of progress made to the St. Lucie County Whole Community through the implementation or completion of projects. Projects that no longer aligned with the LMS's mission or could no longer benefit communities were removed or incorporated into other projects.
- A period to join the LMS Working Group was implemented every year, and solicitations to agencies, jurisdictions, special districts, and private and public sector agencies were made. A major result was the increase in Working Group membership since 2016.

- The Working Group developed bylaws to ensure efficiency and effectiveness in its process of updating the LMS and flexibility in meeting during emergencies and as needed to include new projects should funding become available.
- Working Group members submitted new and existing projects for evaluation, scoring, and ranking in the PPL.
- Working Group members evaluated projects at least once a year. Projects could be submitted at any time, but within a 30-day period, the Working Group's Scoring Subcommittee met as needed to complete the evaluation of all projects. As such, the Working Group adopted a new PPL at least once a year.
- To reduce duplication of effort, funding, and time, Working Group members met independently from Working Group meetings to work on goals, objectives, and strategies, such as the creation of the CRS User Group, which worked on developing the CRS programs through joint efforts in tasks for the jurisdictions of St. Lucie County, City of Port St. Lucie, and City of Fort Pierce that participated in such programs.
- As part of the 2026 update to the St. Lucie County Unified Local Mitigation Strategy (LMS), the Planning Team conducted a comprehensive review of existing plans, policies, programs, and regulatory documents to ensure consistency with local mitigation priorities and to identify opportunities for integration of hazard mitigation into ongoing planning efforts. This review incorporated elements of the Community Rating System (CRS) 10-Step Planning Process to support continued participation in the National Flood Insurance Program (NFIP) and CRS program by participating jurisdictions.
- *The CRS 10-Step Planning Process provides a structured framework for identifying flood hazards, evaluating vulnerabilities, and developing mitigation actions. The following CRS planning steps were considered during development of the 2026 LMS update:*
  - **Organize the Planning Process**: Establish a planning committee and define the planning scope.
  - **Involve the Public**: Provide opportunities for public participation and stakeholder input.
  - **Coordinate with Other Departments and Agencies**: Engage relevant agencies and organizations involved in floodplain management and hazard mitigation.
  - **Assess the Hazard**: Identify flood hazards and understand their extent and characteristics.
  - **Assess the Problem**: Evaluate how flooding affects buildings, infrastructure, and populations.
  - **Set Goals**: Establish mitigation goals and objectives to reduce risk.
  - **Review Possible Activities**: Identify potential mitigation strategies and projects.
  - **Draft an Action Plan**: Develop a prioritized list of mitigation actions.
  - **Adopt the Plan**: Obtain formal adoption by participating jurisdictions.
  - **Implement, Evaluate, and Revise the Plan**: Monitor progress and update the plan as necessary.

- The following documents were reviewed as part of the 2026 LMS update process to support these planning steps and ensure consistency with existing planning and emergency management frameworks:
  - **St. Lucie County Comprehensive Plan:** Future Land Use, Transportation, Infrastructure, Conservation, Coastal Management, Intergovernmental Coordination, Housing, Historical and Cultural, and Capital Improvements
  - **Fort Pierce Comprehensive Growth Management Plan:** Coastal Management, Conservation, Capital Improvements, Future Land Use, Housing, Infrastructure, Intergovernmental Coordination, Port, and Recreation and Open Space
  - **Port St. Lucie Comprehensive Plan:** Coastal Management, Conservation, Capital Improvements, Future Land Use, Housing, Infrastructure, Intergovernmental Coordination, Port, and Recreation and Open Space
  - St. Lucie County Land Development Code
  - St. Lucie County Comprehensive Emergency Management Plan (CEMP)
  - City of Port St. Lucie Comprehensive Emergency Management Plan (CEMP)
  - St. Lucie County CRS current jurisdictional ratings
  - Municipal CRS program documentation and activities consistent with the CRS 10-Step Planning Process
  - St. Lucie County Continuity of Operations Plan (COOP)
  - 2020 LMS Project Prioritized List
- The DRAFT 2026 LMS was presented at the March 2026 LMS Working Group meeting. Once the Florida Division of Emergency Management (FDEM) provided a Letter of Compliance, all Working Group members who represented jurisdictions, special districts, and private and public sector agencies were requested to adopt the LMS as their plan for mitigation goals, objectives, strategies, and projects.

Overview of the LMS Working Group

The LMS Working Group must include a diverse range of representatives to be effective. It encompasses all stakeholder groups in the county from both the public and private sectors. When the St. Lucie County LMS Working Group was established, representatives were selected to ensure that all affected groups could participate in the St. Lucie Whole Community planning process and in the ongoing implementation of LMS strategies in their respective jurisdictions' projects and programs. The Working Group directly engages with the BOCC and the boards and councils from different jurisdictions, incorporating perspectives from the private and public sectors and community input.

Members of the LMS Working Group act as liaisons to their respective divisions, departments, and organizations that implement and promote mitigation programs and projects. The LMS serves as a

comprehensive mitigation document that establishes strategies, goals, and objectives for all jurisdictions, agencies, and organizations that adopt the LMS through resolutions, letters of support, and other organizational mechanisms. As such, the LMS is referenced as a supporting document in significant plans and policies related to the growth and development of the St. Lucie Whole Community. These plans and policies include, but are not limited to:

- Comprehensive Plans
- Capital Improvement Plans
- Growth Management Plans
- Comprehensive Emergency Management Plans (CEMP)
- Continuity of Operations Plans (COOPs)
- Flood Hazards Specific Plans

Each representative in the LMS Working Group plays a vital role in their respective jurisdictions or private sector organizations. Many of these individuals are department directors or administrators who understand how to implement LMS strategies, goals, and objectives in their organizational plans and program administration. The Working Group members use the LMS to support and enhance mitigation programs, such as the Community Rating System (CRS), project initiatives, and resilience initiatives.

For example, jurisdictions like the City of Port St. Lucie and Fort Pierce frequently collaborate with St. Lucie County departments and divisions to undertake mitigation projects that benefit the entire community. By following similar planning processes across jurisdictions, Working Group members refer to the LMS as the unified mitigation strategy for St. Lucie County's whole community, ensuring that it aligns with local, state, and federal criteria for funding sources and project management.

The Director of the St. Lucie County Public Safety Department, Emergency Management Division provides direct staff support from the Emergency Management Division to the Working Group and its chairperson. The Emergency Operations Manager is designated as the LMS Coordinator and acts as the liaison to FDEM and FEMA.

Administrative – Lead Responsibility

The Public Safety Department, Emergency Management Division, is the primary agency responsible for implementing the LMS program. The Emergency Management Division Manager (or designee) who serves as the LMS Coordinator, has the leading responsibility. This coordinator works closely with the Chair of the LMS Working Group, stakeholder groups, communities, and local governments served by the LMS. The LMS Coordinator's responsibilities include:

- Serve as the hazard mitigation advocate at the staff level
- Keep current with all changes in LMS/DMA 2000 (the Disaster Mitigation Act of 2000) programs and communicate those changes to the LMS Working Group

- Interact frequently with the Florida Division of Emergency Management
- Serve as the LMS County Liaison
- Work closely with the LMS Chairperson
- Organize meetings of the LMS Working Group
- Coordinate with and contact all members of the Working Group regularly
- Maintain avenues of communication with the general public
- Set up and maintain files documenting the progress of the LMS program
- Update the PPL as needed.
- Conduct the comprehensive five-year LMS update

Administrative – Support Responsibility

Successfully implementing the LMS is not just the responsibility of the Public Safety Department, Emergency Management Division. It is a collective responsibility that involves all participating organizations from both the public and private sectors. Each organization must fulfill its administrative duties in various ways, including the following:

- Promote and educate others about the significance of local hazard mitigation
- Interact and coordinate frequently with the LMS Coordinator
- Manage mitigation projects or activities
- Aid other organizations so they can implement their mitigation projects or activities
- Disseminate hazard mitigation-related information to constituents
- Document the progress of one's organization's hazard mitigation activities
- Make available to the LMS Coordinator new data and information relevant to the LMS process

An example of supporting other organizations could involve helping with a comprehensive public awareness and education program focused on hazards. Other public organizations and homeowner associations should play a supportive role by promoting and sharing the program information generated to enhance public awareness and education. They should also participate in educational workshops, seminars, and Working Group meetings.

LMS Composition

The St. Lucie County LMS Working Group is responsible for overseeing the development and implementation of the St. Lucie LMS process. This group consists of county and municipal partners who work together to prepare and promote local mitigation strategies and projects aimed at reducing the long-term risks to life and property from natural, technological, and human-caused disasters. The Working Group is designed to broadly represent the various stakeholder groups in St. Lucie County. When

a seat becomes vacant, the LMS Coordinator will coordinate with the relevant organization to invite new representation.

The Working Group serves as the policy development body for the LMS program. Its role is to advise and assist in the formulation, implementation, and administration of the program, ensuring that the diverse interests in St. Lucie County are properly represented.

Table 12 lists the current members of the Working Group. Participant titles are reported as provided by attendees at the time of participation (e.g., meeting sign-in sheets, email invitations/responses, or agency-provided roster information) and were confirmed or corrected during plan development where discrepancies were identified.

Table 12: LMS Working Group Roster

Last Name	First Name	Agency	Email	Primary, Secondary, or Tertiary
Ratliff	Shane	City of Port St. Lucie Emergency Management	sratliff@cityofpsl.com	Chairperson
Frank	John	St Lucie County Road and Bridge Division	frankj@stlucieco.org	Vice Chairperson
Hance	Oscar	St. Lucie County Emergency Management Division	hanceo@stlucieco.org	Coordinator
Alvarez	Abraham	Port St. Lucie Police Department	Abraham.Alvarez@cityofpsl.com	Primary
Armendariz	Areli	North St. Lucie County Water Control District	arelia@higginsfl.com	Secondary
Armendariz	Areli	Fort Pierce Farms Water Control District	arelia@higginsfl.com	Secondary
Balcer	Benjamin	St. Lucie County Planning Development Services	balcerb@stlucieco.org	Primary
Barbieri	John	Indian River State College	gbarbier@irsc.edu	Secondary
Barnes	Venetia	City of Fort Pierce Stormwater Division	vbarnes@cityoffortpierce.com	Primary
Baum	Matt	St. Lucie County Facilities Department	baumm@stlucieco.org	Secondary

Last Name	First Name	Agency	Email	Primary, Secondary, or Tertiary
Bell	Paulette	St. Lucie County Utilities Department	bellp@stlucieco.org	Secondary
Boer	Kathryn E.	Treasure Coast Regional Planning Council	kboer@tcrpc.org	Primary
Bogan	Sandra	St. Lucie County Resilient	bogans@stlucieco.org	Primary
Buchwald	Peter	St. Lucie County Transportation Planning Organization	buchwaldp@stlucieco.org	Secondary
Calderone	Courtney	St. Lucie County Legislative Affairs	calderoneco@stlucieco.org	Primary
Camacho	Carlos	City of Port St. Lucie – Utilities	CCamacho@cityofpsl.com	Primary
Cox	Erin	Treasure Coast Food Bank	ecox@tcfoodbank.org	Primary
Cristaldi	Mark	St. Lucie County Fire District	mcristaldi@slcfd.org	Tertiary
Critchfield	Marshal	Florida Power & Light	marshall.Critchfield@fpl.com	Primary
Dayan	Patrick	St. Lucie County Public Works Department	dayanp@stlucieco.org	Primary
Dellacroce	John	Port St. Lucie Police Department	jdellacroce@cityofpsl.com	Secondary
Ding	Yi	St. Lucie County Transportation Planning Organization	dingy@stlucieco.org	Secondary
Peter	Michael	City of Port St. Lucie Building Department	MPeter@cityofpsl.com	Primary
Dunton	John	City of Port St. Lucie Public Works Department	JDunton@CityofPSL.com	Primary
Dye	Reuben	St Lucie County Board of County Commissioners	dyer@stlucieco.org	Primary

Last Name	First Name	Agency	Email	Primary, Secondary, or Tertiary
Fogarty	Nicole	St Lucie County School	nicole.fogarty@stlucieschools.org	Primary
Forbis	Alicia	City of Fort Pierce Stormwater Division	aforbis@cityoffortpierce.com	Secondary
Franklin	Michelle	St Lucie County Property Appraiser	franklinm@paslc.org	Primary
Gonzalez	Rogelio	Council on Aging of St. Lucie Inc. Community Transit	rgonzalez@coasl.com	Primary
Gonzalez	Brian	St. Lucie Fire District	bgonzalez@slcfd.org	Secondary
Griffin	Amy	St. Lucie County Environmental Resources Department	griffina@stlucieco.org	Primary
Grubich	David	Florida Forest Service	David.Grubich@FDACS.gov	Primary
Hawkins	Sonji	St. Lucie County Public Safety	hawkinss@stlucieco.org	Primary
Heen	Ronnie	City of Port St. Lucie Emergency Management	rheen@cityofpsl.com	Tertiary
Helms	Patrick	North St. Lucie County Water Control District	patrickh@higginsfl.com	Primary
Helms	Patrick	Fort Pierce Farms Water Control District	patrickh@higginsfl.com	Primary
Jacobsen	Colleen	City of Port St. Lucie – Utilities	cjacobsen@cityofpsl.com	Secondary
Jacobsen	Roger	St. Lucie County Mosquito Control	jacobsenr@stlucieco.org	Tertiary
Johnson	Louis	Port St. Lucie Public Works Department	ljohnson@cityofpsl.com	Secondary
Kaiser	Bret	City of Port St. Lucie Public Works	bkaiser@cityofpsl.com	Secondary
Knight	Jason	St. Lucie County Mosquito Control	knightj@stlucieco.org	Secondary

Last Name	First Name	Agency	Email	Primary, Secondary, or Tertiary
Koerner	David	Florida Department of Health-St. Lucie County	David.Koerner@Flhealth.gov	Secondary
LaMartina	Kathy	South Florida Water Management District	klamart@sfwmd.gov	Primary
Lanahan	Thomas J.	Treasure Coast Regional Planning Council	tlanahan@tcrpc.org	Secondary
Lathou	Marceria	St. Lucie County Transportation Planning Organization	lathoum@stlucieco.org	Tertiary
Massa	Bob	St. Lucie Schools	bob.massa@stlucieschools.org	Tertiary
Mincey	Terrill	St. Lucie County Mosquito Control	minceyt@stlucieco.org	Primary
Norris	Kenny	Fort Pierce Police Department	knorris@fppd.org	Secondary
O'Leary	Terence	St Lucie Schools	terence.oleary@stlucieschools.org	Secondary
Olson	Rebecca	St. Lucie County Utilities Department	olsonr@stlucieco.org	Tertiary
Phelan	Kelly	St. Lucie County Legislative Affairs	phelank@stlucieco.org	Tertiary
Pickle	Dennis	St. Lucie West Services District	dpickle@slwsd.org	Primary
Pierre	Nadege	St Lucie County Board of County Commissioners	pierren@stlucieco.org	Primary
Proulx	Christina	Cleveland Clinic – Martin Health	ProulxC@ccf.org	Primary
Reyes	Johan	American Red Cross	johan.reyes@redcross.org	Primary
Ridle	Robert	Fort Pierce Police Department	rridle@fppd.org	Primary
Robertson	Angel	Office of Congressman Brian Mast	angel.robertson@mail.house.gov	Secondary
Rummo	Nichole	Indian River State College	nrummo@irsc.edu	Primary

Last Name	First Name	Agency	Email	Primary, Secondary, or Tertiary
Santamaria	Mayte	St. Lucie County Administration	santamariam@stlucieco.org	Primary
Sejour	Jordan	Office of Congressman Brian Mast	Jordan.Sejour@mail.house.gov	Secondary
Steele	Michelle	Port St. Lucie Police Department	msteele@cityofpsl.com	Primary
Telle	Tracy S.	City of Fort Pierce Engineering Department	ttelle@city-ftpierce.com	Primary
Tennant	Rachel	Fort Pierce Utilities Authority	rtennant@fpua.com	Primary
Thiess	William	Town of St. Lucie Village	william.thiess@stlucievillagefl.gov	Primary
Thomas	Paul	City of Fort Pierce	pthomas@cityoffortpierce.com	Primary
Torres	Stephanie	St. Lucie County Transportation Planning Organization	torress@stlucieco.org	Primary
Vachon	Dane	St. Lucie Fire District	dvachon@slcfd.org	Primary
Waters	Ken	St. Lucie County Sheriff's Office	Watersk@stluciesheriff.com	Primary
Weber	Jaeson	Florida Atlantic University	Jweber15@fau.edu	Primary
Weinshank	William	Port St. Lucie Emergency Management	wweinshank@cityofpsl.com	Primary
Williams	Lydia	Florida Department of Health-St. Lucie County	lydia.williams@flhealth.gov	Primary
Wolfhagen	Tioka	City of Fort Pierce Building Department	twolfhagen@cityoffortpierce.com	Primary
Zrallack	Dan	St. Lucie County Public Works Department	zrallackd@stlucieco.org	Primary

LMS Stakeholder Strategy

Engaging stakeholders is an essential element of effective hazard mitigation planning, as it brings a broad range of experience, expertise, and local insight into the development of the plan. Many stakeholders represent organizations or communities that are directly affected by hazard events, making their participation particularly valuable. Early involvement allows these partners to help shape priorities, clarify local risk conditions, and contribute to the development of practical risk reduction goals. Stakeholder participation also supports the identification of relevant data, feasible mitigation strategies, and opportunities for collaborative action that strengthen implementation at the local level.

St. Lucie County's LMS stakeholder strategy consisted of three main elements:

- The Local Mitigation Strategy Working Group is a preexisting committee set up as part of the previous 2021 LMS update. Meeting quarterly, it consists of representatives of the four participating jurisdictions, other local and regional government agencies, and private and nonprofit organizations. The Planning Team gave regular updates to the Working Group, encouraging members to participate in the process at several points.
- The Planning Team served as the day-to-day planning team. Meeting bi-weekly, the Steering Committee consisted of representatives from all four participating jurisdictions and IEM staff. The Committee was responsible for addressing issues arising from the plan development process and interagency coordination and anything else that required immediate resolution.
- Public outreach was intended to allow an even broader range of stakeholders meaningful opportunities to provide input to the planning process. Major elements included:
  - A multilingual survey (in English, Spanish, and Haitian Kreyol) that was posted online and promoted through multiple channels with 148 respondents.
  - An open invitation for the public to attend LMS Working Group meetings, with meeting information posted online.
  - An in-person town hall and open house held specifically to allow the public an opportunity to learn about the LMS update process and to give feedback. This was paired with a virtual meeting to increase the opportunity for participation.

Table 13 provides a list of stakeholders invited to participate in the planning process via email invitation and categorizes them by stakeholder type. Stakeholder affiliations were reviewed for accuracy; where an agency attribution was unclear or outdated, the entry was corrected based on available documentation.

Table 13: Stakeholders Invited to Participate in the Local Mitigation Strategy

Name	Title	Agency/ Organization	Stakeholder Type	Meeting Attended
John Frank	Road and Bridge Assistant Manager	St. Lucie County Public Works	Local and regional agency	LMS Meeting Q2

Name	Title	Agency/ Organization	Stakeholder Type	Meeting Attended
Oscar Hance	Emergency Management Division Manager	St. Lucie County Emergency Management	Local and regional agency	LMS Meeting Q2, Q3, Q4
Jason Knight	Impoundment Supervisor	St. Lucie County Mosquito Control	Local and regional agency	LMS Meeting Q2, Q3, Q4
Paul Thomas	Director of Building/ Building Official	City of Fort Pierce Building Department	Local and regional agency	LMS Meeting Q2, Q4
Tioka Wolfhagen	Permit Specialist/ CRS Coordinator	City of Fort Pierce Building Department	Local and regional agency	LMS Meeting Q2, Q3, Q4
Tracy Telle	Engineering Manager	City of Fort Pierce	Local and regional agency	LMS Meeting Q2, Q4
Ashaad Addison	Program Coordinator	Treasure Coast Food Bank	Representative of nonprofit organization	LMS Meeting Q2
Shane Ratliff	Emergency Operations/CRS Manager	Port St. Lucie Emergency Management	Local and regional agency	LMS Meeting Q2, Q3, Q4
Carlos Camacho	Engineer	Port St. Lucie Utility Systems Department	Local and regional agency	LMS Meeting Q2, Q3, Q4
Sandra Bogan	Resilience Navigator	St. Lucie County Environmental Resources	Local and regional agency	LMS Meeting Q2, Q3, Q4
Terrill Mincey	Mosquito Control Manager	St. Lucie County Mosquito Control	Local and regional agency	LMS Meeting Q2, Q3, Q4
Matt Baum	Director	St. Lucie County Parks, Recreation, and Facilities Department	Local and regional agency	LMS Meeting Q2, Q4
Venetia Barnes	Stormwater Engineer	City of Fort Pierce Engineering	Local and regional agency	LMS Meeting Q2, Q4

Name	Title	Agency/ Organization	Stakeholder Type	Meeting Attended
Paulette Bell	Public Utilities Administration and Customer Support Assistant Manager	St. Lucie County Utilities	Local and regional agency	LMS Meeting Q2, Q3, Q4
Patrick Dayan	Department Director	St. Lucie County Public Works	Local and regional agency	LMS Meeting Q2, Q3
Bill Thiess	Mayor	St. Lucie Village	Local and regional agency	LMS Meeting Q2
Joy Hawthorne	Deputy Director	St. Lucie County Parks and Recreation	Local and regional agency	LMS Meeting Q2
Yi Ding	Transportation Systems Manager	St. Lucie Transportation Planning Organization	Local and regional agency	LMS Meeting Q2
Rogelio Gonzalez	Transit Vehicle Maintenance & Security Director	Council on Aging	Representative of nonprofit organization	LMS Meeting Q2, Q4
Caleb Gillette	Acting Deputy Chief	Fort Pierce Police Department	Local and regional agency	LMS Meeting Q2
Dave Jacobs	Consultant	Red Cross PB/TC	Representative of nonprofit organization	LMS Meeting Q2
John Dunton	Deputy Director	Port St. Lucie Public Works	Local and regional agency	LMS Meeting Q2, Q3
Abe Alvarez	Fiscal Management Division Director	Port St. Lucie Police Department	Local and regional agency	LMS Meeting Q2, Q3, Q4
Amy Griffin	Environmental Resources Director	St. Lucie County Environmental Resources	Local and regional agency	LMS Meeting Q3, Q4
Rachel Tennant	Director of Public Affairs and Sustainability	Fort Pierce Utilities Authority	Local and regional agency	LMS Meeting Q3

Name	Title	Agency/ Organization	Stakeholder Type	Meeting Attended
Stephanie Torres	Bicycle-Pedestrian Program Manager	St. Lucie Transportation Planning Organization	Local and regional agency	LMS Meeting Q3,Q4
Nicole Fogarty	Coordinator of Growth Management, Land Acquisition, and Inter-Governmental Relations	St. Lucie Public Schools	Local and regional agency	LMS Meeting Q3, Q4
Patrick Helms	Engineer	North St. Lucie River Water Control District/Higgins Engineering & Surveying, LLC	Local and regional agency	LMS Meeting Q3, Q4
Areli Armendariz	Consultant	Fort Pierce Farms Water Control District	Local and regional agency	LMS Meeting Q3, Q4
Sherry McCorkle	Senior External Affairs Specialist	South Florida Water Management District	Local and regional agency	LMS Meeting Q3
Michelle Steele	Captain of Support Services	Port St. Lucie Police Department	Local and regional agency	LMS Meeting Q4
Tanner Rutherford	Project Engineer	City of Fort Pierce Engineering	Local and regional agency	LMS Meeting Q4
James Glover	Recovery and Mitigation Coordinator	St. Lucie County Emergency Management	Local and regional agency	LMS Meeting Q4
Bradley Faltersack	Project Manager	Port St. Lucie Utility Systems District	Local and regional agency	LMS Meeting Q4
Cameryn Weaver	Emergency Management Program Coordinator	Cleveland Clinic Emergency Management	Representative of business, academia, or other private organization	LMS Meeting Q4
Christina Proulx	Senior Manager – Emergency Management	Cleveland Clinic Emergency Management	Representative of business, academia,	LMS Meeting Q4

Name	Title	Agency/ Organization	Stakeholder Type	Meeting Attended
			or other private organization	
Ronnie Heen	Emergency Management Specialist II	City of Port St. Lucie	Local and regional agency	LMS Meeting Q4
Lydia Williams	Public Health Preparedness Planning Manager	Florida Department of Health	Agency with the authority to regulate	LMS Meeting Q4

The 10-Step Planning Process for the Local Mitigation Strategy Update

The St. Lucie County LMS update was developed in accordance with the Community Rating System (CRS) Activity 510 Floodplain Management planning criteria and DMA 2000, following current FEMA guidance. FEMA's mitigation planning framework is organized into four core phases: planning, risk assessment, mitigation strategy development, and plan maintenance. These phases are fully integrated into the CRS 10-Step Planning Process, which provides a structured and compliant approach for local hazard mitigation planning.

Table 14 illustrates the relationship between FEMA's four-phase mitigation planning framework and the CRS Activity 510 10-step process used for the St. Lucie County LMS update.

Table 14: Alignment of FEMA Mitigation Planning Process Phases and CRS 10-Step Process

DMA Process	CRS Process
Planning Process	**Step 1:** Organize and Prepare the Plan. **Step 2:** Involve the Public **Step 3:** Coordinate
Risk Assessment	**Step 4:** Assess the Hazard **Step 5:** Assess the Program
Mitigation Strategy	**Step 6:** Set Goals **Step 7:** Review Possible Activities **Step 8:** Draft an Action Plan
Plan Maintenance	**Step 9:** Adopt the Plan **Step 10:** Implement, Evaluate, and Revise the Plan

Step 1: Organize and Prepare the Plan

St. Lucie County leadership, in coordination with the Local Mitigation Strategy Working Group, established the organizational structure, scope, and schedule for the LMS update. An initial project kickoff meeting brought together county staff, municipal representatives, and technical partners to confirm roles, responsibilities, and anticipated deliverables. Participation was broadened to include municipalities, special districts, and critical stakeholders to ensure a comprehensive and inclusive planning effort.

Meetings were designed to orient participants to CRS Activity 510 requirements and FEMA's four-phase mitigation planning framework, with particular emphasis placed on the hazard assessment and mitigation strategy components of the process. Coordination occurred through a combination of in-person meetings, virtual meetings, email correspondence, and individual consultations. Draft plan materials were distributed to participating jurisdictions throughout the update to support timely review and comment. All working group meetings were publicly noticed, and additional opportunities for public input were provided outside of scheduled meetings.

Step 2: Involve the Public

Public engagement was incorporated throughout the LMS update to ensure that community perspectives and local knowledge informed the planning process. Public meetings were held at key milestones to present findings and gather feedback on the draft plan.

Public outreach efforts included announcements on the St. Lucie County website, distribution of informational materials, stakeholder briefings, social media outreach, and the use of an online public survey available in multiple languages. The survey provided residents, businesses, and organizations with an opportunity to identify hazard concerns, perceived vulnerabilities, and mitigation priorities. Draft plan sections were made available for public review, and all comments received were documented and considered during plan refinement. Over 145 responses were received from the public survey.

Step 3: Coordinate

Interagency coordination was a central component of the St. Lucie County LMS update. The Working Group actively engaged local, regional, state, and federal agencies and nonprofit organizations, utilities, and special districts with roles in hazard mitigation, floodplain management, emergency management, and long-term resilience.

Stakeholders were notified of opportunities to participate through email outreach and direct coordination, and were invited to share data, review draft materials, attend meetings, and provide technical input. A comprehensive list of participating agencies and organizations is included in the LMS Stakeholders section.

The planning process also emphasized alignment with existing plans, policies, and programs that influence land use, infrastructure investment, and hazard risk reduction. Relevant local, regional, and state plans were reviewed to ensure consistency and to leverage ongoing initiatives. These materials supported

hazard identification and vulnerability analysis and informed the development of mitigation goals and actions. Resources reviewed included the Florida State Enhanced Hazard Mitigation Plan, St. Lucie County Comprehensive Plan, local floodplain management documents, emergency planning products, and FEMA Flood Insurance Rate Maps (FIRMs).

Steps 4 and 5: Assess the Hazard and Assess the Problem

St. Lucie County and its participating jurisdictions conducted a comprehensive hazard identification and risk assessment addressing natural, technological, and human-caused hazards relevant to the planning area. Geographic Information System (GIS) tools were used extensively to map hazard-prone areas and evaluate potential impacts on the population, critical facilities, infrastructure, and key community assets.

Hazard profiles and exposure analyses were shared with the Working Group and made available for public review to validate findings and identify localized concerns. In parallel, a mitigation capability assessment was completed to evaluate existing programs, policies, ordinances, and practices that support hazard mitigation and floodplain management. This assessment highlighted current strengths, identified gaps, and provided a foundation for developing targeted mitigation strategies that build on existing capacities.

Steps 6 and 7: Set Goals and Review Possible Activities

Working Group meetings and facilitated discussions were used to establish countywide and jurisdiction-specific mitigation goals consistent with FEMA and CRS guidance. Participants reviewed a broad range of mitigation alternatives, including structural projects, regulatory approaches, public education initiatives, property protection measures, and natural resource protection strategies.

Through a collaborative prioritization process, the Working Group:

- Confirmed mitigation goals aligned with community needs and regulatory requirements
- Evaluated potential mitigation actions using defined selection criteria
- Reviewed the status of previously identified mitigation actions
- Developed new projects to address emerging risks, future development patterns, and changing hazard conditions

Step 8: Draft an Action Plan

Using input from the Working Group, participating jurisdictions, and stakeholders, a draft LMS was prepared for St. Lucie County. The draft incorporated the results of the hazard and risk assessment, the capability assessment, and the mitigation goals and actions developed during earlier planning steps.

The draft plan was posted for public and stakeholder review, and agencies engaged during the planning process were specifically invited to provide comments. Invitations to review the draft plan were also extended to the neighboring counties of Indian River, Okeechobee and Martin. All feedback received was compiled, evaluated, and incorporated as appropriate into the final LMS. The completed plan was then

submitted to the Florida Division of Emergency Management and FEMA Region IV for review and approval.

Step 9: Adopt the Plan

Following state and federal approval, the LMS will be formally adopted by St. Lucie County and each participating jurisdiction through resolution or other official action. Adoption documentation is included in the plan. Formal adoption establishes the LMS as the guiding framework for hazard mitigation activities in the county and ensures compliance with DMA 2000 and CRS requirements.

Step 10: Implement, Evaluate, and Revise the Plan

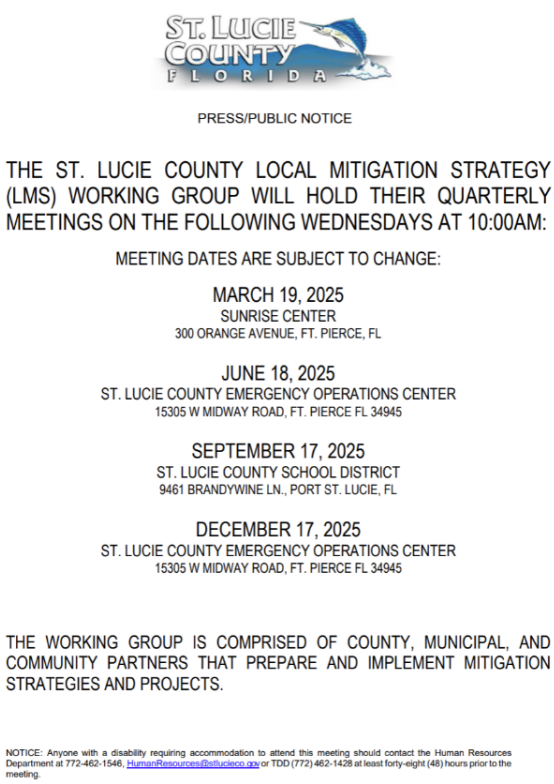
Ongoing implementation and maintenance are essential to the effectiveness of the St. Lucie County LMS. Upon adoption, mitigation actions identified in the plan are advanced through responsible departments and partner agencies. The Plan Maintenance section outlines procedures for tracking progress, evaluating implementation, and updating mitigation priorities as conditions change.

The LMS follows a formal five-year update cycle to maintain eligibility for FEMA mitigation funding and continued CRS participation. The maintenance process also commits to continued public involvement through open meetings, surveys, and opportunities for community input, ensuring that the plan remains responsive, current, and reflective of local priorities.

Public Participation Process

Public participation is a critical and mandated element of the Local Mitigation Strategy update process in St. Lucie County. Both FEMA regulations (44 CFR § 201.6(b)(1)) and the State of Florida's LMS guidance require meaningful opportunities for public involvement. Input gathered from residents and community stakeholders throughout the planning effort helps ensure that the LMS reflects local conditions, lived experiences, and community priorities. This engagement is especially important for reaching underserved and vulnerable populations, who often face disproportionate impacts from natural hazards.

To support inclusive participation for this LMS update, St. Lucie County and its jurisdictions offered multiple avenues for public engagement, including in-person opportunities and an online survey. Recognizing that reliance on in-person meetings alone can limit participation, the County and municipalities used a digital survey to provide a convenient and accessible way for residents and stakeholders to share concerns, identify risks, and offer mitigation ideas. This approach broadened participation and strengthened the overall quality and relevance of the final LMS. The press/public notice in Figure 2 was issued to encourage the public to get involved in the LMS Working Group's quarterly meetings.



PRESS/PUBLIC NOTICE

THE ST. LUCIE COUNTY LOCAL MITIGATION STRATEGY (LMS) WORKING GROUP WILL HOLD THEIR QUARTERLY MEETINGS ON THE FOLLOWING WEDNESDAYS AT 10:00AM:

MEETING DATES ARE SUBJECT TO CHANGE:

MARCH 19, 2025
SUNRISE CENTER
300 ORANGE AVENUE, FT. PIERCE, FL

JUNE 18, 2025
ST. LUCIE COUNTY EMERGENCY OPERATIONS CENTER
15305 W MIDWAY ROAD, FT. PIERCE FL 34945

SEPTEMBER 17, 2025
ST. LUCIE COUNTY SCHOOL DISTRICT
9461 BRANDYWINE LN., PORT ST. LUCIE, FL

DECEMBER 17, 2025
ST. LUCIE COUNTY EMERGENCY OPERATIONS CENTER
15305 W MIDWAY ROAD, FT. PIERCE FL 34945

THE WORKING GROUP IS COMPRISED OF COUNTY, MUNICIPAL, AND COMMUNITY PARTNERS THAT PREPARE AND IMPLEMENT MITIGATION STRATEGIES AND PROJECTS.

NOTICE: Anyone with a disability requiring accommodation to attend this meeting should contact the Human Resources Department at 772-462-1546, HumanResources@stlucieco.gov or TDD (772) 462-1428 at least forty-eight (48) hours prior to the meeting.

Figure 2: Press and Public Notice of LMS Working Group Meetings

Digital Survey

This community survey was conducted to better understand residents' awareness of hazards, levels of concern across a wide range of natural and human-caused threats, and perceptions of vulnerability in St. Lucie County. Responses reflect input from residents, retirees, local employees, educators, public sector staff, and individuals working in or near the county, representing incorporated and unincorporated areas including Port St. Lucie, Fort Pierce, St. Lucie Village, and surrounding communities. Overall, respondents demonstrated varying levels of familiarity with local hazards, but consistently identified flooding, hurricanes, power outages, infrastructure failure, and impacts on critical facilities, such as hospitals, schools, roads, utilities, and the nuclear power plant, as primary concerns. Many participants emphasized heightened vulnerability among elderly residents, low-income households, mobile home communities, coastal and low-lying neighborhoods, and areas with recurring drainage issues. Survey results also highlight strong public support for mitigation actions related to infrastructure improvements, flood risk reduction, emergency communications, and protection of critical facilities, underscoring the importance of integrating community perspectives into the County's hazard mitigation and resilience planning efforts. The public survey was conducted in English, Spanish, and Haitian-Creole. Figure 3, Figure 4, and Figure 5 display the flyers that were disseminated throughout the county.

Figure 3: English Version of the Public Survey Flyer

Figure 4: Spanish Version of the Public Survey Flyer

Figure 5: Haitian-Creole Version of the Public Survey Flyer

RESPONDENT SNAPSHOT

A total of 148 individuals participated in the survey, representing a broad cross-section of the county. Most respondents live in Port St. Lucie, which accounted for 86 participants. Twenty-five respondents live in unincorporated areas of the county, while 19 reside in Fort Pierce and 12 in St. Lucie Village. A small number of participants reported living outside the county, including three from Indian River County, one from Hutchinson Island, one from Vero Beach, and one from Manatee County. They are listed in Figure 6.

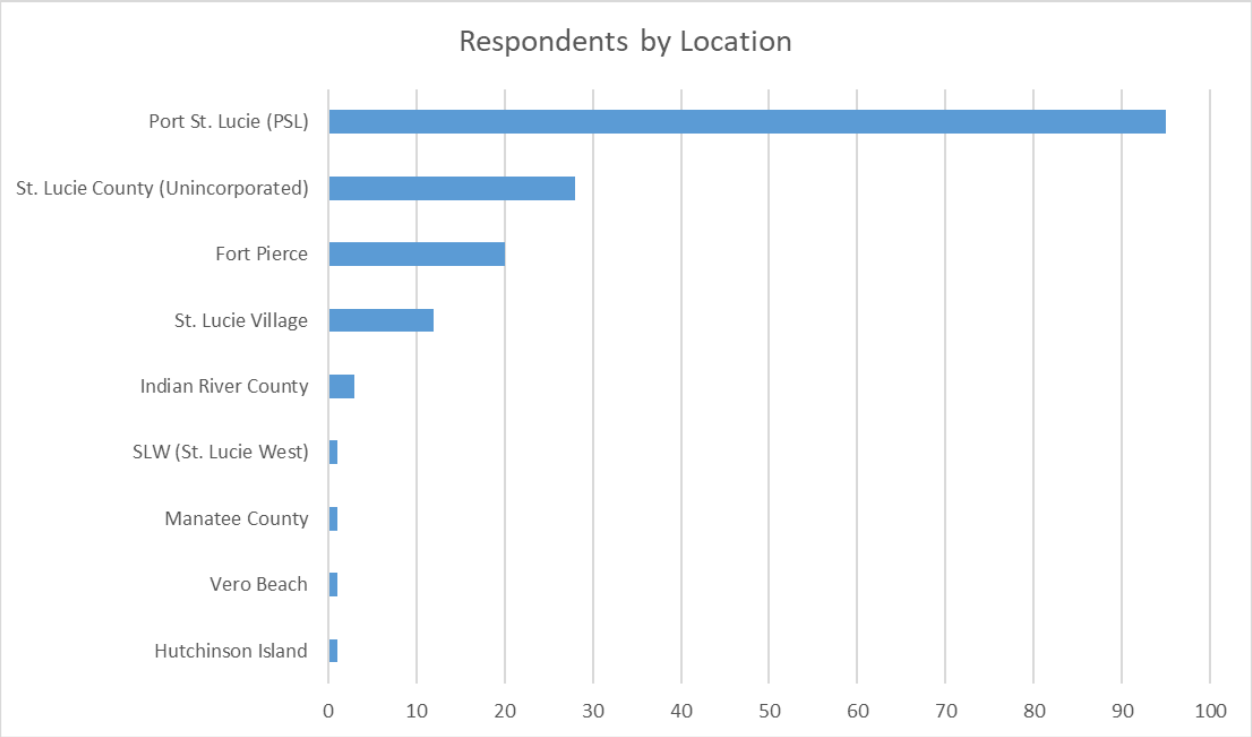


Figure 6: Respondents by Location Public Survey Results

Employment patterns among respondents varied significantly. Fifty-six individuals reported that they are not currently working, which includes retirees, homemakers, individuals with disabilities, job seekers, and seasonal workers. Fifty-two respondents work in the public sector at the local level, including county government, municipalities, special districts, and schools. Fifteen participants are employed in the private sector outside the county, while eleven work in private businesses in the county. Five respondents work in state or federal government roles, and four identified as self-employed.

HOW RESIDENTS PERCEIVED HAZARD MITIGATION

Figure 7 reflects responses from 147 participants and reveals that most people have at least some familiarity with hazard mitigation. A majority (53.7%) say they have heard of it and know a little, while another 20.4% report that they know a lot about it. Combined, this means 85.7% of respondents have some level of awareness of hazard mitigation.

However, the data also shows a notable gap in understanding. About 11.6% of respondents have heard of hazard mitigation but admit they do not know much about it. Another 11.6% have never heard of the term, and 2.7% are unsure. Together, these two groups represent 14.3% of the population that is effectively unaware of hazard mitigation.

This suggests a strong foundation for public engagement: Three out of four residents are moderately aware, and one in five feels well-informed. At the same time, roughly one in seven residents remains unfamiliar, and about one in nine has only superficial knowledge. These gaps highlight a clear opportunity

for targeted education and outreach to move more residents from basic awareness to deeper understanding.

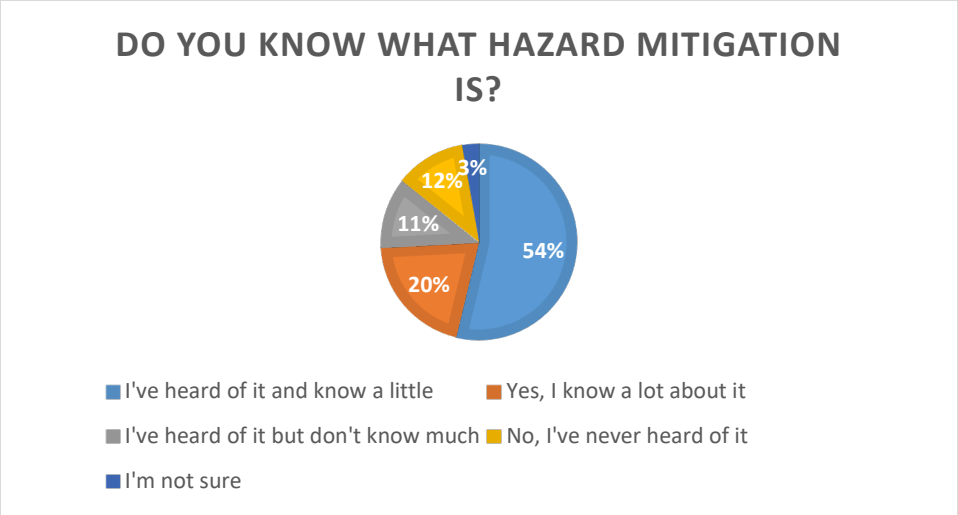


Figure 7: Hazard Mitigation Public Survey Results

PERCEIVED RISKS BY PARTICIPANTS: WHAT DO RESIDENTS WORRY ABOUT?

Results of the public survey about hazards are shown in Figure 8. Hurricanes and tropical storms anchor the top tier of concern. The "very worried" bar is visibly long, and when combined with "somewhat worried," it forms a majority of total responses. Severe thunderstorms and lightning display a similar pattern, reinforcing that convective weather and tropical systems are front of mind.

Extreme temperatures elicit substantial worry. The "very worried" segment is large, and "somewhat worried" adds significant weight, indicating residents are attuned to heat risks and likely the health, energy, and economic impacts that come with hotter periods. Cascading failures, specifically power systems failure and communication system failure, also are high-concern categories. Their "very" and "somewhat" worried portions appear among the largest on the chart. This reinforces the need to think beyond the hazard itself to the fragility of lifelines and how quickly they can be restored.

Sea level rise sits in a moderate-concern band. The "somewhat worried" bar is prominent, while the "very worried" portion is smaller than for storms or heat. This suggests residents view sea level rise as real but more gradually unfolding, which typically points to capital investments and land use policies rather than immediate emergency actions. Transportation system accidents present mixed concern, with a noticeable "somewhat worried" segment but a relatively larger "not very" and "not at all" portion compared with the top-tier hazards.

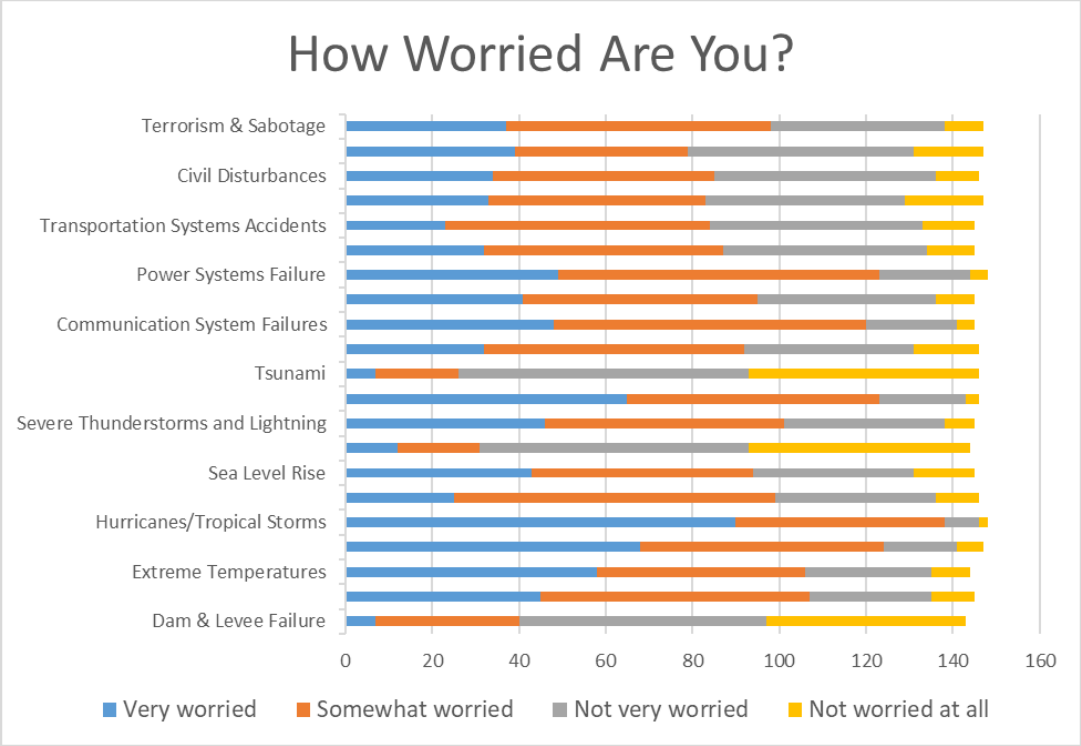


Figure 8: Hazards of Concern Public Survey Results

Tsunami and dam or levee failure show the smallest "very worried" shares and relatively large "not very" and "not at all" segments. In this coastal Florida context, that alignment makes sense: Tsunami probability is low, and large dam/levee exposure is limited. Terrorism and sabotage, and civil disturbances, demonstrate broad dispersion across "somewhat," "not very," and "not at all," with a smaller "very worried" share than the storm and infrastructure categories. That suggests these are background concerns but not leading drivers of preparedness behavior.

INSURANCE COVERAGE

Figure 9 shows the level of insurance coverage, while Figure 10 shows policies by types of hazards. Among property owners, who represented 135 respondents, windstorm and fire coverage were the most common types of insurance, reported by 65.9% and 63.7% of owners, respectively. Flood insurance was significantly less prevalent, with only 42.2% of owners reporting coverage. Earthquake and landslide coverage were rare, at 3.7% and 3.0%, respectively. Notably, 15.6% of owners, or 21 individuals, reported having no disaster-related insurance coverage at all.

Analysis of policy portfolios revealed that 21 owners hold no policies, 29 have one policy, 51 maintain two policies, 29 have three policies, and only a handful have four or five policies. These findings highlight a critical gap in flood insurance adoption and indicate that approximately one in six property owners lacks any form of disaster coverage, underscoring the need for targeted outreach in flood-prone areas.

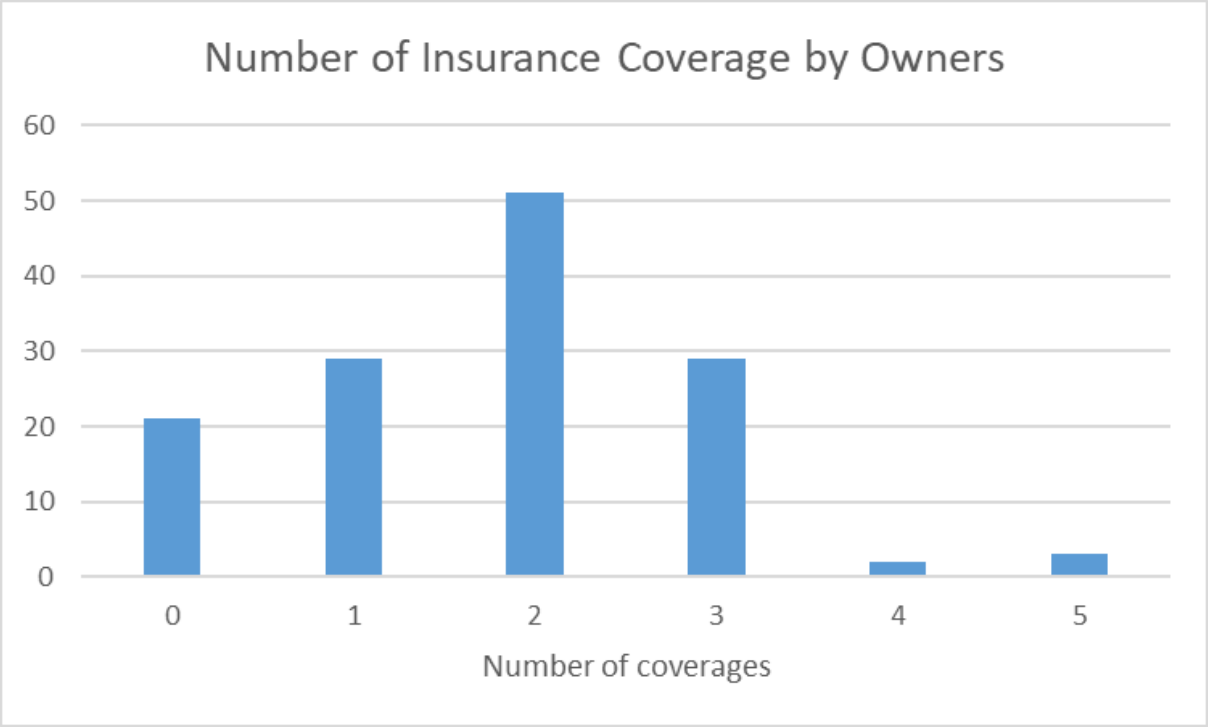


Figure 9: Public Survey Results for the Number of Insurance Policies

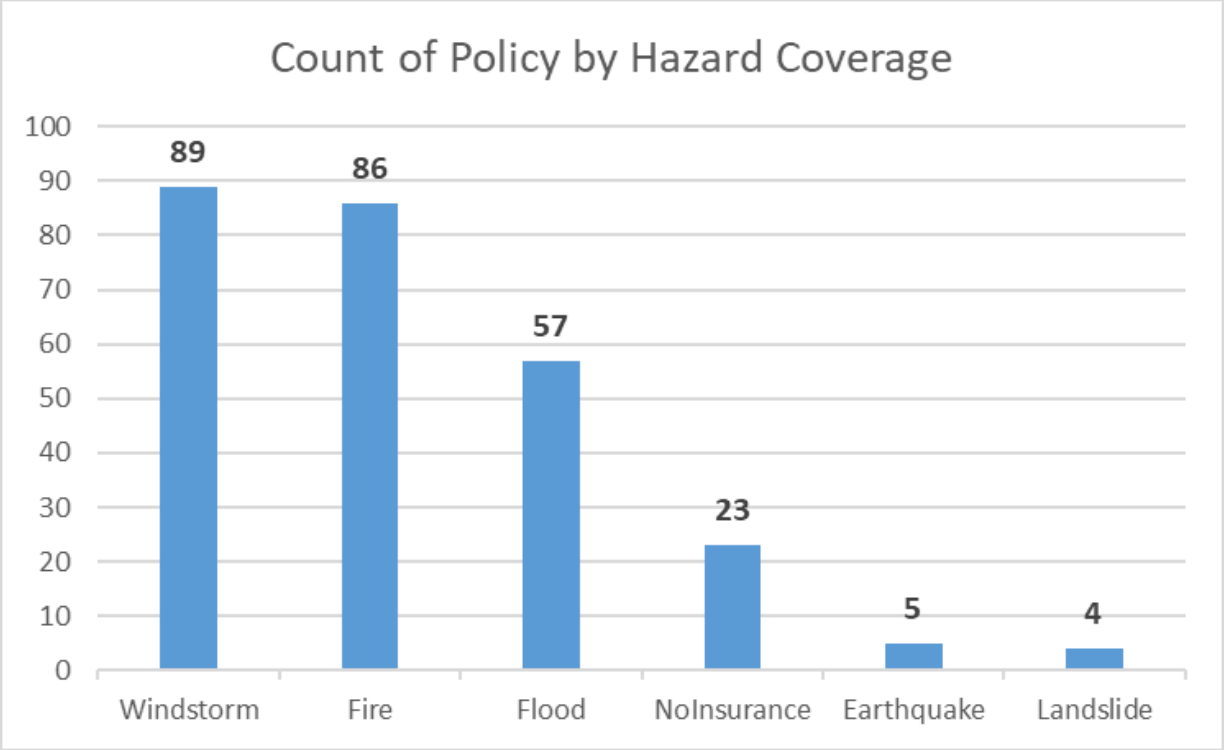


Figure 10: Count of Policies by Hazard Coverage

RESIDENT PRIORITIES FOR RESILIENCE: LIFELINES, NATURAL PROTECTION, HOMES, AND LAND USE

Figure 11 reflects the public's concern about preparing for future disasters. The highest priority was on the safety of roads, hospitals, and communications systems.

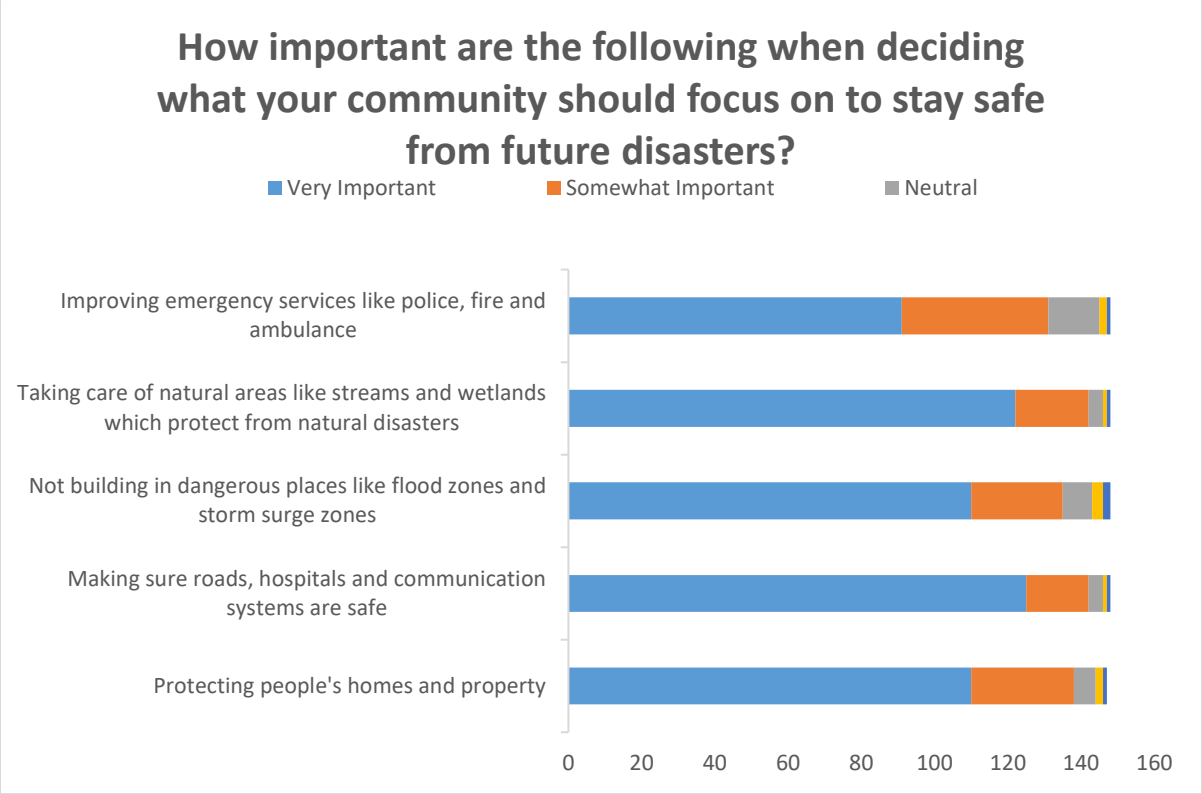


Figure 11: Public Survey Results for the Focus on Future Disasters

Care for natural areas that protect the community, such as streams and wetlands, ranked a close second. Across 148 responses, 82.43% rate it very important and 13.51% somewhat important, with just 4.06% neutral or not important. The average score is 4.76. This pattern confirms that residents value nature-based protection alongside engineered solutions, and they see ecological systems as essential buffers against flooding and storm surge.

Protecting homes and property also sits near the top. Out of 147 responses, 74.83% call it very important and 19.05% somewhat important. Only 5.44% register neutral or not important. The average score of 4.66 shows broad endorsement for actions that reduce damage at the parcel level, from wind and flood retrofits to roof anchorage and impact glazing. Avoiding construction in dangerous places, including flood zones and storm surge areas, earns strong support as well. With 148 responses, 74.32% rate it very important and 16.89% somewhat important. The neutral and not important shares total 8.79%, and the average score is 4.61. Residents are clearly comfortable with policies that steer development away from high-risk areas, a sign that prevention through land use decisions resonates with the public.

Improving emergency services, including police, fire, and ambulance, is widely supported but with slightly lower intensity than the other priorities. Out of 148 responses, 61.49% rate it very important and 27.03% somewhat important, while 11.81% are neutral or not important. The average score is 4.47. This result still indicates strong approval, yet it suggests the community places even greater emphasis on preventing damage and maintaining lifelines than on expanding response capacity alone.

If we combine very important and somewhat important for each item, the pattern is consistent. Safeguarding roads, hospitals, and communication systems and caring for natural areas both reach 95.95%. Protecting homes and property reaches 93.88%. Avoiding dangerous places reaches 91.22%. Improving emergency services reaches 88.51%. All five priorities sit well above 88%, which means residents are aligned around a comprehensive approach that blends infrastructure hardening, nature-based protection, household-level retrofits, and risk-aware land use.

PLACES OF CONCERN

The data in Figure 12 show that residents are most concerned about critical infrastructure and essential services rather than social or recreational spaces. The highest levels of concern center on power generation facilities, housing, and transportation networks, followed by coastal areas and institutions that serve large populations, such as schools and hospitals.

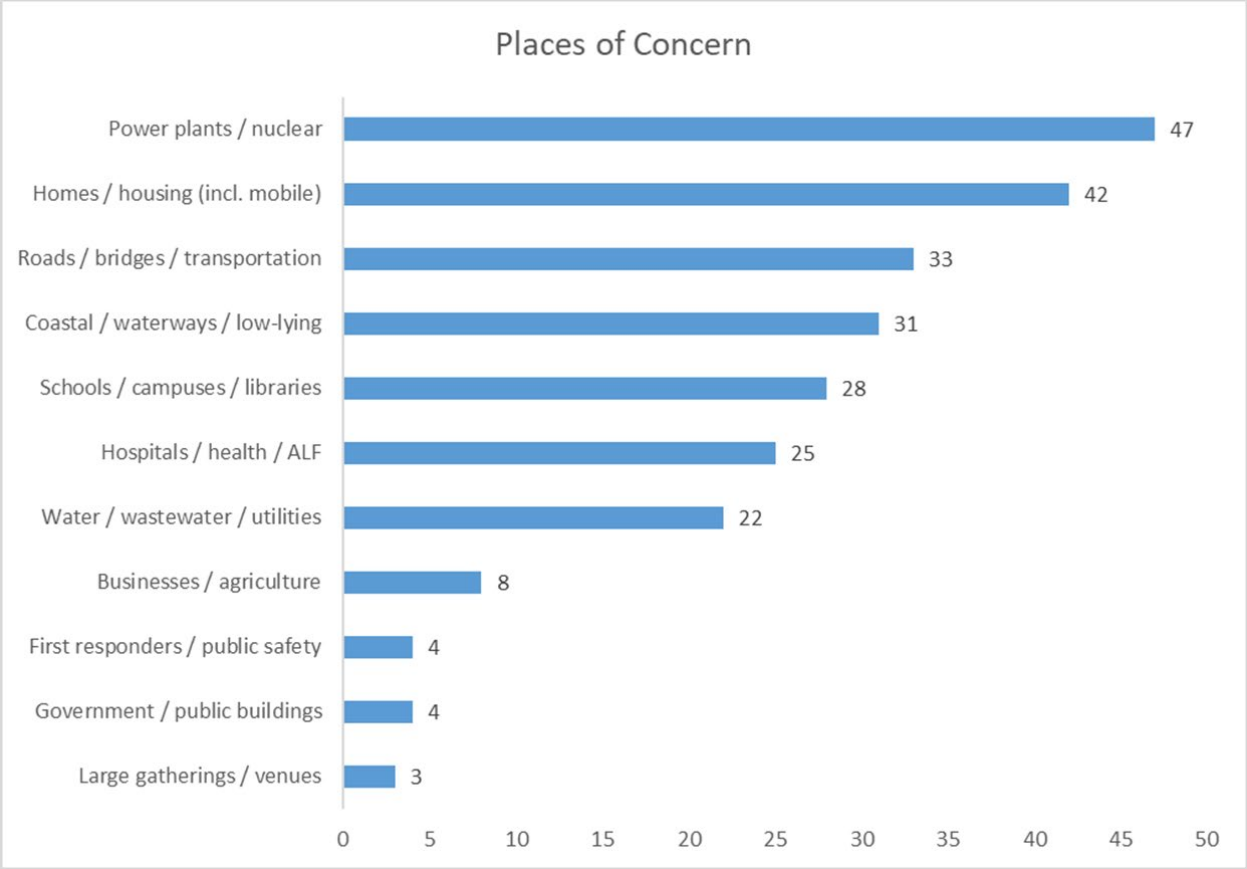


Figure 12: Public Survey Results for the Places of Concern

TOP AREAS OF CONCERN

Power plants and nuclear facilities rank first with 47 mentions, signaling that residents view energy infrastructure as highly vulnerable and essential for community safety. This concern likely reflects the cascading impacts of power loss during disasters, which can affect hospitals, water systems, and emergency response. Homes and housing, including mobile homes, come second with 42 mentions. This indicates strong awareness of residential vulnerability, particularly in hurricane-prone regions where wind and flood damage can displace families and strain recovery resources.

Roads, bridges, and transportation systems follow with 33 mentions, underscoring the importance of maintaining evacuation routes and supply chains during emergencies. Disruption in transportation can delay rescue operations and hinder access to critical services. Coastal areas, waterways, and low-lying zones are next with 31 mentions. This reflects concern about flooding, storm surge, and erosion, which are common hazards in coastal Florida communities.

MODERATE CONCERNS

Schools, campuses, and libraries received 28 mentions, while hospitals and health facilities were close behind at 25. These results highlight the need to protect places that house vulnerable populations and serve as shelters or care centers during disasters. Water, wastewater, and utility systems were cited 22 times, reinforcing the importance of lifeline infrastructure for sanitation and public health.

LOWER-TIER CONCERNS

Businesses and agriculture were mentioned only 8 times, and first responders/public safety facilities and government buildings each received 4 mentions. Large gathering venues were the least cited, with only 3 mentions. Although these areas are still relevant, residents appear to prioritize core infrastructure and essential services over economic or recreational spaces.

The community's priorities clearly lean toward safeguarding lifelines and critical facilities. Energy systems, housing, transportation, and coastal protection dominate the list, followed by schools, hospitals, and utilities. This pattern suggests that resilience planning should focus on hardening power infrastructure, improving drainage and flood defenses, reinforcing evacuation routes, and ensuring continuity of operations for health and education facilities. Lower concern for venues and government buildings does not eliminate their importance but indicates they are secondary compared with systems that sustain life and recovery.

PARTICIPANTS' PRIORITIES: IMPROVEMENT IDEAS

Figure 13 shows that residents strongly favor improvements that address flooding, environmental protection, and transportation safety. These priorities reflect a desire for both immediate hazard mitigation and long-term resilience strategies. The distribution of responses shows a clear hierarchy, with drainage and stormwater management at the top, followed closely by ecosystem protection and road infrastructure upgrades.

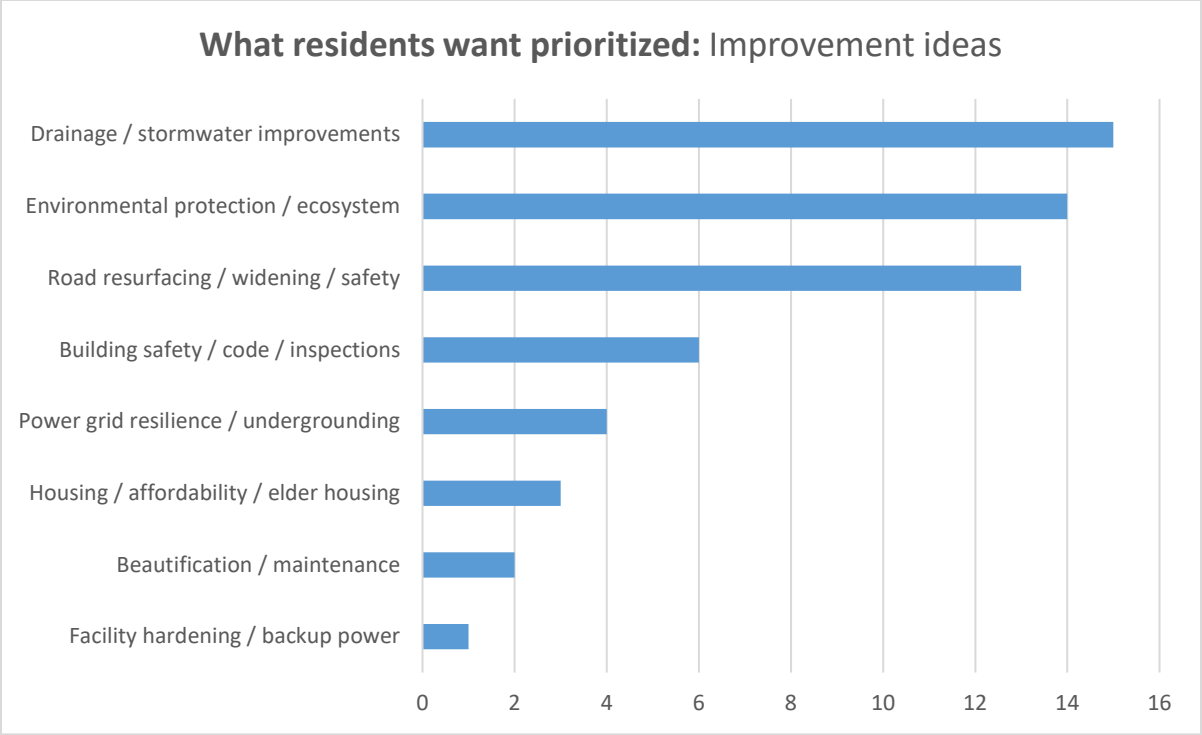


Figure 13: Public Survey Results for the Prioritization of Issues

Residents clearly prioritize improvements that address flooding, environmental protection, and transportation safety. Drainage and stormwater upgrades lead the list with about 15 mentions, signaling strong concern over flooding and water management. This emphasis likely reflects recurring storm events and the county's vulnerability to heavy rainfall and tidal backflow. Environmental protection and ecosystem care follow closely with 14 mentions, showing that residents value natural systems such as wetlands and streams as critical defenses against disasters. Road resurfacing, widening, and safety enhancements rank third with roughly 13 mentions, underscoring the importance of reliable transportation routes for evacuation, emergency response, and daily mobility.

Secondary priorities include building safety, code compliance, and inspections, which received about eight mentions, indicating that residents want stronger enforcement of standards to reduce wind and flood damage. Power grid resilience and undergrounding were noted four times, reflecting awareness of the cascading impacts of outages during disasters. These priorities suggest that while structural integrity and energy reliability matter, they are viewed as complementary to broader infrastructure and environmental measures.

Lower-tier concerns include housing affordability and elder housing, mentioned three times, and beautification and maintenance, which received two mentions. Facility hardening and backup power were the least cited, with only one mention. This pattern shows that residents place greater emphasis on community-wide improvements that prevent damage and maintain essential services rather than isolated upgrades to individual facilities. Overall, the data points to a strong preference for proactive, system-level investments that reduce risk and enhance resilience before disasters strike.

PARTICIPANTS' PRIORITIES: FACILITIES MENTIONED

According to Figure 14, residents most frequently cited schools and shelters as facilities needing improvement, with 10 mentions reflecting their critical role during emergencies. Utilities, such as the power grid and substations, follow with 7 mentions, and hospitals, clinics, and assisted living facilities rank next with 6, highlighting the importance of maintaining essential services and healthcare access during disasters. Emergency operations centers and public safety facilities received 3 mentions, while libraries and fire hydrants were noted only 2 and 1 times, respectively, indicating that while these assets matter, residents prioritize hardening shelters, lifelines, and healthcare infrastructure to ensure safety and continuity during crises.

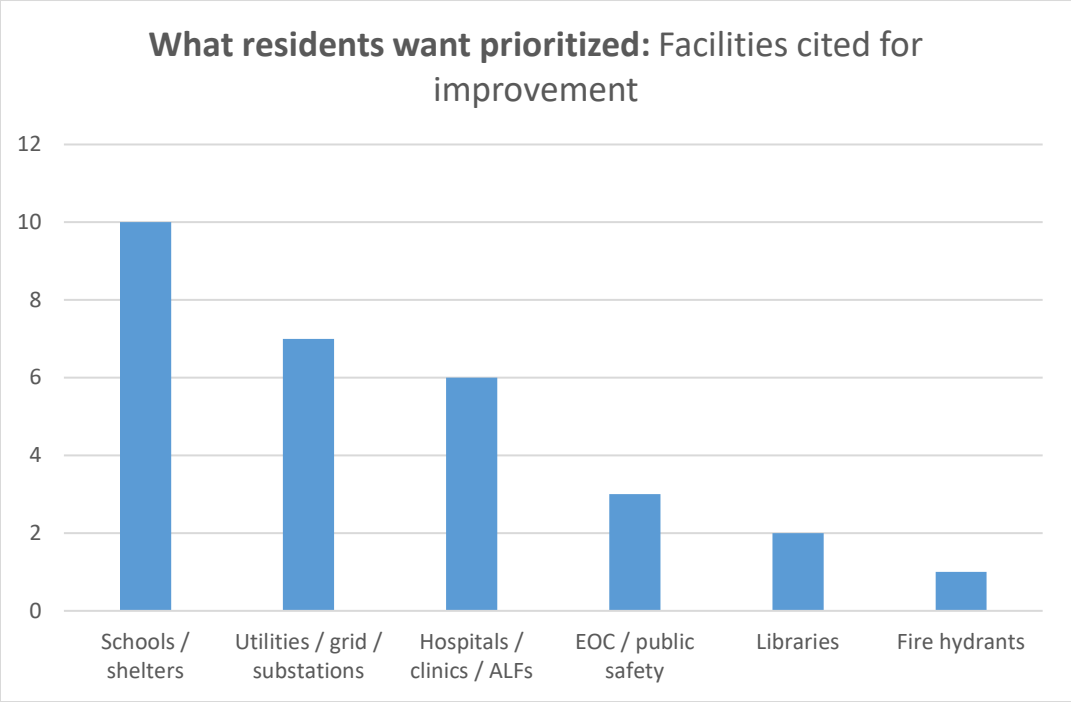


Figure 14: Public Survey Results for the Prioritization of Facilities

HOW RESIDENTS RECEIVE HAZARD AND RISK REDUCTION INFORMATION

Residents rely on multiple channels to obtain information about hazards and risk reduction. According to Figure 15, Emergency Alert Systems were the most frequently mentioned source, cited by 105 respondents. Television followed closely with 98 mentions, while social media was noted by 89 participants. Text messaging was identified by 75 respondents, and the county website was mentioned by 73. Community networks and word of mouth also were significant, with 62 mentions, and radio was cited by 58 respondents.

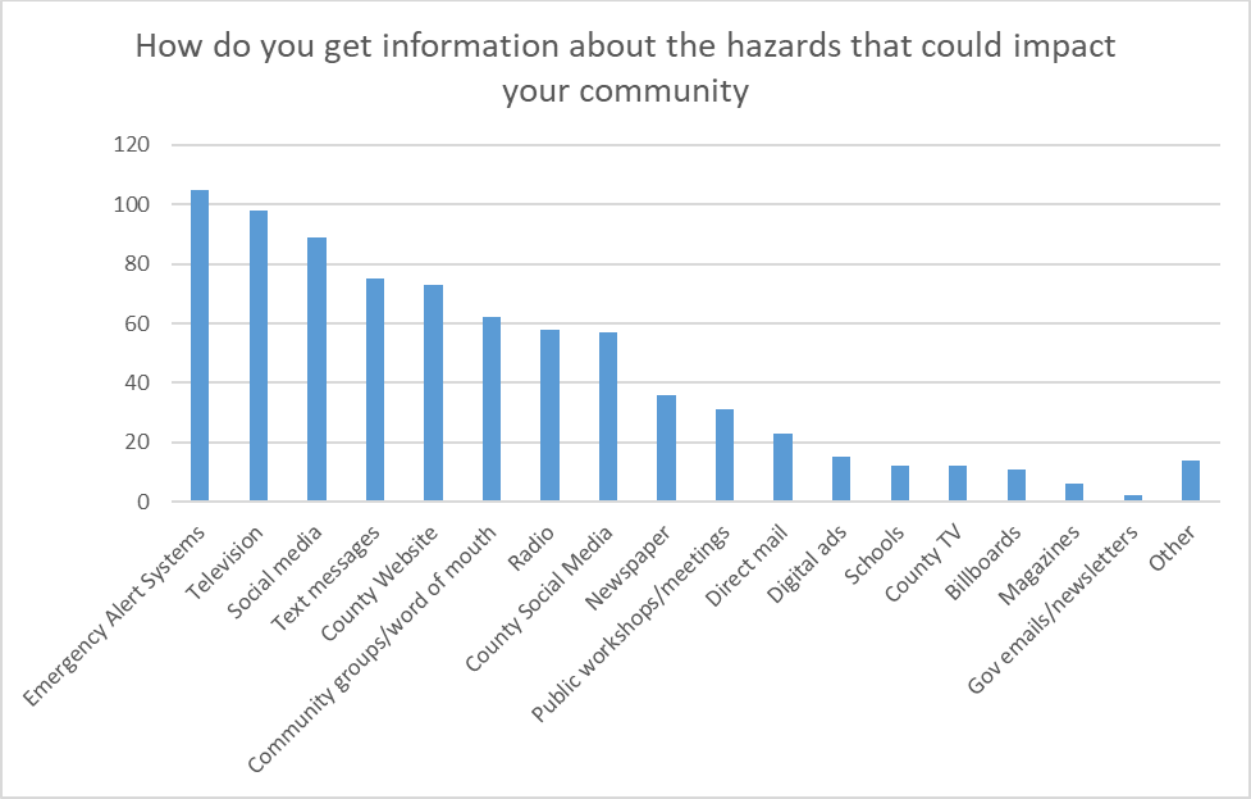


Figure 15: Public Survey Results for the Sources of Information About Hazards

When grouped by category, 86.4% of respondents reported using official sources, such as county alerts and the National Hurricane Center. Media channels, including television, radio, print, and online platforms, were used by 75.5% of participants. Community and social sources were reported by 74.8%, while marketing and other channels accounted for 26.5%. These findings suggest that official alerts combined with television, text messaging, and the county website or social media outreach would effectively inform most residents. Community groups and schools serve as strong relays for information dissemination.

RESIDENT AWARENESS AND PREPAREDNESS: ACCESS TO HAZARD INFORMATION AND RISK REDUCTION KNOWLEDGE

Seventy-one percent say they receive enough hazard information (Figure 16), and 72% say they know how to lower their vulnerability (Figure 17). This near parity suggests that current outreach is largely effective at translating information into practical knowledge, with a strong majority reporting that they can act on what they learn. The results imply that hazard communication is reaching much of the community with messages that are not only visible but also usable.

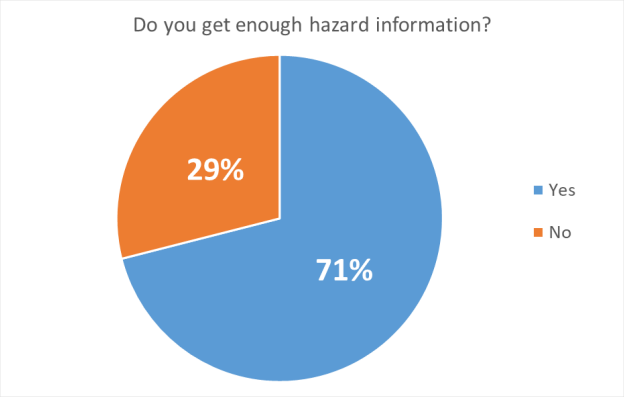


Figure 16: Public Survey Results for the Amount of Hazard Information

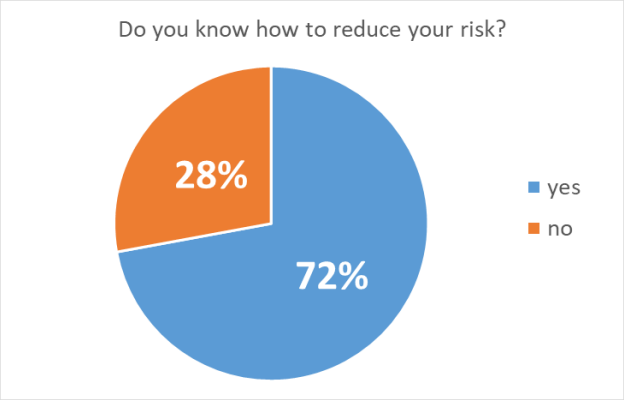


Figure 17: Public Survey Results for Knowledge About Reduction of Risk

At the same time, these figures highlight a persistent gap. Twenty-nine percent do not feel they get enough hazard information, and 28% do not know how to reduce risk, meaning more than one in four residents lacks either awareness or actionable guidance. This gap likely reflects challenges in accessibility, timeliness, or relevance of content for specific groups, such as renters, seniors, non-English speakers, or households with limited internet access. Bridging the two charts, the task is to convert the "informed but unsure" and "unreached" segments into confident actors by pairing concise, seasonal hazard messages with clear, step-by-step actions—home hardening checklists, flood insurance prompts in high-risk areas, and neighborhood-level project updates—delivered through trusted channels and community relays.

Documentation

Figure 18 to Figure 25 show sign-in sheets and agendas for all meetings of the LMS Working Group during the planning process.

St. Lucie County LMS Working Group – 2nd Quarter Meeting Minutes
Date: Wednesday, June 18, 2025
Time: 10:00 a.m. – 12:00 p.m.
Location: Fenn Center, 2000 Virginia Ave, Fort Pierce, FL

I. Call to Order

The meeting was called to order at 10:00 a.m.

II. Welcome and Introductions

Introductions were made by attendees, including representatives from St. Lucie County, the City of Fort Pierce, Port St. Lucie.

III. Public Comment

None.

IV. Approval of Agenda

Motion to approve the agenda by Paul; seconded by Matt. Motion passed.

V. Approval of Minutes – March 19, 2025

Motion to approve the previous meeting minutes by Venetia; seconded by Patrick. Motion passed.

VI. LMS Update Project – Jeanne Bunting, Joe Harris (IEM)

Joe and Jeanne introduced the IEM team and provided an overview of the LMS update process. Topics included:

- Scope of work and project timeline
- Deadlines and planning goals
- What IEM expects from stakeholders
- Alignment with the FDEM Planning Manual
- Community engagement strategy
- Identification of hazards and vulnerabilities
    - Shane suggested adding Brightline (transportation)
    - Patrick raised concerns regarding water supply
- Emphasis on open data sharing with IEM
- Retaining most previous goals
- Removing outdated references
- Actions and implementation planning
- Plan maintenance through monitoring, updates, regular reviews, and public involvement
- Upcoming distribution of public survey
- Importance of capturing accurate impacts and photo documentation

VII. Working Group Action Items

A. HMGP Funding Update

- Shane discussed current HMGP opportunities and Elevate Florida
- Application requirements include letters of intent and updated cost estimates

B. New Project Scoring

- Oscar shared the updated PPL, noted that projects have been removed at the request of agencies and/or due to completion.
- New projects were added and ranked based on the scoring committee results and are included.
- One project remains unranked due to late submission
- Motion to approve by Carlos, Second by Paul.

VIII. Member Comments and Miscellaneous

- Joy Hawthorne to be added to the LMS distribution list since Parks and Facilities have split

IX. Adjourn

Motion to adjourn by Paul; seconded by Venetia.

Attendee List – June 18, 2025 LMS Working Group Meeting

Name	Agency
John Frank	SLC Public Works (PW)
Oscar Hance	St. Lucie County Emergency Management
Jason Knight	SLC Mosquito Control (MC)
Paul Thomas	City of Fort Pierce
Tioka Wolfhagen	City of Fort Pierce
Tracy Telle	City of Fort Pierce
Ashaad Addison	Treasure Coast Food Bank
Shane Ratliff	Port St. Lucie Emergency Management
Carlos Camacho	PSL Utility Systems Department
Sandra Bogan	St. Lucie County Environmental Resources

Terrill Mincey	SLC Mosquito Control
Matt Baum	SLC Facilities
Venetia Barnes	City of Fort Pierce
Paulette Bell	SLC Utilities
Patrick Dayan	SLC Public Works
Bill Thiess	St. Lucie Village
Joy Hawthorne	SLC Parks & Rec
Yi Ding	St. Lucie TPO
Rogelio Gonzalez	COA Community Transit
Caleb Gillette	Fort Pierce Police Department
Dave Jacobs	Red Cross PB/TC
John Dutton	PSL Public Works
Abe Alvarez	PSL Police Department

Figure 18: Second Quarter Meeting Minutes

ST. LUCIE COUNTY PUBLIC SAFETY

ST. LUCIE COUNTY EMERGENCY MANAGEMENT DIVISION
LOCAL MITIGATION STRATEGY WORKING GROUP MEETING
SIGN IN SHEET – 06/18/2025

ATTENDEES			
NAME	AGENCY	PHONE	E-MAIL
John Frank	SLC - PW	[redacted]	[redacted]
Oscar Haines	SLC EM		
Jason Knight	SLC MC		
Paul Thomas	City of Ft. Pierce		
Trisha Wolfhagen	City of Fort Pierce		
TRACY TEMS	CITY OF FP		
Ashaad Addison	Treasure Coast Food Bank		
Shane Ratliff	PSL EM		
Chris Candelaria	PSLUSD		
Terrill Mincey	SLCMC		
Matt Baum	SLC Facilities		
Venetia Barnes	COFP		
Paulette Bell	SLCU		

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ST. LUCIE COUNTY PUBLIC SAFETY

ST. LUCIE COUNTY EMERGENCY MANAGEMENT DIVISION
LOCAL MITIGATION STRATEGY WORKING GROUP MEETING
SIGN IN SHEET – 06/18/2025

ATTENDEES			
NAME	AGENCY	PHONE	E-MAIL
PATRICK DUNN	SLC Public Works	[redacted]	[redacted]
Bill Thiess	St. Lucie Village		
Jay Hawthorne	ST. Lucie BOCC Park		
Yi Ding	St. Lucie TPO		
Rogelio Gonzalez	COA Community Transit		
CALEB GILLETTE	FORT PIERCE POLICE DEPT		
DAVE MACOOS	Red Cross PBTC.		
John Dunton	PSL PW		
ABE ALVAREZ	PSL Police		

Figure 19: Second Quarter Sign-In Sheet

St. Lucie County LMS Working Group – 2nd Quarter Meeting Minutes
Date: Wednesday, June 18, 2025
Time: 10:00 a.m. – 12:00 p.m.
Location: Fenn Center, 2000 Virginia Ave, Fort Pierce, FL

I. Call to Order

The meeting was called to order at 10:00 a.m.

II. Welcome and Introductions

Introductions were made by attendees, including representatives from St. Lucie County, the City of Fort Pierce, Port St. Lucie.

III. Public Comment

None.

IV. Approval of Agenda

Motion to approve the agenda by Paul; seconded by Matt. Motion passed.

V. Approval of Minutes – March 19, 2025

Motion to approve the previous meeting minutes by Venetia; seconded by Patrick. Motion passed.

VI. LMS Update Project – Jeanne Bunting, Joe Harris (IEM)

Joe and Jeanne introduced the IEM team and provided an overview of the LMS update process. Topics included:

- Scope of work and project timeline
- Deadlines and planning goals
- What IEM expects from stakeholders
- Alignment with the FDEM Planning Manual
- Community engagement strategy
- Identification of hazards and vulnerabilities
    - Shane suggested adding Brightline (transportation)
    - Patrick raised concerns regarding water supply
- Emphasis on open data sharing with IEM
- Retaining most previous goals
- Removing outdated references
- Actions and implementation planning
- Plan maintenance through monitoring, updates, regular reviews, and public involvement
- Upcoming distribution of public survey
- Importance of capturing accurate impacts and photo documentation

VII. Working Group Action Items

A. HMGP Funding Update

- Shane discussed current HMGP opportunities and Elevate Florida
- Application requirements include letters of intent and updated cost estimates

B. New Project Scoring

- Oscar shared the updated PPL, noted that projects have been removed at the request of agencies and/or due to completion.
- New projects were added and ranked based on the scoring committee results and are included.
- One project remains unranked due to late submission
- Motion to approve by Carlos, Second by Paul.

VIII. Member Comments and Miscellaneous

- Joy Hawthorne to be added to the LMS distribution list since Parks and Facilities have split

IX. Adjourn

Motion to adjourn by Paul; seconded by Venetia.

Attendee List – June 18, 2025 LMS Working Group Meeting

Name	Agency
John Frank	SLC Public Works (PW)
Oscar Hance	St. Lucie County Emergency Management
Jason Knight	SLC Mosquito Control (MC)
Paul Thomas	City of Fort Pierce
Tioka Wolfhagen	City of Fort Pierce
Tracy Telle	City of Fort Pierce
Ashaad Addison	Treasure Coast Food Bank
Shane Ratliff	Port St. Lucie Emergency Management
Carlos Camacho	PSL Utility Systems Department
Sandra Bogan	St. Lucie County Environmental Resources

Terrill Mincey	SLC Mosquito Control
Matt Baum	SLC Facilities
Venetia Barnes	City of Fort Pierce
Paulette Bell	SLC Utilities
Patrick Dayan	SLC Public Works
Bill Thiess	St. Lucie Village
Joy Hawthorne	SLC Parks & Rec
Yi Ding	St. Lucie TPO
Rogelio Gonzalez	COA Community Transit
Caleb Gillette	Fort Pierce Police Department
Dave Jacobs	Red Cross PB/TC
John Dutton	PSL Public Works
Abe Alvarez	PSL Police Department

Figure 20: Second Quarter Meeting Agenda and Minutes

ST. LUCIE COUNTY FLORIDA
PUBLIC SAFETY

ST. LUCIE COUNTY EMERGENCY MANAGEMENT DIVISION
LOCAL MITIGATION STRATEGY WORKING GROUP MEETING
SIGN IN SHEET – 06/18/2025

ATTENDEES			
NAME	AGENCY	PHONE	E-MAIL
John Frank	SLC - PW	[redacted]	[redacted]
Oscar Hance	SLC EM		
Jason Knight	SLC MC		
Paul Thomas	City of Ft. Pierce		
Nicholas Wolfhagen	City of Fort Pierce		
Tracy Tells	City of FP		
Ashaad Addison	Treasure Coast Food Bank		
Shane Ratliff	PSL EM		
Carlos Camacho	PSL USD		
Terrill Mincey	SLCMC		
Matt Baum	SLC Facilities		
Venetia Barnes	COFP		
Paulette Bell	SLCU		

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ST. LUCIE COUNTY FLORIDA
PUBLIC SAFETY

ST. LUCIE COUNTY EMERGENCY MANAGEMENT DIVISION
LOCAL MITIGATION STRATEGY WORKING GROUP MEETING
SIGN IN SHEET – 06/18/2025

ATTENDEES			
NAME	AGENCY	PHONE	E-MAIL
Patrick Dalyan	SLC Public Works	[redacted]	[redacted]
Bill Thiess	St. Lucie Village		
Jay Hawthorne	St. Lucie BOCC Park		
Yi Ding	St. Lucie TPO		
Rogelio Gonzalez	CoA Community Transit		
Caleb Gillette	Fort Pierce Police Dept		
Dave Yacobs	Red Cross PBtC.		
John Dunton	PSL PW		
Abe Alvarez	PSL Police		

Figure 21: Second Quarter Meeting Sign-In Sheet

St. Lucie County LMS Working Group – 3rd Quarter Meeting Minutes
Date: Wednesday, September 17, 2025
Time: 10:00 a.m. – 12:00 p.m.
Location: St. Lucie County Public Schools 9461 Brandywine Ln, Port St. Lucie, FL 34986

I. Call to Order
The meeting was called to order at approximately 10:06 a.m. by Chair Shane Ratliff (City of Port St. Lucie Emergency Management).

II. Welcome and Introductions
Introductions were made by attendees, including representatives from St. Lucie County, the City of Fort Pierce, Port St. Lucie, and other partner agencies. Consultant representatives from IEM (Lisa Blake, Joey Harris, Shelby Rushing) were also present (virtually).

III. Public Comment
None.

IV. Approval of Agenda
Motion to approve the agenda by Nicole Fogarty; seconded by Carlos Camacho. Motion passed unanimously.

V. Approval of Minutes – June 18, 2025
Amendment to add Sandra Bogan to attendance. Motion to approve requested amendment by Nicole Fogarty; seconded by Terrill Mincey. Motion to approve amended minutes by Sandra Bogan; seconded by Nicole Fogarty. Motion passed unanimously.

VI. LMS Update Project – Lisa Blake (IEM)
Progress since June included hazard profiles (erosion, tornadoes, sea level rise), GIS mapping, and distribution of a public survey (49 responses received; none in Spanish/Haitian Creole).

Data needs discussed:
- County's flood vulnerability assessment and additional hazard modeling (Sandra Bogan).
- Brightline rail accidents added to transportation hazards (Shane Ratliff).
- Stormwater Master Plan update in progress (Patrick Dayan).
- Repetitive loss and severe repetitive loss property data shared by local jurisdictions.

Group noted population growth increases overall risk exposure, especially in Tradition area (wildfire interface and flooding concerns).
IEM will distribute hazard ranking worksheets to members for input.
Timeline remains on track for completion in March 2026.

St. Lucie County LMS Working Group – 3rd Quarter Meeting Minutes
Date: Wednesday, September 17, 2025
Time: 10:00 a.m. – 12:00 p.m.
Location: St. Lucie County Public Schools 9461 Brandywine Ln, Port St. Lucie, FL 34986

VII. Working Group Action Items
A. Elevate Florida Update – Oscar Hance
- One St. Lucie County property funded under county HMGP contribution; two on waitlist; 94 unfunded, 6 withdrawn.
- Concerns raised regarding long timelines. State prioritization focused on repetitive/severe repetitive loss properties.
- County contributed 5% HMGP funding; waiting on 12-month lock for final allocations.

B. HMGP Updates
- PSL Building B project passed final inspection; awaiting closeout; FEMA delays significant.
- SLC Utilities executed contract for three generators under Ian HMGP.
- Lakewood Park Drainage Project (Irma 2017) completed design and review; awaiting FEMA approval to move to Phase II. Delays continue.
- NRCS Emergency Watershed Program (Hurricane Milton tornado debris) awarded ~$260K; contractor mobilizing for 40-day cleanup.

VIII. CRS Updates
St. Lucie County completed three-year cycle visit. Anticipated to retain Class 5; potential to pursue Class 4 with stormwater plan points and other prerequisites.
County earned full points for posting elevation certificates via Forerunner link.
Fort Pierce and PSL on same schedule for 2026 cycle visits. Discussion of new CRS Coordinators Manual (2025 edition) and staffing reductions at ISO.

IX. Member Comments and Miscellaneous
Public survey promotion emphasized (flyers, QR codes, social media, county/city websites, libraries, utilities, private businesses).
Cutoff date for survey participation set as November 1, 2025 (with option to extend).
Members reminded to document outreach for CRS points.

X. Adjourn
Motion to adjourn by Nicole Fogarty; seconded by Carlos Camacho; Meeting adjourned at approximately 10:55 a.m. Next meeting scheduled for Wednesday, December 17, 2025, at the St. Lucie County EOC.

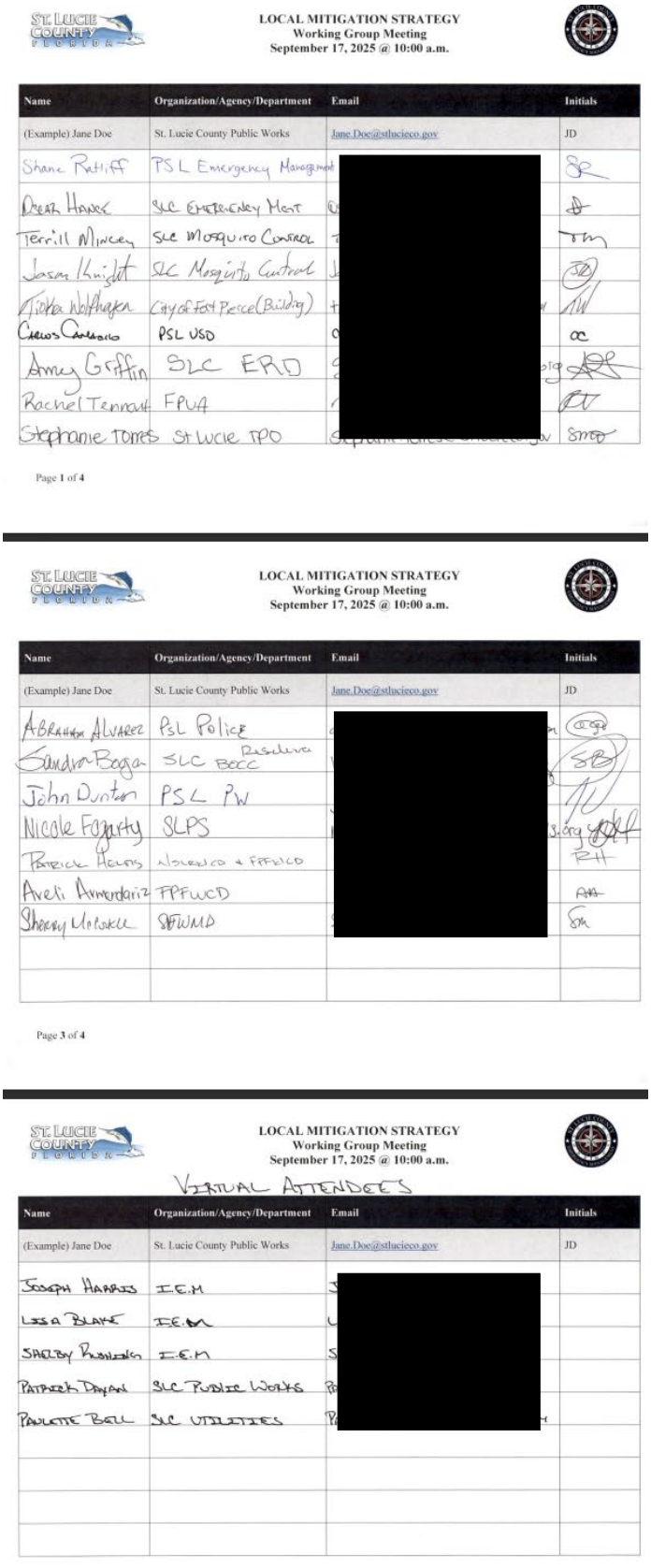
Attendance List – September 17, 2025 LMS Working Group Meeting

Name	Agency
Shane Ratliff	City of Port St. Lucie Emergency Management
Oscar Hance	St. Lucie County Emergency Management
Terrill Mincey	SLC Mosquito Control

St. Lucie County LMS Working Group – 3rd Quarter Meeting Minutes
Date: Wednesday, September 17, 2025
Time: 10:00 a.m. – 12:00 p.m.
Location: St. Lucie County Public Schools 9461 Brandywine Ln, Port St. Lucie, FL 34986

Jason Knight	SLC Mosquito Control
Tioka Wolfhagen	Ft. Pierce Building Department
Carlos Camacho	Port St. Lucie Utilities Service District
Amy Griffin	SLC Environmental Resources
Rachel Tennant	Fort Pierce Utilities Authority
Stephanie Torres	St. Lucie TPO
Abraham Alvarez	PSL Police Department
Sandra Bogan	SLC Resilience (Innovation and Performance)
John Dunton	PSL Public Works
Nicole Fogarty	St. Lucie County Emergency Management
Patrick Helms	North St Lucie River Water Control District
Areli Armendariz	Fort Pierce Farms Water Control District
Sherry McCorkle	South Florida Water Management District
VIRTUAL ATTENDEES	
Lisa Blake	IEM
Joey Harris	IEM
Shelby Rushing	IEM
Paulette Bell	St. Lucie County Utilities
Patrick Dayan	St. Lucie County Public Works

Figure 22: Third Quarter Meeting Agenda and Minutes



LOCAL MITIGATION STRATEGY
Working Group Meeting
September 17, 2025 @ 10:00 a.m.

Name	Organization/Agency/Department	Email	Initials
(Example) Jane Doe	St. Lucie County Public Works	Jane.Doe@stlucieco.gov	JD
Shane Ratliff	PSL Emergency Management	[redacted]	
Dean Hance	SLC Emergency Mgmt		
Terrill Mincey	SLC Mosquito Control		
Jason Knight	SLC Mosquito Control		
Tisha Wolfhagen	City of Fort Pierce (Building)		
Carlos Cardenas	PSL USD		
Amy Griffin	SLC ERD		
Rachel Tennant	FPUA		
Stephanie Torres	St Lucie TPO		

Page 1 of 4

LOCAL MITIGATION STRATEGY
Working Group Meeting
September 17, 2025 @ 10:00 a.m.

Name	Organization/Agency/Department	Email	Initials
(Example) Jane Doe	St. Lucie County Public Works	Jane.Doe@stlucieco.gov	JD
Abraham Alvarez	PSL Police	[redacted]	
Sandra Boggan	SLC BCC Resident		
John Dunton	PSL PW		
Nicole Fogarty	SLPS		
Patricia Helms	NSLRWCD & FPFWCD		
Aveli Armendariz	FPFWCD		
Sherry Morocco	SFWMD		

Page 3 of 4

LOCAL MITIGATION STRATEGY
Working Group Meeting
September 17, 2025 @ 10:00 a.m.

VIRTUAL ATTENDEES

Name	Organization/Agency/Department	Email	Initials
(Example) Jane Doe	St. Lucie County Public Works	Jane.Doe@stlucieco.gov	JD
Joseph Harris	I.E.M	[redacted]	
Lisa Blake	I.E.M		
Shelby Rhinesmith	I.E.M		
Patrick Dugan	SLC Public Works		
Paulette Bell	SLC Utilities		

Figure 23: Third Quarter Meeting Sign-In Sheet

St. Lucie County Local Mitigation Strategy Working Group
Fourth Quarter Meeting Minutes

Date: Wednesday, December 17, 2025 **Time:** 10:00 a.m. to 12:00 p.m.
Location: St. Lucie County EOC - 15305 W. Midway Road, Fort Pierce, Florida

I. Call to Order
The meeting was called to order at approximately 10:05 a.m. by the LMS Working Group Chair, Shane Ratliff.

II. Welcome, Introductions, and Attendance
Attendance for the December 17, 2025 LMS Working Group meeting was documented through in person sign in sheets maintained at the meeting location. In person attendance was used to establish quorum and conduct official business. Virtual participation was available but was not used to establish quorum.

In Person Attendees (Used to establish quorum):

Name	Agency
Oscar Hance	St. Lucie County Emergency Management
Shane Ratliff	Port St. Lucie Emergency Management
Carlos Camacho	Port St. Lucie Utilities Service District
Michelle Steele	Port St. Lucie Police Department
Abe Alvarez	Port St. Lucie Police Department
Stephanie Torres	St. Lucie Transportation Planning Organization
Tracy Telle	City of Fort Pierce
Tioka Wolfhagen	City of Fort Pierce
Venetia Barnes	City of Fort Pierce Stormwater
Tanner Rutherford	City of Fort Pierce Engineering
Terrill Mincey	St. Lucie County Mosquito Control
Jason Knight	St. Lucie County Mosquito Control
Nicole Fogarty	St. Lucie County Public Schools
Patrick Helms	North St. Lucie River Water Control District
Areli Armendariz	Fort Pierce Farms Water Control District
James Glover	St. Lucie County Emergency Management
Bradley Faltersack	Port St. Lucie Utilities Service District
Paulette Bell	St. Lucie County Utilities
Amy Griffin	St. Lucie County Environmental Resources
Rogelio Gonzales	Council on Aging
Cameryn Weaver	Cleveland Clinic Emergency Management
Christina Proulx	Cleveland Clinic Emergency Management

Virtual Attendees (Not used to establish quorum):

Name	Agency
Ronnie Heen	City of Port St. Lucie
Joseph Harris	IEM – LMS Update Consultant
Carlos Santos Rivera	IEM – LMS Update Consultant
Patrick Marchman	IEM – LMS Update Consultant
Sabrina Lunsford	IEM – LMS Update Consultant
Sandra Bogan	St. Lucie County Innovation and Performance
Lydia Williams	Florida Department of Health
Matt Baum	St. Lucie County Facilities
Paul Thomas	City of Fort Pierce Building Dept

III. Public Comment
No public comments were received.

IV. Approval of Agenda
Motion to approve the agenda as presented by N. Fogarty, seconded by S. Torres. Motion carried.

V. Approval of Minutes
N. Fogarty identified an incorrect title associated with her name on the attendance list in the September 17, 2025, meeting minutes. The correction was noted and addressed by O. Hance. Motion to approve the minutes with corrections by R. Gonzales, seconded by C. Camacho. Motion carried.

VI. Program for Public Information Plan
The Program for Public Information Plan was presented by S. Ratliff. No updates or changes were suggested. Motion to approve by N. Fogarty, seconded by S. Torres. Motion carried.

VII. Local Mitigation Strategy Update Progress
An update on the Local Mitigation Strategy revision effort was provided by the IEM consultant team.

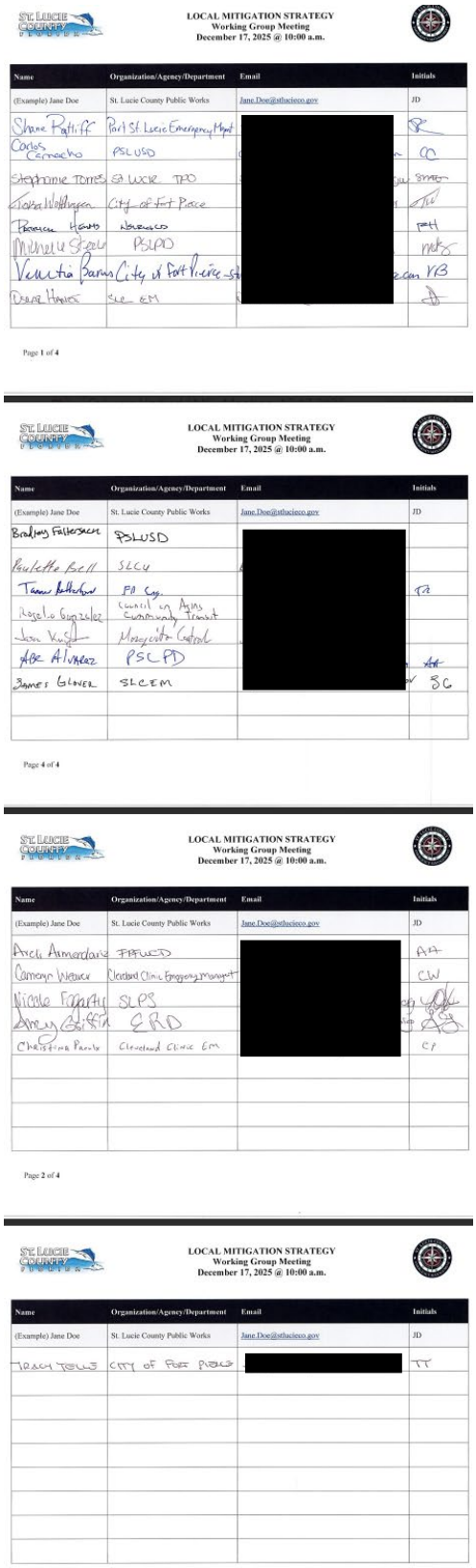
VIII. Community Rating System Updates
Community Rating System updates were provided for participating jurisdictions.

IX. 2026 Quarterly Meeting Dates and Tentative Locations
The following meeting dates are confirmed for calendar year 2026. Locations are tentative and will be confirmed prior to each meeting:
- March 18, 2026 – City of Fort Pierce Building Department
- June 17, 2026 – St. Lucie County Emergency Operations Center
- September 16, 2026 – St. Lucie County Public Schools
- December 16, 2026 – Oxbow Eco Center

X. Member Comments and Miscellaneous
Discussion included Elevate Florida updates from the State, fourth quarter PPI updates with a request for members to confirm information and notify O. Hance of any issues and anticipated new members and updated representative information in the first quarter of 2026.

XI. Adjourn
Motion to adjourn by N. Fogarty, seconded by C. Camacho. Motion carried. The meeting adjourned shortly after 11:00 a.m.

Figure 24: Fourth Quarter Meeting Agenda and Minutes



LOCAL MITIGATION STRATEGY
Working Group Meeting
December 17, 2025 @ 10:00 a.m.

Name	Organization/Agency/Department	Email	Initials
(Example) Jane Doe	St. Lucie County Public Works	Jane.Doe@stlucieco.gov	JD
Shane Ratliff	Port St. Lucie Emergency Mgmt	[redacted]	
Carlos Carnacho	PSLUSD		CC
Stephanie Torres	St. Lucie TPO		
Tobia Wolfhagen	City of Fort Pierce		
Patricia Hayes	Nabucco		PH
Michelle Steele	PSLPD		
Venetia Barnes	City of Fort Pierce		VB
Diane Hanes	SLC EM		

Page 1 of 4

LOCAL MITIGATION STRATEGY
Working Group Meeting
December 17, 2025 @ 10:00 a.m.

Name	Organization/Agency/Department	Email	Initials
(Example) Jane Doe	St. Lucie County Public Works	Jane.Doe@stlucieco.gov	JD
Bradley Fallersack	PSLUSD	[redacted]	
Paulette Bell	SLCU		
Tanner Detherford	FD Cap.		TA
Rogelio Gonzalez	Council on Aging Community Transit		
Jon Kuhl	Morgenstern Control		
Abe Alvarez	PSLPD		AA
James Glover	SLCEM		SG

Page 4 of 4

LOCAL MITIGATION STRATEGY
Working Group Meeting
December 17, 2025 @ 10:00 a.m.

Name	Organization/Agency/Department	Email	Initials
(Example) Jane Doe	St. Lucie County Public Works	Jane.Doe@stlucieco.gov	JD
Arch Armendariz	FPFWCD	[redacted]	AA
Cameryn Weaver	Cleveland Clinic Emergency Mangmt		CW
Nicole Fogarty	SLPS		
Amy Griffin	ERD		
Christina Paulo	Cleveland Clinic EM		CP

Page 2 of 4

LOCAL MITIGATION STRATEGY
Working Group Meeting
December 17, 2025 @ 10:00 a.m.

Name	Organization/Agency/Department	Email	Initials
(Example) Jane Doe	St. Lucie County Public Works	Jane.Doe@stlucieco.gov	JD
Tracy Telle	City of Fort Pierce	[redacted]	TT

Figure 25: Fourth Quarter Meeting Sign-In Sheet

Hazard Identification, Risk Assessment, and Vulnerability

In accordance with the requirements of 44 CFR §201.6(c)(2) and CRS Activity 510, St. Lucie County and its municipalities conducted a comprehensive hazard identification and risk assessment to evaluate the full range of natural, technological, and human-caused hazards that pose a threat to life, property, critical facilities, infrastructure, and environmental resources. This assessment builds upon previous LMS updates, the State of Florida Hazard Mitigation Plan, FEMA mitigation planning guidance, and input from the LMS Working Group and the public. An all-hazards, risk-based approach was used to ensure that both high-frequency and high-consequence hazards are systematically evaluated and that mitigation priorities reflect current conditions, development patterns, and future risk drivers.

The risk assessment examines hazard frequency, exposure, and vulnerability to determine the relative risk each hazard presents to all of St. Lucie County. Exposure and vulnerability analyses consider impacts on populations (including socially vulnerable groups), buildings, critical facilities, lifelines, and key economic and environmental assets. Geographic Information System (GIS) analyses was used, where applicable, to estimate potential losses and spatially depict hazard-prone areas. Consistent with CRS Activity 510, this assessment supports floodplain management planning by identifying flood hazards, repetitive loss drivers, and opportunities for risk reduction through property protection, infrastructure investment, land use planning, and public information. The findings of this section provide the technical foundation for the mitigation strategy, prioritized project selection, and ongoing plan maintenance efforts designed to reduce long-term risk and enhance community resilience.

Table 15 lists federal disaster and emergency declarations impacting St. Lucie County from 1965 through 2024. These declarations, issued by the federal government and administered through agencies, such as FEMA, formally recognize hazard events of sufficient magnitude to warrant federal assistance. The table documents key information for each declaration, including the declaration identification number, date, designation type (Disaster [DR], Emergency [EM], or Fire Suppression Assistance [FSA]), the triggering hazard event, and the availability of individual and public assistance funding where applicable.

The historical record demonstrates that St. Lucie County has experienced recurrent impacts from hurricanes, tropical storms, flooding, wildfire incidents, public health emergencies, and severe weather events. Several disasters resulted in substantial federal assistance and widespread community disruption. Collectively, these events illustrate not only the frequency of hazard occurrences affecting the county but also the significant economic and operational consequences associated with major disasters.

Table 15: Disaster Declarations in St. Lucie County

Declaration Number	Year	Type	Event Details
DR-209-FL	1965	DR	Hurricane Betsy

Declaration Number	Year	Type	Event Details
DR-526-FL	1977	DR	Severe Winter Weather
DR-732-FL	1985	DR	Severe Freeze
DR-851-FL	1990	DR	Severe Freeze
DR-1074-FL	1996	DR	Severe Flooding
DR-1223-FL	1998	DR	Extreme Fire Hazard
EM-3143-FL	1999	EM	Hurricane Floyd Emergency Declarations
EM-3139-FL	1999	EM	Florida Fires 04/15/1999
FM-2251-FL	1999	FM	Okeechobee Fire Complex
DR-1300-FL	1999	DR	Hurricane Floyd Major Disaster Declarations
EM-3150-FL	2000	EM	Tropical Storm Irene – Florida
DR-1306-FL	2000	DR	Florida – Hurricane Irene – Disaster Request
DR-1359-FL	2001	DR	Severe Freeze
DR-1545-FL	2004	DR	Hurricane Frances
DR-1539-FL	2004	DR	Tropical Storm Bonnie and Hurricane Charley
DR-1561-FL	2004	DR	Hurricane Jeanne
DR-1551-FL	2004	DR	Hurricane Ivan
EM-3220-FL	2005	EM	Hurricane Katrina Evacuation
DR-1609-FL	2006	DR	Hurricane Wilma
FM-2696-FL	2007	FM	Okeechobee Fire Complex
DR-1785-FL	2008	DR	Tropical Storm Fay
EM-3288-FL	2008	EM	Tropical Storm Fay
DR-4084-FL	2013	DR	Hurricane Isaac
DR-4337-FL	2017	DR	Hurricane Irma
DR-4283-FL	2017	DR	Hurricane Matthew
EM-3385-FL	2017	EM	Hurricane Irma
EM-3377-FL	2017	EM	Hurricane Matthew
EM-3419-FL	2019	EM	Hurricane Dorian
DR-4486-FL	2020	DR	COVID-19 Pandemic
DR-4468-FL	2020	DR	Hurricane Dorian
EM-3533-FL	2020	EM	Hurricane Isaias

Declaration Number	Year	Type	Event Details
EM-3432-FL	2020	EM	COVID-19
DR-4673-FL	2022	DR	Hurricane Ian
EM-3584-FL	2022	EM	Tropical Storm Ian
DR-4680-FL	2023	DR	Hurricane Nicole
EM-3587-FL	2023	EM	Tropical Storm Nicole
EM-3622-FL	2025	EM	Hurricane Milton
DR-4834-FL	2025	DR	Hurricane Milton

Historical Events (2019–2025)

Table 16 lists recorded hazard events affecting St. Lucie County between 2019 and 2025. The information, drawn largely from the National Weather Service (NWS) Storm Events Database, documents a wide spectrum of weather-related and natural hazards experienced in the county during this period. These events include severe thunderstorms, flooding incidents, hail, thunderstorm winds, and tropical systems, reflecting the county's exposure to both acute storm impacts and recurring environmental hazards.

For each event, the table identifies the date and general location in the county and outlines documented consequences, such as injuries, fatalities, and estimates of property and agricultural losses, where available. Collectively, this dataset provides valuable insight into the types, frequency, and severity of hazard events affecting St. Lucie County and serves as an important reference for evaluating historical impacts, identifying patterns of vulnerability, and informing future mitigation planning efforts.

Table 16: Natural Disaster Events Since the Last Plan Update

Location	Date	Type	Fatalities	Injuries	Property Damage	Crop Damage
Port St Lucie	4/5/2019	Hail	0	0	$0	$0
Port St Lucie	4/5/2019	Hail	0	0	$0	$0
Port St Lucie	4/5/2019	Hail	0	0	$0	$0
Ft Pierce St Lucie Airport	4/19/2019	Thunderstorm Wind	0	0	$0	$0
Ankona	6/13/2019	Thunderstorm Wind	0	0	$0	$0
St Lucie County	9/2/2019	Tropical Depression	0	0	$0	$0
St Lucie County	9/3/2019	Storm Surge/Tide	0	0	$0	$0
St Lucie County	2/15/2020	Rip Current	1	0	$0	$0

Location	Date	Type	Fatalities	Injuries	Property Damage	Crop Damage
Walton	4/26/2020	Hail	0	0	$0	$0
Port St Lucie	5/21/2020	Hail	0	0	$0	$0
Port St Lucie	5/21/2020	Hail	0	0	$0	$0
Port St Lucie	5/27/2020	Lightning	1	0	$0	$0
St Lucie County	8/2/2020	Tropical Storm	0	0	$0	$0
St Lucie County	9/21/2020	Coastal Flood	0	0	$0	$0
Eden	10/1/2020	Heavy Rain	0	0	$0	$0
St Lucie County	11/8/2020	Tropical Storm	0	0	$0	$0
Ft Pierce St Lucie Airport	4/11/2021	Thunderstorm Wind	0	0	$0	$0
Ancona	4/11/2021	Thunderstorm Wind	0	0	$0	$0
St Lucie County	5/9/2021	Wildfire	0	0	$810,000	$0
St Lucie County	11/6/2021	Coastal Flood	0	0	$0	$0
White City	11/21/2021	Flash Flood	0	0	$5,000	$0
Treasure Coast International Airport	1/10/2022	Hail	0	0	$0	$0
Treasure Coast International Airport	1/10/2022	Hail	0	0	$0	$0
Treasure Coast International Airport	1/10/2022	Hail	0	0	$0	$0
White City	1/10/2022	Hail	0	0	$0	$0
Ft Pierce St Lucie Airport	3/12/2022	Thunderstorm Wind	0	0	$0	$0
Ancona	5/20/2022	Hail	0	0	$0	$0
St Lucie County	6/3/2022	Tropical Depression	0	0	$0	$0
Treasure Coast International Airport	6/6/2022	Tornado	0	0	$10,000	$0
Ancona	6/9/2022	Thunderstorm Wind	0	0	$5,000	$0

Location	Date	Type	Fatalities	Injuries	Property Damage	Crop Damage
Walton	6/9/2022	Tornado	0	0	$210,000	$0
Ft Pierce St Lucie Airport	6/30/2022	Tornado	0	0	$0	$0
Port St Lucie	9/27/2022	Flood	0	0	$0	$0
St Lucie County	9/28/2022	Tropical Storm	0	0	$0	$0
St Lucie County	9/28/2022	Tropical Storm	0	0	$0	$0
St Lucie County	9/29/2022	Storm Surge/Tide	0	0	$0	$0
St Lucie County	11/9/2022	Storm Surge/Tide	0	0	$0	$0
St Lucie County	11/9/2022	Tropical Storm	0	0	$0	$0
St Lucie County	11/9/2022	Tropical Storm	0	0	$0	$0
Treasure Coast International Airport	4/16/2023	Hail	0	0	$0	$0
White City	4/16/2023	Hail	0	0	$0	$0
White City	4/16/2023	Hail	0	0	$0	$0
White City	4/16/2023	Hail	0	0	$0	$0
White City	4/24/2023	Hail	0	0	$0	$0
Ft Pierce	4/26/2023	Thunderstorm Wind	0	0	$1,500	$0
Ankona	4/26/2023	Thunderstorm Wind	0	0	$0	$0
Harmony Heights	7/23/2023	Thunderstorm Wind	0	0	$250	$0
Sunland Gardens	10/23/2023	Funnel Cloud	0	0	$0	$0
Port St Lucie	1/6/2024	Funnel Cloud	0	0	$0	$0
Harmony Heights	5/19/2024	Hail	0	0	$0	$0
Ft Pierce Beach	5/19/2024	Hail	0	0	$0	$0
St Lucie County	9/26/2024	Tropical Storm	0	0	$0	$0
St Lucie County	9/26/2024	Tropical Storm	0	0	$0	$0
St Lucie County	10/9/2024	Tropical Storm	0	0	$0	$0
St Lucie County	10/9/2024	Tropical Storm	0	0	$0	$0
Port St Lucie	10/9/2024	Tornado	0	0	$750,000	$0

Location	Date	Type	Fatalities	Injuries	Property Damage	Crop Damage
Port St Lucie	10/9/2024	Tornado	0	0	$5 million	$0
Ft Pierce St Lucie Airport	10/9/2024	Tornado	0	0	$250,000	$0
Indrio	10/9/2024	Flash Flood	0	0	$0	$0
Harmony Heights	10/9/2024	Tornado	0	0	$1.5 million	$0
Treasure Coast International Airport	10/9/2024	Tornado	6	0	$475 million	$0
Port St Lucie	10/9/2024	Tornado	0	0	$15 million	$0
St Lucie County	11/3/2024	Rip Current	1	0	$0	$0
Treasure Coast International Airport	3/10/2025	Thunderstorm Wind	0	0	$10,000	$0
Ft Pierce St Lucie Airport	5/5/2025	Hail	0	0	$0	$0
Treasure Coast International Airport	5/5/2025	Hail	0	0	$0	$0
Ft Pierce Beach	5/5/2025	Hail	0	0	$0	$0
Ft Pierce St Lucie Airport	5/5/2025	Thunderstorm Wind	0	0	$0	$0

Table 16 documents a steady pattern of natural hazard activity affecting St. Lucie County since the last plan update, reflecting both frequent lower-impact weather events and several higher-consequence incidents. Most recorded events consist of severe thunderstorms, hail, tropical systems, and coastal or flash flooding, many of which resulted in minimal or no reported damage locally. Damage estimates reported in the NOAA/NWS Storm Events Database represent preliminary event summaries and may include broader regional impacts or generalized estimates associated with larger storm systems. Local post-storm assessments conducted by St. Lucie County generally indicate that many recent events produced relatively limited structural damage within the county. Nevertheless, the record highlights the county's vulnerability to sudden, localized hazards such as severe thunderstorms and tornadoes, including those associated with the October 9, 2024, storm system that affected portions of Port St. Lucie, Fort Pierce, Harmony Heights, and surrounding areas

Hazards Profiled

St. Lucie County, located along Florida's Atlantic coast, is exposed to a broad spectrum of natural, technological, and human-caused hazards that pose varying levels of risk to residents, visitors, infrastructure, and critical services. Although hurricanes and tropical storms are widely recognized as primary threats due to the county's coastal location, other hazards, such as flooding, extreme temperatures, wildfires, and severe convective weather, also present recurring and, in some cases, escalating challenges. The county's relatively low elevation, shallow groundwater table, extensive canal systems, and proximity to coastal waters contribute to heightened susceptibility to flood-related impacts, including tidal flooding associated with sea level rise and seasonal high-tide events.

Natural hazards relevant to St. Lucie County include dam and levee failure, coastal and inland erosion, extreme heat and cold events, flooding, hurricanes and tropical storms, agricultural and environmental pests and diseases, sea level rise, seismic hazards, severe thunderstorms and lightning, tornadoes, tsunamis, and wildfires. Besides these natural threats, the county is vulnerable to a range of technological hazards, including communication system failures, epidemics and pandemics, power system disruptions, radiological accidents, transportation system incidents, and contamination of potable water wellfields. Human-caused hazards, such as civil disturbances, mass migration events, and acts of terrorism or sabotage, also can affect public safety, continuity of operations, and community stability.

A review of historical disaster records and hazard data indicates that nearly all jurisdictions in St. Lucie County experience exposure to multiple hazard types, though the nature and degree of risk vary based on geographic location, land use patterns, and development characteristics. Coastal communities face increased exposure to storm surge, erosion, and tidal flooding, while inland areas are more susceptible to freshwater flooding, wildfire, and severe thunderstorms. Agricultural areas and environmentally sensitive lands are additionally vulnerable to pests, diseases, drought conditions, and water supply disruptions.

The LMS evaluates each identified hazard using historical occurrence data, geographic extent, vulnerability of people and assets, and the likelihood of future events. During previous LMS updates, hazard profiles were reviewed and refined to incorporate newly available data, observed trends, and evolving risk conditions. This process emphasized validating existing hazard information, documenting events occurring since the prior plan update, recognizing jurisdiction-specific differences in exposure and vulnerability, and maintaining consistency with the Florida State Hazard Mitigation Plan.

The hazards are organized as follows:

Natural Hazards

- Erosion
- Extreme Temperatures
- Flooding
- Hurricane/Tropical Storm

- Pests and Disease (including Agriculture)
- Sea Level Rise
- Seismic Hazards
- Severe Thunderstorm and Lightning
- Tornado
- Tsunami
- Water Structure Failure
- Wildfire

Technological Hazards

- Communication System Failure
- Epidemic/Pandemic
- Power System Failure
- Radiological Accident
- Transportation System Accident
- Wellfield Contamination

Human Caused Hazards

- Civil Disturbance
- Mass Migration
- Terrorism and Sabotage

Capability Assessment

This section presents St. Lucie County's ability to implement hazard mitigation strategies by examining existing planning frameworks, regulatory tools, technical expertise, financial resources, and public outreach programs consistent with FEMA's capability assessment framework. This assessment identifies strengths and limitations in the county's current policies, programs, staffing, and procedures that influence its capacity to reduce risk and enhance resilience. Understanding these capabilities is essential for prioritizing mitigation actions, leveraging available resources, and identifying areas for improvement. The findings in this section provide a foundation for developing feasible and actionable strategies that align with local needs and comply with state and federal requirements.

This section is organized by mitigation capability type. To provide a comprehensive evaluation, this assessment is organized into four key capability areas:

- **Planning and Regulatory Capabilities**: The plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.
- **Administrative and Technical Capabilities**: The staff, skills, and tools that can help carry out mitigation actions.
- **Financial Capabilities**: Evaluating county- or city-specific capabilities, state and federal resources, and funding from participating agencies and organizations to determine what projects are feasible, given their costs.
- **Education and Outreach Capabilities:** Programs and methods that promote awareness through a whole-community approach to encourage and facilitate risk reduction and promote resilience.

Figure 26 shows the relationships between these types of capabilities.

All four jurisdictions completed FEMA-based capability assessment forms, which documented their current mitigation capabilities across the four categories listed above. These forms requested information on existing plans, policies, staffing, technical tools, funding sources, and outreach programs. The results were analyzed to identify strengths, limitations, and opportunities for improvement.

The following sections outline the specific capabilities assessed during this process, highlighting existing resources and areas for enhancement. These findings will inform targeted strategies to strengthen St. Lucie County's hazard mitigation program and improve resilience across all jurisdictions. The following sections outline the specific capabilities assessed during this process.

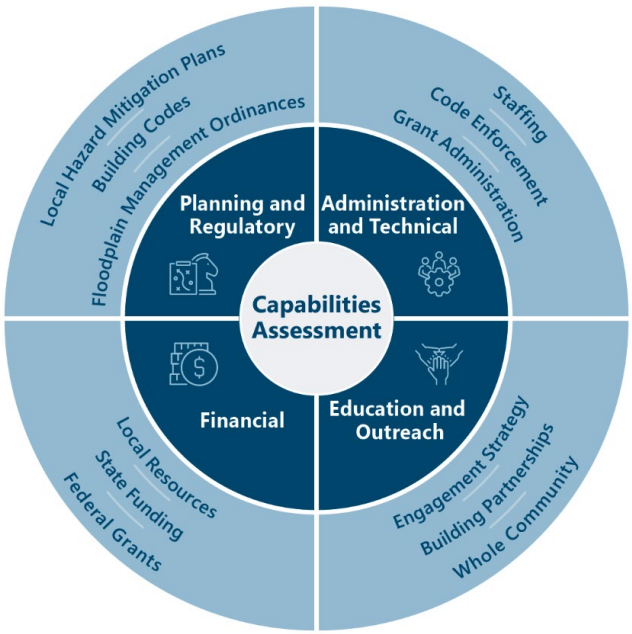


Figure 26: Four Key Mitigation Capabilities

Planning and Regulatory

Jurisdictions have the authority to create policies and programs and to establish rules and regulations that protect and serve their residents by reducing exposure to hazards and minimizing potential losses. Local policies are typically detailed in community plans, enacted through local ordinances, and enforced by governmental bodies with designated regulatory and administrative responsibilities. Many communities have developed strategies to improve their disaster resistance and long-term resilience. A primary goal of these plans is to coordinate existing activities across departments and agencies to integrate individual objectives into a comprehensive action plan that supports hazard mitigation and risk reduction.

The following tables summarize the planning and regulatory capabilities, including plans, policies, codes, and ordinances that guide development, manage growth, and prevent and reduce the impacts of hazards.

Table 17: Plans

Plan	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
Port St. Lucie			
Port St. Lucie Comprehensive Plan (all elements, including future land use, conservation, coastal management, infrastructure, housing, transportation, capital improvements)	Y	Directs most growth inland/ upland away from surge zones; supports SFHA standards, freeboard, protection of drainage corridors, and wetland storage; ties mitigation to the Capital Improvements Element and concurrency.	Current (per adopted elements shared in the LMS); next amendments occur during the regular cycle.
Capital Improvement Plan (CIP)	Y	Programs include drainage basin retrofits, culvert/bridge replacements, stormwater storage, lift-station generators, shelter retrofits, hardening of critical facilities, and roadway flood relief.	Updated annually with budget
Unified Local Mitigation Strategy (LMS) – St. Lucie County	Y	City participates in project ranking; uses LMS list for HMGP/FMA and state resilience grant submittals (drainage, pumps, tide/backflow valves, backup power).	2026 update (current); participates quarterly in LMS meetings and annually updates projects on the Prioritized Project List of the LMS.

Plan	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
Comprehensive Emergency Management Plan (CEMP)/Continuity of Operations Plan	Y	Defines incident command structure, essential emergency management functions, evacuation and shelter coordination with the County EOC, and post-disaster damage assessment procedures. The CEMP establishes operational protocols for emergency response and recovery, while the Continuity of Operations (COOP) plan identifies essential functions, backup locations, and resource coordination necessary to maintain government operations during emergencies.	Maintained; reviewed annually with county EOC
Stormwater Master Plan/MS4 Program	Y	Basin-level modeling and BMPs; detention/retention retrofits; outfall controls and backflow prevention; green infrastructure where feasible.	Ongoing (MS4 permit cycle)
Floodplain Management Program/ NFIP	Y	Enforces elevation, SI/SD, floodproofing; coordinates repetitive-loss outreach; supports CRS activities. The City of Port St. Lucie and St. Lucie County participate in the Community Rating System as Class 5 communities, while the City of Fort Pierce participates as a Class 6 community.	Ongoing; ordinance updated with code cycles
Transportation Planning (St. Lucie TPO LRTP/TIP)	Y	Prioritizes hardening and drainage along I-95, Florida's Turnpike, US-1, Crosstown Parkway, and key arterials; supports evacuation and reentry resilience.	LRTP current; TIP updated annually
Regional Resilience and Vulnerability Assessment (County)	Y	Identifies city exposure along the North Fork of the St. Lucie River, Ten Mile Creek, and legacy subdivisions; provides	Finalized June 2025

Plan	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
		project pipeline for state resilience submissions.	
State Plans (Florida SHMP; Statewide Resilience Plan)	Y	Framework and eligibility for grant funding; alignment improves scoring and match leverage.	SHMP 2024; State Resilience Plan 2024–2025 cycle
Fort Pierce			
Fort Pierce Comprehensive Plan (all elements, incl. future land use, conservation, coastal management, infrastructure, housing, transportation, capital improvements)	Y	Guides growth toward inland areas; limits density in Coastal High Hazard Area (CHHA) and Special Flood Hazard Areas (SFHA); integrates resilience and hazard mitigation policies per F.S. 163.3178(2)(f); supports post-disaster redevelopment and flood protection infrastructure.	Updated 2022 (evaluation and appraisal); next EAR-based update due 2027
Capital Improvement Plan (CIP)	Y	Prioritizes hardening and mitigation projects—drainage basin retrofits, tide/backflow valves, seawall rehabilitation, generators for critical facilities, and water/sewer resilience upgrades.	Updated annually with budget
Unified Local Mitigation Strategy (LMS) – St. Lucie County	Y	City participates in the St. Lucie County LMS; it includes Fort Pierce drainage, power, shoreline, and facility-hardening projects; and enables access to HMGP, BRIC, and state resilience funding.	2025 update in progress
Emergency Operations Plan (EOP)/Continuity	Y	Defines local response roles, resource coordination, evacuation/shelter procedures, and continuity of operations; integrates with county EOC and regional mutual aid agreements.	Reviewed annually with county EOC
Stormwater Master Plan/MS4 Program	Y	Manages drainage basins, controls pollutant discharges to	Ongoing; MS4 permit cycle 2023–2028

Plan	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
		Indian River Lagoon, integrates pump stations and outfall tide valves; provides modeling base for mitigation projects.	
Floodplain Management Program/ NFIP	Y	Implements FEMA floodplain standards; enforces freeboard and SI/SD; provides CRS credit activities; reduces flood risk citywide.	Ordinance current: CRS Class 5 after 2024 recertification)
Transportation Planning (St. Lucie TPO LRTP/TIP)	Y	Coordinates resilient road networks and evacuation access along US-1, SR A1A, Seaway Drive, and SR 70 (Okeechobee Rd); includes bridge elevation and drainage improvements.	Mobility Plan adopted 2021; next update 2026
Regional Resilience and Vulnerability Assessment (County)	Y	Identifies vulnerable, low-lying neighborhoods (e.g., South Beach, Indian River Drive, Avenue D corridor) and supports project scoping for FDEP resilience grants.	Finalized June 2025
State Plans (Florida SHMP; Statewide Resilience Plan)	Y	Framework for state coordination and grant eligibility; aligns city project scoring and cost-share.	SHMP 2024; State Resilience Plan 2025
St. Lucie Village			
Comprehensive Plan	Y	Guides low-density residential land use and open-space preservation in lagoon-front and flood-prone areas; restricts intensification in the Coastal High Hazard Area (CHHA) and Special Flood Hazard Areas (SFHA); implements F.S. 163.3178 coastal resilience requirements.	Adopted 2010 (Amended 2021); next amendment due with Countywide updates 2025–2026.
Capital Improvements Plan (CIP)	Y	Coordinates small-scale infrastructure maintenance (culvert replacement, tide valve installation, drainage repair)	Annual budget cycle.

Plan	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
		with County Public Works and Indian River Lagoon Council (IRL) grants.	
Local Mitigation Strategy (LMS)	Y	Town participates in St. Lucie County LMS; uses project ranking to access FEMA HMGP/ BRIC funds for minor drainage, shoreline stabilization, and generator projects.	LMS Update 2025 (current).
Emergency Operations Plan (EOP)/ Comprehensive Emergency Management Plan (CEMP)	Y	Relies on County EOC under ESF #5; contains annex for evacuation, debris removal, and re-entry.	Maintained annually by County Public Safety.
Floodplain Management Program	Y	Implements NFIP ordinance; enforces elevation and floodproofing; coordinates with County Floodplain Administrator for permits.	Ongoing (Ordinance No. 2016-2 adopted 2016).
Stormwater Management Plan	Y	County MS4 coverage extends through interlocal agreement; Town monitors open-ditch systems and cross-culverts.	Ongoing joint maintenance agreement.
Regional Resilience & Vulnerability Assessment	Y	Uses County's 2025 Assessment for Indian River Lagoon exposure and compound flooding such as North Indian River Drive.	Finalized June 2025.
State Hazard Mitigation Plan/Statewide Resilience Plan	Y	Provides eligibility and scoring framework for small-town drainage and shoreline adaptation grants.	SHMP 2024; Resilience Plan 2025 cycle.
St. Lucie County			
Comprehensive Plan (multiple elements)	Y	Directs growth away from CHHA and SFHAs; supports preservation of habitat and floodplain, supports freeboard/ elevation, critical-facility siting, and capital priorities for	Elements current per adopted files shared with LMS; next updates occur via regular amendment

Plan	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
		stormwater, bridges/culverts, and shelter hardening.	cycles tied to annual budget/CIP. Comprehensive Plan update to be completed in 2026.
Capital Improvement Plan (CIP)	Y	Funds drainage conveyance/ storage, tide/backflow valves, pump/lift-station backup power, bridge/culvert replacements, shelter retrofits, hardening, energy efficiency, floodproofing and wind resistance enhancements to critical assets; acquisition/ restoration of ecosystems as natural buffers/ attenuation.	Updated with the annual budget (recurring).
Climate Action/ Adaptation Plan	Y (via State/ Regional Resilience plans adopted/used by the County)	Leverages Statewide Resilience Plan, Regional Resilience Plan and Vulnerability Assessments to rank and submit projects (living shorelines, outfalls, flood control).	Statewide Resilience Plan 2024–2025 in effect; County's Regional Resilience Plan and Vulnerability Assessment (RVA–flood) finalized and accepted in June 2025 through January. St. Lucie County Regional Resilience Plan and companion Resilience Vulnerability Assessment-Other Hazards (RVA-OH) to be finalized and accepted in 2026.
Economic Development Plan	Y	Aligns infrastructure investments (roads/utilities) with resilient siting; supports post-disaster business continuity and hardening programs.	2019 via Ordinance 19-005 (reference in Comp Plan/Economic Development Element).

Plan	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
			Comprehensive Plan Update to be completed in 2026
Land Use Plan (future land use element/map series)	Y	Applies CHHA/SFHA constraints, evacuation routes, soils, topography, wetlands. Addresses land use patterns, setbacks, and density/intensity limits; preserves flood storage, urban sprawl, and natural resources and conservation lands.	Current; updated through Comp Plan amendment cycles.
Local Emergency Operations Plan/CEMP	Y	Establishes evacuation, sheltering, ESF roles, and continuity; integrates hazard data and resource typing for mitigation prioritization.	Maintained and posted by County Emergency Management Division; Healthcare CEMP guidance updated annually.
Stormwater Management Plan/MS4	Y	Basin retrofits, BMPs, outfall controls, green infrastructure; reduces flood depth/duration and pollutant loads to IRL/North Fork.	Ongoing, SLC SWMP update (eta 2026). (MS4 permits require periodic updates.)
Transportation Plan (St. Lucie TPO LRTP/TIP)	Y	Identifies evacuation routes and vulnerable corridors (US-1, A1A, I-95, Turnpike), structures, and drainage upgrades; coordinates evacuation access and hardening.	2045 LRTP adopted Feb 3, 2021; 2050 LRTP due Feb 3, 2026; TIP updated annually.
Substantial Damage Plan/Procedures	Y	Guides inspections, SI/SD determinations, and elevation/ rebuild compliance post-event.	SI/SD provisions include in the FBC. Maintained by Building/FPM; date: Floodplain Management Code, which include SI/SD provisions was updated 2018 via Ordinance 18-001 (in

Plan	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
			practice updated after major events).
Other – Flood Protection Information/CRS Program	Y	Public info/outreach; flood insurance uptake; CRS credit activities.	County participates in CRS. Reached Class 5 in 2022. Completed Cycle Visit in August. Will remain in Class 5. Next update for either 3 or 5 years. TBD

Jurisdictions manage land use by adopting and enforcing zoning laws, subdivision regulations, land development ordinances, building codes, building permit requirements, and stormwater management ordinances which regulate the location, design, and construction of development. When well prepared and effectively administered, these regulations can help mitigate hazards by reducing exposure to risk, minimizing damage to structures and infrastructure, and supporting long-term resilience.

Table 18: Regulations and Ordinances

Plan	Does this regulation/ ordinance effectively reduce hazard impacts?	Is it adequately administered and enforced?	When was it last updated? When will it next be updated?
Port St. Lucie			
Florida Building Code (as adopted by PSL)	Yes – wind design, flood loads, impact protection, roof uplift, critical facility standards	Yes (Building Department)	State code cycle (current edition adopted)
Floodplain Management Ordinance	Yes – elevation/freeboard, SI/SD, floodproofing, lowest-floor standards	Yes (Floodplain Administrator)	Current; updates with NFIP/FBC cycles
Land Development Code/Zoning	Yes – limits intensity in CHHA/SFHA; preserves stormwater corridors and buffers; sets setbacks and open-space.	Yes (Planning and Zoning/Engineering)	Ongoing amendments
Subdivision Regulations	Yes – drainage criteria, roadway cross sections, access for emergency response, water-quality BMPs	Yes (Public Works/Stormwater)	Current; periodic

Plan	Does this regulation/ ordinance effectively reduce hazard impacts?	Is it adequately administered and enforced?	When was it last updated? When will it next be updated?
Stormwater/Illicit Discharge/Erosion and Sediment Control	Yes – reduces nuisance/flash flooding and pollutant loads to North Fork and IRL systems.	Yes (stormwater/ utilities)	MS4 cycle
Critical Facility Siting/Backup Power (policy/ standards)	Yes – keeps essential services out of CHHA/SFHA where feasible; requires standby power for water/wastewater and EOC-support facilities.	Yes	Ongoing
Fort Pierce			
Florida Building Code (as adopted by PSL)	Yes – wind and flood-resistant standards, impact glazing, critical facility hardening	Yes (Building Department)	State code cycle (current)
Floodplain Management Ordinance	Yes – elevation, SI/SD, floodproofing, freeboard	Yes (Floodplain Administrator)	Current; updates with NFIP/FBC cycles
Land Development Code/Zoning	Yes – restricts high-density uses in CHHA/SFHA; provides coastal setback and buffer requirements.	Yes (Planning Department)	Comprehensive rewrite 2023; review ongoing
Subdivision Regulations	Yes – requires stormwater retention, open space, drainage access, and emergency ingress/egress.	Yes	Updated with LDC rewrite (2023)
Stormwater/Illicit Discharge/Erosion and Sediment Control	Yes – reduces flooding, protects lagoon water quality.	Yes (Public Works/ Utilities)	MS4 permit cycle
Critical Facility Siting/Backup Power (policy/ standards)	Yes – applies to water/wastewater, shelters, EOC.	Yes (Utilities and Public Safety)	Ongoing
St. Lucie Village			
Building Code (FBC as adopted)	Yes – wind/flood load compliance.	Yes – the Village has a certified Building Official who also serves as its Floodplain Manager	Adopted each state cycle (2023 edition current).

Plan	Does this regulation/ ordinance effectively reduce hazard impacts?	Is it adequately administered and enforced?	When was it last updated? When will it next be updated?
Floodplain Ordinance	Yes – sets freeboard (+1 ft) and SI/SD rules.	Yes – enforced by County Floodplain Administrator.	2016; review 2026.
Zoning Ordinance	Yes – low-density zoning reduces exposure.	Yes – the Board of Aldermen enforces the Land Development Code (formerly called the Zoning Ordinance)	2021 amendments; next periodic review 2025.
Subdivision Regulations	Yes – drainage and access standards for infill.	Yes – Subdivision Regulations are in Village Ordinance No. 62-8 and are enforced by the Village Board of Aldermen	Ongoing.
Stormwater/ Tide Valve Policy	Yes – addresses tidal backflow and ponding.	Yes – Public Works and Contractors.	Implemented FY 2023; expanding FY 2026.
Open-Space/ Conservation Zoning	Yes – preserves lagoon-front buffers.	Yes.	Ongoing.
St. Lucie County			
Building Code (FBC as adopted)	Yes – wind/flood loads, elevation, impact protection.	Yes (County Building Dept.).	State code cycle; local adoption per cycle (current).
Flood Insurance Rate Maps	Yes – basis for SFHA regulation and insurance rating.	Yes (FP GIS Divisions).	FIRMs current; updates as FEMA map revisions occur.
Floodplain Ordinance	Yes – elevation, SI/SD, lowest floor, floodproofing.	Yes (FP Administrator	Current; updated with FBC/NFIP changes.
Subdivision Ordinance	Yes – drainage, open space, utility and road standards.	Yes (Planning/ Engineering).	Current; periodic.
Zoning Ordinance	Yes – use, density, setbacks; CHHA/SFHA constraints.	Yes.	Ongoing amendments.

Plan	Does this regulation/ ordinance effectively reduce hazard impacts?	Is it adequately administered and enforced?	When was it last updated? When will it next be updated?
Natural Hazard-Specific Ordinances (stormwater/tide valves, backflow prevention)	Yes – reduces nuisance and tidal flooding.	Yes (Public Works/Utilities).	Ongoing programmatic updates.
Acquisition of Land for Open Space/ Recreation	Yes – preserves storage and buffers.	Yes (Environmental Resources and Parks and Recreation).	Ongoing.
Prohibition of Building in At-Risk Areas	Yes – through CHHA/SFHA and conservation designations.	Yes.	Ongoing (as policy/code updates).
Other	CRS activities and outreach requirements.	Yes.	CRS cycle (every 3 years).

Administrative and Technical

Legal, regulatory, and fiscal capabilities form the foundation for effectively developing a mitigation strategy. However, successful implementation of this strategy requires appropriate personnel and organizational capacity. Administrative and technical capabilities emphasize the availability of human resources responsible for executing and sustaining all aspects of hazard mitigation. These resources include technical experts, such as engineers and scientists, and personnel with skills, such as grant writing, emergency management, planning, and public works.

The following tables summarize the administrative and technical capabilities, including the staff and their respective skills, as well as the available tools and systems to support mitigation actions.

Table 19: Administrative Capabilities

Administrative Capability	In Place (Y/N)	Is staffing adequate?	Is staff trained on hazards and mitigation?	Is coordination between agencies and staff effective?
Port St. Lucie				
Chief Building Official	Y	Yes (surge capacity through mutual aid)	Yes – FBC/NFIP/ SI-SD	Yes – city/county coordination
City Engineer/Public Works	Y	Yes	Yes – stormwater/ drainage resilience	Yes

Administrative Capability	In Place (Y/N)	Is staffing adequate?	Is staff trained on hazards and mitigation?	Is coordination between agencies and staff effective?
Community/Comprehensive Planner(s)	Y	Yes	Yes – risk-informed review	Yes
Emergency Management (City EOC; liaison to County EOC)	Y	Yes	Yes – ICS/NIMS; annual exercises	Yes
Floodplain Administrator	Y	Yes	Yes – NFIP/CRS	Yes
GIS/Data	Y	Yes	Yes (FEMA/NOAA/ SFWMD/ USGS/ Local Vulnerability/ Risk Assessment datasets)	Yes
Planning and Zoning Board/City Council	Y	Yes	Orientation on hazards and development in SFHAs	Yes
CERT/VOAD Partners	Y	Variable (volunteer)	Yes	Yes
Other (TPO, TCRPC, FPUA, FPL liaison)	Y	Yes	Yes	Yes
Fort Pierce				
Chief Building Official	Y	Yes	Yes – FBC/NFIP training	Yes
City Engineer/Public Works	Y	Yes	Yes – stormwater, drainage, coastal	Yes
Community/Comprehensive Planner(s)	Y	Yes	Yes – resilience and floodplain management	Yes
Emergency Management (city liaison; county EOC primary)	Y	Yes	Yes – ICS/NIMS; liaison to county EOC	Yes
Floodplain Administrator	Y	Yes	Yes – NFIP/CRS	Yes
GIS/Data	Y	Yes	Yes – FEMA/NOAA datasets; asset mapping	Yes

Administrative Capability	In Place (Y/N)	Is staffing adequate?	Is staff trained on hazards and mitigation?	Is coordination between agencies and staff effective?
Planning and Zoning Board/City Council	Y	Yes	Yes – training during Comprehensive Plan/LDC updates	Yes
CERT/VOAD Partners	Y	Variable (volunteer-based)	Yes	Yes
St. Lucie Village				
Town Manager/ Administrator	Y – Town does not have town manager but mayor acts in this capacity	Limited (1 FTE) Yes – annual County EOC briefings.	Yes – works through County EOC and FDEM.	
Contract Building Official (County)	Y	Yes Yes – FBC/NFIP.	Yes. The Village does have a certified Building Official that also serves as its Floodplain Administrator	
Emergency Management Liaison (to County EOC)	Y	Yes (part-time) Yes – ICS 100/200.	Yes.	
Floodplain Administrator (County delegated)	Y	Yes Yes – NFIP/CRS.	Yes.	
Public Works/ Maintenance Staff (contracted)	Y	Contracted on call Yes – drainage and debris training.	Yes.	
Planning Board/ Zoning Board of Adjustment	Y	Yes – the Village Board of Aldermen functions as a planning board and the Village	Yes – County staff support.	

Administrative Capability	In Place (Y/N)	Is staffing adequate?	Is staff trained on hazards and mitigation?	Is coordination between agencies and staff effective?
		has a separate Board of Adjustment. Orientation provided.		
Fire/EMS (County District #10)	Y	Yes Yes – County training.	Yes.	
Law Enforcement (Sheriff)	Y	Yes Yes – County training.	Yes.	
St. Lucie County				
Chief Building Official	Y	Yes (workload surges post-event)	Yes (FBC/NFIP/SI-SD)	Yes
Civil Engineer (County Engineering/Public Works)	Y	Yes (project-based)	Yes (stormwater, drainage, coastal)	Yes
Community Planner	Y	Yes	Yes (risk-informed review)	Yes
Emergency Manager (Public Safety)	Y	Yes	Yes (ICS/NIMS; CEMP)	Yes
Floodplain Administrator	Y	Yes	Yes (NFIP/CRS)	Yes
GIS Coordinator	Y	Yes	Yes (FEMA//NOAA/ SFWMD/USGS/ Local Vulnerability/ Risk Assessments datasets)	Yes
Planning Commission	Y	Yes	Orientation provided	Yes
Fire Safe Council	N/A (no WUI focus)	–	–	–
CERT	N	NA	NA	NA
Active VOAD	Y	Yes (faith/ nonprofit partners)	Yes	Yes

Administrative Capability	In Place (Y/N)	Is staffing adequate?	Is staff trained on hazards and mitigation?	Is coordination between agencies and staff effective?
Other (TPO, FPUA, FPL liaison)	Y	Yes	Yes	Yes

Table 20: Technical Capabilities

Technical Capability	In Place? (Y/N)	How has the capability been used to assess/mitigate risk in the past? (Answer or N/A)	How can the capability be used to assess/mitigate risk in the future?
Port St. Lucie			
Mitigation Grant Writing	Y	HMGP/FMA/state resilience submittals for drainage, generators, and pump stations	BRIC planning and construction; expand state resilience applications based on 2025 Assessment
Hazard Data/ Analytics	Y	Used SLOSH/FIRMs and local stormwater modeling to scope projects near the North Fork and older subdivisions	Incorporate compound flooding/groundwater interaction layers
GIS	Y	Permit screening (SFHA), repetitive-loss mapping, project siting	Asset-level vulnerability (lift stations, outfalls, traffic signals)
Mutual Aid Agreements	Y	Activated for debris operations and law/fire support post-storms	Maintain with county/FPUA/ FPL
CRS Program Management	Y	Public information, mapping, and insurance outreach	Maintain or improve on current Class 5 rating through Drainage Maintenance activities and exploration of a Watershed Master Plan.
Fort Pierce			
Mitigation Grant Writing	Y	Submitted HMGP (Hurricanes Irma, Ian) for generators, tide valves, and drainage; applied for FDEP resilience grants (2023–2024)	Expand BRIC submissions and state resilience projects for low-lying neighborhoods
Hazard Data/ Analytics	Y	Used LMS risk mapping, FIRM data, and 2025 Vulnerability Assessment to identify flood-prone areas (e.g., Avenue D basin, South Beach)	Integrate compound flooding and sea-level-rise modeling

Technical Capability	In Place? (Y/N)	How has the capability been used to assess/mitigate risk in the past? (Answer or N/A)	How can the capability be used to assess/mitigate risk in the future?
GIS	Y	SFHA/CHHA screening, asset mapping, project prioritization	Support flood-risk dashboard for public information (CRS credit)
Mutual Aid Agreements	Y	Activated for debris removal, power restoration, and law/fire support after hurricanes (e.g., Irma, Ian)	Maintain active MOUs
CRS Program Management	Y	Class 6—public information, flood insurance outreach, drainage maintenance documentation	Target Class 5 rating by next CRS cycle
St. Lucie Village			
Mitigation Grant Writing (Support from County LMS staff)	Y	The Village received a HMGP grant for storm shutters on its Town Hall and St. Lucie School buildings in 2005 after the 2004 hurricanes. Applied for State Resilience grant funding for tide valves in 2023 but were not funded. Installed six tide valves and paid for them on its own. Have had success with pursuing grants for septic-to-sewer conversion projects to mitigate tidal flooding effects ($636,873 in legislative appropriations and $1,700,000 in an Indian River Lagoon Water Quality Grant) and very recently for design and construction of an FPUA potable water distribution system ($12.1 million CDBG Disaster Recovery-Hurricane Milton grant)	Seek State Resilience funding for culvert and shoreline projects 2025–2026
GIS Data/ Mapping (Support from County GIS)	Y	Used for FIRM review and property elevations. Also receive support from FPUA GIS staff for GIS work related to sewer and water projects and grant applications	Integrate County SLR and tidal flood layers
Mutual Aid Agreements (with County and	Y	Activated for debris clearance after Hurricanes Matthew (2016) and Ian (2022). Also finalizing an MOU with the County on a storm-	Maintain current MOUs through 2025 review.

Technical Capability	In Place? (Y/N)	How has the capability been used to assess/mitigate risk in the past? (Answer or N/A)	How can the capability be used to assess/mitigate risk in the future?
neighboring municipalities)		generated debris management site	
Engineering Support (County Public Works)	Y	Drainage evaluations and outfall retrofits	Continue joint inspections post-storms.
NFIP CRS Participation (via County)	Y	Class 5 credits shared with County program	Coordinate for future Class 5 targets.
St. Lucie County			
Mitigation Grant Writing	Y	HMGP/FMA/PA mitigation submittals after hurricane seasons; state and federal Resilience applications.	FMA/HMGP/Elevate Florida pipelines tied to 2025 LMS and 2025 Resilience Assessment.
Hazard Data/ Analytics	Y	FIRMs, SLOSH, surge/SLR scenarios integrated in LMS updates.	Expand groundwater/king tide and compound flooding analytics.
GIS	Y	Evacuation zones, SFHA/CHHA screens for permits and projects.	Asset-level vulnerability and project scoping for federal/state funding and permits.
Mutual Aid Agreements	Y	EMAC/State mutual aid for EOC ops and debris mgmt.	Maintain & expand for sheltering, public works, and utilities.
FDEM Watershed Initiative	Y	Funding for CRS activities	Action needed to achieve CRS Class 4
CRS Program Management	Y	Class 5 participation; program for public information (PPI).	Enhance or Maintain Class 5 CRS rating.

Financial

Identifying current and potential funding sources is crucial in the mitigation planning process. Planning partners can now select and implement financially feasible actions by exploring, identifying, and assessing various funding options.

FEMA's Hazard Mitigation Assistance (HMA) grants are available to fund eligible mitigation measures to reduce future disaster losses. Eligible applicants include state agencies, local governments, special districts, federally recognized tribes, and private nonprofit organizations.

Table 21 summarizes financial capabilities, which are the resources available to fund mitigation actions. Discussing funding and financial capabilities is important for determining which projects are feasible, given their costs.

Table 21: Financial Capabilities

Funding Resource	In Place? (Y/N)	Has this funding resource been used in the past, and for what types of activities?	Could it be used to fund future mitigation actions?	Can it be used as the local cost match for a federal grant?
Port St. Lucie				
General Fund	Y	Drainage spot improvements, debris contracts, and a match for grants	Yes	Yes
Capital Improvement Program (CIP)	Y	Basin retrofits, culverts, roadway flood relief, and generators	Yes	Yes
Stormwater Utility Fee	Y	O&M and capital drainage projects	Yes	Yes
Impact Fees	Y	Growth-related infrastructure can include resilient features.	Possible	Possible
HMGP (404)	Y	Post-storm drainage and backup power	Yes	No
FMA	Y	Repetitive-loss mitigation (elevations/acquisitions where applicable)	Yes	No
PA Mitigation (406)	Y	Codes/standards upgrades during eligible repairs	Yes	No
Statewide Resilience Grants (FDEP)	Y	Outfalls, tide-valves, pump stations, living shorelines	Yes	Yes
FDOT/TPO (LRTP/TIP)	Y	Corridor drainage and bridge/culvert resilience	Yes	Yes
CDBG/CDBG-DR (as available)	Y	Housing/infrastructure; potential drainage and elevations	Yes	Yes
Bonds/Special Assessments	Y	Large capital packages	Yes	Yes
Private/NGO (IRL Council, etc.)	Y	Pilot living shoreline/ education	Yes	In-kind possible

Funding Resource	In Place? (Y/N)	Has this funding resource been used in the past, and for what types of activities?	Could it be used to fund future mitigation actions?	Can it be used as the local cost match for a federal grant?
Fort Pierce				
General Fund	Y	Drainage and shoreline maintenance, match for grants	Yes	Yes
Capital Improvement Program (CIP)	Y	Stormwater, pump stations, drainage retrofits, generators	Yes	Yes
Stormwater Utility Fee	Y	Dedicated revenue for O&M and flood improvements	Yes	Yes
Impact Fees	N	Yes; unknown	Yes	Yes
HMGP (404)	Y	Post-hurricane hardening and generators	Yes	No
FMA	Y	Flood mitigation projects; not recent but eligible	Yes	No
PA Mitigation (406)	Y	Hardening projects during repair work	Yes	No
Statewide Resilience Grants (FDEP)	Y	Tide valves, seawall rehabilitation, shoreline stabilization (2023–2025)	Yes	Yes
FDOT/TPO (LRTP/TIP)	Y	Evacuation-route drainage and bridge retrofits	Yes	Yes
CDBG/CDBG-DR (as available)	Y	Drainage and infrastructure in Low Moderate Income (LM) areas (Avenue D)	Yes	Yes
Bonds/Special Assessments	Y	Infrastructure improvement programs	Yes	Yes
IRL Council/ Nonprofits	Y	Living shorelines, lagoon water-quality projects	Yes	Possible (in-kind)
St. Lucie Village				
General Fund	Y	Drainage maintenance and debris contracts.	Yes.	Yes.
CIP Allocation	Y	Small capital projects (≤ $50 k).	Yes.	Yes.

Funding Resource	In Place? (Y/N)	Has this funding resource been used in the past, and for what types of activities?	Could it be used to fund future mitigation actions?	Can it be used as the local cost match for a federal grant?
HMGP (through County sponsorship)	Y	Received grant in 2005 for storm shutters on two buildings	Yes.	No
FDEP Statewide Resilience Grants	Y	The only Resilience grant application for tide valves was not funded, and the Village funded this project from its cash reserves	Yes.	Yes.
FEMA FMA (through county subapplication)	Y	Not yet used directly.	Yes – seek shoreline pilot.	No.
CDBG Small Cities Program	Y	Not used to date.	Possible for drainage improvement.	Yes.
Stormwater Utility Fee	N – no local utility district	–	No (currently).	–
Grants (Private/NGO/ IRL Council)	Y	IRL Council mini-grant (shoreline plants 2021).	Yes.	Possible (in-kind).
Bonds/ Special Assessments	N	Have not used Bonds/Special Assessments for Infrastructure Improvement Programs but may consider that in the future.	Yes	Yes
FDOT/ TPO Funding	Y	Evacuation-route drainage and bridge retrofits. Would be all County, nothing in St. Lucie Village, but would benefit from County efforts.	Yes	Yes
IRL Council/ Nonprofits	Y	Living shorelines, lagoon water-quality projects. Received an IRL Water Quality Grant for septic-to-sewer conversion, but that is administered through FDEP,	Yes	Possible (in-kind).

Funding Resource	In Place? (Y/N)	Has this funding resource been used in the past, and for what types of activities?	Could it be used to fund future mitigation actions?	Can it be used as the local cost match for a federal grant?
		not the IRL Council. Will consider this in the future		
St. Lucie County				
Capital Improvement Project Funding	Y	Drainage, culverts, pump stations, generators, and facility hardening	Yes	Yes
General Funds	Y	Supplemental match and small-scale projects	Yes	Yes
HMGP (404)	Y	Post-hurricane mitigation (elevations, generators, drainage)	Yes	No
FMA	Y	Repetitive loss/Severe RL property mitigation	Yes	No
PA Mitigation (406)	Y	Codes/standards upgrades during repairs	Yes	No
CDBG	Y	Post-disaster housing and small infrastructure	Yes	Yes (as allowable)
NRCS Programs	Y	Watershed and bank stabilization (as eligible)	Yes	Possibly (case-by-case)
USACE Programs	Y	Shoreline/lagoon and flood-risk studies	Yes	Possibly (case-by-case)
Taxes (property/ special)	Y	Dedicated revenue for CIP and Reserves.	Yes.	Yes.
Stormwater MTSU	Y	O&M and capital retrofits. Ad valorem tax levied on property value.	Yes	Yes
Utility Service Fees	Y	Water/wastewater hardening; backup power	Yes	Yes
Impact Fees	Y	Growth-related, may contribute to resilience features. CIGP and TRIP grant funding through TPO are matched with impact fees.	Possibly	Yes
General Obligation/	Y	Large capital programs	Yes	Yes

Funding Resource	In Place? (Y/N)	Has this funding resource been used in the past, and for what types of activities?	Could it be used to fund future mitigation actions?	Can it be used as the local cost match for a federal grant?
Special Purpose Bonds				
Federal-funded Programs (IIJA/BIL)	Y	Planning and construction grants	Yes	No
State-funded Programs (Statewide Resilience, Indian River Lagoon, NEP, FDEP, SFWMD, FDACS grants)	Y	Drainage/outfall/tide-valve/living shoreline	Yes	Yes
Private/ Nonprofit Programs	Y	Partner projects (living shorelines, outreach)	Yes	Possibly (in-kind)
Other – ½ Cent Gas Tax	Y	Yes – funds road, stormwater improvements and other projects to reduce neighborhood flooding, improve water quality, reduce traffic congestion, and add sidewalks. Projects to reduce neighborhood flooding, improve water quality, improve local roads, reduce traffic congestion, and add sidewalks.	Yes	Yes

Education and Outreach

Table 22 summarizes education and outreach capabilities, which refer to programs and actions designed to communicate information, raise awareness of hazard risks, and encourage individual- and community-level risk reduction through public education, engagement, and information-sharing activities.

Table 22: Education and Outreach

Education and Outreach Capability	In Place? (Y/N)	Does this resource currently incorporate hazard mitigation?	Notes
Port St. Lucie			
City Website/Social Media/E-news	Y	Yes – flood safety, evacuation, hurricane preparation, stormwater BMPs, severe weather/ flood awareness week campaigns, FRP Outreach, Storm Information, Preparedness Information	Coordinated with County PIO and Alert St. Lucie
Public Workshops/Open Houses	Y	Yes – drainage projects and comprehensive plan updates	Conducted seasonally and during project design
Alert St. Lucie enrollment promotion	Y	Yes – warning and reentry information	Joint effort with County EM
CRS-related Flood Insurance Outreach	Y	Yes – encourages NFIP coverage and risk reduction, PPI mailers to all SFHA properties, insurers/lenders/realtors, and Repetitive Loss Properties.	CRS Class 5
Engagement with Vulnerable Populations	Y	Yes – senior centers, HOA networks, faith-based partners	Multilingual materials as available
Fort Pierce			
City Website/Social Media/E-news	Y	Yes – flood risk, hurricane preparedness, insurance information	Regular seasonal updates
Public Workshops/Open Houses	Y	Yes – floodplain and stormwater management topics	Held in coordination with County EM and FPUA
Alert St. Lucie enrollment promotion	Y	Yes – emergency notifications, evacuations	County-managed platform promoted locally
CRS-related Flood Insurance Outreach	Y	Yes – NFIP and risk reduction education	Annual CRS activities and newsletters

Education and Outreach Capability	In Place? (Y/N)	Does this resource currently incorporate hazard mitigation?	Notes
Engagement with Vulnerable Populations	Y	Yes – Avenue D and South Beach community meetings	Partnered with nonprofits, churches, and neighborhood groups
St. Lucie Village			
Website/ Newsletter/ Social Media	Y	Yes – storm prep and flood info.	Posts County EM alerts and CRS tips. Has a website and a "Village People" email group that includes almost 50% of village households. Do not have an official social media presence but are considering it. Use mass mailouts when necessary for notifications of projects or other purposes."
Public Meetings/ Workshops	Y	Yes – floodplain and resilience topics.	Meetings are once per month at the Town Hall and have special meetings or workshops when necessary.
Alert St. Lucie System (County)	Y	Yes – emergency notifications.	Residents enrolled via County portal.
Outreach to Vulnerable Groups	Y	Yes – seniors and lagoon-front residents.	Use the Village People email group and website to communicate with residents."
Coordination with County PIO and FDEM	Y	Yes – joint press and storm updates.	Active since 2019.
St. Lucie County			
Community Newsletter(s)	Y	Yes	County Public Safety and PIO channels
Hazard Awareness Campaigns (StormReady/Severe Weather Week/schools)	Y	Yes	Seasonal hurricane preparation; insurance/ flood information
Public Meetings/Events	Y	Yes	LMS working group; resilience workshops; stormwater workshops, and BOCC meeting updates.
Emergency Management Listserv	Y	Yes	Alert St. Lucie and EOC email distributions
Local News	Y	Yes	TV/radio partners for warnings and recovery information

Education and Outreach Capability	In Place? (Y/N)	Does this resource currently incorporate hazard mitigation?	Notes
Distributing Hard Copies of Notices	Y	Yes	Libraries, community centers
Insurance Disclosures/Outreach	Y	Yes	CRS flood insurance messaging
Organizations serving Underserved/Vulnerable	Y	Yes	VOAD partners, faith-based, and senior services
Social media	Y	Yes	Facebook/X/Nextdoor for watches/warnings and mitigation tips
Other	Y	Yes	County engagement webpage (includes mitigation strategy survey, public works news, hurricane info, update SLC, and GIS maps) County flood-protection webpage/CRS page.

Participation in the National Flood Insurance Program

Flooding is the costliest natural hazard in the United States, and recent changes in federal regulations and rating methodologies have contributed to increasing flood insurance premiums nationwide. Community participation in the National Flood Insurance Program (NFIP) provides both access to flood insurance for property owners and eligibility for additional grant funding specifically for flood-related issues. Assessing the NFIP status and compliance of St. Lucie County and its participating jurisdictions provides planners with a clearer understanding of the local floodplain management framework, areas for improvement, and available grant funding.

The NFIP's Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. Participants are offered discounted flood insurance premiums to reflect the reduced flood risk from community actions that meet the CRS's three goals. These goals are to reduce flood damage to insurable property, strengthen and support the insurance aspects of the NFIP, and encourage a comprehensive approach to floodplain management through coordinated planning, regulation, and public outreach. This section identifies and evaluates existing programs for the following jurisdictions:

- St. Lucie County
- City of Fort Pierce
- Port St. Lucie
- St. Lucie Village

St. Lucie County and its participating jurisdictions have a wide range of floodplain management capabilities. The questions in Table 23 focus on the roles, responsibilities, and capabilities of the floodplain manager and on the community's enforcement of floodplain regulations and participation in programs such as CRS. They also address the community's management of development permits, tracking of structures in flood hazard areas, determinations of substantial damage, and ongoing compliance with the NFIP in accordance with FEMA requirements.

Table 23: Floodplain Management

Question	St. Lucie County	Fort Pierce	Port St. Lucie	St. Lucie Village
Does the community participate in the NFIP?	Yes	Yes	Yes	Yes
Who is the floodplain manager? Is this their primary or secondary role?	Building Department Official (county) (serves as NFIP floodplain point-of-review per county flood guidance; role appears secondary to Building Department Official's duties).	Paul Thomas, Building Director and Floodplain Administrator (role appears primary in Building Department leadership)	Floodplain Coordinator for variance/ technical determinations; role appears specialized/ secondary in permitting/ building workflow). Reviews all ECs for approval.	Carl Peterson, Building Department Official/Floodplain Administrator (primary role: Building Department Official; floodplain admin appears secondary)
Does the floodplain manager have adequate training and capacity for their role?	Likely adequate: County participates in CRS and provides structured flood permitting guidance through Planning and Development Services/Building Department review.	Likely adequate: Maintains CRS Class 6 with annual recertification and a named Floodplain Administrator.	Likely adequate: CRS Class 5 reported; City provides flood mitigation/insurance assistance via Public Works and SD outreach through the Building Department. Floodplain Coordinator and Building Official are Certified Floodplain Managers (CFM).	Not confirmed in reviewed sources (Village has an adopted floodplain ordinance and designated Building Department Official/ floodplain function
How does the community enforce its floodplain rules? Does enforcement include monitoring compliance and acting to correct violations?	Enforces via development review/permit requirements under county flood damage prevention code, including required elevation certificates and treating missing documentation as a	Enforces through Floodplain Management (Code/ Chapter 109) and regulatory BFE methods; information provided publicly as "Floodplain Regulations"	Enforces through Building Code + Flood Damage Prevention (city ordinance chapters); uses Building Department processes (permits, inspections) and flood variance/coordination	Enforces through its Floodplain Management Ordinance administered by the Building Department Official, including permit controls and

Question	St. Lucie County	Fort Pierce	Port St. Lucie	St. Lucie Village
	presumed violation until provided.		through Flood Plain Coordinator	compliance administration (including SD/SI administration)
When was the most recent floodplain management ordinance adopted?	Ordinance No. 11-031 (amending Flood Damage Prevention section of County LDC). (Later flood-related amendments exist, but the newest flood ordinance date was not confirmed from the sources reviewed.)	Ordinance No. 21-002 (amending Floodplain Management chapter)	Ordinance 21-62 amending City Code Chapter 152 Floodplain Management was adopted on July 26, 2021.	Ordinance 2016-1
Does your community participate in the Community Rating System (CRS)?	Yes	Yes	Yes	No
Does the community's floodplain management ordinance include any higher standards? If so, please list.	Documentation/EC rigor: Ordinance language indicates required compliance documentation (e.g., elevation certificates) and presumes violation if missing.	Yes: City guidance describes adding 0.4 feet in coastal areas when determining BFE (per FEMA rounding guidance).	Yes (some): Flood variance procedures and use of structured SI/SD calculations are documented.	Ordinance exists
Who is responsible for permitting?	Planning and Development Services/Building Department (county) (floodway submissions reviewed by County Building Department Official)	City Building Department/ Floodplain Management (administered through Building Department/ floodplain function)	City Building Department (permits, inspections, and flood-related contacts routed through Building Department) and elevation enforced to BFE + 12 inches.	Town Building Department Official (administers ordinance and permitting).
How does the community issue	Through standard permitting with additional	Through floodplain management permitting per	Through Building Department permitting;	Through Town's Floodplain

Question	St. Lucie County	Fort Pierce	Port St. Lucie	St. Lucie Village
development permits in the Special Flood Hazard Area?	floodway/SFHA submittals (e.g., no-rise certification for floodway work) reviewed by County Building Department Official.	city floodplain chapter and published floodplain regulations guidance.	flood-related determinations/variances coordinated with Flood Plain Coordinator; post-event SD outreach directs property owners to Building Department	Management Ordinance administered by the Building Department Official.
Does the community maintain elevation certificates?	Yes (required/maintained as compliance documentation); absence can be treated as noncompliance until provided.	Likely yes	Likely. Yes, all elevation certificates are maintained locally and are available for inspection by contacting the Floodplain Coordinator.	Not confirmed (ordinance exists; EC recordkeeping not confirmed
Does the community track the number of buildings in the special flood hazard area? If yes, are there any trends?	Yes: LMS includes mapped "Homes Located in the SFHA" and repetitive loss area mapping	Yes (through LMS regional analysis);	Yes, as part of the CRS program we have to have a count of properties in the SFHA each year for CRS recertification.	Yes (through LMS regional analysis);
How many repetitive loss (RL) structures does the community have? (List number and type of structure)	185 total: 181 residential + 4 commercial	142 total: 130 residential + 12 commercial.	15 total: 14 residential + 1 commercial.	4 total: 4 residential + 0 commercial.
How many severe repetitive loss (SRL) structures does the community have? (List number and type of structure)	12	17	0	3

Question	St. Lucie County	Fort Pierce	Port St. Lucie	St. Lucie Village
Have any RL/SRL properties been mitigated since the last plan update?	0	0	3	0
Who is responsible for making substantial damage/substantial improvement determinations?	Local Building Department Official + Floodplain Administrator function (County Building Department Official is the review point for floodway work; state guidance notes SD determinations are a Building Department Official/ Floodplain Administrator responsibility).	Building Department Director/ Floodplain Administrator leads floodplain administration; SD determinations are a local Building Department Official/Floodplain Administrator function	Building Department via Floodplain Coordinator surveys SFHA non-compliant properties that were damaged to make an initial determination if they qualify under SD/SI after a disaster.	Building Department Official (ordinance references Building Department Official procedures for SI/SD administration).
How does the substantial damage/ substantial improvement process work in your community?	Permit-driven SD/SI compliance using NFIP standards; floodway work requires technical submittals (e.g., no-rise) and Building Department review.	Permit-driven SD/SI compliance under city floodplain chapter; CRS program administration supports consistent enforcement.	City uses Building Department workflow; Flood Variance Request Form documents SI calculation methods and the "50% rule" trigger. Floodplain Coordinator assesses non-compliant structures in the SFHA after a disaster.	Ordinance assigns Building Department procedures for administering/ documenting SI/SD determinations.
Is there sufficient staff and training to make substantial damage/ substantial improvement determinations?	Not explicitly stated; CRS participation and formal Building Department review process suggest baseline capacity, but staffing/training levels not quantified in reviewed sources.	Not explicitly stated; CRS Class 6 annual recertification suggests functional capacity.	Yes, there are only a few "non-compliant" properties in the SFHA in the City, and we have the staff available to assess them all, if needed, after a disaster.	Not explicitly stated.

Question	St. Lucie County	Fort Pierce	Port St. Lucie	St. Lucie Village
How are substantial damage/substantial improvement requirements messaged to the public before and after an event?	County provides public flood guidance through its website (flood protection/flood awareness resources);	City provides NFIP/ floodplain information and CRS-related public communications	City explicitly messages SD requirements: Directs residents to contact the Building Department after a flood to determine SD applicability. FRP messaging also instructs residents in pre- and post-disaster approved PPI messages.	Not confirmed (no specific pre/post-event SD messaging in reviewed sources).
Have any substantially damaged/ substantially improved structures been mitigated since the last plan update?	N/A	N/A	No SD/SI since last plan update.	N/A
How will the community remain in compliance with the NFIP moving forward? (Simply stating "the community will continue to comply with the NFIP" will not meet FEMA's planning requirements.)	Continue compliance via: (1) maintaining/enforcing flood damage prevention code with required EC documentation, (2) floodway technical review (no-rise) by Building Department Official, and (3) CRS program participation (ongoing public information and compliance activities).	Maintain compliance via: (1) annual CRS recertification to keep Class 6, (2) ongoing administration by Floodplain Administrator/ Building Department under Floodplain Management chapter, and (3) continued public-facing floodplain regulation guidance.	Maintain compliance via: (1) Building Department permit/inspection enforcement, (2) Flood Plain Coordinator technical determinations/variance pathway, (3) public outreach on flood risk and SD requirements, and (4) CRS Class 5 program maintenance	Maintain compliance by: (1) continuing to administer/enforce the Town Floodplain Management Ordinance through the Building Department Official, and (2) ensuring that SI/SD determinations are administered/documented per ordinance procedures.

St. Lucie County and its participating jurisdictions conduct numerous processes and collect data regularly to ensure proper floodplain management and ongoing compliance with NFIP requirements. The responses in Table 24 address the communities' processes for supporting flood map change requests, including community coordination and public engagement during the Risk Mapping, Assessment, and Planning (Risk MAP) process, and provide timelines for the most recent Flood Insurance Rate Map (FIRM) updates and methods for public access. In addition, they explore the communities' use of Risk MAP products and whether updated floodplain data or modeling is collected and shared with partner agencies and FEMA to support flood risk assessment and mitigation planning.

Table 24: Floodplain Mapping

Question	St. Lucie County	Fort Pierce	Port St. Lucie	St. Lucie Village
How does the community support map change requests? This could be requests during the Risk MAP process or through Letters of Map Amendment or Revision.	Public is directed to FEMA flood map tools (MSC/ NFHL viewer) for flood zone information, which is where LOMA/LOMR actions are initiated; in the currently accessible sources.	Public is directed to FEMA map tools and "Know Your Flood Hazard" resources	City flood webpage provides public guidance on flood zones/flood insurance and directs users to FEMA flood maps for flood zone determinations; Floodplain Coordinator will provide information to those wishing to file LOMA/LOMR	FEMA MSC/NFHL are the standard public pathways for LOMA/LOMR requests.
When did the latest Flood Insurance Rate Map (FIRM) become effective?	2/19/20	2/16/12	2/19/20	4/1/1980
When was the latest FIRM adopted?	2020	2012	2020	1980
Is the FIRM and Flood Insurance Study (FIS) report in an accessible location? How would the public get access to their flood map information?	County flood protection page directs users to FEMA flood map information tools (MSC/NFHL) to find flood zones.	City flood protection page provides "Know Your Flood Hazard" guidance and directs users to FEMA flood map resources. (FEMA	City flood mitigation/ insurance page directs users to FEMA flood maps/ flood zone determination resources. City Flood Zone	FEMA MSC/NFHL are the standard public access points.

Question	St. Lucie County	Fort Pierce	Port St. Lucie	St. Lucie Village
		Flood Map Service Center)	lookup tool provides links to FIRM and studies on each parcel chosen.	
Does the community use any Risk MAP products? If so, describe.	Yes – The county participated in a FEMA-partnered Risk MAP update, releasing preliminary coastal FIRMs in 2023, which were developed using updated hydrologic and hydraulic modeling to more accurately reflect coastal flood hazards.[10]	Part of county Risk MAP effort, the City's ArcGIS Hub "Flood Zones" layers are based on updated FIRM data from the county-FEMA Risk MAP update.[11]	Yes – As part of the unified St. Lucie County-Fort Pierce-Port St. Lucie-St. Lucie Village Risk MAP effort, the city incorporates and promotes updated FIRMs through its flood mitigation programs and the Unified Local Mitigation Strategy.[12]	Yes – As a participating jurisdiction in the county's Risk MAP/FEMA update cycle, the Village receives and adopts the same updated FIRMs. These are available through the shared county GIS platform.[13]
Does the community collect updated floodplain data or modeling? Is this shared with partners and with FEMA?	Yes – Actively maintains updated floodplain data through its ArcGIS open-data portal and "Flood Awareness" programs. Releases No-Rise certifications per FEMA technical	Yes – The city hosts an ArcGIS Hub "Flood Zones" web tool (reflecting updated FIRM data) and operates a FEMA CRS. The local CRS Coordinator manages floodplain permits—including No-Rise analyses—	Yes – The Office of Emergency Management maintains current flood data through FEMA MSC and city GIS. The city's Unified Local Mitigation Strategy (2021) outlines flood hazard data use across	Yes – The Village follows St. Lucie County's floodplain management protocols, including permit processing, No-Rise certification, and proactive distribution of updated flood

[10] St. Lucie County. (n.d.). Flood awareness. St. Lucie County. https://www.stlucieco.gov/departments-and-services/planning-and-development-services/building-inspections/flood-awareness. St. Lucie County. (n.d.). Flood protection information. St. Lucie County. https://www.stlucieco.gov/departments-and-services/public-safety/flood-protection-information.

[11] City of Fort Pierce. (n.d.). Flood zones [GIS dataset]. ArcGIS Hub. https://city-of-fort-pierce-arcgis-hub-cofpf.hub.arcgis.com/datasets/flood-zones-1.

[12] City of Port St. Lucie. (n.d.). Flood mitigation & insurance. City of Port St. Lucie. https://www.cityofpsl.com/Government/Your-City-Government/Departments/Emergency-Management/Flood-Mitigation-Insurance.

[13] St. Lucie County. (n.d.). FEMA flood zones. St. Lucie County Open Data. https://data-slc.opendata.arcgis.com/apps/slc::fema-flood-zones/explore.

Question	St. Lucie County	Fort Pierce	Port St. Lucie	St. Lucie Village
	standards. These datasets are shared on the state's geospatial portal and FEMA's National Flood Hazard Layer.[14]	and coordinates regularly with FEMA's Map Service Center.[15]	jurisdictions. It shares data with the county, state, and FEMA during map updates and mitigation planning.	data through the county's ArcGIS Hub and to FEMA.

St. Lucie County and its participating jurisdictions have multiple ways to engage in public outreach and to support communication with insurance agents regarding flood insurance. Table 25 shows how each jurisdiction educates the public about floodplain management and flood insurance availability, both inside and outside flood-prone areas, utilizing various outreach methods, such as letters, social media, and presentations. The questions also explore the community's engagement with insurance agents, the existence of flood hazard disclosure laws in Florida, the public's familiarity with flood insurance options, and whether there are properties or areas lacking flood insurance coverage.

Table 25: Flood Insurance and Outreach

Question	St. Lucie County	Fort Pierce	Port St. Lucie	St. Lucie Village
How does the community educate the public on floodplain management and the availability of flood insurance, in and out of the floodplain?	Public-facing flood resources (Flood Protection Information; Flood Awareness; Elevation Certificate information) and CRS public information/outreach activities (incl. CRS outreach/flood warning activities).	City webpages encourage flood insurance and explain NFIP/CRS benefits and flood protection guidance.	Dedicated "Flood Mitigation and Insurance" page with "Know Your Flood Hazard," links to FEMA MSC and city flood zone map, plus related public communications (news) and public outreach events throughout the year	Town ordinance establishes local floodplain management requirements; public can access FEMA maps via FEMA MSC. Floodplain manager contact published by the state.
How does the community engage with insurance agents on flood insurance?	CRS outreach work and county guidance directs residents to discuss coverage with agents.	City NFIP/CRS materials are designed to support resident/ agent conversations on	City materials direct residents to evaluate risk and pursue coverage using FEMA/city tools (often in coordination with an	State flood disclosure law explicitly prompts buyers to discuss flood insurance with an insurance agent.

[14] St. Lucie County. (n.d.). Flood awareness. St. Lucie County. https://www.stlucieco.gov/departments-and-services/planning-and-development-services/building-inspections/flood-awareness.
[15] City of Fort Pierce. (n.d.). Know your flood hazards. City of Fort Pierce. https://www.cityoffortpierce.com/825/Know-Your-Flood-Hazards.

Question	St. Lucie County	Fort Pierce	Port St. Lucie	St. Lucie Village
		coverage and discounts.	insurance agent). City sends annual letter and documentation to all lenders, insurers, and real estate agents outlining the City's participation in NFIP/CRS and how to talk to their clients about insurance.	
Does the community (or state) have flood hazard disclosure laws?	Yes (State of Florida): Florida Statute § 689.302 requires a flood risk disclosure to prospective purchasers (including flood insurance notice and questions on flood history/ claims/assistance).	Same as St. Lucie County.	Same as St. Lucie County.	Same as St. Lucie County.
How familiar is the public with their flood insurance options?	County provides public education resources and CRS outreach intended to increase awareness.	City provides NFIP/CRS education and flood protection guidance.	City provides a dedicated flood insurance/mitigation education page and mapping tools and CRS outreach to all properties in the SFHA annually	State-required disclosures are intended to increase awareness at point of sale.
How many properties have flood insurance in the community?	NFIP policies in force: 4,675.	NFIP policies in force: 4,089.	NFIP policies in force: 2,584.	NFIP policies in force: 138.
Are there any areas where flood insurance is lacking?	County materials emphasize risk and insurance availability (including outside mapped floodplains), implying gaps may exist where risk is	City encourages continued purchase of flood insurance (including for tenants), implying uptake gaps can exist.	City messaging emphasizes knowing flood zone and planning for risk, implying outreach focus areas may include outside-SFHA risk.	Unknown

Question	St. Lucie County	Fort Pierce	Port St. Lucie	St. Lucie Village
	underestimated or uptake is low.		Areas in X zones near the St. Lucie River show gaps in policies and efforts are being made to educate residents of their inherent risk based on location.	

Opportunities to Expand and/or Improve Capabilities

The findings of the capability assessment were reviewed to identify opportunities to expand, initiate, or integrate capabilities across planning, regulatory, administrative, technical, financial, and outreach functions to further hazard mitigation goals and objectives. These are listed in Table 26. Where such opportunities were identified and feasible, they were included in the action plan to support implementation and ongoing compliance with state and federal mitigation planning requirements.

Table 26: Opportunities to Expand

Capability	Opportunity to Expand and/or Improve
Port St. Lucie	
Planning and Regulations	• Target repetitive-loss clusters along the north fork of the St. Lucie River and legacy subdivisions for basin storage, outfall controls, and road-elevation packages, sequenced through CIP. • Formalize compound-flood screening (rainfall + king tide + surge) in development review and integrate results into the Comprehensive Plan and LDC updates. • Advance generator and fuel redundancy for Port St. Lucie Utility Systems (PSLUS) plants and priority lift stations to reduce sanitary sewer overflows during extended outages. • Expand CRS activities (public information, drainage system maintenance documentation, and mapping) to improve the city's CRS Class 5 and reduce NFIP premiums. • Continue TPO corridor resilience projects on Crosstown Parkway, US-1, and Turnpike/I-95 interchanges (drainage/culvert upgrades, signal power redundancy).
Administrative and Technical	• Continue encouraging City Staff to earn Certified Floodplain Manager credentials
Financial	• Continue seeking out funding opportunities and grants to improve drainage systems citywide • Expand using ½ cent sales tax to improve drainage

Capability	Opportunity to Expand and/or Improve
	• Pre-develop projects for the Prioritized Project List and have them shovel-ready for when HMGP grants are released to maximize awards.
Education and Outreach	• Expand opportunities to message to the public through social media, local public-access TV, and other outlets • Expand community presentations to HOAs and Community Groups
Fort Pierce	
Planning and Regulations	• Implement comprehensive stormwater retrofit and outfall improvement program focused on repetitive-loss areas, including South Beach, Avenue D, and Georgia Avenue basins. • Expand participation in the State Resilience Grant Program for pump stations, tide valves, and seawall rehabilitation. • Advance CRS rating improvement to Class 5 through expanded public outreach, documentation of maintenance, and enhanced mapping. • Continue collaboration with FPUA to harden water and wastewater systems, including backup power and SCADA redundancy. • Integrate sea-level rise and groundwater modeling into stormwater and land-development decisions using 2025 Regional Resilience and Vulnerability Assessment data. • Increase community engagement in underserved and repetitive-loss neighborhoods with multilingual outreach (English, Spanish, Haitian Creole).
Administrative and Technical	• Encourage all city departments to have one staff member who is a Certified Floodplain Manager. • Incentivize employees who do not work in the Building Department to obtain this certification. • Increase compensation for employees who participate in floodplain, CRS, and resilience activities.
Financial	• None
Education and Outreach	• Enlist assistance from organizations such as the Federal Emergency Management Agency (FEMA), the Association of State Floodplain Managers (ASFPM), and the Florida Floodplain Managers Association (FFMA) to provide presentations and resources to City Councils and County Boards to emphasize the importance of flood insurance and support their staff regarding floodplain management and resilience initiatives.
St. Lucie Village	
Planning and Regulations	• Develop a Town-specific Stormwater and Drainage Maintenance Schedule (inventory culverts/outfalls, establish 5-year inspection rotation). • Formalize a Resilience Element in the Comprehensive Plan by 2026 using County's 2025 Vulnerability Assessment data.
Administrative and Technical	• Regional Resilience & Vulnerability Assessment data.

Capability	Opportunity to Expand and/or Improve
Financial	• Pursue FDEP Statewide Resilience Grant Cycle 2025 for additional tide valves along Indian River Lagoon.
Education and Outreach	• Expand outreach with multilingual flood risk and evacuation materials distributed jointly with County EM.
St. Lucie County	
Planning and Regulations	• Incorporate the June 2025–2026 Regional Resilience Plan & Vulnerability Assessment to identify project corridors (IRL/lagoon fringe, North Fork St. Lucie River) into the Comp Plan/CIP; and target CRS Class-5 credits. • Completion of the St. Lucie County Regional Resilience Plan and companion Resilience Vulnerability Assessment-Other Hazards (RVA-OH) in 2026.
Administrative and Technical	• Increase post-disaster SI/SD surge staffing (cross-train inspectors); expand GIS asset vulnerability layers (lift stations, outfalls, tide valves). • Seeking opportunities to get other staff CFM certified – other building staff, public works staff, & public safety staff.
Financial	• Build a standing HMGP application calendar with shovel-ready scopes; evaluate dedicated stormwater fee adjustments to accelerate pump/tide-valve retrofits in repetitive-loss basins.
Education and Outreach	• Expand multilingual (English/Spanish/Haitian Creole) preparedness/ mitigation engagement; continue the LMS public input process now underway for the 2025 update.

Plan Integration

Future updates to comprehensive plans, capital improvement programs, and emergency operations plans should embed findings from the 2025 Regional Resilience and Vulnerability Assessment and align with LMS priorities. Integration with transportation planning (LRTP/TIP) and CRS programs will further institutionalize resilience. The planning partnership recognizes that all core jurisdictional capabilities are adaptable to meet evolving needs. Every code can be revised, and every plan can be updated.

Table 27: Integration with Previous Plans

Plan	How the prior plan was integrated
Port St. Lucie	
Comprehensive Plan and LDC	Used LMS risk layers (CHHA/SFHA, surge, repetitive-loss) in land-use decisions and code updates.
CIP	Prioritized drainage and utility hardening derived from LMS vulnerability mapping and project scoring.
EOP/CEMP	Incorporated LMS hazards into evacuation/sheltering and continuity triggers.

Plan	How the prior plan was integrated
TPO LRTP/TIP	Applied flood-prone corridor data to select roadway/bridge drainage projects and hardening.
CRS Program	Leveraged LMS outreach and mapping to meet CRS credit activities and public information goals.
Fort Pierce	
Comprehensive Plan	Used LMS hazard maps and vulnerability analysis to guide development patterns and capital investment priorities.
CIP	Funded mitigation and drainage projects identified in LMS and stormwater plans.
EOP/CEMP	Integrated hazard and critical facility data from LMS.
TPO LRTP/TIP	Applied vulnerability data to prioritize evacuation and bridge projects.
CRS Program	Leveraged LMS outreach and risk data for public education and insurance awareness.
St. Lucie Village	
St. Lucie County LMS	Town participates through interlocal membership; project list incorporated in County LMS annex.
County Comprehensive Plan/Coastal Element	Town aligns shoreline policies and open-space preservation.
County CEMP/EOP	Evacuation, debris, and continuity of operations are guided by County plans.
Floodplain Management Program	Administered by County staff on Town's behalf; integration ensures NFIP compliance.
CRS Program	Town benefits from County's Class 6 CRS rating via shared activities (public info and mapping).
St. Lucie County	
Comprehensive Plan and Map Series	CHHA/SFHA data and evacuation considerations used in development review and policy updates.
CIP	Prioritized drainage/backup power projects derived from LMS risk findings.
EOP/CEMP	Used LMS risk profiles for evacuation/shelter and continuity planning.
TPO LRTP/TIP	Incorporated evacuation resilience and drainage constraints into corridor projects.
CRS Program	Used LMS outreach and flood information for CRS credit activities and public education.

Table 28: Opportunities to Integrate with Future Plans

Plan	Description	Process for Integration (who, what, when, and how)
Port St. Lucie		
Comprehensive Plan Amendments (2025–2026)	Embed 2025 vulnerability hotspots and compound-flood screens; strengthen policies for infill drainage and freeboard.	Planning and Zoning + Engineering with County Resilience; public workshops; adoption through EAR-based amendments.
CIP (annual)	Multi-year packages for basin storage, culverts, pump stations, and lift-station generators (PSLUS).	Public Works/Utilities + OMB; stack with BRIC/HMGP/state resilience cycles.
CRS Program (next cycle)	Improve to next class by expanding public information, mapping, and maintenance documentation.	Floodplain Admin + Communications; formalize outreach calendar, make progress towards a Watershed Master Plan as a pre-requisite to Class 4 status.
TPO 2050 LRTP/ TIP	Integrate drainage risk and access continuity for Crosstown Pkwy, US-1, and freeway interchanges.	City Engineering + TPO; LRTP update cycle; TIP annually.
EOP/COOP Updates	Align essential facilities and shelter power needs with LMS mitigation schedule.	City EM Liaison + county EOC; annual maintenance.
Fort Pierce		
Comprehensive Plan (2027 EAR update)	Strengthen Resilience and Infrastructure Elements using 2025 Assessment; codify freeboard and compound flooding standards.	Planning Department with Public Works and County Resilience; 2026–2027.
CIP	Program recurring drainage and shoreline projects aligned with LMS and Resilience priorities.	Public Works/Finance annually; BRIC/HMGP/state grants.
CRS Program	Target Class 5; expand mapping and maintenance documentation.	Floodplain Administrator/Planning; next CRS cycle.
EOP	Incorporate new infrastructure resilience and communication redundancies.	EM Coordinator/county EOC; annual.
FPUA Utility Resilience Plan	Formalize integration with city CIP and LMS projects.	City–FPUA coordination 2025–2026.
St. Lucie Village		
Comprehensive Plan Update (2026)	Add Resilience Element per F.S. 163.3178 (2)(f).	Town Manager + County Planning/ TCRPC support 2025–2026.

Plan	Description	Process for Integration (who, what, when, and how)
Stormwater Maintenance Plan (2025)	Inventory culverts/ tide valves for capital planning.	Public Works + County Engineering; fund through State Resilience Grants.
LMS Project List (Annual)	Add shoreline and drainage retrofit projects.	Town Manager + County Resilience Coordinator; annual review.
FPUA Coordination MOU	Integrate backup power and fuel resilience for shared utilities.	Town Manager + FPUA 2025.
CRS Class 5 Goal (County Program)	Enhance public info and outreach activities.	Town Manager + County Floodplain Admin by next CRS cycle.
St. Lucie County		
Comprehensive Plan Amendments	Incorporate 2025 resilience and sustainable mobility study findings, including hotspots and project corridors..	Planning and Development Services with Public Safety/Engineering; during 2025–2026 amendment cycles, using 2025 Assessment maps.
CIP (FY cycles)	Program pump/tide-valve/culvert replacements and shelter retrofits.	Public Works/Utilities/OMB; annual budget; leverage DEP Resilience/ HMGP/State matches.
CRS Program	Continue Class-5 actions (public info, mapping, drainage maintenance).	Floodplain Admin, Building Dept. + Emergency Management Division support; next CRS cycle review.
TPO 2050 LRTP and TIP	Integrate vulnerability and adaptation for US-1/A1A/I-95/Turnpike bridges/outfalls.	TPO + County Engineering; LRTP due Feb 3, 2026; TIP annually.
EOP/CEMP Updates	Align sheltering, evacuation, and continuity with 2025 LMS.	Public Safety/EOC Emergency Management Division; annual maintenance; Healthcare CEMP page provides facility guidance.

Observations on Capability Assessment

St. Lucie County and its jurisdictions maintain strong foundational capabilities across planning, regulatory, administrative, technical, financial, and outreach functions. Comprehensive plans, land development codes, and floodplain ordinances incorporate hazard mitigation principles, although opportunities remain to strengthen compound flooding analysis and codify resilience standards in future updates. Administrative and technical resources include designated floodplain administrators, emergency management liaisons, GIS tools, hazard data analytics, and grant-writing expertise; however, surge staffing for post-disaster substantial damage determinations is a noted challenge. Financial capabilities leverage general funds, capital improvement allocations, stormwater utility fees, and access to federal and state programs, such as HMGP, BRIC, FMA, and Statewide Resilience grants, with opportunities to formalize

grant calendars and explore dedicated resilience funding streams. Education and outreach efforts include seasonal campaigns, CRS-related activities, and multilingual engagement, with key opportunities to expand outreach in underserved neighborhoods and enhance CRS ratings through improved documentation and public information initiatives.

Participation in NFIP and CRS

All jurisdictions participate in the NFIP, with St. Lucie County, Fort Pierce, and Port St. Lucie maintaining active CRS programs. Current CRS class 5, providing premium discounts to policyholders. Opportunities include advancing CRS ratings through enhanced public information and drainage maintenance documentation.

Opportunities for Improvement

St. Lucie County and its jurisdictions can strengthen mitigation capabilities through targeted enhancements across all core areas. In Planning and Regulatory, integrating compound flooding and sea-level rise modeling into land development decisions and codifying resilience corridors in comprehensive plans will improve long-term risk reduction. For Administrative and Technical functions, expanding cross-training for substantial damage determinations and incentivizing Certified Floodplain Manager (CFM) credentials will build technical capacity. In the Financial category, establishing a standing HMGP and BRIC application calendar and evaluating stormwater fee adjustments can accelerate funding for critical retrofits. Finally, Education and Outreach efforts should focus on increasing multilingual engagement and partnering with nonprofits and VOAD to deliver targeted education in repetitive-loss neighborhoods, ensuring equitable access to mitigation resources.

Conclusion

This capability assessment finds that St. Lucie County and its jurisdictions maintain a strong foundation of planning and regulatory tools, technical resources, and public outreach programs that support hazard mitigation. However, gaps remain in the surge of staffing for post-disaster operations, advanced modeling for compound flooding and sea-level rise, and dedicated funding streams for resilience projects. Addressing these gaps through targeted actions, such as integrating forward-looking risk assessments into land-use decisions, expanding technical training and certifications, formalizing grant application schedules, and enhancing multilingual outreach, will strengthen the county's ability to reduce risk and improve resilience across all communities. By leveraging existing capabilities and implementing these improvements, St. Lucie County can advance a more extensive and effective hazard mitigation program.

Erosion

Definition

Erosion is the process of gradually wearing away and losing land areas, including riverbanks, hillslopes, beaches, shorelines, and dunes, due to wind and water activity. This phenomenon can be triggered by various natural events, such as heavy rainfall, rapid snowmelt, hurricanes, storm surges, tides, wildfires, and windstorms. Additionally, human activities, including vegetation removal and urban development, can exacerbate erosion. Increasing frequency or intensity of storms, wildfires, and storm surges may elevate the risk of erosion. Although it often occurs gradually, erosion can have significant impacts, potentially damaging or destroying buildings and infrastructure.

There are six types of coastal change seen along the coastlines of St. Lucie County:[16]

- **Beach Erosion:** This natural process occurs when waves and ocean currents gradually remove sand from the shoreline, leading to a decrease in beach width. This process is exacerbated by factors such as sea-level rise, storm surge, and human activities like shoreline modification (inlet and/or coastal structures), coastal development, and sand mining. As beaches shrink, they pose significant risks to coastal properties and infrastructure, which can suffer damage from increased flooding and storm impacts.
- **Dune Erosion:** This natural process occurs when ocean waves and currents persistently impact the front face of a dune, leading to a gradual decrease in both the volume and elevation of the dune structure. This erosion is intensified by rising sea levels, extreme weather events, and human activities such as coastal development and sand mining. As the protective barrier of the dune disappears, coastal properties become increasingly exposed and vulnerable to the forces of future storms, which can result in severe damage or loss of infrastructure.
- **Overwash:** This occurs when wave heights exceed the elevation of a coastal dune, leading to the movement of sand inland across the area. This natural process can substantially reshape coastal landscapes, as seawater and sediment are pushed over the dunes during storm events or high tides. As a result of overwash, the beach ecosystem often undergoes an obvious transformation, which can include the formation of new landforms, such as c fans or channels. This frequently causes considerable damage to coastal properties, including homes, infrastructure, and natural habitats, as waves and sediment can erode dune systems and flood low-lying areas, resulting in both immediate and long-term impacts on the coastal environment.
- **Inundation and Island Breaching:** Inundation occurs when the beach system, located between the primary dune and the shoreline, is fully submerged by rising storm surge during severe weather events such as hurricanes. This flooding disrupts local ecosystems, impacting habitats for shorebirds and coastal vegetation.

[16] USGS, "Coastal Change Hazards: Hurricane and Extreme Storms," https://coastal.er.usgs.gov/hurricanes/coastal-change/index.php.

- *Island breaching occurs when strong currents generated by storm surge carve channels through barrier islands, altering their geography and ecology. This process can connect the ocean with estuaries or lagoons, changing salinity levels and affecting marine life. These changes pose immediate risks to coastal communities and have long-term effects on sediment transport and coastal erosion, challenging conservation and management efforts.*
- **Marsh Erosion:** This is a significant environmental issue affecting wetland coastlines near oceans and bays. It is primarily caused by waves and ocean currents that slowly wear away wetland soil, leading to a loss of land area. Factors such as rising sea levels, increased storm intensity, and human activities such as shoreline development exacerbate this process. The erosion results in the loss of habitat for wildlife and reduces the marshes' ability to protect against storm surges and flooding.
- **Beach Escarpment:** Area of the Earth where elevation changes suddenly, often resulting from wave action or erosion. It typically separates two relatively level areas with different elevations, such as the base of a cliff or a steep slope. Beach escarpments can be formed by processes like erosion and faulting, and they play a significant role in coastal geography and the erosion of barrier island beaches.[17]

Location and Extent

Erosion in St. Lucie County typically occurs along the coastline, beaches, seawalls, inlets, barrier islands, islands, riverbanks, and coastal cliffs. The region is particularly vulnerable to coastal erosion due to wave action and rising sea levels, especially in areas such as Treasure Cove (Port St. Lucie), Hutchinson Island (St. Lucie County), and Fort Pierce. The Florida Department of Environmental Protection identifies 7.6 miles of St. Lucie County's Atlantic shoreline as "critically eroded."[18]

Table 29 lists beaches that are susceptible to erosion in St. Lucie County. This may not be a complete list of all St. Lucie County beaches.

Table 29: St. Lucie County Beaches[19]

Beach	Jurisdiction
Avalon State Park	State of Florida
Blind Creek Beach	St. Lucie County
Blue Heron Beach	St. Lucie County
Coconut Crossing Park	Fort Pierce
Dollman Park Beach	St. Lucie County
Fort Pierce Inlet State Park	State of Florida

[17] USGS, "Beach Erosion with Escarpment", https://www.usgs.gov/media/images/beach-erosion-escarpment
[18] Florida Department of Environmental Protection, "Critically Eroded Beaches of Florida, August 2024," https://floridadep.gov/rcp/coastal-engineering-geology/documents/critically-eroded-beaches-florida.
[19] Visit St. Lucie, "Beach Bliss," https://visitstlucie.com/beaches/.

Beach	Jurisdiction
Frederick Douglass Memorial Park	St. Lucie County
Gulfstream Beach	Fort Pierce
Herman's Bay Beach	St. Lucie County
Jetty Park Beach	Fort Pierce
John Brooks Park Beach	St. Lucie County
Kimberly Bergalis Memorial Park	Fort Pierce
Little Mud Creek	St. Lucie County
Middle Cove Beach	St. Lucie County
Normandy Beach	St. Lucie County
Ocean Bay Beachside	St. Lucie County
Pepper Beach Park Riverside	St. Lucie County
Pepper Park Beach	St. Lucie County
Porpoise Beach	Fort Pierce
Queens Island Park	St. Lucie County
South Beach Park	Fort Pierce
South Causeway Beach	Fort Pierce
Surfside Park	Fort Pierce
Walton Rocks Beach	St. Lucie County
Waveland Beach	St. Lucie County

In addition to coastal areas, riverbank erosion can occur along the St. Lucie River and areas adjacent to bodies of water, especially during heavy rain or flooding events that increase water flow. Residential areas near water bodies may also experience erosion if proper landscaping and drainage practices are not in place.

St. Lucie County has several islands and barrier islands, particularly near the coast (see Figure 27) which shows a visual of the islands off the coast of St. Lucie. One notable example is Hutchinson Island, which runs parallel to the mainland. Additionally, the Indian River Lagoon contains smaller islands and wetlands.

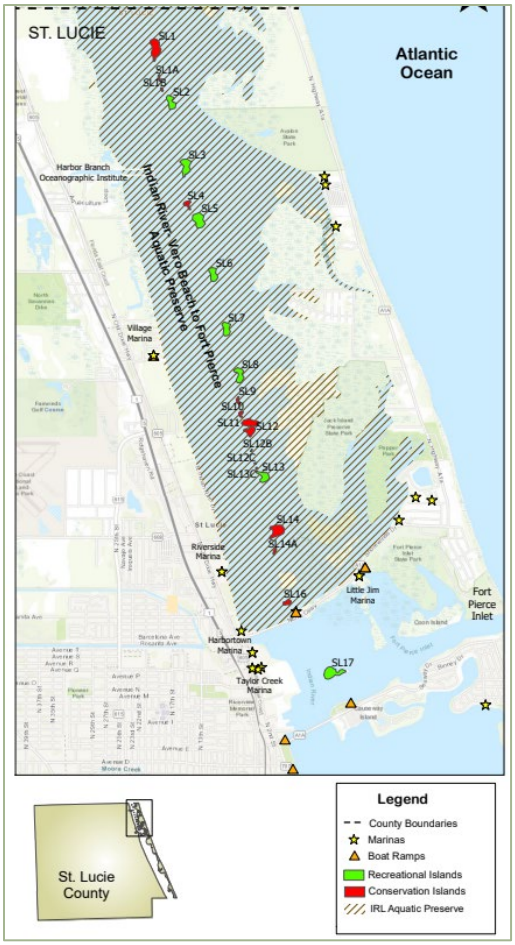


Figure 27: Islands in St. Lucie County[20]

Escarpments are persistently found along the county's eastern shoreline immediately downdrift of Fort Pierce Inlet. These "cliffs" are typically transient in nature but can persist during winter months as a result of impacts the Inlet has on coastal morphology. Additionally, some unprotected areas around the Indian River Lagoon may also have persistent escarpments as a result of high wind/wave condition.

Table 30 provides the locations of critically and non-critically eroded beach and inlet shorelines in St. Lucie County.

[20] Spoil Island Project, "Spoil Island Maps by County," https://www.fosifl.org/spoil-island-project-home/spoil-island-maps-by-county/.

Table 30: Locations of Critically and Non-Critically Eroded Beach and Inlet Shorelines, St. Lucie County[21]

Eroding Shoreline Location	Erosion Condition	Critically Eroded Beaches (miles)	Non-Critically Eroded Beach (miles)	Critically Eroded Inlet (miles)	Non-Critically Eroded Inlet (miles)
R34–R46	Critical	2.3	0	0	0
R46–R80	Non-Critical	0	6.4	0	0
R80–R90.3	Critical	1.9	0	0	0
R90.3–R98	Non-Critical	0	1.5	0	0
R98–R115+1000	Critical	3.4	0	0	0
Total		**7.6**	**7.9**	**0**	**0**

Erosion is a significant concern due to the region's coastal geography and rising sea levels. To assess erosion extent and severity, annual field surveys are typically conducted in critically eroded segments of shoreline to document visible changes in landforms. Aerial photography and satellite imagery also help track landscape changes over time, while Geographic Information Systems (GIS) analyze spatial data to visualize erosion patterns and predict future vulnerabilities.

FDEP maintains coastal range monuments along the Atlantic shoreline (approximately every 1,000 linear feet) to provide stationary reference points for coastal surveying efforts. A comparison of subsequent surveying efforts from any one of these monuments allows the County to compare beach changes from year to year and assess sediment morphology and trends.[22] These range monuments are utilized by surveyors and engineers to track erosional trends and justify nourishment events.

EXTENT

The Digital Shoreline Analysis System (DSAS) is a tool developed by the U.S. Geological Survey (USGS) to analyze shoreline changes over time.[23] It primarily uses geospatial data, such as satellite imagery and historical maps, to assess shoreline dynamics, particularly in coastal areas.

DSAS can quantify changes in shoreline position by calculating rates of erosion or accretion, and it provides a methodological framework for analyzing historical shoreline data. This information is vital for managing coastal areas, conserving habitats, and understanding the impacts of climate patterns on coastal environments.

[21] Florida Department of Environmental Protection, "Critically Eroded Beaches of Florida, August 2024," https://floridadep.gov/sites/default/files/FDEP_Critically%20Eroded%20Beaches_08-2024_0.pdf.
[22] FDEP, https://floridadep.gov/sites/default/files/FDEP_Range_Monuments_FAQ_04-2020.pdf.
[23] USGS, "Digital Shoreline Analysis System (DSAS)," https://www.usgs.gov/centers/whcmsc/science/digital-shoreline-analysis-system-dsas#overview.

DSAS also uses a graded classification system to categorize coastal changes, typically ranging from very high erosion to very high accretion, which refers to areas where sediment and soil accumulate. Table 31 summarizes shoreline change categories and associated erosion or accretion rates.

Table 31: Shoreline Grades[24]

Category	Rate of Shoreline Change (m/year)	Shoreline Classification
1	Greater than -2	Very High Erosion
2	Greater than -1 and less than -2	High Erosion
3	Greater than 0 and less than -1	Moderate Erosion
4	0	Stable
5	Greater than 0 and less than +1	Moderate Accretion
6	Greater than +1 and less than +2	High Accretion
7	Greater than +2	Very High Accretion

JURISDICTIONAL IMPACTS

Hazard impacts refer to the adverse effects stemming from natural or human-induced events. These impacts include physical damage, human health concerns, and economic, environmental, and social impacts, as seen in Table 32.

Table 32: Impacts of Erosion, by Jurisdiction

Participant	Impacts
St. Lucie County	Erosion in St. Lucie County mainly impacts Fort Pierce Beach and South Hutchinson Island, though any coastal region or riverine area may be at risk from erosion. When erosion occurs, the structural integrity of infrastructure may be compromised, leading to costly repairs for roads, bridges, and coastal structures. Property loss is another concern, as homes and businesses along the coastline are vulnerable to erosion. This can result in severe damage, decreased property values, and displacement of residents. Public safety is also at risk due to unstable ground in eroded areas. Environmental impacts include loss of wildlife habitats and sediment runoff that can affect local waterways. Economically, erosion can strain local budgets as communities face repair costs and may need to increase taxes or reduce funding for essential services.
City of Port St. Lucie	Critical infrastructures such as roads, bridges, and utilities can be damaged, leading to expensive repairs and service disruptions. Erosion can decrease property values as homes become vulnerable to flooding and storm damage. It also threatens recreational areas and natural habitats, reduces the quality of life for residents, and affects local tourism. Public safety is jeopardized as erosion

[24] K. Nassar et al., "Shoreline Change Detection Using DSAS Technique: Case of North Sinai Coast, Egypt," *Marine Georesources & Geotechnology* 37, no. 1 (2018): 81–95, https://doi.org/10.1080/1064119x.2018.1448912.

Participant	Impacts
	increases the risks of flooding and storm surges during severe weather. Because Port St. Lucie is farther inland and has no beaches, erosion impacts are mainly a concern along the riverfront.
City of Fort Pierce	Coastal roads and bridges are vulnerable to erosion, which undermines their stability, increases maintenance costs, and poses the risk of road collapses that disrupt access to emergency services and essential goods. Homes near the coastline are at risk of damage, which may lead to displacement and declines in property value. The loss of beachfront areas can deter visitors, resulting in decreased revenue and job losses, placing economic strain on the community. Erosion can also degrade coastal habitats, threatening local wildlife and reducing biodiversity, especially along the Fort Pierce Inlet and Jetty Park area. The decline in marine environments can harm industries like fishing and ecotourism.
Town of St. Lucie Village	Roads and bridges can become unstable as soil erodes, leading to expensive repairs and disruptions in transportation and emergency services. Residential properties, especially those near waterways, such as the North Fork of the St. Lucie River that borders the village, are also at risk. As land erodes, homeowners face potential loss of property and financial strain, leading to displacement and declining property values, which impact economic stability. Erosion reduces vegetation, which is essential for flood control and wildlife habitats. This loss can detract from the community's appeal, affecting tourism and recreational activities. Additionally, erosion leads to increased flooding and water quality issues. Pollutants washing into waterways can contaminate drinking water, posing health risks to residents.

NATIONAL RISK INDEX

The NRI is a valuable tool for assessing various hazards across communities in the United States. However, it does not evaluate erosion as a significant hazard and is therefore not included in this particular hazard profile.

Magnitude and Severity

The potential magnitude and severity of erosion in St. Lucie County can be significant due to its coastal location and the impact of both natural and human-induced factors. Coastal erosion, often worsened by sea level rise and storm surges linked to atmospheric change, threatens local infrastructure, ecosystems, and recreational areas. Areas along the Atlantic coastline are particularly vulnerable, where wave action and strong currents can lead to substantial land loss over time.

In addition, human-caused activities such as construction, altered drainage patterns, and beach nourishment projects can either mitigate or worsen erosion impacts. Severe erosion could lead to property damage, loss of habitat for wildlife, and increased sedimentation in waterways, which affects water quality. In extreme cases, communities may face displacement due to land loss and flooding.

Historic Events

Finding reliable public sources that track coastal erosion can be challenging. Many local agencies provide information about current conditions but often lack comprehensive historical data on erosion trends. Although the National Centers for Environmental Information Storm Events Database does not provide specific data on erosion, examining coastal floods, hurricanes, storm surges, and tropical storms within the database has yielded useful information on erosion events in St. Lucie County.

Table 33 summarizes erosion events that occurred from 2019 through November 2025. Tracking all cases of erosion is complex and challenging, and Table 33 should be regarded as a summary rather than a comprehensive account of all erosion events. There are many factors influencing erosion, and numerous localized incidents may not be documented. Consequently, the table does not encompass the full scale of erosion occurrences in St. Lucie County.

Table 33: Historical Erosion Events, St. Lucie County[25]

Date	Type	Property Damage	Description
9/2/2019	Hurricane	Initial damage assessments in east-central Florida surpassed $32 million, mainly due to beach erosion.	In St. Lucie County, wind gusts reached tropical storm force during squalls, especially along the barrier islands. However, sustained winds remained below that threshold, as Hurricane Dorian's center was far to the east.
9/3/2019	Storm Surge	Initial damage assessments in east-central Florida surpassed $32 million, mainly due to beach erosion.	As Hurricane Dorian moved northwest along the east-central Florida coast, St. Lucie County beaches experienced moderate to severe erosion due to a 2-foot storm surge. Strong onshore winds and large swells during high tides contributed to the surge, which also raised water levels in the Indian River Lagoon system.
8/2/2020	Tropical Storm	Tropical Storm Isaias caused minor beach erosion due to elevated tides, approximately 1 foot above predicted levels.	In St. Lucie County, tropical storm-force winds affected the barrier islands, with gusts reaching storm strength across much of the County from early morning to late afternoon on August 2. The highest sustained wind of 41 mph and peak gust of 46 mph were recorded at the St. Lucie Nuclear Power Plant at 7:05 a.m. Tropical Storm Isaias

[25] National Center for Environmental Information, "Storm Events Database," https://www.ncdc.noaa.gov/stormevents/listevents.jsp?eventType=%28Z%29+Coastal+Flood&eventType=%28Z%29+Hurricane+%28Typhoon%29&eventType=%28Z%29+Storm+Surge%2FTide&eventType=%28Z%29+Tropical+Depression&eventType=%28Z%29+Tropical+Storm&beginDate_mm=01&beginDate_dd=01&beginDate_yyyy=2019&endDate_mm=02&endDate_dd=28&endDate_yyyy=2025&county=ST.%2BLUCIE%3A111&hailfilter=0.00&tornfilter=0&windfilter=000&sort=DT&submitbutton=Search&statefips=12%2CFLORIDA.

Date	Type	Property Damage	Description
			moved north, coming closest to the coast approximately 36 miles east-southeast of Fort Pierce Inlet.
9/21/2020	Coastal Flood	The coastline experienced minor to moderate beach erosion, with some regions facing significant erosion.	Coastal flooding reached minor to moderate levels around high tide, with the greatest impact near Fort Pierce Inlet. The boat launch was closed due to missing dock planks and nearby washouts. Some earthen berms around mosquito impoundments on the Indian River also suffered minor erosion. Beach erosion was mostly minor, although approximately 30 feet of beachfront was lost along portions of Fort Pierce Beach.
11/6/2021	Coastal Flood	A long stretch of strong northeast winds, along with the highest astronomical tides of the year and high surf, caused coastal flooding and beach erosion along the east-central Florida coast.	Coastal flooding affected the St. Lucie County coast from November 6 to 9 due to strong northeast winds and large surf during seven high tide cycles. These winds coincided with the year's highest astronomical tides, leading to peak water levels on November 7 and 8. Emergency Management reported minor beach erosion and significant water run-up toward the dunes at many local beaches.
9/28/2022	Tropical Storm	Persistent onshore winds before and during the storm resulted in water level rises (storm surge) of 1 to 3 feet along east-central Florida, causing moderate to severe beach erosion.	Hurricane Ian's slow movement and large wind field caused prolonged tropical storm-force winds across St. Lucie County. Surface observations recorded peak winds of 55 to 65 mph throughout the County.
9/29/2022	Storm Surge/Tide	The County experienced moderate to severe beach erosion.	Onshore flow before and during Ian caused water levels to rise by 1 to 2 feet along the St. Lucie County coastline.
11/9/2022	Storm Surge/Tide	Onshore winds created very large waves exceeding 30 feet offshore, which, over several unusually high tide cycles, caused moderate to severe beach erosion across east-central Florida.	Onshore winds before and during Hurricane Nicole caused water levels to rise 3 to 5 feet along the St. Lucie County coastline, leading to moderate to severe beach erosion. This further damaged already weakened dunes and beach access crossovers from Hurricane Ian. Elevated water levels of 2 to 4 feet and wave action along the Intracoastal Waterway resulted in street flooding and damage to some boat docks and marinas. In addition,

Date	Type	Property Damage	Description
			Hurricane Nicole contributed to damages to docks and piers along the St. Lucie River in Port St. Lucie.
11/9/2022	Hurricane	Onshore winds created very large waves exceeding 30 feet offshore, which, over several unusually high tide cycles, caused moderate to severe beach erosion across east-central Florida.	Hurricane Nicole produced a wide wind field, resulting in tropical storm-force winds, gusts reaching hurricane force, and heavy rain in St. Lucie County. There were scattered reports of downed trees and some minor structural damage caused by strong winds, which peaked at speeds between 55 and 65 mph along the coast and 45 to 55 mph in inland areas. County officials reported no storm-related fatalities. Notable impacts sustained to the County's southern beaches and the USACE approved rehabilitation assistance to reconstruct the adjacent federal beach project.

FEMA DISASTER DECLARATIONS

There are currently no FEMA disaster declarations associated with this specific hazard.

Probability of Future Conditions

Based on the area's history, the probability of beach erosion in St. Lucie County is high. Coastal erosion is continual and cyclical. Erosion is exacerbated by tropical storms, storm surge, high winds, heavy rainfall, winter storms, and hurricanes. It is anticipated that there will be at least one storm event per year that contributes to erosion.

Coastal areas such as Fort Pierce, Port St. Lucie, and Hutchinson Island are particularly vulnerable to rising sea levels and intensified storms, which contribute to coastal erosion. Additionally, low-lying regions near the Indian River Lagoon and other estuarine systems can experience erosion, especially with changes in rainfall patterns and increased flooding events due to atmospheric changes.

Barrier islands in St. Lucie County, like South Hutchinson Island and the northern portion of North Hutchinson Island, are also at risk, as barrier islands are susceptible to both rising sea levels and storm surge impacts, leading to extensive erosion. Developed areas along the St. Lucie River and its tributaries may also see increased erosion due to alterations in drainage patterns and increased runoff from developments. The range of erosion for these events is from 1 (very high erosion) to 7 (very high accretion).

Vulnerability Assessment

St. Lucie County faces a moderate vulnerability to soil and beach erosion along its entire coastline; other beachfront communities have reported low to moderate erosion issues. Erosion also poses a potential risk to local communities, wildlife habitats, and ecosystems in both estuarine and riverine areas, such as the Indian River Lagoon (St. Lucie County) and the North Fork of the St. Lucie River. As of August 2024, St. Lucie County has three critically eroded areas, totaling 7.6 miles, and two non-critically eroded areas, totaling 7.9 miles.[26] Fort Pierce Beach (Fort Pierce) (from R34 to R46), which extends south from Fort Pierce Inlet, is critically eroded over 2.3 miles. This situation poses a threat to recreational activities and development interests. Most of the area is currently part of a beach restoration project.[27]

Along central Hutchinson Island (St. Lucie County), there is a 6.4-mile segment of shoreline (from R46 to R80) that is not critically eroded and currently poses no threats; however, immediately to the south is a 1.9-mile eroded section (from R80 to R90.3) that threatens the facilities of the St. Lucie Nuclear Power Plant (Jensen Beach, St. Lucie County), as well as some development and recreational interests at Walton Rocks Park (Hutchinson Island, St. Lucie County). Continuing south, there is another 1.5-mile eroded segment (from R90.3 to R98) that does not currently pose any threats.[28] The southernmost 3.4 miles of the County shoreline (from R98 to R115+1000) is critically eroded, putting development interests at risk.[29]

The Village of St. Lucie is also vulnerable to coastal erosion while Port St. Lucie is vulnerable to erosion along the tidally influenced St. Lucie River. Properties near the shore or river front are at risk, especially during severe weather. Human activities, such as urban development, increase erosion rates. The threat of hurricanes and tropical storms exacerbates the situation, as storm surges can cause extensive damage. Changing atmospheric patterns, particularly sea level rise, heighten the risk of flooding and erosion. Additionally, the loss of vegetation, such as mangroves and dunes, weakens natural defenses against erosion.

While certain areas of St. Lucie County show resilience against erosion, critical assessments are necessary for affected regions to mitigate risks to infrastructure, local communities, and natural habitats. Immediate attention to restoration projects and proactive measures will be essential in addressing these vulnerabilities.

[26] Florida Department of Environmental Protection, "Critically Eroded Beaches of Florida, August 2024," https://floridadep.gov/sites/default/files/FDEP_Critically%20Eroded%20Beaches_08-2024_0.pdf.
[27] Florida Department of Environmental Protection, "Critically Eroded Beaches of Florida, August 2024," https://floridadep.gov/sites/default/files/FDEP_Critically%20Eroded%20Beaches_08-2024_0.pdf.
[28] Florida Department of Environmental Protection, "Critically Eroded Beaches of Florida, August 2024," https://floridadep.gov/sites/default/files/FDEP_Critically%20Eroded%20Beaches_08-2024_0.pdf.
[29] Florida Department of Environmental Protection, "Critically Eroded Beaches of Florida, August 2024," https://floridadep.gov/sites/default/files/FDEP_Critically%20Eroded%20Beaches_08-2024_0.pdf.

IMPACTS TO ASSETS

Table 34 provides a summary of the consequences of erosion. It discusses the effects on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, and public confidence.

Table 34: Consequence Analysis

Sector	Consequence
Public	• Drinking water may become contaminated. • Waterborne diseases may spread. • Residents may be displaced due to home damage. • Displaced residents may increase the demand for housing and services and strain resources. • Historical and cultural landmarks may be lost due to erosion, threatening the community's heritage and identity.
First Responders	• First responders may need to allocate more resources and personnel to emergency response efforts, which could stretch their capacity thin and impact the ability to respond to other emergencies. • The changing landscape may require ongoing training to prepare for new types of emergencies related to erosion and infrastructure damage. • They may face increased health risks due to contaminated floodwaters. • Reduced funding and resources due to increased erosion.
Property, Facility, and Infrastructure	• Homes and businesses located near the coastline or low-lying areas risk erosion due to flooding, leading to structural damage, loss of property value, and increased repair costs. • Roads, bridges, and public transportation systems may be negatively affected, resulting in increased maintenance needs and potential road closures. • Drainage systems may be compromised by eroded sediments. • Facilities may need retrofitting or relocation, which is costly and disruptive. • Reduced demand for properties in affected areas, causing property values to decline. • Certain areas may become uninsurable, and insurance premiums may skyrocket, making it too expensive for homeowners and businesses to secure coverage. • Repair and maintenance costs for infrastructure may increase. • Existing drainage and flood management systems may become inadequate, leading to infrastructure strain, more frequent and severe flooding, and increased erosion. • Governments and organizations may need to invest in long-term planning and adaptation strategies, such as levees or restoring natural barriers.
Environment	• Coastal erosion may accelerate, threatening beaches and natural habitats. • Critical shorelines, including dunes and wetlands, may be lost.

Sector	Consequence
	• Coastal and riverbank areas may be lost, leading to saltwater intrusion, which reduces the filtering of pollutants and decreases habitats for wildlife. • Local biodiversity may be disrupted, resulting in the loss of fish populations and other wildlife. • Flora and fauna may decline due to habitat loss. • Water quality may be altered due to increased sediment loads carrying pollutants into water bodies.
Economic Conditions	• Property values may decline. • Businesses may face interruptions or closures, affecting employment and income levels. • Increased insurance costs or coverage limits for homes and businesses. • Impact on tourism due to natural attractions like beaches and parks becoming affected by erosion, which could lead to job losses and reduced economic activity. • Population displacement leading to a strained housing market, increased demand for services, and a shift in labor markets. • The County may have to spend significant funds on adaptation measures, diverting money from critical services. • Businesses may reconsider investing in regions vulnerable to erosion, thereby stunting local economic growth. • Strain on economic resources due to increased insurance costs and tax burdens.
Public Confidence	• Residents may feel that local authorities are not adequately addressing the risks, which can lead to decreased trust in government and its ability to manage future challenges. • As erosion increasingly threatens properties and lives, people may feel anxious about their safety, impacting their confidence in living in the area. • A lack of transparency can lead to misinformation and a lack of confidence in the County among residents.

IMPACT ON COMMUNITY LIFELINES

Erosion can impact several FEMA Community Lifelines, highlighting the interconnectedness of infrastructure systems and the challenges posed by environmental changes (see Figure 28). Here's a closer look at how community lifelines can be impacted by erosion.

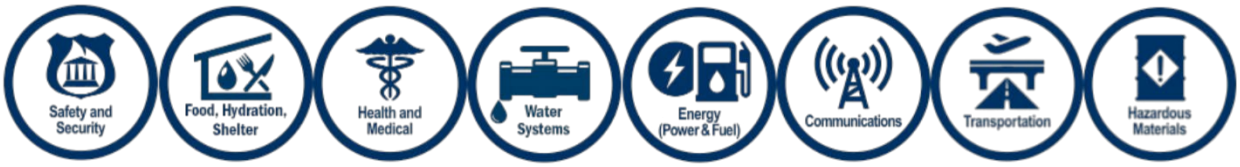


Figure 28: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** Erosion can undermine essential infrastructure like roads and bridges, which are critical for ensuring quick access for first responders. When these routes are compromised, it can lead to delayed emergency services and create hazardous situations, ultimately putting lives at risk.
- **Food, Hydration, and Shelter:** Agricultural lands are particularly susceptible to erosion, leading to decreased soil fertility and reduced crop yields. This not only affects food production but can also impact water systems by contaminating water sources with pollutants from eroded land. As shelters are increasingly at risk from erosion, communities may face greater challenges in providing safe living conditions.
- **Health and Medical:** The erosion of land can cause physical damage to healthcare facilities and impede access to medical services, especially in rural areas where services are already limited. If roads or pathways to these essential services are eroded, individuals may struggle to receive timely medical assistance, exacerbating health crises.
- **Energy:** Ongoing erosion can jeopardize energy infrastructure by damaging power lines, pipelines, and substations that are essential for supplying electricity and fuel. Disruptions in these systems can lead to power outages and complications in energy access during emergencies, complicating recovery efforts.
- **Communications:** Erosion can cause damage to critical communication infrastructure, such as cell towers and Internet service lines. This can disrupt communication channels during emergencies, making it more difficult for residents to receive updates and for responders to coordinate efforts effectively.
- **Transportation:** Erosion poses a significant threat to transportation networks by destabilizing roads and transit routes. This can hinder movement within communities, delay evacuations, and impede the delivery of goods and services, thereby affecting community resilience and recovery.
- **Hazardous Materials:** Erosion can compromise facilities that store or manage hazardous materials. If these sites are affected by land erosion, there is an increased risk of leaks or spills, which can lead to environmental contamination and pose serious threats to community safety.
- **Water Systems:** Water systems face significant challenges from erosion, particularly in watersheds and riverbanks. As erosion increases sedimentation in water sources, it can degrade water quality and disrupt the delivery of safe drinking water. Damage to structures related to water supply and treatment facilities can further exacerbate these issues, impacting public health.

IMPACT DUE TO CHANGES IN DEVELOPMENT

As development has continued to increase in the planning area, the risk of erosion has continued to increase. This risk is intensified by the loss of coastal wetlands and natural barriers due to development, which has increased the potential for erosion and flooding as storm surges can penetrate further inland, threatening homes and infrastructure (see Figure 29).

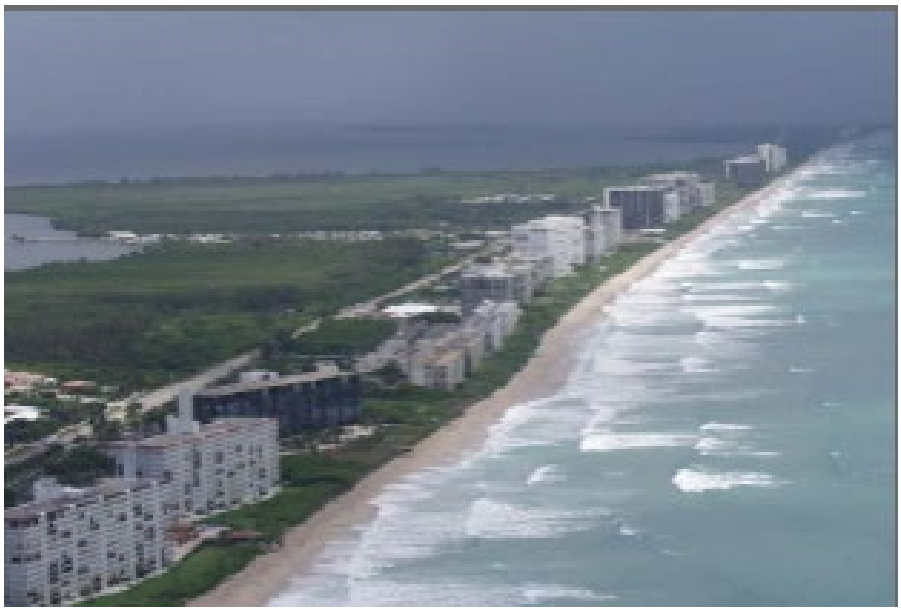


Figure 29: Coastal Development, St. Lucie County[30]

New infrastructure, such as roads and bridges built near the coast in hazard-prone areas, has also increased vulnerability, as this infrastructure may suffer from erosion, leading to increased maintenance costs for the local government.

In response to these challenges, St. Lucie County has implemented various erosion control measures, including beach nourishment/renourishment projects and stricter zoning regulations, which have generally decreased vulnerability to erosion. The County also maintains ongoing relationships with the U.S. Army Corps of Engineers and the Florida Department of Environmental Protection to implement two federal beach projects in critically eroded segments of shoreline. In 2020, the Florida Power & Light Co. installed concrete reef balls about 400 feet off the shoreline, parallel to it, at the St. Lucie Nuclear Power Plant to prevent beach erosion and provide habitat for marine organisms.[31]

Additionally, in 2026, the U.S. Army Corps of Engineers, in partnership with the St. Lucie County Erosion District, will start renourishing approximately 4.7 miles of beachfront as part of ongoing renourishment operations at Fort Pierce Beach and the county's southern beaches. Roughly 400,000 cubic yards of sand will be placed off the coast of part of the Fort Pierce Shore Protection Project, south of Fort Pierce Inlet, and 315,000 cubic yards of sand as part of the St. Lucie County, Coastal Storm Risk Management (CSRM) Project which will strengthen shoreline resilience and decrease vulnerability.[32]

[30] U.S. Army Corps of Engineers, "St. Lucie County." https://www.saj.usace.army.mil/Missions/Civil-Works/Shore-Protection/St-Lucie-County/.
[31] TCPalm, "FPL Deploys Artificial Reef Ball Project to Stop Beach Erosion, Create Wildlife Habitat," https://www.tcpalm.com/story/news/local/st-lucie-county/2020/07/13/fpl-artificial-reef-ball-construction-aims-prevent-beach-erosion-near-nuclear-plant/5389818002/.
[32] St. Lucie County Florida, "Fort Pierce Shore Protection Project." https://www.stlucieco.gov/departments-and-services/port-of-fort-pierce/erosion-district/fort-pierce-shore-protection-project.

These initiatives aim to reduce coastal erosion while balancing development needs, illustrating the complexity of managing growth in vulnerable environments. However, while the measures help reduce vulnerability, ongoing maintenance and adaptation to changing environmental conditions remain essential. The effectiveness of these initiatives can be impacted by factors such as changing atmospheric patterns and sea-level rise, which may require continual assessment and updating strategies to ensure long-term resilience.

IMPACTS ON POPULATIONS OF FOCUS

Erosion poses dangers to at-risk populations, impacting St. Lucie County and communities such as Fort Pierce, Port St. Lucie, and the Village of St. Lucie. These areas include resource-limited families, senior citizens, and individuals with disabilities, who often lack the resources necessary for effective responses to natural hazards. As erosion continues to compromise shorelines and waterways, the likelihood of physical displacement rises, leading to potential loss of property and reduced community stability. This situation is especially concerning for those with limited mobility or financial means, who may struggle to relocate or modify their living conditions in the face of environmental threats.

Extreme Temperatures (Heat and Cold)

Definition

EXTREME HEAT

Extreme heat occurs when conditions are substantially hotter and/or more humid than average for a location at that time of year. According to the National Oceanic and Atmospheric Administration (NOAA), extreme heat is defined as a period of abnormally hot and dangerous temperatures, with or without high humidities, that can result in negative impacts to people, animals, and infrastructure. St. Lucie County is experiencing these conditions more and more as the average high temperatures in the summer continue to rise.

Heat is the primary cause of weather-related fatalities in the United States,[33] and it can significantly impact the human body. Heat stress can take many forms from heat cramps to heat exhaustion and heat stroke. These conditions can cause illness or even death if the person cannot find a cool environment. Individuals at higher risk of heat-related illnesses include infants and young children, pregnant women, and individuals with chronic medical conditions.

The relationship between humidity and heat can influence the severity of extreme heat events. Humidity constricts the body's ability to cool itself by sweating. When the air is more humid sweat cannot evaporate as quickly, reducing its cooling factor. Because humidity is so important in how humans experience extreme heat, several measurements have been created that take humidity into account. The Heat Index[34]

[33] National Weather Service, "Heat Safety Tips and Resources," 2024, https://www.weather.gov/safety/heat.
[34] National Weather Service, "What is the heat index?" https://www.weather.gov/ama/heatindex.

and wet-bulb globe[35] temperature are two means of measuring temperature that factor in humidity and other variables to provide a more accurate assessment of how hot it feels outside.

Prolonged exposure to excessive heat can have negative consequences outside of human health as well. Prolonged extreme heat can damage agrarian systems, including crops and livestock, and increase risk of wildfires and drought. Furthermore, extended periods of extreme heat can lead to power outages, as the heavy demand for air conditioning taxes the power grid.

EXTREME COLD

Extremely cold temperatures occur when conditions are substantially colder than average for a location to the point that it is damaging to human health, agriculture, or infrastructure. While infrastructure damage or disruption usually occurs when the temperature gets near 32°, causing frost and freezing conditions, temperatures as high as 40°F–50°F can impact human health. When combined with wet conditions and high winds, temperatures in the 40–50-degree range can cause hypothermia, a condition where a person is no longer able to maintain their core body temperature.

Frost is water vapor that becomes solid, usually forming on objects like cars, windows, and plants. It can occur when air temperatures fall below 36°F, the wind is light, and there is sufficient moisture in the air. If a frost persists for long enough, it can lead to crop damage or loss. Frost is not a threat to the public but is a concern for the agricultural industry, particularly during Florida's citrus growing season.

A freeze occurs when overnight temperatures reach at least 32°F. A hard freeze occurs when the temperature falls below 28°F for four hours or more. While most vegetation can survive a frost, very little vegetation can survive a hard freeze. Most damage to crops occurs during a hard freeze. Additionally, homes and buildings in Florida are not typically built to withstand impacts of hard freezes, including damage to pipes. The NWS will issue a hard freeze watch or warning whenever this type of weather is expected. While cold fronts rarely bring snow or sleet to Florida, long lasting cold temperatures occur more often and can last for several days.

[35] National Weather Service, "Wet Bulb Globe Temperature: How and When to Use It," https://www.weather.gov/news/211009-WBGT.

Location and Extent

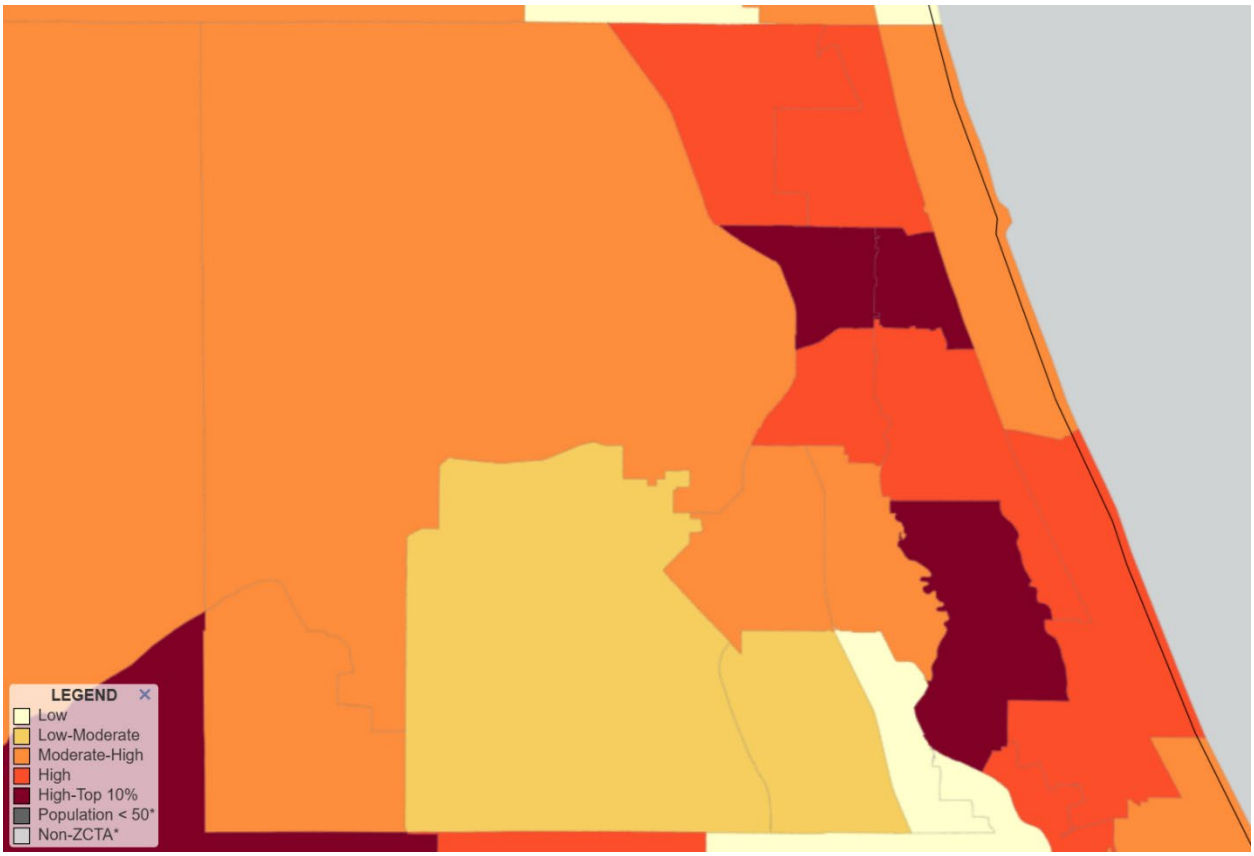


Figure 30: Centers for Disease Control and Prevention's Heat and Health Index Applied to St. Lucie County

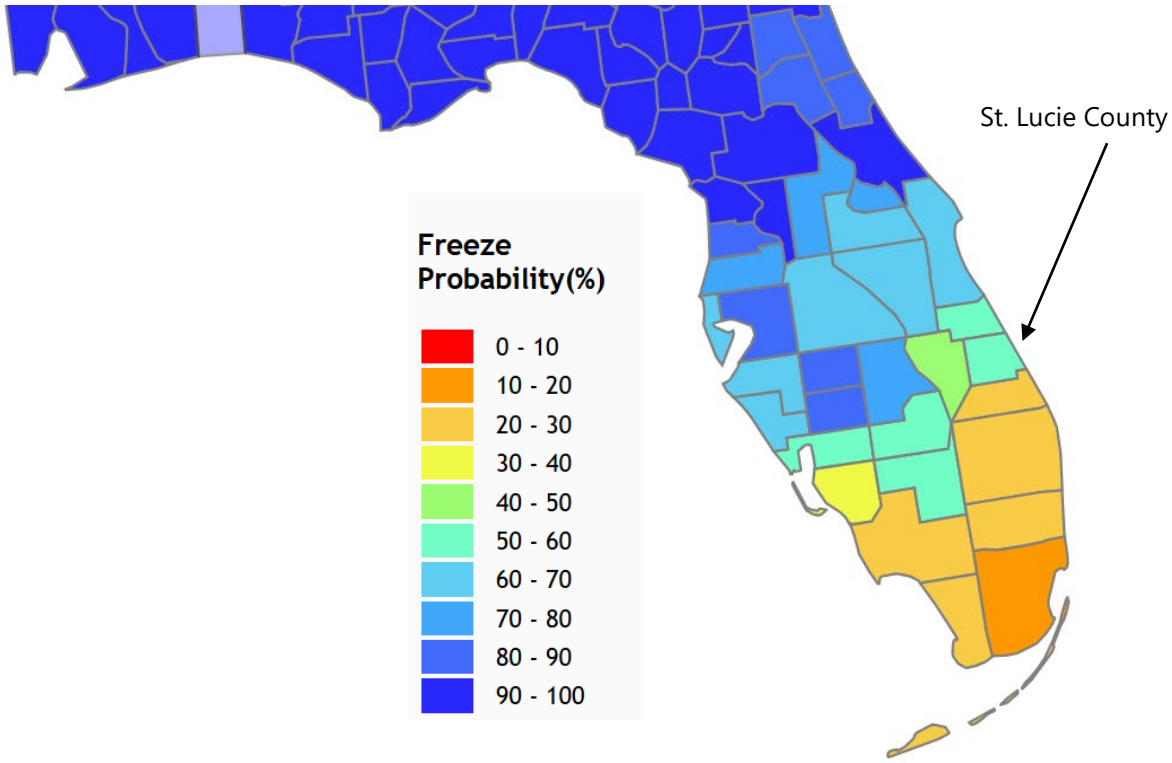


Figure 31: AgroClimate's Freeze Risk Probability by Florida County

St. Lucie County is situated on the east coast of Florida, bordered by the Atlantic Ocean to the east and the St. Lucie River to the south. This geographical position contributes to its generally mild and warm subtropical climate. The county experiences relatively moderate temperatures year-round, with average winter lows typically above freezing. Its coastal location helps to mitigate extreme temperature fluctuations compared to more inland areas. However, St. Lucie County can be affected by cold fronts that sweep down from the north, leading to temporary drops in temperature. These cold events can have a more pronounced impact on the region's agriculture and infrastructure, as the local ecosystem and population are not accustomed to dealing with extreme cold. Public health can also be impacted by occasional extreme heat events which largely effect the entire county.

EXTENT

EXTREME HEAT

Due to St. Lucie's subtropical climate, it experiences hot and humid weather during the summer months and generally mild winters. While the entire county is susceptible to extreme heat events, the risk changes depending on characteristics of the geographic area and built environment. The coastal areas, like Fort Pierce and Hutchinson Island, experience higher humidity due to the proximity to the ocean, which can exacerbate extreme heat conditions. But they also experience cooling ocean breezes that can help moderate temperatures. In terms of built environment, most of the densely populated areas are located in the coastal, eastern part of the county. Densely built cities trap heat through the "urban heat island effect"

raising their average temperatures, see Figure 30 and Figure 32.[36] Impervious surfaces and structures absorb and re-emit heat more than natural landscapes do. Places where these surfaces and structures are concentrated see a daytime increase of 1–7 degrees Fahrenheit during the day and 2–5 degree increase at night.[37] In St. Lucie County the urban heat island effect can impact communities along the coast from Port St. Lucie to Lakewood Park.

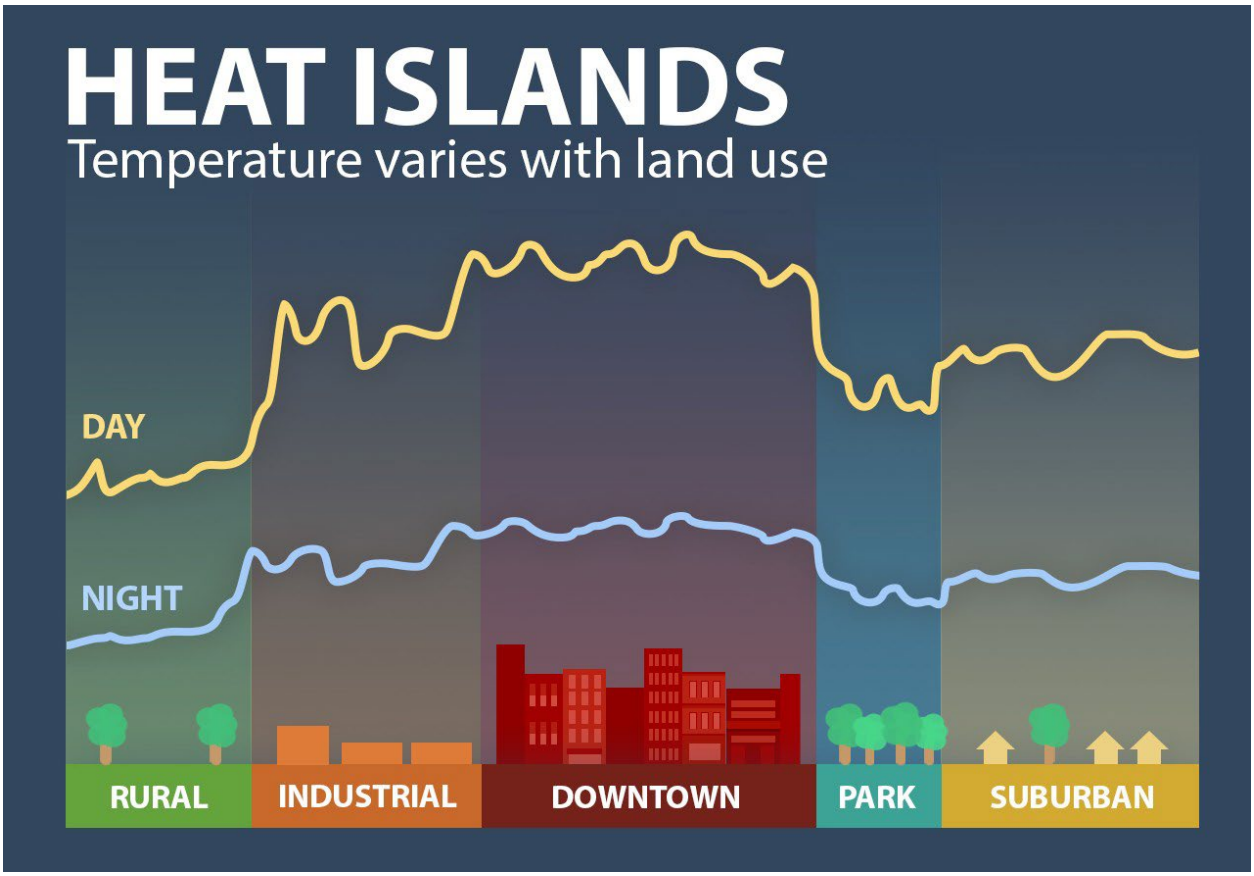


Figure 32: The Urban Heat Island Effect

Although the western part of the county does not have access to the cooling ocean breezes, it is less susceptible to extreme heat due to ample vegetation and the lack of dense development. Still, those that are working outdoors for extended period during summer months could experience heat stress if not properly hydrated or rested.

[36] Center for Disease Control, "Heat and Health Index," 2024, https://ephtracking.cdc.gov/Applications/heatTracker/; Climate Central, "Urban Heat Islands," 2021, https://www.climatecentral.org/climate-matters/urban-heat-islands.
[37] U.S. Environmental Protection Agency, "What Are Heat Islands,"2025, https://www.epa.gov/heatislands/what-are-heat-islands.

EXTREME COLD

Extreme cold weather in St. Lucie County is relatively rare due to its southern latitude and coastal influence. Both of these factors keep St. Lucie's climate mild in the winter. Still, extreme cold weather can impact the whole county according to the National Risk Index.

The western region of the county, where agricultural activities are concentrated, are particularly vulnerable to frost and freezing temperatures, which can damage sensitive plants and affect local farming operations. These areas are further from the Coast which lessens the temperature moderating effects of the ocean. Additionally, residences and facilities in the eastern region, especially older buildings, may not be equipped for cold weather. These areas can experience issues such as unprotected pipes freezing or inadequate heating. Overall, while the coastal areas experience milder temperatures due to the ocean's moderating influence, the inland areas of St. Lucie County are more susceptible to the adverse effects of extreme cold events.

JURISDICTIONAL IMPACTS

Although impacts from extreme temperatures in St. Lucie County have rarely been documented, when extreme heat or cold occurs they can have a significant impact on the health, economy, and infrastructure of the jurisdictions. The diverse size and geography of these jurisdictions means that the impacts of extreme temperatures will be different for each jurisdiction, but, generally, extreme heat will primarily affect public health while extreme cold could damage infrastructure and agricultural products as well. Table 35 summarizes the potential impacts of extreme temperatures across the County's jurisdictions.

Table 35: Impacts of Extreme Temperatures, by Jurisdiction

Jurisdiction	Extreme Heat Impacts	Extreme Cold Impacts
St. Lucie County	While extreme heat poses no risk to infrastructure or facilities in St. Lucie County, it has the potential to impact the health of residents and tourists. Those who are outside during extended periods during extreme heat could suffer from heat stress. This could have secondary economic impacts on the County if outdoor laborers are unable to work due to extreme heat. The effects of extreme heat could be especially difficult for agricultural workers in the western region of the County.	The rare nature of extreme cold events in St. Lucie County means that infrastructure and systems are not built to deal with the impact of ice. Federal highways and state roads, like Interstate 95 and Route 1, could ice over, restricting travel throughout the County. County maintained roads could also ice over, requiring maintenance from County staff. Depending on the length of the extreme cold, pipes could burst due to expanding frozen water. This would not only damage the pipes but could flood critical facilities as well. Crops in the western region of the County could be harmed by freeze impacting employment and tax revenue for the County. Residents without heating or shelter could suffer from hypothermia or frostbite if exposed to extreme cold.

Jurisdiction	Extreme Heat Impacts	Extreme Cold Impacts
City of Port St. Lucie	As a dense urban area, Port St. Lucie faces higher temperatures due to the urban heat island effect. This puts residents and tourists at higher risk for heat stress illnesses, especially those laboring outside or who do not have access to air conditioning. No physical infrastructure is at risk in the City of Port. St. Lucie due to extreme heat.	Many of the impacts from extreme cold stem from the rarity of freezing weather in Port St. Lucie. Water and other critical infrastructure in Port St. Lucie could be impacted by freezing pipes and the subsequent flooding that could occur. These buildings and systems were not designed to withstand freezing temperatures. Transportation could be heavily impacted by ice on local roads and major highways that could limit emergency response across the City. Residents without heating or shelter could suffer from hypothermia or frostbite if exposed to extreme cold.
City of Fort Pierce	Fort Pierce's proximity to the Atlantic Ocean and Indian River dampens the impacts of extreme heat on the City due to the cool ocean breezes created. Still, high temperatures can get into the mid-90s with the heat index going into the 100s. In the denser parts of the City, the urban heat island effect will raise temperatures even higher. These extreme temperatures put residents and tourists at higher risk for heat stress illnesses, especially those laboring outside or who do not have access to air conditioning. No physical infrastructure is at risk in the City of Fort Pierce due to extreme heat.	Fort Pierce is exposed to many of the same impacts as the City of Port St. Lucie when it comes to extreme cold. Residents and their homes may not be prepared for cold temperatures, exposing them to hypothermic or frostbite conditions. Water infrastructure could face severe damage if frozen pipes burst and the ensuing flooding could damage critical facilities. Transportation systems around the City could be impacted with even a short freeze, requiring maintenance from the City and disrupting emergency response.
Town of St. Lucie Village	St. Lucie Village experiences few impacts from extreme heat due to its proximity to the Indian River and Atlantic Ocean. The ample vegetation throughout the Town helps to reduce high temperatures as well. Still, vulnerable individuals, like the elderly or small children without access to air conditioning could be impacted by extreme heat. No physical infrastructure is at risk in the Town of St. Lucie Village due to extreme heat.	St. Lucie Village relies on just a few roads to connect it to the rest of St. Lucie County. If Indian River Drive or Old Dixie Highway ice over, the Town will be isolated from the rest of the County, complicating emergency response and accessing supplies. Any residents without heating or shelter could suffer from hypothermia or frostbite if exposed to extreme cold for an extended period of time. Water infrastructure could face severe damage if frozen pipes burst and the ensuing flooding could damage critical facilities.

NATIONAL RISK INDEX

According to the NRI, the risk of a cold wave in St. Lucie County is Very High with a score of 97.2. This means the risk of a cold wave in St. Lucie County is higher than 97% of other counties in the United States. This rating primarily comes from the widespread nature of a cold wave when it occurs, impacting every resident and facility in the county.

The NRI gives a No Rating risk score for heat wave risk in St. Lucie County because it has no occurrence of heat waves documented.

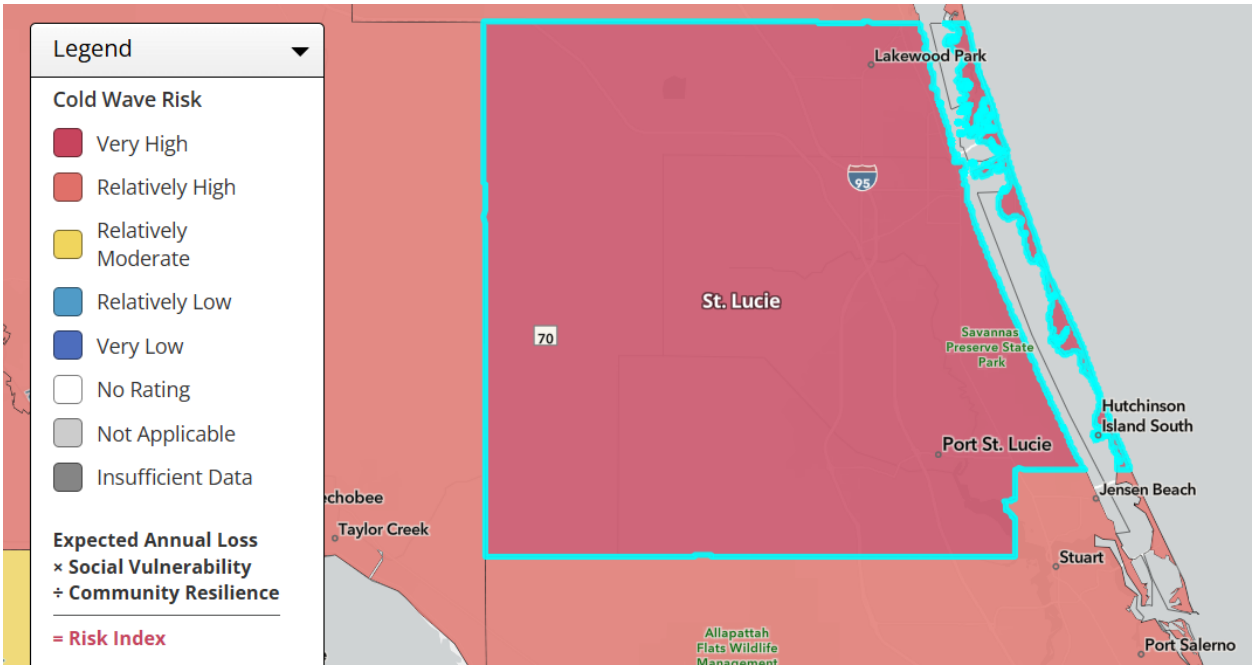


Figure 33: NRI Score for Cold Waves in St. Lucie County

Magnitude and Severity

EXTREME HEAT

Extreme heat is measured through several metrics that account for air temperature, humidity, and other environmental factors. The first is simply through measuring ambient air temperature in degrees Fahrenheit or Celsius. These measurements are easily recognizable and understandable but do not take into account other factors that affect how humans experience extreme heat. The Heat Index and Wet Bulb Globe Temperature were created to add nuance to ambient air temperature measurement.

HEAT INDEX

The Heat Index combines air temperature and relative humidity to estimate how hot it feels to the human body. This is important because high humidity can impede the body's ability to cool itself through sweating, making it feel hotter than the actual air temperature. The Heat Index is calculated using a

formula that incorporates both the air temperature (in Fahrenheit or Celsius) and the relative humidity (as a percentage). The result is expressed in degrees Fahrenheit or Celsius. In the Heat Index chart shown in Figure 34, the red area indicates extreme danger. Alerts will be issued when the heat index is expected to exceed 105°F–110°F for at least two consecutive days.

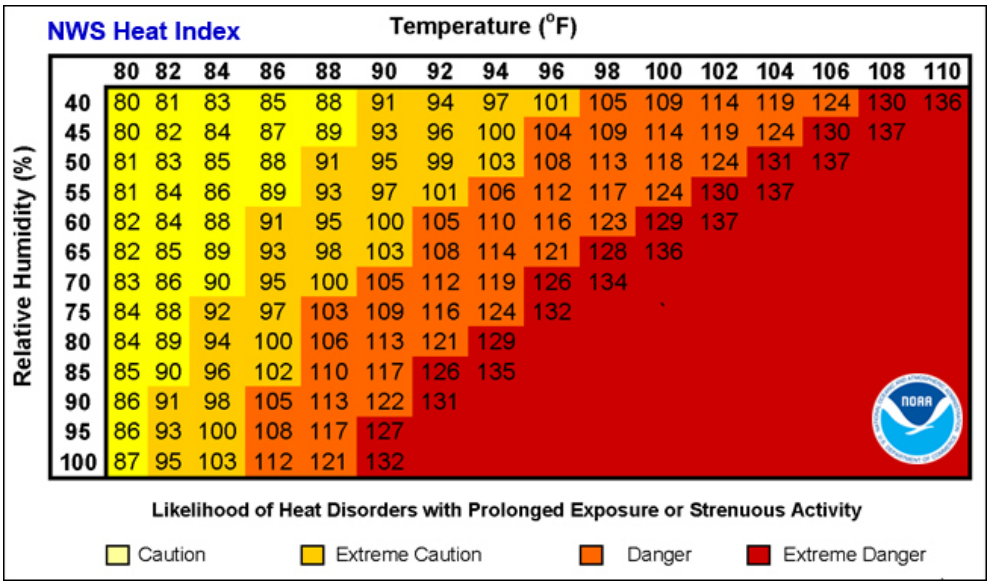


Figure 34: Heat Index Calculation Table with Warning Levels

WET BULB GLOBE TEMPERATURE

The Wet Bulb Globe Temperature (WBGT) is a more comprehensive and complex measurement that takes into account multiple environmental factors, providing a more accurate representation of heat stress on the human body. It factors in air temperature, humidity, wind speed, and sunlight to calculate the temperature. The WBGT is a combination of three measurements:

1. **Air temperature** is measured by a typical outdoor thermometer.
2. **Natural wet bulb temperature** is measured by a thermometer wrapped in a wet cloth, which simulates the cooling effect of sweat (which is influenced largely by wind and humidity). Since the thermometer is exposed to the sun, it also accounts for the effects of sunlight.
3. **Black globe temperature** is measured with a thermometer inside a black globe, which indicates how hot it feels in direct sunlight.

WBGT provides a more detailed understanding of how environmental factors constrict or allow the human body to cool itself in heat. See Figure 35 for an example of how WBGT translates into guidelines for athletic activity outside.

WBGT (°F)	Athletic Activity Guidelines
Less than 80	Unlimited activity with primary cautions for new or unconditioned athletes or extreme exertion; schedule mandatory rest/water breaks (5 min water/rest break every 30 min).
80 - 84.9	Normal practice for athletes; closely monitor new or unconditioned athletes and all athletes during extreme exertion. Schedule mandatory rest/water breaks (5 min water/rest break every 25 min).
85 - 87.9	New or unconditioned athletes should have reduced intensity practice and modifications in clothing. Well-conditioned athletes should have more frequent rest breaks and hydration as well as cautious monitoring for symptoms of heat illness. Schedule frequent mandatory rest/water breaks (5 min water/rest break every 20 min). Have cold or ice immersion pool on site for practice.
88 - 89.9	All athletes must be under constant observation and supervision. Remove pads and equipment. Schedule frequent mandatory rest/water breaks (5 min water/rest break every 15 min). Have cold or ice immersion pool on site for practice.
90+	SUSPEND PRACTICE/MUST INCLUDE MANDATORY BREAKS AS DIRECTED BY GAMEDAY ADMINISTRATION DURING CONTEST.

Figure 35: WBGT Guidelines for Athletic Activity

EXTREME COLD

Extreme cold is primarily measured through ambient air temperature expressed in either degrees Fahrenheit or Celsius. This gives the public a broad understanding of how cold it is and if freezing could occur. A freeze occurs when overnight temperatures reach at least 32°F. A hard freeze occurs when the temperature falls below 28°F for four hours or more.

When strong winds combine with cold temperatures, the heat loss from a person's skin can be accelerated; this is called the wind chill. The wind chill can make it feel like it is much colder outside than the actual temperature. In areas unaccustomed to winter weather, near freezing temperatures are considered "extreme cold." The Wind Chill Temperature Index from the National Weather Service calculates the dangers from winter winds and freezing temperatures. Figure 36 shows the wind chill for various air temperatures and wind speeds.

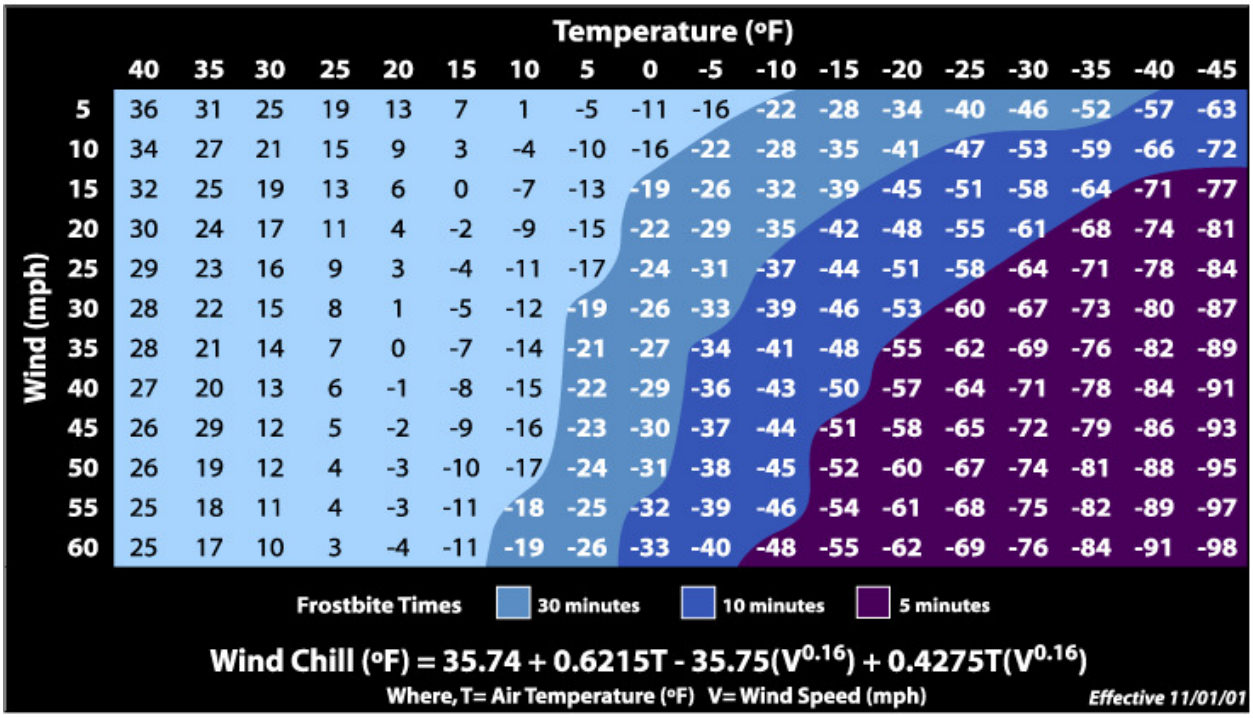


Figure 36: NWS Wind Chill Chart with Frostbite Times

Historic Events

EXTREME HEAT

The National Centers for Environmental (NCEI) Storm Events Database lists one extreme heat event that occurred in St. Lucie County since data collection began in 1950.

Table 36: Historical Extreme Heat Events in St. Lucie County

Date	Description	Fatalities	Injuries	Property Damage	Crop Damage
7/25/2017	Heat index values rose as high as 108 in St. Lucie County. Three St. Lucie County residents were taken to local hospitals after complaining of heat-related illnesses while being outdoors. A Port St. Lucie woman in her 20s was transported to a local hospital after she felt dizzy and nauseous after	0	0	$0	$0

Date	Description	Fatalities	Injuries	Property Damage	Crop Damage
	walking for two hours around noon. A Fort Pierce man in his 30s became ill after performing work outdoors and was transported to a local hospital. A teenager was also transported to a local hospital after suffering abdominal pains and sweats after having mowed lawns during the afternoon.				

EXTREME COLD

NCEI Storm Events Database lists four extreme cold events that occurred in St. Lucie County since data collection began in 1950.

Table 37: Historical Extreme Cold Events in St. Lucie County

Date	Description	Fatalities	Injuries	Property Damage	Crop Damage
1/21/2009	An already cold airmass was reinforced by even colder air behind a strong cold front. Low wind chills, freezing temperatures and frost affect most of east central Florida for three consecutive nights. Wind chill readings in the 20s also occurred during the morning of the 21st. The coldest morning at most locations was on the 22nd, when hard freeze conditions spread south across many locations of the interior peninsula to Lake Okeechobee.	0	0	$0	$0
1/2/2010	High temperatures did not exceed 60°F for 9 of 12 days between January 2 and 13 at Fort Pierce Airport. One day experienced high temperatures only in the 40s (49°F on January 10). Low temperatures fell to 40°F or less for 12 consecutive days and 32 degrees or below on seven days. Three days experienced minimum temperatures in the mid to upper 20s, with the coldest temperature of 26°F on January 7. Similar temperatures	0	0	$0	$1,580,000

Date	Description	Fatalities	Injuries	Property Damage	Crop Damage
	occurred across the remainder of St. Lucie County, although low temperatures were several degrees higher on the barrier islands. Frost also occurred on many mornings. Long durations of freezing temperatures resulted in considerable crop damage. In addition, Winds near 10 mph occurred on several nights, producing wind chill temperatures in the teens and lower 20s. A very rough cost estimate for (direct weather-related) freeze losses to fruit, vegetable and citrus crops across St. Lucie County during January totaled 1.58 million dollars.				
12/14/2010	Strong cold advection behind a cold front brought temperatures below freezing to all of east central Florida for two consecutive nights. A hard freeze occurred across most areas of the mainland peninsula, with a freeze even occurring across the barrier islands. Temperatures early on Dec 14 fell to the mid to upper 20s across the region, with 6 to 9 hours of below freezing temperatures at many locations and 1 to 3 hours below 27°F in several areas. Similar to slightly higher temperatures occurred on Dec 15, with many locations again reaching the mid-20s and the duration of below freezing temperatures ranging from 4 to 11 hours at most locations. Gusty winds accompanied the cold weather on Dec. 14, with wind chill values reaching the mid to upper teens at most locations around daybreak.	0	0	$0	$0
12/27/2010	For the second time in December, strong cold advection behind a cold front brought temperatures well below freezing to all of east central Florida, for three consecutive nights. A	0	0	$0	$2,070,000

Date	Description	Fatalities	Injuries	Property Damage	Crop Damage
	hard freeze occurred across most areas of the mainland peninsula. Temperatures early on Dec 27 fell to the upper 20s to around 30 across the region, with 2 to 8 hours of below freezing temperatures at many locations. Even colder temperatures were experienced on Dec 28, with many locations reaching the lower to mid-20s and the duration of below freezing temperatures ranging from 3 to 11 hours at most locations. A third night of similarly cold readings occurred on Dec. 29.				
2/1/2026	In January 2026, a strong Arctic air mass impacted much of Florida, bringing unusually cold overnight temperatures across the Treasure Coast. Temperatures in portions of St. Lucie County fell into the 30s with widespread wind chills in the 20s during the early morning hours.	0	0	$0	$0

FEMA DISASTER DECLARATIONS

EXTREME HEAT

There have been no FEMA disaster declarations for extreme heat for Florida or St. Lucie County.

EXTREME COLD

There has never been a FEMA disaster declaration for extreme cold temperatures in St. Lucie County. However, periodic cold-air outbreaks do affect the region, and there have been several disasters declared for other parts of South Florida due to extreme cold temperatures and freezing conditions.

Disasters declared for other areas of South Florida:

- **January 31, 1977 (DR-526):** Extreme cold temperatures were felt across Florida with snow falling as far south as Miami. One to two inches of snow were reported in the Tampa and Orlando areas. Disaster was declared for Escambia, Miami-Dade, Orange, and Hillsborough Counties.
- **December 23–25, 1989 (DR-851):** From December 22 to 26, 1989, Florida experienced one of the most severe cold waves in its history with record-breaking temperatures, snow, ice, sleet, and hard freezes. Claiming at least 26 lives, power and transportation were shut down over much of Florida,

with heavy losses in the agricultural industry. A disaster was declared for Alachua, Gulf, Escambia, Leon, Citrus, Duval, Brevard, Orange, Tampa Bay, Collier, and Miami-Dade Counties.

Probability of Future Conditions

EXTREME HEAT

It is highly likely that the number of days with extreme heat in St. Lucie County will increase over the next few decades. Already, heatwaves in the Southeastern United States are happening more frequently and during a longer heat season. Under a low-emissions scenario, it is projected that St. Lucie County could experience 38 days at 95°F, up from an average of less than two from 1961 to 1999. Under a high emissions scenario this number could be as high as 63 95-degree days. As the atmosphere warms, evaporation increases causing a rise in humidity as well, making the higher temperatures feel even hotter. Hotter temperatures and increased humidity will intensify health impacts on residents, especially those with higher vulnerability to extreme heat including children, the elderly, individuals with underlying health issues, socioeconomically disadvantaged individuals, and the unhoused.

In recent decades, St. Lucie County has experienced rapid population growth. Between 2000 and 2010, it was among the fastest-growing counties in the U.S., gaining more than 80,000 new residents in that decade. The rate of growth has not slowed down in recent years with an estimated 13% growth between 2020 and 2023. This growth equates to more urbanization throughout the county to accommodate new residents. As the urban areas grow and new ones develop, more people are exposed to higher temperatures due to the urban heat island effect. This trend will likely continue and worsen the public health impacts of extreme heat.

EXTREME COLD

As climate patterns continue to change, long-term projections indicate that extreme heat will become more frequent while the overall likelihood of sustained extreme cold temperatures in St. Lucie County may decline. Under both low- and high-emission scenarios, the number of days with a minimum temperature below 32°F is projected to drop to less than once per year on average by 2050, compared with approximately two days per year between 1961 and 1990. However, recent events demonstrate that damaging cold outbreaks remain possible. In January 2026, a widespread Arctic air outbreak affected much of Florida and resulted in significant agricultural losses estimated at more than $3 billion statewide. Although St. Lucie County experienced more limited direct impacts, the event underscores that occasional winter freeze events can still occur and may produce significant regional economic impacts even as long-term trends point toward fewer cold extremes.

Vulnerability Assessment

EXTREME HEAT

Extreme heat is currently a low-probability, medium-consequent risk for St. Lucie County, Port St. Lucie, Fort Pierce, and St. Lucie Village, but the risk is growing due to the changes in weather patterns across time. The primary vulnerability from extreme heat is to the health of St. Lucie County residents. Extreme heat impacts at-risk populations most acutely, including socioeconomically disadvantaged populations, individuals with disabilities and chronic illnesses, elderly, youth, and unhoused populations. The Center for Disease Control's Social Vulnerability Index shows Fort Pierce as having the highest level of social vulnerability in the county. Laborers that work outside during the hottest hours of the day are also at risk of developing heat stress.

EXTREME COLD

Extreme cold is currently a low-probability, high-consequent risk for St. Lucie County, Port St. Lucie, Fort Pierce, and St. Lucie Village. The primary vulnerabilities from extreme cold are icy roads disrupting transportation, agricultural losses due to freezing, and at-risk populations experiencing hypothermia or frostbite.

If roads are covered with ice or frost, even for a fairly short period of time it could lead to vehicular accidents and blocked roadways. This could disrupt emergency response operations in the county, commuters driving to work, and deliveries from other parts of the region.

A hard freeze can cause devastating losses for farms in St. Lucie County. In 2010 alone there were over $3.5 million in agricultural losses due to extreme cold. Colder or longer lasting storms could cause worse losses in the agricultural sector in St. Lucie County.

Similar to extreme heat, at-risk populations in St. Lucie County are at higher risk of injury during extreme cold events. The elderly population is vulnerable due to their bodies losing heat faster than children or adults. Elderly with chronic health conditions or persons with comorbidities and/or lower immune systems are susceptible to getting colds, which can rapidly worsen and turn into pneumonia. Socioeconomically disadvantaged populations face many of the same vulnerabilities. If homes do not have adequate heating and insulation, those residents will be more vulnerable to impacts from winter weather and freezing temperatures. Last, the unhoused community is extremely vulnerable to winter weather conditions, especially freezing temperatures.

IMPACTS ON ASSETS

Table 38: Consequence Analysis

Sector	Consequence
Public	• **Extreme Heat:** At-risk populations, including socioeconomically disadvantaged populations, individuals with disabilities and chronic illnesses, elderly, youth, and unhoused populations, are at risk of developing heat stress. Laborers, including construction workers and agricultural laborers, could develop heat stress illnesses if not properly hydrated and rested. • **Extreme Cold:** Similar to extreme heat, at-risk populations, including socioeconomically disadvantaged populations, individuals with disabilities and chronic illnesses, elderly, youth, and unhoused populations, are at risk of developing frostbite or hypothermia. Car accidents are possible if roads become icy.
First Responders	• **Extreme Heat:** Under a prolonged extreme heat event there may be an increase in 9-1-1 calls for heat stress. This could overload the emergency response system for the County. Also, first responders could be at risk of over-exertion in the heat. • **Extreme Cold:** There will likely be increased 9-1-1 calls, especially for traffic accidents if the roads are icy. First responders themselves are vulnerable to traffic accidents while responding.
Property, Facility, and Infrastructure	• **Extreme Heat:** HVAC systems will be under slightly higher stress than usual in order to maintain comfortable temperatures during an extreme heat event. This can increase the risk of utility failure and energy infrastructure disruption. • **Extreme Cold:** Roads could become iced over damaging transportation infrastructure. Electrical transmission lines could be downed or damaged from ice as well. Depending on how long and severe the extreme cold event is, pipes could freeze and burst damaging water supply infrastructure.
Environment	• **Extreme Heat:** Prolonged extreme heat can exacerbate drought or wildfire conditions in the County. • **Extreme Cold:** There is the potential for trees to fall from ice accumulation on branches.
Economic Conditions	• **Extreme Heat:** Some crops require specific temperature ranges in order to grow effectively. Extreme heat can disrupt the growth and sale of these crops. • **Extreme Cold:** Millions of dollars of agricultural crops can be lost during an extreme cold event, reducing profits for farmers and tax revenue for the County. Damaged infrastructure like roads and power lines would result in costs for repairs.
Public Confidence	• **Extreme Heat:** If people become ill and/or die from exposure to extreme heat, local communities may believe the government is not doing all that it can to help those in need, especially if a cooling shelter was not open or available. • **Extreme Cold:** If the continuity of operations for the County and local governments is broken, local residents may lose confidence in the ability of government to handle disaster situations.

IMPACT ON COMMUNITY LIFELINES

FEMA's community lifelines are shown in Figure 37. They can be affected by extreme temperatures in the following ways.

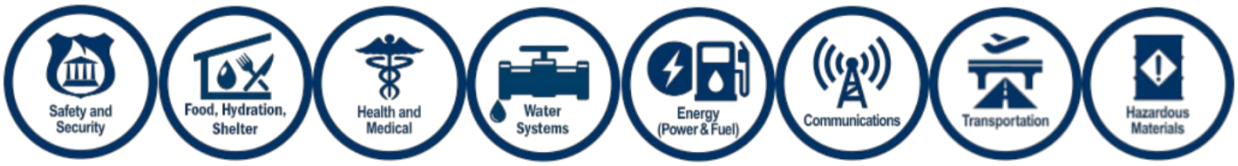


Figure 37: Federal Emergency Management Agency Community Lifelines

EXTREME HEAT

- **Safety and Security:** First responders may face unsafe conditions due to extreme heat or suffer from heat stress while working. This could reduce response time to 9-1-1 calls.
- **Food, Hydration, and Shelter:** Residents and tourists may not hydrate enough during extreme heat events leading to dehydration. If people's shelter does not have air conditioning it could contribute to heat exposure.
- **Health and Medical:** More people will be seeking medical care for heat-related illnesses including heat cramps, dehydration, heat exhaustion, and heat stroke. This could overwhelm the medical system under worst case conditions.
- **Water Systems:** Extreme heat can exacerbate drought conditions leading to a lack of potable water in the County.
- **Energy (Power and Fuel):** HVAC systems across the County will be running a high level to maintain a comfortable temperature in buildings. This extra power output could stress the electrical system causing an outage in the worst-case scenario.
- **Communications:** There may be a higher volume of 9-1-1 calls than usual due to health impacts from the heat. This could lead to longer wait times to be connected to an operator and slower emergency response.
- **Transportation:** It is unlikely that extreme heat will impact transportation.
- **Hazardous Materials:** It is unlikely that extreme heat will impact hazardous materials.

EXTREME COLD

- **Safety and Security:** Icy roads could make emergency response from law enforcement or fire services difficult. Traffic accidents could block primary routes through the County and emergency vehicles themselves might be in danger while in transit.
- **Food, Hydration, and Shelter:** Transport of food and water could be halted while roads are icy and dangerous to travel on. Agricultural crops may be damaged or destroyed because of cold temperatures. If pipes freeze and burst some facilities may not have access to potable water.

- **Health and Medical:** Vulnerable population may be exposed to injury or death from hypothermia and frostbite, requiring medical attention. Emergency medical services might be hampered by icy roads and accidents on primary routes through the County.
- **Water Systems:** If the temperature gets cold enough for an extended period of time then pipes could freeze and burst, damaging the water infrastructure in the County.
- **Energy (Power and Fuel):** Ice on electrical lines and downed trees could cause power outages. Those that use propane for fuel may not be able to refill their tanks if the roads are impassible.
- **Communications:** There may be a higher volume of 9-1-1 calls than usual due to accidents and health impacts from the cold and ice. This could lead to longer wait times to be connected to an operator and slower emergency response.
- **Transportation:** Major roads across the County could be inaccessible if they are iced over. Accidents caused by the ice could cause extended transportation delays even after temperatures have risen.
- **Hazardous Materials:** Hazardous materials being transported by vehicle are at a heightened risk of spilling from an accident.

IMPACTS DUE TO CHANGES IN DEVELOPMENT

As the population and the built environment grow in St. Lucie County, more people, infrastructure and facilities are exposed to extreme heat and extreme cold events. St. Lucie County has grown by an estimated 44,000 residents (13%) since 2020. That means more roads to accommodate these residents and more buildings and facilities to house and serve them. This development increases temperatures through the urban heat island effect. An example includes the North St. Lucie County Towns, Villages & Countryside (TVC) Special Area which will allows up to 37,500 dwelling units, 5,000,000 sq ft of commercial/retail, and 464 acres of industrial use within the TVC designation.

This growth also puts more infrastructure, primarily roads and powerlines, at risk of impact from ice. With more residents and more miles of road throughout the county, there is a higher chance of damage to the roads that require maintenance and accidents on the road due to icy conditions. This is true for energy infrastructure as well. More powerlines will need to be installed to serve new developments. These powerlines can be disrupted by ice or damaged by falling trees cutting off residents from needed power.

IMPACTS ON POPULATIONS OF FOCUS

For both extreme heat and extreme cold events, certain groups and areas in St. Lucie County, Port St. Lucie, Fort Pierce, and St. Lucie Village are at heightened risk in impact, injury, and death. The elderly, socioeconomically disadvantaged populations, and unhoused individuals are all at higher risk than most to health impacts from extreme temperatures. This could be because of underlying health conditions, lack of shelter, or not enough financial resources to protect themselves. These populations make up a significant part of St. Lucie County. Almost a quarter of the population is over 65 years old and 11.4% are under the poverty line. According to the Treasure Coast Homeless Services Council there were 175 homeless individuals in St. Lucie County as of their last point in time survey on February 20, 2025. These

individuals need extra support during extreme temperature events in order to avoid the impacts of heat- and cold-related illness.

Flooding

Definition

Flooding is one of the most frequent and costly natural hazards affecting communities across the United States. It occurs when water temporarily submerges normally dry land due to excessive rainfall, storm surge, or infrastructure failure, such as a dam or levee breach. According to the Federal Emergency Management Agency, floods are the most widespread of all weather-related disasters, impacting more people and property annually than any other hazard.[38] Flood events can develop slowly over days as rivers and streams overflow their banks, or rapidly in the case of flash floods caused by intense rainfall. Coastal flooding, on the other hand, is typically driven by tropical storms, hurricanes, or high tides that push seawater inland.

Inland flooding results primarily from heavy precipitation and saturated soils that exceed the capacity of natural or engineered drainage systems. Urbanization can intensify flooding by increasing impervious surfaces, such as roads, parking lots, and rooftops, which limit infiltration and accelerate runoff. When stormwater systems become overwhelmed, flash flooding can occur even in areas far from major water bodies. Coastal areas face additional threats from storm surge and tidal flooding, both of which are expected to increase with rising sea levels.[39] These combined factors make flooding a dynamic hazard that affects both inland and coastal communities, often leading to significant damage to homes, infrastructure, agriculture, and critical facilities.

The impacts of flooding extend beyond physical destruction. Flood events can disrupt transportation networks, utilities, and public health services, leading to cascading effects on local economies and community well-being. Prolonged flooding can also increase exposure to waterborne diseases, contaminate drinking water supplies, and generate hazardous debris and waste. The degree of flooding's impact depends on storm intensity, land use, elevation, and the effectiveness of mitigation measures, such as levees, retention basins, and zoning regulations.[40]

Location and Extent

Flooding can impact all areas of St. Lucie County, but the severity and type of flooding vary widely across jurisdictions based on geography, development patterns, and proximity to water bodies. Coastal and low-lying areas, particularly Fort Pierce and portions of Port St. Lucie near the St. Lucie River and Indian River Lagoon, are more susceptible to tidal, storm surge, and rainfall-driven flooding. In these urbanized zones,

[38] Federal Emergency Management Agency. (2023). *Flood hazard mapping and mitigation overview.* U.S. Department of Homeland Security.
[39] National Oceanic and Atmospheric Administration. (2024). *Flooding: Causes and impacts.* U.S. Department of Commerce.
[40] U.S. Geological Survey. (2023). *Floods: Overview of flood hazards and hydrology.* U.S. Department of the Interior.

extensive impervious surfaces increase runoff, often overwhelming drainage systems during heavy rain or tropical storm events. Inland and rural areas of the county, including St. Lucie Village and the agricultural regions west of I-95, face distinct challenges from riverine and flash flooding. Although these regions may experience less frequent inundation, limited stormwater infrastructure and longer distances from emergency services can prolong recovery efforts when flooding does occur.

Flooding in the county may be compounded by sea-level rise and more intense rainfall patterns, which increase the likelihood of both chronic nuisance flooding and extreme events. The diversity of local topography and development across St. Lucie County means that each jurisdiction experiences different forms of vulnerability, from urban drainage issues to tidal backflow and groundwater intrusion.

Table 39: Types of Flooding in St. Lucie County[41]

Classification	Geographic Impact
Extreme Rainfall	The increased intensity and duration of precipitation events that often lead to severe flash flooding in low-lying areas
Sea Level Rise	The gradual expansion and rise in the level of the world's oceans due to increased atmospheric and water temperatures and the melting of ice caps.
High Tide Flooding	A consequence of rising sea levels involves the recurrent inundation of low-lying areas by tidal waters during high tide events.
Storm Surge	An abnormal rise of seawater levels during a storm, caused by intense, sustained onshore winds and low atmospheric pressure during extreme weather events.
Compound Flooding	Occurs when multiple causes of flooding coincide simultaneously or subsequently in a short period, such as tidal, storm surge, and rainfall-induced flooding, intensified by rising sea levels.

EXTENT

The extent of flooding refers to the geographic area and severity of inundation that occurs during a flood event, typically defined by statistical recurrence intervals, such as the 100-year and 500-year flood events. A 100-year flood represents a flood event that has a 1% chance of occurring in a given year, while a 500-year flood has a 0.2% annual chance of occurrence. These probabilities are based on historical hydrologic data and modeling, not on fixed calendar periods, meaning that multiple "100-year" floods can occur in a few years. The extent of flooding for each category depends on factors, such as rainfall intensity, watershed size, topography, soil saturation, and the presence of stormwater infrastructure or levee systems.

In St. Lucie County, areas in the 100-year floodplain, identified by FEMA's Flood Insurance Rate Maps (FIRMs), are considered at high risk of inundation during heavy rainfall, storm surge, or river overflow events. These areas include portions of Fort Pierce, Port St. Lucie, and low-lying coastal zones along the

[41] St. Lucie County, City of Port St. Lucie, City of Fort Pierce, and St. Lucie Village, St. Lucie County regional resilience vulnerability assessment: Final report, June 2025.

Indian River Lagoon, where flooding can disrupt transportation, damage property, and threaten public safety.

500-year flood zones represent moderate- to low-risk areas that may only experience flooding under extreme or compounding conditions, such as prolonged rainfall combined with tropical storm surge. Although less frequent, 500-year floods can cause catastrophic damage from the large volume of water and the unpreparedness of infrastructure not designed for such rare events.[42]

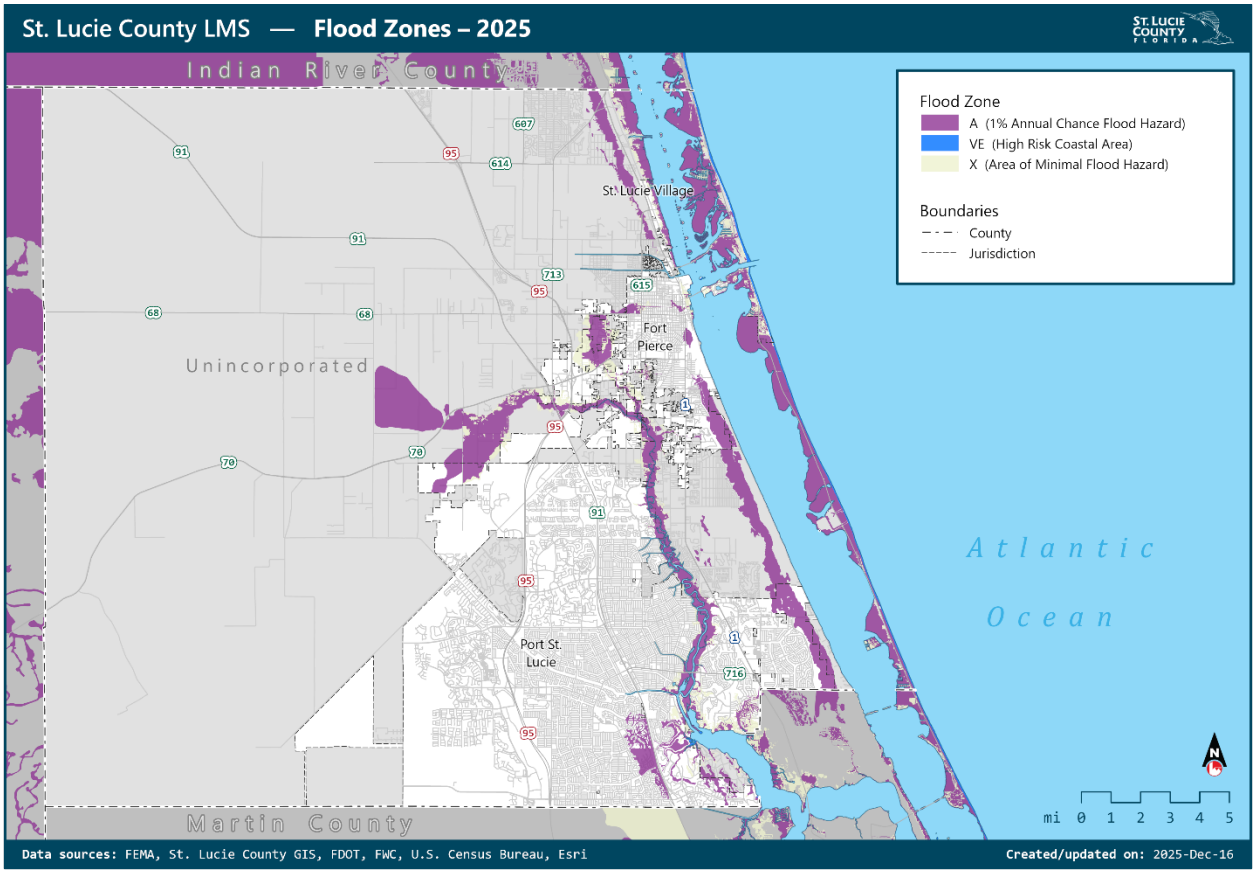


Figure 38: 100- and 500-Year Flood Classification for St. Lucie County

The extent and impact of 100- and 500-year floods are also influenced by ongoing development and changing precipitation patterns. Urbanization increases impervious surfaces, which heightens runoff and expands the flood footprint beyond mapped boundaries. The following map shows the extent of flooding in St. Lucie County.

JURISDICTIONAL IMPACTS

Flooding represents a significant natural hazard capable of disrupting daily life, damaging infrastructure, and straining emergency and recovery systems across St. Lucie County and its jurisdictions. Floodwaters

[42] National Oceanic and Atmospheric Administration. (2024). *Flood frequency and risk assessment.* U.S. Department of Commerce.

can arise from heavy rainfall, tropical storms, hurricanes, or storm surge, spreading rapidly in low-lying and coastal areas. The county's diverse geography, ranging from coastal zones along the Indian River Lagoon to inland neighborhoods and rural lands, means the impacts of flooding vary considerably by jurisdiction. Densely developed cities, such as Port St. Lucie and Fort Pierce face high exposure due to impervious surfaces and drainage limitations, while smaller communities like St. Lucie Village must contend with reduced access to emergency support and longer recovery periods. Table 40 summarizes potential flood-related impacts across the county's jurisdictions.

Table 40: Impacts of Flooding, by Jurisdiction

Jurisdiction	Impacts
St. Lucie County	Countywide flooding can overwhelm stormwater systems, inundate transportation corridors, and damage public facilities. Repeated events strain public works and emergency management resources, disrupt schools and businesses, and increase costs associated with debris removal and infrastructure repair. Economically, flood damage reduces productivity, impairs access to employment centers, and raises insurance and mitigation expenditures. Social impacts include temporary displacement, mental-health stress, and heightened demand for community assistance programs.
City of Port St. Lucie	As the county's largest and fastest-growing municipality, Port St. Lucie is highly vulnerable to flash flooding and drainage system overloads during heavy rain or tropical systems. Residential areas built on low-lying terrain near canals and retention ponds may experience recurring street and yard flooding. Prolonged flooding can close roadways, isolate neighborhoods, and delay emergency response. Economic losses often stem from property damage, business interruptions, and the cost of restoring public utilities and transportation networks.
City of Fort Pierce	Fort Pierce faces flooding from both coastal surge and inland rainfall, particularly in older neighborhoods with limited stormwater capacity. Flooding can disrupt port operations, tourism, and the city's downtown economy. Low-elevation areas near the Indian River Lagoon are especially susceptible to tidal flooding during hurricanes and king-tide events. Long-term recovery challenges include damage to critical infrastructure, erosion of shoreline protection features, and increased maintenance costs for drainage systems.
Town of St. Lucie Village	The town's proximity to the Indian River Lagoon and limited elevation make it vulnerable to tidal and rainfall-induced flooding. Although the community's small size may reduce widespread damage, limited stormwater infrastructure and reliance on county and state assistance prolong recovery. Flooding can restrict mobility, disrupt essential deliveries, and impact private wells and septic systems.

NATIONAL RISK INDEX

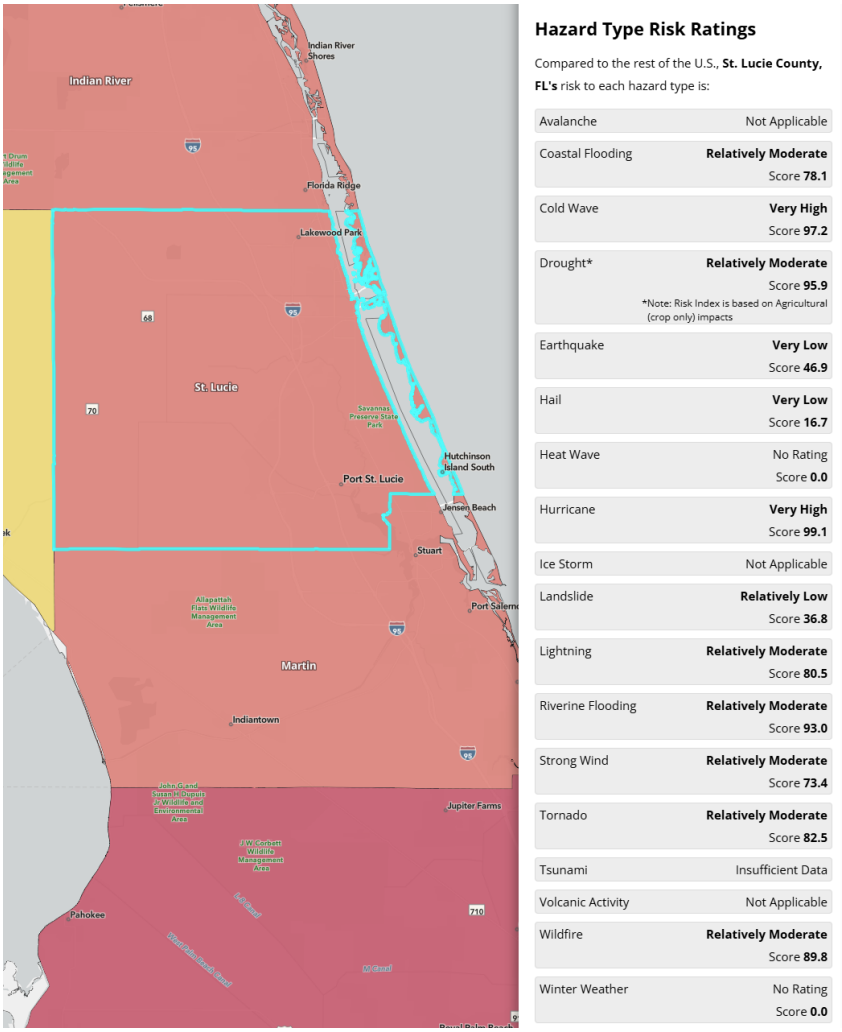


Figure 39: National Risk Index for Riverine Flooding

According to the NRI, St. Lucie County faces relatively moderate risk from both coastal flooding and riverine flooding, though these scores place the county well above national averages. The coastal flooding score of 78.1 reflects vulnerability along the Indian River Lagoon and barrier island areas, where storm surge and sea-level rise contribute to recurring inundation. These events can threaten homes, transportation corridors, and utilities, particularly during hurricanes or high-tide cycles.

The riverine flooding score of 93.0 indicates even greater concern for inland flooding from intense rainfall and drainage system overloads. Low-lying neighborhoods, canal networks, and areas adjacent to the St. Lucie River are particularly at risk during prolonged rain events or tropical systems. Together, these scores suggest that while the county's coastal zones face periodic tidal flooding, inland areas may experience more widespread and damaging events linked to heavy rainfall.

Magnitude and Severity

Flooding can have widespread and long-lasting impacts across St. Lucie County, disrupting transportation networks, damaging infrastructure, and affecting both public safety and economic stability. The magnitude of flood events depends on rainfall intensity, storm surge levels, drainage capacity, and the effectiveness of flood-control measures. During major tropical systems or prolonged heavy rains, large portions of the county, particularly low-lying and coastal areas, can experience significant inundation. These events may isolate neighborhoods, close major roadways, such as U.S. Highway 1 and I-95, and damage residential, commercial, and public properties. Flood severity can range from minor street flooding to extensive, countywide inundation that impacts thousands of structures. Coastal flooding from hurricanes and king tides can erode shorelines, overtop seawalls, and threaten utilities, while riverine flooding along the St. Lucie River and canal systems can cause prolonged standing water that delays recovery. The secondary effects of flooding often include power outages, contamination of drinking-water supplies, mold growth, and disruptions to emergency response operations. Extended flooding can also affect the local economy by halting tourism, slowing port operations, and reducing access to businesses.

Besides direct physical damage, floods can strain social and public health systems, particularly among residents in low-lying or mobile-home communities. Mental-health impacts, displacement stress, and economic losses may persist long after the waters recede. As development continues and extreme-weather events become more frequent, flooding remains one of the most significant and recurring hazards facing St. Lucie County. Proactive mitigation measures, including improved stormwater management, coastal reinforcement, and community education, are essential to reduce future risk and enhance resilience across all jurisdictions.

Historic Events

The following provides a synopsis of flooding events that have occurred within St. Lucie County.

Hurricane of September 1933: The 1933 Treasure Coast Hurricane formed east-northeast of the Leeward Islands on August 31 and attained maximum sustained winds of at least 140 miles per hour, making landfall near the border of Palm Beach and Martin Counties as a strong Category 3 hurricane. Buildings were blown off their foundations, and citrus groves were devastated. Stuart, Jupiter, and Fort Pierce were heavily damaged.

Flood of 1947: This Flood is generally considered the most severe Flood recorded in southern Florida. Heavy rainfall, including the rains from two hurricanes, occurred over a period of 5 months. Certain areas of St. Lucie County were flooded for months, and there was extensive damage to agriculture in general. Such a flooding event would be much more significant today because of the increase in land development along the eastern side of the County.

Flood of 1953: As occurred in 1947, this Flood was preceded by 5 months of heavier than normal rainfall, which included a tropical storm in October. June through October rainfall was approximately 48 inches. Damage was heaviest in the beef cattle industry, with extensive losses of improved pastureland, which

required supplemental feeding of cattle. Vegetable growers and dairy farmers also suffered significant losses as a result of this flood.

Flood of September 20–22, 1985: This incident affected large areas of St. Lucie County. Over a four-day period, 14 inches of rain were recorded in the City of Fort Pierce, with about half falling during a seven-hour period over the night of September 20, 1985. Flooding of streets and houses was widespread, especially in the central area around Five-mile and Ten-mile Creeks, where large numbers of residents were evacuated from their homes.

Since 1995, the National Centers for Environmental Information (NCEI) Storm Event database has recorded 26 flooding events in St. Lucie County and its jurisdictions. Table 41 provides an overview of each of these events.

Table 41: Historical Flooding Events in St. Lucie County[43]

Date	Location	Type	Fatalities	Injuries	Property Damage	Crop Damage	Description
10/17/1995	Port St. Lucie	Flood	0	0	$4,000,000	$0	An estimated 13 inches of rain fell in the county, flooding 12 homes and most roadways in the southern part of the County.
8/12/1998	St. Lucie County	Flood	0	0	$0	$0	Heavy thunderstorm rains flooded streets and U. S. Highway 1 in Port St. Lucie.
9/25/2003	St. Lucie County	Flash Flood	0	0	$20,000	$0	About six inches of rain fell in the Port St. Lucie area flooding major roadways and stalling cars.
9/4/2004	St. Lucie County	Flash Flood	0	0	$0	$0	From 4 to 8 inches of heavy rain from Hurricane Frances produced widespread flooding of roads, residences and businesses mainly in the coastal communities.
9/5/2004	St. Lucie (Zone)	Storm Surge/ Tide	0	0	$0	$0	Hurricane Frances made landfall at about high tide, after midnight on the 5th. The highest surges occurred south of Ft. Pierce Inlet. This was associated with the inner eye wall band as it was blowing normal to the coast. Surge levels ran from 3 to 4 feet from Cape Canaveral, north through Volusia County. Surge levels ran from near 6 feet south of Cape Canaveral to near 8 feet in Ft. Pierce. The surge was less over Martin County, although there was a strong longshore current and considerable beach erosion.

[43] NCEI. "Storm Events Database." https://www.ncei.noaa.gov/stormevents/listevents.jsp?eventType=%28Z%29+Coastal+Flood&eventType=%28C%29+Flash+Flood&eventType=%28Z%29+Flood&eventType=%28Z%29+Storm+Surge%2FTide&beginDate_mm=01&beginDate_dd=01&beginDate_yyyy=1996&endDate_mm=05&endDate_dd=31&endDate_yyyy=2025&county=ST.%2BLUCIE%3A111&hailfilter=0.00&tornfilter=0&windfilter=000&sort=DT&submitbutton=Search&statefips=12%2CFLORIDA.

Date	Location	Type	Fatalities	Injuries	Property Damage	Crop Damage	Description
9/25/2004	St. Lucie (Zone)	Storm Surge/ Tide	0	0	$0	$0	The greatest storm tides occurred between Brevard and St. Lucie Counties, to the right of the landfalling eye wall. Initial estimates of storm tides range from 6 feet in Volusia County to around 10 feet in St Lucie county, and about 8 feet in Martin County. Damage would have been greater except that Jeanne came ashore mainly during a low tide. At the next high tide strong wind and rain bands were still hitting Volusia County from the east. Hardest hit was the town of New Smyrna Beach where much of the sand east of the town's seawall was removed.
8/19/2008	St. Lucie County	Flood	0	0	$67,000,000	$20,000,000	Tropical Storm Fay came on shore in southwest Florida, moving north northeast toward Lake Okeechobee. By the early morning of August 20th Tropical Storm Fay had moved to southern Brevard County producing rainfall amounts ranging from 10 to 15 inches in Martin, Saint Lucie, Okeechobee, and Indian River counties. Okeechobee reported 69 homes damaged by flood waters and a total of $1.2 million. Indian River and St. Lucie counties reported a combined loss in citrus of $10 million. One indirect fatality occurred in Indian River County when a car hydroplaned and crashed.
12/17/2009	St. Lucie County	Flood	0	0	$0	$0	Numerous bands of heavy showers and isolated thunderstorms trained over interior portions of St. Lucie County from late afternoon until well into the evening, producing over 12 inches of rain in less than 24 hours. Temporary roadway and lowland flooding resulted, but no structures were damaged.

Date	Location	Type	Fatalities	Injuries	Property Damage	Crop Damage	Description
8/27/2012	St. Lucie County	Flood	0	0	$20,000	$0	Persistent heavy rainbands from Tropical Storm Isaac produced widespread urban and lowland flooding across much of the county. Rainfall from the morning of August 26 until the evening of August 27 averaged 5 to 10 inches, with isolated totals of 12 to 14 inches, most of which fell during the morning and afternoon of August 27. The most significant impacts occurred near the coast, from Lakewood Park to Fort Pierce, White City, and Port St. Lucie. Numerous roads were temporarily closed due to standing water.
10/27/2012	St. Lucie (Zone)	Coastal Flood	0	0	$4,200,000	$0	Hurricane Sandy moved slowly northwest, parallel to the Florida coast, 200–250 miles offshore. Due to the very expansive wind fields associated with the hurricane, sustained tropical storm winds reached the east-central Florida beaches and adjacent portions of the barrier islands. Moderate to major beach erosion was sustained in St. Lucie County. Sand over-washed two beach access parking areas and erosion damaged the foundation of a pump station.
1/9/2014	St. Lucie County	Flood	0	0	$20,000	$0	A cluster of showers and isolated thunderstorms moved very slowly down the coast of St. Lucie and Martin Counties during the afternoon and early evening. Twenty-four hour rainfall totals reached 8–12 inches across much of the coastal portion of the counties, with most the rain falling in a period of 6-hours or less. Flooding of many roadways occurred, stranding vehicles. Drainage canals overflowed and

Date	Location	Type	Fatalities	Injuries	Property Damage	Crop Damage	Description
							standing water reached a foot in many locations and was slow to recede.
2/28/2015	St. Lucie County	Flood	0	0	$0	$0	A combination of CoCoRaHS, ham radio, and public reports indicated 3 to 6 inches of rain fell across southeastern St. Lucie County, with most of the rain falling in a 6-hour or less period. Flooding closed many primary and secondary roadways, stranding and submerging many vehicles. Drainage canals and creeks overflowed. Although high water surrounded many subdivisions, businesses and homes, no water was reported to have entered any homes or businesses.
5/17/2016	St. Lucie County	Flood	0	0	$50,000	$0	Persistent thunderstorms produced extremely heavy rain in a short time period from southern areas of Ft. Pierce northward to beyond the Indian River County line. Numerous roads were closed due to high water and several cars were flooded. Standing water remained high in many neighborhoods for over 24 hours. The Ft. Pierce ASOS (KFPR) recorded a record 9.85 inches for the day, and 8.53 inches accumulated in four hours (1300–1700 LST).
10/6/2016	St. Lucie County	Flood	0	0	$0	$0	Rainbands associated with Hurricane Matthew produced rainfall totals between 3 and 4 inches, resulting in areas of mostly minor urban and poor drainage flooding. Several roadways were impacted by significant ponding.
10/6/2016	St. Lucie (Zone)	Storm Surge/ Tide	0	0	$0	$0	As Hurricane Matthew passed offshore, the beaches experienced minor to moderate erosion and a

Date	Location	Type	Fatalities	Injuries	Property Damage	Crop Damage	Description
							significant wave run-up to dunes and berms due to an estimated 2–3 foot storm surge.
9/10/2017	St. Lucie County	Flash Flood	0	0	$30,000,000	$0	Prior to the direct impacts from approaching Hurricane Irma, rain bands streamed onshore from the Atlantic and produced between 6 and 11 inches of rain in less than 4 hours during the very early morning hours, affecting much of Ft. Pierce. A Weather Underground site measured 10.46 inches. Numerous roadways quickly flooded and became impassible, with nearly 4 feet of standing water in front of the Ft. Pierce Police Station on US Highway 1. Water breached several homes, including on El Rancho Drive and near 25th Street and Virginia Avenue. One family needed to be rescued from their flooded home due to rising water.
9/10/2017	St. Lucie (Zone)	Storm Surge/ Tide	0	0	$0	$0	As Hurricane Irma moved northward over west-central Florida, the St. Lucie County beaches experienced moderate to major erosion and wave run-up due to an estimated 2–3 foot storm surge. Similar water level rises occurred in the intracoastal waterway, which combined with wave action to produce mostly minor damage to docks, primarily along the western shores of the river.
9/10/2017	St. Lucie County	Flood	0	0	$0	$0	Rainbands associated with Hurricane Irma produced rainfall totals of 8–12 inches, flooding urban areas and places with and poor drainage. Many roadways had significant levels of standing water, and many retention ponds reached capacity or overflowed. More significant (flash) flooding occurred farther

Date	Location	Type	Fatalities	Injuries	Property Damage	Crop Damage	Description
							north across the county, including Ft. Pierce (see separate flash flood entry).
9/3/2019	St. Lucie (Zone)	Storm Surge/ Tide	0	0	$0	$0	As Hurricane Dorian moved northwest parallel to the east central Florida coast, the Saint Lucie County beaches experienced varying degrees of beach erosion, with moderate to major beach erosion in some areas, due to an estimated 2 foot above ground level storm surge. The strong onshore winds and large swells over two high tide cycles contributed to the surge. Similar water level rises occurred in the Indian River Lagoon system.
9/21/2020	St. Lucie (Zone)	Coastal Flood	0	0	$0	$0	Minor to locally moderate coastal flooding occurred near the times of high tide. The greatest impacts were reported near Ft. Pierce Inlet, where the boat launch was closed due to missing planks on a dock and some washouts nearby. In addition, the earthen berms surrounding several mosquito impoundments along both sides of the Indian River suffered minor erosion from over wash. Beach erosion was mainly minor, except locally moderate along portions of Ft. Pierce Beach, where about 30 feet of beachfront was lost.
11/6/2021	St. Lucie (Zone)	Coastal Flood	0	0	$0	$0	Coastal flooding occurred along the Saint Lucie County coast after strong northeast winds and large breaking surf persisted for seven consecutive high tide cycles from November 6–9. The strong winds occurred in conjunction with the highest astronomical tides of the year, with the greatest total water levels observed on November 7–8. Saint Lucie County Emergency Management and local beach

Date	Location	Type	Fatalities	Injuries	Property Damage	Crop Damage	Description
							patrol reported minor beach erosion. Significant water run-up occurred toward the dunes at many county beaches.
11/21/2021	St. Lucie County	Flash Flood	0	0	$5,000	$0	Extreme rainfall, with totals of 6–12 inches fell in less than 12 hours, with much of the rain occurring in less than 6-hours. Numerous roadways in Port St. Lucie, White City and adjacent Ft. Pierce South experienced rapid inundation, resulting in stalled cars and blocked roads. Numerous roads were closed with water approaching several homes. Water accumulated to heights of 2.5 to 3 feet near Kitterman Road and U.S. Highway 1 (Port St. Lucie) and Gopher Ridge Road (White City). The highest rain measurement was 11.40 inches from a Weather Underground mesonet site located 4 miles north of Port St. Lucie.
9/27/2022	St. Lucie County	Flood	0	0	$0	$0	Heavy rain embedded in the outer bands ahead of Hurricane Ian produced widespread rainfall totals of 4 to 8 inches across St. Lucie County, resulting in sporadic reports of street, urban, and poor drainage flooding. Several roadways were impacted by significant levels of standing water and many retention ponds reached capacity or overflowed. Emergency management officials indicated minimal damage to residential and business structures.
9/29/2022	Coastal St. Lucie (Zone)	Storm Surge/ Tide	0	0	$0	$0	Persistent onshore flow ahead of and during Ian led to water level rises of 1 to 2 feet along the St. Lucie County coastline. Moderate to severe beach erosion was sustained across the county.

Date	Location	Type	Fatalities	Injuries	Property Damage	Crop Damage	Description
11/9/2022	Coastal St. Lucie (Zone)	Storm Surge/ Tide	0	0	$0	$0	Persistent onshore flow ahead of and during Nicole led to water level rises of 3 to 5 feet along the St. Lucie County coastline. Moderate to severe beach erosion along already weakened dunes left behind in the wake of Hurricane Ian led to additional failures of structures along the coastline, namely dunes and beach access crossovers. Elevated water levels of up to 2 to 4 feet and wave action along the intracoastal waters resulted in street flooding along the riverfront and damage to some boat docks and marinas in the county.
10/9/2024	St. Lucie County	Flash Flood	0	0	$0	$0	The rainbands of Hurricane Milton produced very heavy rainfall rates over a 3-hour period, between 1400 EST and 1700 EST that resulted in substantial flooding in portions of northeast St. Lucie County. Rainfall totals from the system ranged between 2 to 4 inches in the western part of the county, to as much as 6 to 8 inches in the eastern part of the county. Several roads were made impassable due to standing water issues, up to 3 feet in some areas. The Treasure Coast International Airport recorded 4.46 inches of rain on Oct 9, a new daily record rainfall for the site. Damage to property and county infrastructure was minimal.

FEMA DISASTER DECLARATIONS

St. Lucie County has received multiple FEMA disaster declarations related to flooding events over the past several decades, most of which were tied to major tropical storms and hurricanes that caused widespread inundation, storm surge, and inland flooding. One of the most significant was FEMA Disaster Declaration 4337-DR-FL (Hurricane Irma, 2017), which brought heavy rainfall and storm surge that caused extensive flooding across residential areas, roadways, and drainage systems throughout the county. Federal assistance supported debris removal, infrastructure repair, and mitigation projects to strengthen stormwater management and protect critical facilities from future flood impacts.

In FEMA Disaster Declaration 4283-DR-FL (Hurricane Matthew, 2016), portions of coastal St. Lucie County, including Fort Pierce and barrier island communities, experienced localized flooding and beach erosion from high surf and surge. Federal aid under the Public Assistance Program helped restore coastal infrastructure and reinforced flood-control structures. More recently, the county was included in FEMA Disaster Declaration 4673-DR-FL (Hurricane Ian, 2022) and 4680-DR-FL (Hurricane Nicole, 2022), both of which caused significant rainfall-induced flooding and property damage. These declarations provided funds for emergency protective measures, temporary housing, and hazard-mitigation initiatives aimed at reducing repetitive-loss flooding. Table 42 lists the disaster declarations for St. Lucie County.

Table 42: Disaster Declarations for Flooding for St. Lucie County

Year	Disaster Declaration	Type	Incident	Event
1965	DR-209-FL	DR	Hurricane	Hurricane Betsy
1996	DR-1074-FL	DR	Flood	Severe Flooding
1999	EM-3143-FL	EM	Hurricane	Hurricane Floyd Emergency Declarations
1999	DR-1300-FL	DR	Hurricane	Hurricane Floyd Major Disaster Declarations
2000	EM-3150-FL	EM	Hurricane	Tropical Storm Irene – Florida
2000	DR-1306-FL	DR	Hurricane	Fl-Hurricane Irene-Dr-Req
2004	DR-1545-FL	DR	Hurricane	Hurricane Frances
2004	DR-1539-FL	DR	Hurricane	Tropical Storm Bonnie and Hurricane Charley
2004	DR-1561-FL	DR	Hurricane	Hurricane Jeanne
2004	DR-1551-FL	DR	Hurricane	Hurricane Ivan
2005	EM-3220-FL	EM	Hurricane	Hurricane Katrina Evacuation
2006	DR-1609-FL	DR	Hurricane	Hurricane Wilma
2013	DR-4084-FL	DR	Hurricane	Hurricane Isaac
2017	DR-4337-FL	DR	Hurricane	Hurricane Irma
2017	DR-4283-FL	DR	Hurricane	Hurricane Matthew

Year	Disaster Declaration	Type	Incident	Event
2017	EM-3385-FL	EM	Hurricane	Hurricane Irma
2017	EM-3377-FL	EM	Hurricane	Hurricane Matthew
2019	EM-3419-FL	EM	Hurricane	Hurricane Dorian
2020	DR-4468-FL	DR	Hurricane	Hurricane Dorian
2020	EM-3533-FL	EM	Hurricane	Hurricane Isaias
2022	DR-4673-FL	DR	Hurricane	Hurricane Ian
2022	EM-3584-FL	EM	Hurricane	Tropical Storm Ian
2023	DR-4680-FL	DR	Hurricane	Hurricane Nicole
2023	EM-3587-FL	EM	Tropical Storm	Tropical Storm Nicole
2024	DR-4834-FL	DR	Hurricane	Hurricane Milton

Probability of Future Conditions

Given ongoing urban development, coastal change, and climate variability, the likelihood of future flooding events in St. Lucie County is considered high. The county's location along Florida's Atlantic coast and its extensive network of canals, rivers, and low-lying neighborhoods make it especially vulnerable to both coastal and inland flooding. Heavy rainfall associated with tropical systems, king tides, and storm surge events can overwhelm drainage infrastructure and lead to prolonged inundation. As development continues in flood-prone areas and impervious surfaces increase, runoff is expected to intensify, compounding existing drainage challenges.

The region's connectivity through I-95, U.S. 1, and Florida's Turnpike, along with denser urbanized areas, such as Port St. Lucie and Fort Pierce, heightens the exposure of residents, businesses, and critical infrastructure to flood hazards. Coastal communities face additional risk from sea-level rise, which can exacerbate tidal flooding and saltwater intrusion into groundwater systems. Inland zones along the St. Lucie River and canal corridors are increasingly susceptible to heavy-rainfall flooding during hurricanes and seasonal storms.

Future flood impacts may also be influenced by changing rainfall patterns and more intense tropical activity. Continued coordination with the South Florida Water Management District, FEMA, and the Florida Division of Emergency Management will be essential to strengthen early-warning systems, update floodplain maps, and enhance local mitigation efforts. Long-term resilience will depend on sustained investment in stormwater infrastructure, coastal restoration, and community preparedness to reduce vulnerability and ensure that St. Lucie County remains adaptive to evolving flood risks. Table 43 provides an outline of flood zones within St. Lucie County that have structures and populace located within them.

Table 43: Flood Zones with Structures and Populace Located in St. Lucie County.

Flood Zone	Definition
Zone A	Areas subject to inundation by the 1-percent-annual-chance flood event. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown.
Zone AE	Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. BFEs are shown within these zones.
Zone AH	Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are 1–3 feet. BFEs derived from detailed hydraulic analyses are shown in this zone.
Zone AO	Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are 1–3 feet. Average flood depths derived from detailed hydraulic analyses are shown within this zone.
Zone VE	Areas along coasts subject to inundation by the 1-percent-annual-chance flood event with additional hazards due to storm-induced velocity wave action. BFEs derived from detailed hydraulic coastal analyses are shown within these zones.
Zone X	Moderate risk areas within the 0.2-percent-annual-chance floodplain, areas of 1 percent-annual-chance flooding where average depths are less than 1 foot, areas of 1 percent-annual-chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1-percent-annual-chance flood by a levee. No BFEs or base flood depths are shown within these zones.

Table 44 provides an overview of the structures and population contained within FEMA flood zones.

Table 44: Distribution of Structures and Population by FEMA Flood Zone[44]

Flood Zone	Total Number of Structures	Total Value of Structures	Replacement Value Structures	Total Population in Flood Zone
Zone A	490	$129,307,100.00	$245,000,000.00	1,176
Zone AE	7,580	$3,177,962,600.00	$6,152,535,593.60	25,675
Zone AH	1,569	$500,284,500.00	$968,550,792.00	4,642
Zone AO	146	$1,539,272,000.00	$2,980,030,592.00	7,601
Zone VE	98	$265,363,400.00	$513,743,542.40	1,339
Zone X	133,094	$34,360,351,435.00	$66,547,000,000.00	332,011
Total	**142,977**	**$39,972,541,035.00**	**$77,406,860,520.00**	**372,444**

[44] Source: St. Lucie County Planning Department & GIS 2026.

The majority of structures and population are located within Zone X. This zone contains 133,094 structures, which account for approximately 93% of the total structures within flood zones. This zone accounts for the largest share of total exposure due to its extensive development of structures. Among the SFHA (Zones A, AE, AH, AO, and VE), Zone AE represents the highest concentration of risk with 7,580 structures valued at approximately $3.18 billion and a population of 25,675. Zones AH and AO show a relatively high total and replacement values, indicating concentrated development and potentially higher per-structure exposure. Zone VE represents coastal high-hazard areas with elevated replacement values relative to their size.

Historical Flood Damage, NFIP Claims, and Repetitive Loss Review

As part of the flood hazard assessment, St. Lucie County, the City of Fort Pierce, and the City of Port St. Lucie, reviewed historical flood damage to buildings within their respective jurisdictions. This review was conducted to address Community Rating System Activity 510, Step 5(c).

The review included:

- The complete FEMA property-level list of properties that have received National Flood Insurance Program claim payments;
- Current repetitive loss and severe repetitive loss property information;
- FEMA Community Information System insurance and claims reports;
- Available local post-disaster damage assessment records;
- Known flood-prone streets, drainage problem areas, and other documented flooding locations; and
- The buildings located within each jurisdiction's defined repetitive loss areas.

Each jurisdiction reviewed every address on FEMA's flood insurance claims list located within its boundaries, not only properties classified as repetitive loss or severe repetitive loss. Claims locations were compared with regulatory flood hazard areas, locally identified flooding areas, repetitive loss areas, flood-prone streets, drainage problem areas, and the vulnerable structure inventory contained in this assessment. All buildings located within the defined repetitive loss areas were included in the flood vulnerability assessment.

Table 45: NFIP Participation and Claims Data by Jurisdiction

Jurisdiction	NFIP CID	CIS Data Date	Policies in Force	Insurance in Force	Closed Paid Losses	Amount of Closed Paid Losses
St. Lucie County	120285	02/22/2026	6023	$1,560,126,000	2216	$45,551,585.50

Jurisdiction	NFIP CID	CIS Data Date	Policies in Force	Insurance in Force	Closed Paid Losses	Amount of Closed Paid Losses
City of Ft. Pierce	120286	02/02/2026	2516	$600,455,000	1174	$32,771,969
City of Port St. Lucie	120287	01/02/2026	2584	$837,857,000	505	$2,033,132

Vulnerability Assessment

St. Lucie County's vulnerability to flooding is influenced by its geography, population density, infrastructure, and patterns of development. Low-lying coastal and inland areas, especially those adjacent to the St. Lucie River, Indian River Lagoon, and interconnected canal systems, face recurring flood threats from heavy rainfall, tropical storms, and storm surge. Populations living in coastal and riverfront zones, mobile home communities, and neighborhoods with inadequate drainage are at the greatest risk. Socioeconomic factors, such as limited income, lack of flood insurance, and dependence on low-elevation housing, exacerbate vulnerability for many households. Residents without access to vehicles or reliable transportation may also face challenges evacuating during severe flood events.

NATURAL FLOODPLAIN FUNCTIONS

St. Lucie County's floodplains perform essential natural functions that reduce flood risk while supporting ecological integrity and long-term community resilience. These floodplain areas include riverine corridors, coastal wetlands, estuaries, mangrove systems, freshwater marshes, and low-lying basins that naturally absorb, store, and convey floodwaters. Major systems, such as the St. Lucie River, North Fork and South Fork tributaries, Ten Mile Creek, and associated drainage canals play a critical role in moderating peak flows and reducing downstream flooding by temporarily storing excess water during high-intensity rainfall events.

Floodplain wetlands also play a significant role in protecting water quality. Sediments, nutrients, and pollutants are filtered as floodwaters pass through wetlands and riparian buffers before reaching sensitive receiving waters, such as the St. Lucie Estuary, Indian River Lagoon, and nearshore Atlantic waters. Preserved vegetated buffers along rivers, canals, and creeks help reduce nonpoint source pollution from urban runoff, agricultural activities, and transportation corridors, supporting both ecological health and regulatory water quality goals.

St. Lucie County's floodplains sustain diverse and productive ecosystems that provide habitat for fish, birds, and other wildlife. Coastal mangroves and estuarine systems serve as nurseries for marine species, while inland floodplains and freshwater wetlands support migratory birds and native terrestrial species. These ecosystems enhance biodiversity and contribute to the county's natural heritage. Along the coastline and estuarine margins, mangrove forests and natural shoreline features provide critical protection by dissipating wave energy and storm surge, serving as a natural first line of defense for inland communities and critical infrastructure.

IMPACTS TO ASSETS

Table 46: Consequence Analysis

Sector	Consequence
Public	Flooding can lead to the displacement of residents, road closures, and temporary loss of access to essential services. Low-lying neighborhoods may experience repeated property losses, and prolonged standing water can increase health risks, such as mold exposure and waterborne disease.
First Responders	Emergency personnel may face delays due to flooded roadways, impassable bridges, and communication disruptions. Responding to water rescues or flooded critical facilities can strain staffing and resources during concurrent storm events.
Continuity of Operations	Flooding can disrupt government services, utilities, and transportation networks, affecting both emergency response and long-term recovery operations. Damage to roads, culverts, and drainage systems may hinder access to shelters and medical facilities.
Property, Facility, and Infrastructure	Residential, commercial, and public infrastructure, including water treatment plants, lift stations, and transportation corridors, are highly susceptible to flood damage. Repeated inundation can accelerate deterioration of foundations, electrical systems, and road surfaces.
Environment	Floodwaters can mobilize pollutants, debris, and wastewater, degrading surface and groundwater quality. Prolonged inundation may also damage wetlands and coastal habitats that are essential for storm protection and biodiversity.
Economic Conditions	Flood events can disrupt business operations, tourism, and agriculture, leading to revenue losses and long recovery periods. Property damage may also increase insurance claims and elevate premiums for residents and businesses.
Public Confidence	Recurrent flooding can erode public trust in local infrastructure and emergency preparedness, especially if communication is inconsistent or recovery is delayed. Transparent, timely updates and visible mitigation progress are essential to maintaining public confidence.

The National Flood Insurance Program (NFIP) aims to reduce the financial impact of flooding on individuals, communities, and the nation. Established by Congress in 1968 through the National Flood Insurance Act, the NFIP is administered by FEMA in the Department of Homeland Security. Its purpose is to provide affordable flood insurance to property owners, renters, and businesses while encouraging sound floodplain management practices that reduce future flood damage. Table 47 provides information on the participants in the NFIP program for St. Lucie County.

Table 47: NFIP Participants

Jurisdiction	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Adoption	Reg-Emer Date	Tribal
Unincorporated St. Lucie County	1/24/75	8/17/81	2/19/20	2020	8/17/81	No
Port St. Lucie	12/13/74	3/15/82	2/19/20	2020	3/15/82	No
Fort Pierce	5/24/74	12/1/77	2/19/20	2020	12/1/77	No
St. Lucie Village	11/29/74	4/1/80	2/19/20	2020	4/1/80	No

REPETITIVE LOSS AND SEVERE REPETITIVE LOSS PROPERTIES

Repetitive Loss (RL) properties are NFIP-insured buildings that have experienced multiple flood damage claims. In FEMA's Community Rating System (CRS) program, participating communities are required to identify and map Repetitive Loss Areas—clusters of repeatedly flooded buildings—rather than focusing solely on individual addresses. Although the detailed addresses and claim histories of RL properties are protected under the Federal Privacy Act and not made publicly available, FEMA provides this information directly to communities to support floodplain management, outreach, and mitigation planning activities. Table 48 provides a list of communities in St. Lucie County that participate in the CRS program. St. Lucie Village does not participate in the CRS program.

Table 48: CRS Program Participants

Jurisdiction	CRS Entry Date	Current Effective Date	Current Class	% Discount
Unincorporated St. Lucie County	10/1/94	4//1/24	5	25%
Port St. Lucie	10/1/91	4/1/23	5	25%
Fort Pierce	10/1/92	5/1/12	6	20%

Severe Repetitive Loss (SRL) properties represent a subset of RL properties that have incurred especially high cumulative flood insurance payouts or repeated significant damage over time. These properties are given higher priority for federal mitigation funding programs, such as the Flood Mitigation Assistance (FMA) and Hazard Mitigation Grant Program (HMGP), which can support elevation, acquisition, or floodproofing projects. Under CRS guidance, buildings situated near RL or SRL properties and subject to the same flooding source are considered part of the same Repetitive Loss Area for planning, outreach, and mitigation purposes. Repetitive loss properties within St. Lucie County and its jurisdictions are publicly accessible through the following mapping website: cityofpsl.com/flood. Table 49 provides an overview of the RL and SRL properties in St. Lucie County and its jurisdictions.

Table 49: Repetitive and Severe Repetitive Loss Properties in St. Lucie County

	Repetitive Loss Property			Severe Repetitive Loss Property		
Jurisdiction	Total	Residential	Commercial	Total	Residential	Commercial
Unincorporated St. Lucie County	157	157	04	23	23	0
Port St. Lucie	15	14	1	0	0	0
Fort Pierce	142	130	12	0	0	0
St. Lucie Village	4	4	0	0	0	0

IMPACT ON COMMUNITY LIFELINES

Flooding can disrupt all seven of FEMA's Community Lifelines (see Figure 40), and the most severe impacts are on Safety and Security, Food, Water, Shelter, and Transportation.

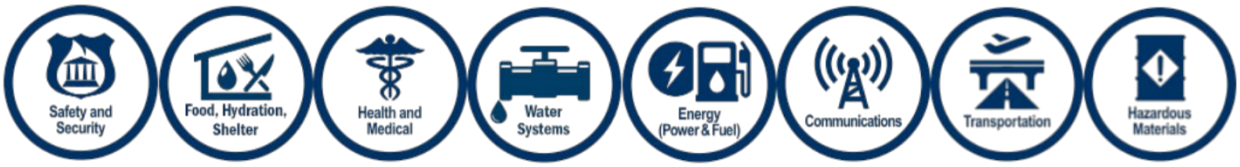


Figure 40: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** Heavy rainfall, storm surge, and riverine flooding can damage roads, bridges, and culverts, isolating neighborhoods and delaying emergency response. Prolonged flooding may require water rescues, road closures, and temporary evacuations, directly affecting public safety.
- **Food, Water and Shelter:** Floodwaters can contaminate drinking water systems and disrupt wastewater treatment facilities. Homes and shelters in low-lying or coastal areas may become uninhabitable, increasing demand for temporary housing and relief services. Flooded grocery stores, gas stations, and supply distribution centers can interrupt food and fuel availability, while debris and standing water may restrict the transport of essential goods.
- **Health and Medical:** This lifeline is especially vulnerable when flooding limits access to hospitals, clinics, or emergency care facilities.
- **Water Systems:** Floodwaters can contaminate drinking water systems and disrupt wastewater treatment facilities.
- **Energy (Power and Fuel):** Power outages and impassable roads can delay patient transport and strain healthcare resources.
- **Communications:** Substations, power lines, and telecommunication towers may be exposed to high water or storm damage.

- **Transportation:** Flooding can inundate major corridors, local streets, transit routes, and rail lines, disrupting the movement of people, goods, and emergency services.
- **Hazardous Materials:** Floodwaters can mobilize contaminants from industrial sites, chemical storage facilities, fuel stations, agricultural operations, and household hazardous waste. Inundation of these sites may lead to spills, leaks, or the uncontrolled release of hazardous substances into waterways, soils, and developed areas.

IMPACT DUE TO CHANGES IN DEVELOPMENT

Over the past five years, St. Lucie County has experienced steady population growth, expanding urban infill, and significant infrastructure development, all of which have altered the way flood hazards affect local communities. Increased construction in low-lying and coastal zones, such as Port St. Lucie and Fort Pierce, has reduced the amount of natural drainage and infiltration available to absorb rainfall. Expanding residential subdivisions, commercial corridors, and impervious surfaces like roads and parking lots have intensified runoff, increasing both the frequency and magnitude of flooding in urban and suburban areas. In addition, infill development has placed new structures in previously undeveloped floodplains, elevating exposure to stormwater inundation and flash flooding during tropical systems or heavy seasonal rainfall events.

Transportation improvements and new commuting corridors have also reshaped water flow patterns. Expanded roadways, canal modifications, and new drainage systems have created complex hydrologic interconnections, sometimes transferring flood risks between neighborhoods or jurisdictions. Coastal areas face additional exposure from sea-level rise, which contributes to more frequent tidal flooding and saltwater intrusion, especially in eastern St. Lucie County near the Indian River Lagoon. Rural and inland areas, though less densely developed, remain vulnerable to roadway flooding and prolonged ponding due to limited drainage capacity and slower recovery times. As the county continues to grow, careful integration of floodplain management, zoning regulations, and green infrastructure will be needed to mitigate these risks.

IMPACTS ON POPULATIONS OF FOCUS

Certain groups in St. Lucie County are disproportionately affected by flooding due to socioeconomic, geographic, and demographic factors. Residents in coastal, canal-front, and low-elevation neighborhoods, many of whom are elderly or low-income, face increased risks of property damage, displacement, and loss of essential services. Older adults and individuals with disabilities may experience difficulty evacuating or accessing shelters during major flood events. Low-income households are less likely to possess flood insurance, making recovery slower and more financially burdensome.

Workers in essential sectors, such as healthcare, retail, agriculture, and public safety, are also more vulnerable, as flooding can limit transportation access to workplaces or disrupt income streams. Renters, particularly those in older housing stock or mobile homes, often face unsafe living conditions during floods and limited relocation options afterward. Children and students can be impacted when school closures occur due to flooded roadways or facility damage, creating ripple effects for working parents and caregivers.

Individuals experiencing homelessness or housing insecurity are among the most at risk during flood events, often lacking reliable shelter, sanitation, or access to emergency resources. For these populations, even minor flooding can cause significant hardship. Targeted outreach, improved evacuation planning, and equitable investment in stormwater infrastructure, especially in historically underserved neighborhoods, are essential to reducing these disparities.

Tropical Cyclones: Hurricanes and Tropical Storms

Definition

A tropical cyclone is an organized warm-core, low pressure weather system without any organized fronts attached that develops over warm ocean waters. Tropical cyclones with maximum sustained surface winds of less than 39 mph are called tropical depressions. A tropical storm is a tropical cyclone with maximum sustained winds of at least 39 mph but less than 74 mph. Tropical storms are given official alphabetical names, resetting each year. Above 74 mph, a tropical storm is categorized a hurricane, typhoon, or cyclone based on the storm's geographic location.[45] Figure 41 shows Hurricane Francis approaching St. Lucie in 2004.

[45] NOAA, "Tropical Cyclone Introduction," 2025, https://www.noaa.gov/jetstream/tropical/tropical-cyclone-introduction.

Figure 41: Hurricane Frances as It Approached Its Direct Hit on St. Lucie, 2004[46]

In the Northern Hemisphere, a tropical cyclone with winds 74 mph and above is called a hurricane. Hurricanes draw energy from warm ocean waters and areas with low vertical wind shear (changes in wind speed with height). They feature counterclockwise-rotating winds of 74 mph or faster. Hurricanes are formed from tropical disturbances that form over oceans with surface temperatures warmer than 81°F (26.5°C). The ambient heat in the sea's surface and moisture in the rising air column set up a low-pressure center and convective conditions that allow formation of self-sustaining circular wind patterns. Under the right conditions, these winds may continue to intensify until they reach hurricane strength. This heat and moisture from the warm ocean water is the energy source of a hurricane. Hurricanes weaken rapidly when deprived of their energy source by traveling over land or entering cooler waters. The Saffir-Simpson wind scale is used to categorize wind speed 1–5 once a storm reaches hurricane status. This scale can be somewhat misleading as many tropical cyclone hazard impacts occur outside of wind, but it is still the most consistent scale used to describe an oncoming storm to the public.[47]

[46] NASA/Goddard Space Flight Center Scientific Visualization Studio, "Hurricane Frances Progression with Fixed View," https://svs.gsfc.nasa.gov/2977.

[47] Evans, Scotney D., et al., 2022, "An interdisciplinary approach to evaluate public comprehension of the "cone of uncertainty" graphic." Bulletin of the American Meteorological Society 103.10 : E2214-E2221.

When a tropical cyclone threatens the coast, advisories, watches, and warnings are issued by the National Hurricane Center (NHC) and are often displayed in graphics such as the "Cone of Uncertainty" and "Storm Surge Risk" maps. Figure 42 shows the Cone of Uncertainty for Tropical Storm Nicole, which hit as a hurricane just south of Vero Beach in Indian River County on November 10, 2022. This advisory was given at 4 a.m. EST on November 9, 2022. The Cone of Uncertainty, like the Saffir-Simpson Wind Scale, can cause confusion since people may incorrectly believe that the cone represents the size of the storm, so they are not in danger if the cone does not cover their area.[48] While researchers are proposing updates to the Cone of Uncertainty, it remains the most reliable and accessible hurricane forecast graphic for the public.

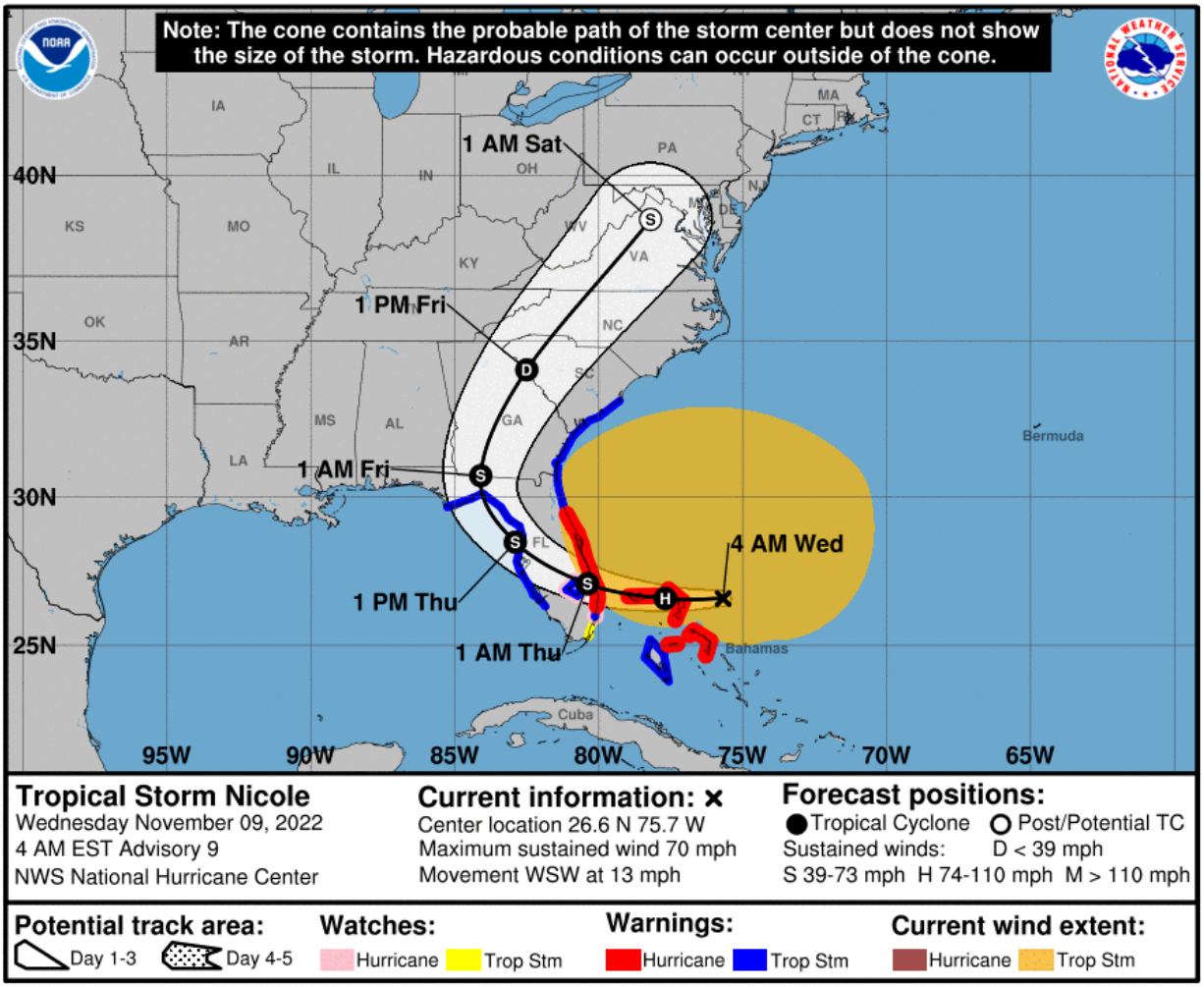


Figure 42: Tropical Storm Nicole Cone of Uncertainty with Wind Field Advisory, November 9, 2022[49]

[48] Blair, M., J. Collins, L. Myers, and B. Page, 2025, "Influence of Cone of Uncertainty and Storm Surge Maps in Evacuation Decision-Making for Hurricane Ian." University of South Florida.
[49] NHC Archive, "Graphics Archive," 2025, https://www.nhc.noaa.gov/archive/2022/NICOLE_graphics.php?product=3day_cone_with_line_and_wind.

While any type of severe weather warning such as flood or extreme warnings may occur during a tropical cyclone event, the main advisories issued exclusively in tropical cyclones are as follows:

- **Hurricane Watch:** Indicates that hurricane conditions are possible and may threaten the area within 48 hours.
- **Hurricane Warning:** Issued when winds of at least 74 mph are to be expected in the area within 36 hours.
- **Tropical Storm Watch:** Issued when tropical storm conditions (sustained winds of 39 to 73 mph) are possible within the specified area within 48 hours.
- **Tropical Storm Warning:** Issued when tropical storm conditions (sustained winds of 39 to 73 mph) are expected within your area within 36 hours.

Location

The entirety of St. Lucie County (which includes each of the jurisdictions in the planning area) is at risk to tropical cyclones, including hurricanes, in the Atlantic Basin. The coastal areas are more at risk due to storm surge inundation risk due to their proximity to seawater, regardless of the storm's direction. However, because tropical cyclones lose energy as they travel over land, a tropical cyclone traveling west to east from the Gulf to the Atlantic may experience higher winds, more intense rainfall, or even a tornado outbreak as was witnessed during Hurricane Milton in October 2024. If the cyclone is travelling east to west, the Atlantic coast experiences the worst impacts, and cities inland to the west would experience less intense winds and rain but would be more at risk to inland and river flooding instead of storm surge.

The barrier-island corridor, including Hutchinson Island and the Fort Pierce Inlet region, experiences the highest exposure to surge, wave action, and coastal erosion. Interior neighborhoods along the St. Lucie River, Indian River Lagoon, and Ten Mile Creek Basin are susceptible to freshwater flooding from heavy rainfall and drainage limitations.

NOAA SLOSH modeling indicates that a Category 3 hurricane could produce storm-surge depths exceeding 9 feet above ground level along the barrier island and 4–6 feet along the western lagoon shoreline. Heavy rainfall from slow-moving systems, such as Hurricanes Frances, Jeanne, and Fay, can exceed 10–15 inches countywide, overwhelming drainage infrastructure and causing widespread road closures.

JURISDICTIONAL IMPACTS

The primary jurisdictions in St. Lucie County, including the cities of Port St. Lucie, Fort Pierce, St. Lucie Village, and the unincorporated regions of the county, exhibit comparable tropical cyclone damage and operational effects, as illustrated in Table 50. High winds, hail, flooding, and lightning strikes affect the entirety of St. Lucie County. However, areas closer to the coast, such as Fort Pierce and St. Lucie Village, face greater risks from ocean-related impacts, including storm surge, large waves, and sand erosion. These hazards could hinder beachgoers and boaters from utilizing the area and may destroy residential properties and tourist attractions. Conversely, the City of Port St. Lucie and the more inland

unincorporated areas may suffer greater damage from falling trees, structural damage, inland flooding, fires, and road blockages due to tropical cyclone effects.

Table 50: Impacts of Tropical Cyclones, by Jurisdiction

Jurisdiction	Impacts
St. Lucie County	Tropical cyclones pose a significant threat to human life and can cause widespread damage across St. Lucie County. The county is home to numerous residences, recreational areas like state parks and beaches, and tourist attractions such as shopping districts and resorts, all of which are vulnerable to damage from wind, hail, heavy rain, flooding, and lightning during a tropical cyclone. Open beach areas and golf courses increase the threat of lightning on human life. The resulting physical damage can lead to expensive repairs and business closures, creating economic difficulties for the county and causing considerable stress for its residents. Additionally, tropical storms and hurricanes can result in serious injuries and fatalities, further heightening the pressure on residents to safeguard themselves and cope with the loss of loved ones. The aftermath of these storms can also create environmental issues, as increased tree damage and debris can harm wildlife habitats and release harmful chemical pollutants. Moreover, winter residents and tourists may avoid the area after such damage or when tropical storms or hurricanes are imminent, negatively impacting the community both economically and socially.
City of Port St. Lucie	The City of Port St. Lucie is located in the eastern portion of the County and features numerous residential areas, including homes, tourist rentals, and senior living facilities, along with shopping districts and expansive golf courses, all of which are susceptible to considerable damage from tropical cyclones. Critical facilities like hospitals, fire stations, and police stations could be impacted under severe hurricane conditions, reducing their ability to respond to needs of residents. Debris along local roads and major thoroughfares like US 95 and Florida's Turnpike could inhibit travel in and out Port St. Lucie for significant periods of time. The St. Lucie River, which runs adjacent to Port St. Lucie, also heightens the risk of inland flooding. The possibilities of physical, economic, and social damages to public and private assets and well as injuries and fatalities from hurricanes in Port St. Lucie are significant.
City of Fort Pierce	The City of Fort Pierce is home to numerous residential properties, hotels, and recreational facilities, including beaches, parks, golf courses, the Treasure Coast International Airport and the large Lawnwood Hospital. Situated directly on the Atlantic coast, Fort Pierce is often among the first areas to encounter the impacts of any tropical cyclone approaching from the east, and it is particularly susceptible to storm surge. Severe storms can result in physical damage and power outages that may leave residents, as well as the hospital, more vulnerable due to diminished medical response capabilities. Damage to the beachfront and local businesses can also lead to expensive repairs and revenue losses caused by closures or a decline in tourism following considerable damage.
Town of St. Lucie Village	The Town of St. Lucie Village is a small community that includes residential homes, government buildings, shops, marinas, and beaches. Tropical cyclone damage to

Jurisdiction	Impacts
	homes and shopping districts can lead to expensive repairs and business closures, creating economic challenges for the town. Additionally, winter residents and tourists may choose to avoid the area following damage or in anticipation of incoming storms, negatively impacting the community both economically and socially. Given the small size of St. Lucie Village, any economic, social, or environmental impacts can be more severe than those experienced by neighboring jurisdictions, as there are fewer internal critical facilities available for support.

Figure 43 shows the hurricane evacuation zones in St. Lucie County, with those regions nearer the coast and bodies of water in Zone A, the first to be evacuated. Those that are farther from the coast and water are in Zone B. St. Lucie County does not have zones C through E. The Florida Power & Light (FPL) Company also has evacuation areas in Zones 1–8. Similarly, those on the coast who are most at risk to water and wind impacts that could shut down power are in Zones 1 and 2, where areas more inland are Zones 3–8.

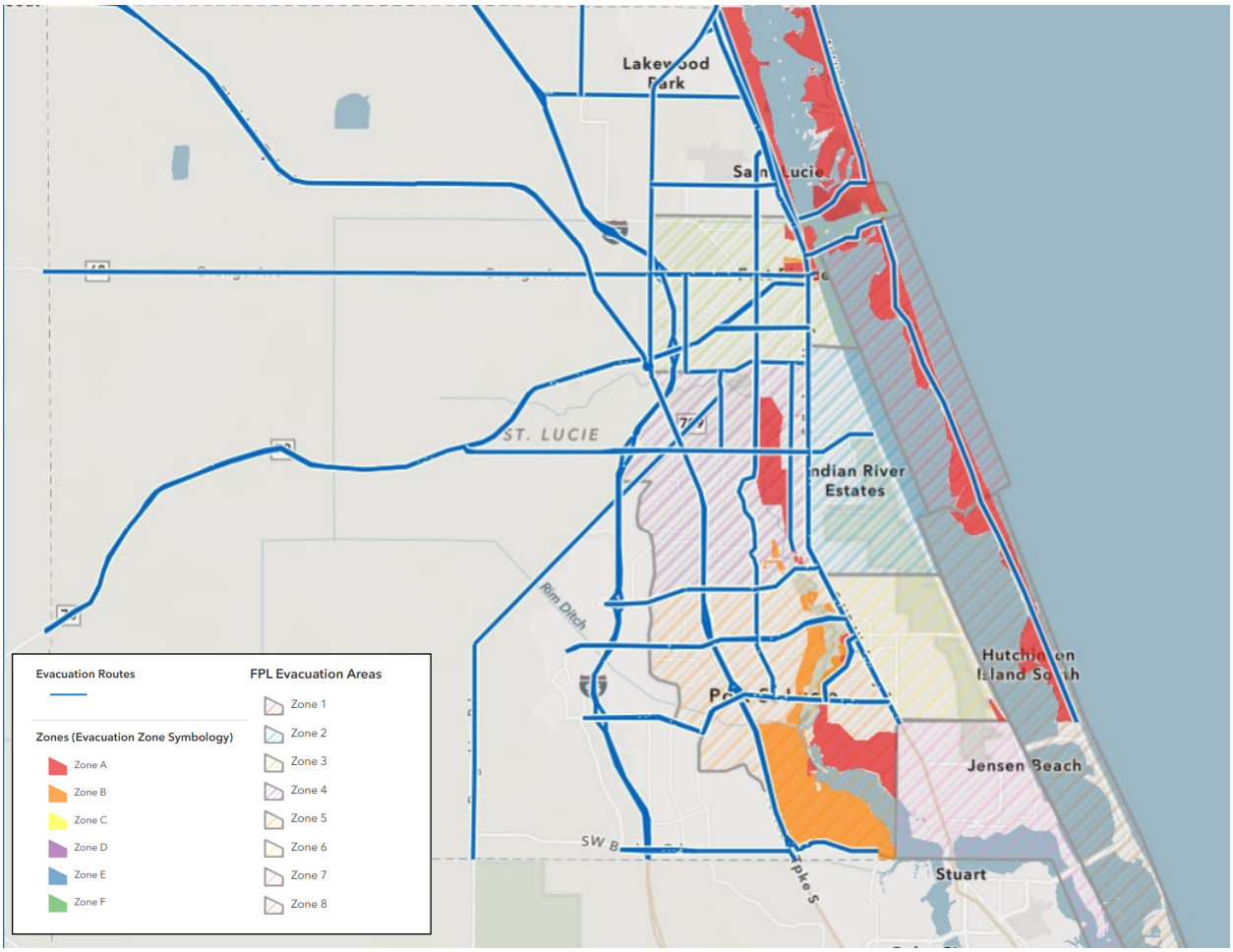


Figure 43: St. Lucie County Evacuation Zones and Routes[50]

[50] St. Lucie County, FL, "Shelter and Evacuation Information," 2025, https://slcem.maps.arcgis.com/apps/instant/lookup/index.html?appid=16569d43f3bc4614a4054ccaa19a5473.

NATIONAL RISK INDEX

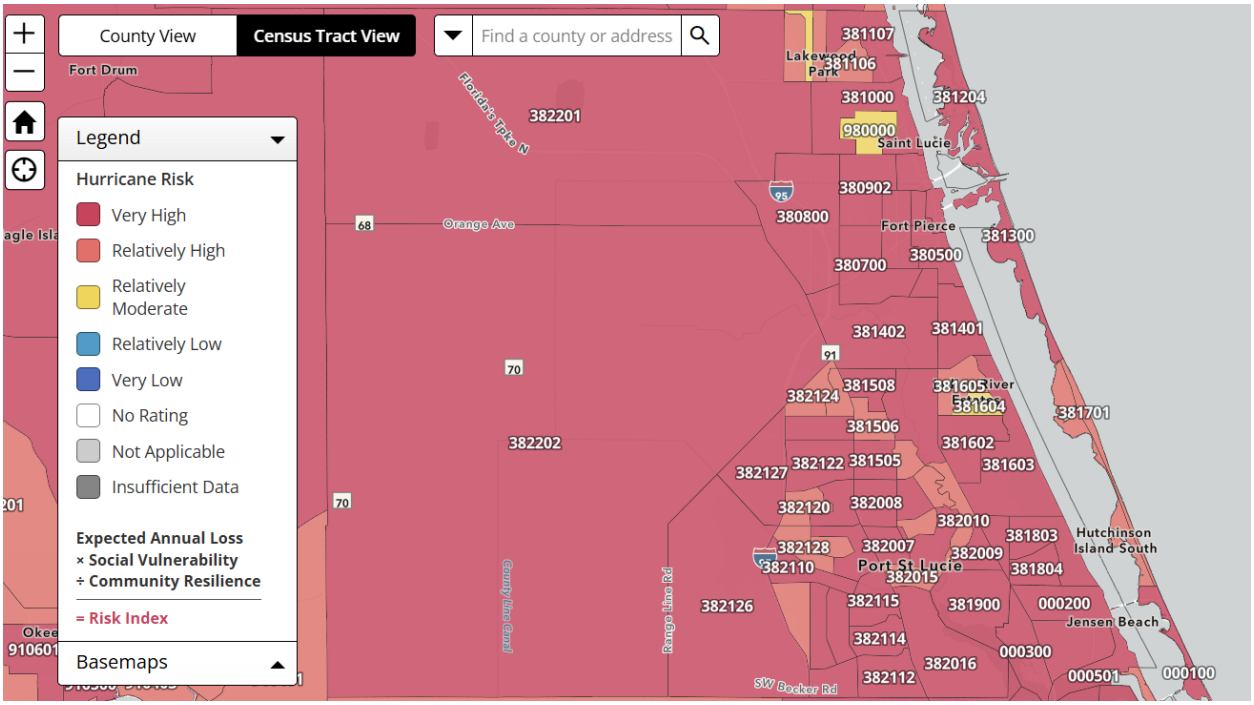


Figure 44: National Risk Index for Hurricanes, Retrieved November 24, 2025

The NRI gives St. Lucie County a *Very High* score of 99.1 out of 100 for hurricanes (see Figure 44). Other hazards that can exist during a hurricane such as Lightning, Riverine Flooding, Strong Wind, and Tornado have *Relatively Moderate* scores, and Hail has a *Very Low* score. St. Lucie County overall has a very high expected annual loss (EAL) that is mainly due to the EAL of hurricanes at $188 m. There is an average of 0.3 expected loss hurricane events each year, and $49.7 billion in building value and $178.7 million in agriculture value exposed to hurricane damage. All residents of St. Lucie County are exposed to hurricane risk. The historic loss ratio is very high. Additionally, social groups in St. Lucie County have a Relatively High[51] and the community has a Relatively Moderate ability to prepare for natural hazard impacts such as hurricanes.[52]

Magnitude and Severity

Tropical cyclones are measured in intensity based on their wind speed. While there has been research to show that wind speed alone is not a coherent description of all the potential hazard impacts in a tropical cyclone, wind scales are still the central focus for measuring tropical cyclone extent.[53] Tropical cyclones begin as tropical waves that are simple inverted areas of low pressure with a slight cyclonic curvature. As the tropical wave gains energy and maintains organized convection (100–300 miles in diameter), it

[52] National Risk Index, "St. Lucie County, FL," 2025, https://hazards.fema.gov/nri/map.
[53] Paxton, L.D., Collins, J. and Myers, L., 2024. Reconsidering the Saffir-Simpson Scale: A Qualitative Investigation of Public Understanding and Alternative Frameworks. In Advances in Hurricane Risk in a Changing Climate (pp. 241–279). Cham: Springer Nature Switzerland.

develops into a tropical disturbance, with a non-frontal migratory character. The next step is a tropical depression, which is a tropical cyclone with maximum sustained surface winds of 38 mph. As the tropical depression gains energy and wind speeds, it evolves into a tropical storm when wind speeds reach 39–74 mph.[54] Once a tropical storm exceeds 74 mph maximum sustained winds, it becomes a hurricane that is measured of the Saffir-Simpson Hurricane Wind Scale shown in Table 51.

Table 51: The Saffir-Simpson Hurricane Wind Scale[55]

Category	Sustained Winds	Types of Damage Due to Hurricane Winds
1	**74–95 mph** (64–82 kt or 119–153 km/h)	**Very dangerous winds will produce some damage:** Well-constructed frame homes could have damage to roof, shingles, vinyl siding, and gutters. Large branches of trees will snap, and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
2	**96–110 mph** (83–95 kt or 154–177 km/h)	**Extremely dangerous winds will cause extensive damage:** Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
3 (major)	**111–129 mph** (96–112 kt or 178–208 km/h)	**Devastating damage will occur:** Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
4 (major)	**130–156 mph** (113–136 kt or 209–251 km/h)	**Catastrophic damage will occur:** Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to months. Most of the area will be uninhabitable for weeks or months.
5 (major)	**157 mph or higher** (137 kt or higher or 252 km/h or higher)	**Catastrophic damage will occur:** A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to months. Most of the area will be uninhabitable for weeks or months.

RAINFALL AND FLOODING SEVERITY

Rainfall during tropical systems varies widely depending on storm speed and trajectory. Slow-moving hurricanes and tropical storms can deliver 10–20 inches of rain in less than 48 hours, producing extensive

[54] NOAA, "Tropical Definitions," 2025, https://www.weather.gov/mob/tropical_definitions.
[55] National Hurricane Center, NOAA, "Saffir Simpson Hurricane Wind Scale," 2025, https://www.nhc.noaa.gov/aboutsshws.php.

flooding within drainage basins such as the North Fork of the St. Lucie River, Ten Mile Creek, and Savannas Preserve. Such events can exceed the 10-year storm drainage design threshold, leading to temporary road closures and overbank flooding.

In Port St. Lucie, the Engineering Standards for Land Development specify the requirements for road crown elevation. The road crown elevation must be a minimum of two feet higher than the average wet-season water table. In addition, local roads must be designed to the ten-year, one-day stage, while collector roads must meet the twenty-five-year, one-day stage. Arterial roads are required to meet the twenty-five-year, three-day stage, and bridges must be designed to withstand the fifty-year, three-day stage.

SECONDARY HAZARDS AND DURATION

- **Tornadoes:** Short-lived tornadoes occasionally occur in the outer bands of hurricanes; most are EF-0 to EF-1 with localized damage. However, during Hurricane Milton, several stronger tornadoes were documented, including EF-2 and EF-3 events that struck across St. Lucie County, resulting in more widespread and severe damage.
- **Power and Communication Outages:** Historical data from Florida Power & Light (FPL) indicate that major hurricanes can result in outages for up to 80% of County customers, with restoration taking from several hours to multiple days depending on system damage.
- **Erosion:** The 2022 Hurricane Nicole event eroded dunes along Hutchinson Island, with localized losses exceeding 15 feet of shoreline retreat in places.

Historic Events

Tropical cyclones, including hurricanes, have occurred frequently throughout Florida's history as the state borders both the Gulf of Mexico and Atlantic Ocean, where many of the storms originate. St. Lucie County is directly on the Atlantic Coast, so many of the tropical cyclones throughout history have impacted the county. Table 52 describes all direct tropical cyclone events including hurricanes that have impacted St. Lucie County from 2019–2024.[56]

Table 52: NCEI Storm Events Database for Tropical Cyclones in St. Lucie County from 2019–2024

Date	Name	Description
9/3/2019	Hurricane Dorian	Wind gusts to tropical storm force in squalls occurred through much of the county, especially along the barrier islands. Sustained winds in Saint Lucie County remained below tropical storm force as the center of Dorian remained far away to the east.

[56] National Centers for Environmental Information (NCEI), "Severe Events Database," 2025, https://www.ncei.noaa.gov/stormevents/listevents.jsp?eventType=%28Z%29+Hurricane+%28Typhoon%29&eventType=%28Z%29+Tropical+Depression&eventType=%28Z%29+Tropical+Storm&beginDate_mm=01&beginDate_dd=01&beginDate_yyyy=1950&endDate_mm=12&endDate_dd=31&endDate_yyyy=2025&county=ST.%2BLUCIE%3A111&hailfilter=0.00&tornfilter=0&windfilter=000&sort=DT&submitbutton=Search&statefips=12%2CFLORIDA.

Date	Name	Description
8/2/2020	Hurricane Isaias	Sustained tropical storm force winds affected the barrier islands, with gusts to tropical storm force in squalls through much of the remainder of the county from early morning through late afternoon August 2. The highest sustained wind was measured at the Saint Lucie Nuclear Power Plant (41 mph from the northeast at 0705LST on August 2), and the peak gust was also at the Saint Lucie Nuclear Power Plant (46 mph from the northeast at 0705LST on August 2).
11/9/2020	Hurricane Eta	Sustained tropical storm force winds affected the barrier islands, with gusts to tropical storm force in squalls through much of the remainder of the county from early evening on November 8 through sunrise on November 9. The highest sustained wind was measured at the Saint Lucie Nuclear Power Plant (48 mph from the east-northeast at 1842LST on November 8), and the peak gust was also at the Saint Lucie Nuclear Power Plant (60 mph from the east-northeast at 1842LST on November 8).
6/4/2022	Tropical Depression (outer bands of Potential Tropical Cyclone One (PTC1))	Sustained winds below tropical storm force with the strongest winds occurring in outer rain bands along the barrier islands and Intracoastal Waterway. The highest peak wind gust measured was at North Hutchison Island (50 mph from the east at 0620LST on June 4).
9/29/2022	Hurricane Ian	Hurricane Ian's slow movement and large wind field led to a prolonged period of tropical storm force winds across St. Lucie County. Surface observations indicated peak winds between 55 and 65 mph throughout the county. Emergency management officials indicated minimal damage to residential and business structures. No storm-related deaths were reported.
11/10/2022	Hurricane Nicole	Hurricane Nicole's extensive wind field led to a period of tropical storm force winds, hurricane force wind gusts, and heavy rain in St. Lucie County. Scattered reports of trees downed and some minor structural damage due to strong winds, which surface observations indicated peaked between 55 and 65 mph along the coast and 45 to 55 mph across inland areas. County officials reported no storm-related fatalities.
9/27/2024	Hurricane Helene	St. Lucie County Emergency Management reported limited damage across the county, mainly in the form of fallen trees and power lines. Surface observations indicated peak wind gusts generally between 35 to 45 mph and up to 55 mph closer to the coast. Rainfall totals ranged between 0.5 to 1.5 inches.
10/10/2024	Hurricane Milton	St. Lucie County Emergency Management reported isolated instances of downed trees and powerlines because of Tropical Storm Milton's winds, which surface observations indicated peak wind gusts between 50 to 70 mph and locally up to 75 mph. Six tornadoes were confirmed to have affected the county. Rainfall

Date	Name	Description
		totals ranged between 3 to 6 inches. A damage assessment reported a total of 185 structures affected, 1,187 with minor damage, 165 with major damage, and 151 destroyed, resulting in over $485 million in residential damage and $12 million in county infrastructure damage, primarily due to tornadoes. There were six direct and one indirect storm-related fatalities in St. Lucie County associated with Hurricane Milton.

MAJOR COST PREVIOUS OCCURRENCES

Several major tropical cyclone events have directly impacted St. Lucie County. This does not include the property damages, injuries, or deaths from hazards (such as flooding, hail, extreme wind, or lightning) that stem from tropical cyclone events but are not directly within the storm (outer bands, remnants, etc.).

HURRICANE FLOYD – SEPTEMBER 15, 1999

On September 15th, the center of Hurricane Floyd passed approximately 115 statute miles off the east central Florida coast. The most severely affected areas were the coastal regions of Brevard and Volusia counties, which experienced widespread wind gusts nearing 70 mph. As a result, thousands of residents were left without electricity. Reports of beach erosion, downed trees, power lines, and damage to some homes also emerged from the coastal areas of St. Lucie and Indian River counties, with property damage in St. Lucie County estimated at around $50,000. Additionally, inland areas such as Orange and Seminole counties reported downed trees, power lines, and minor structural wind damage.

HURRICANE IRENE – OCTOBER 16, 1999

Weakened Hurricane Irene moved northeast from the Florida Keys across south Florida and emerged over the Atlantic near Ft. Pierce. Although the storm was classified as a category one hurricane, no sustained hurricane-force winds were recorded in east central Florida. Coastal areas from Ft. Pierce to Daytona Beach experienced wind gusts ranging from 60 to 70 mph. The most significant impact in Martin and St. Lucie counties was flooding, with rainfall totaling 5 to 9 inches, inundating 300 homes. Approximately 50 homes suffered major wind damage, and thousands of trees were uprooted. The beachfront communities were the hardest hit, with many houses and high-rise hotels sustaining roof damage and damage from wind-driven rain. Additionally, a barge broke loose during the high winds, causing damage to the causeway bridge on U.S. Highway 528 near Cape Canaveral. Significant beach erosion was reported along the entire coast, with most areas losing between 4 to 10 feet of beachfront, leading to millions of dollars of estimated damage in each county. St. Lucie County alone reported over $6 million in property damage.

HURRICANE FRANCES, DIRECT HIT TO ST. LUCIE COUNTY – SEPTEMBER 4, 2004

Category 2 Hurricane Frances made landfall on the Florida east coast near Sewall's Point, between St. Lucie and Martin Counties, early on September 5. Moving west-northwest at 7 mph, the storm maintained hurricane strength while crossing the eastern half of the Florida Peninsula before being downgraded to a

tropical storm later that afternoon, about 50 miles east of Tampa Bay. The slow-moving storm produced hurricane-strength wind gusts for approximately 19 hours across Martin, St. Lucie, and Indian River counties, resulting in an estimated $4.5 billion in damage. St. Lucie County recorded the highest wind gusts at 94 knots (108 mph) in Ft. Pierce and lowest pressure at 962.1 mb at St. Lucie Lock. Winds over 100 mph destroyed coastal structures, marinas, and vessels, while hundreds of homes and businesses were either destroyed or significantly damaged inland. Beach erosion was severe, with losses ranging from 5 to 6 feet in south Brevard County to up to 12 feet near Vero Beach, where a section of a beach road washed out. A storm surge of 5.89 feet was recorded at the St. Lucie Lock, with similar surges near Cocoa Beach and up to 8 feet around Vero Beach. Rainfall estimates reached up to 13 inches in Volusia County, with St. Lucie County experiencing significant inland flooding alongside Martin, Indian River, and Brevard counties. St. Lucie had an estimated $2.5 billion in property damage and $47.2 million in crop damage.

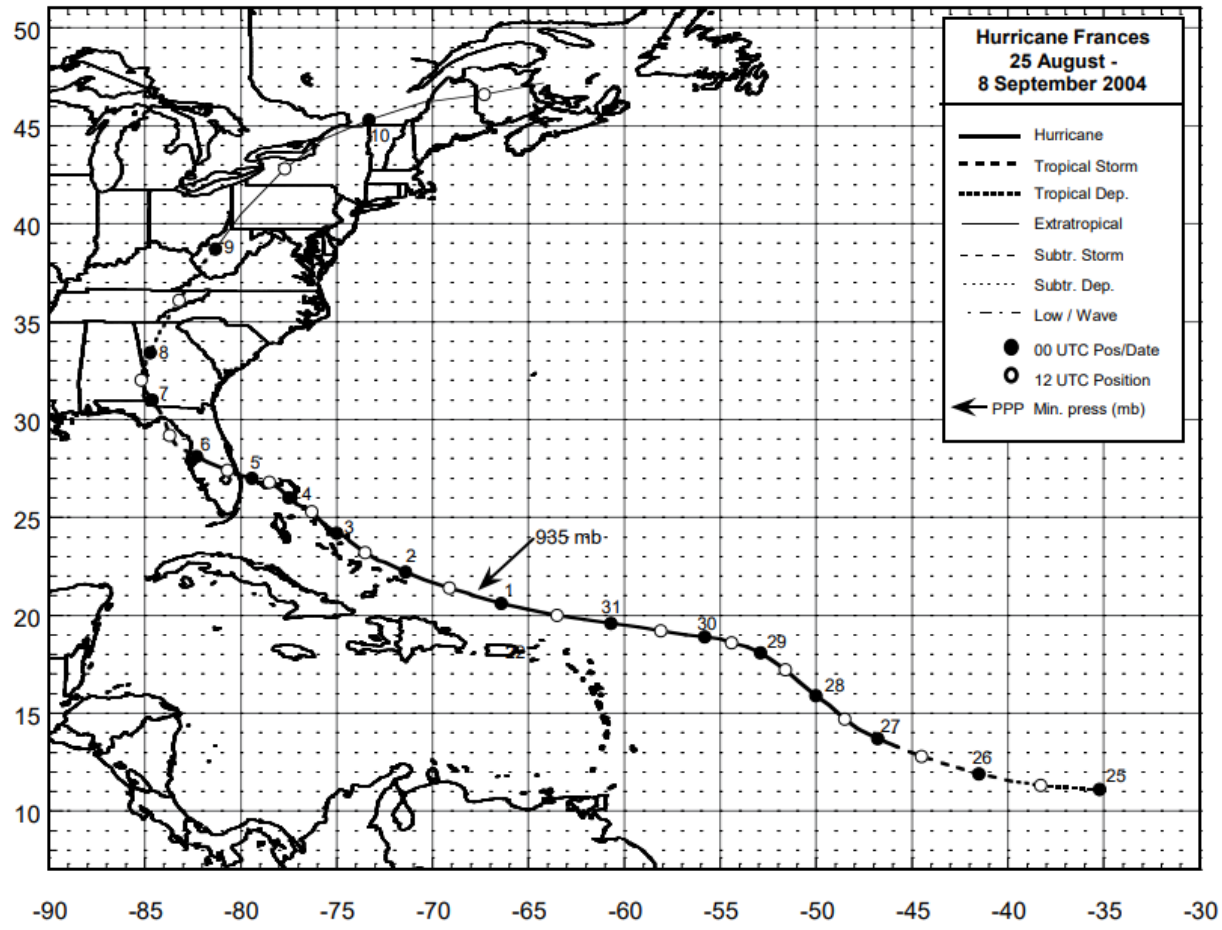


Figure 45: Track of Hurricane Frances, August 25–September 8, 2004[57]

[57] NHC Data Archive, "2004 Atlantic Hurricane Season: Hurricane Frances," 2025, https://www.nhc.noaa.gov/data/tcr/AL062004_Frances.pdf.

HURRICANE WILMA – OCTOBER 24, 2005

Hurricane Wilma crossed southern Florida from the southwest, weakening into a tropical storm as it exited Florida over the Atlantic Ocean just south of St. Lucie County. The strongest winds in St. Lucie occurred as they shifted to the north, with estimated gusts of 100 mph along the beaches. In the county, two mobile homes were destroyed, and widespread minor wind damage was reported, including downed trees and power lines, and damages to roofs and outbuildings. A minor league baseball stadium suffered severe damage, and the roof of the St. Lucie County civic center was blown off. The total crop loss, including vegetables, citrus, and sugar, amounted to $28 million, with rainfall reaching up to 6 inches. At Ft. Pierce Airport, wind gusts reached 77 mph (68 knots) with sustained winds of 52 mph (45 knots), and the lowest recorded pressure was 968.5 millibars. Although four tornadoes occurred during Wilma's passage, all were in Brevard County. Total damage across Brevard, Indian River, St. Lucie, Martin, and Okeechobee counties was estimated at $97.5 million, with St. Lucie County accounting for $5.9 million of that total.

HURRICANE IRMA – SEPTEMBER 10, 2017

Hurricane Irma moved northward over the far western Florida peninsula between the afternoon of September 10 and the morning of September 11, maintaining Category 1–2 strength. During its closest approach to east-central Florida in the early morning hours of September 11, rain bands extended west to east through northwest Osceola, Lake, and western Orange counties. The extensive wind field resulted in prolonged tropical storm force winds and gusts reaching hurricane strength across all of east-central Florida, including St. Lucie County. While there were no direct hurricane-related fatalities, 10 indirect fatalities occurred during the evacuation and recovery phases. Preliminary damage estimates for east-central Florida exceeded $1.3 billion, with St. Lucie County accounting for $25 million of that total. A storm surge of 2–3 feet impacted the coasts of Martin, St. Lucie, and Indian River Counties, while Brevard and Volusia Counties experienced surges of 3–4 feet. Significant beach erosion occurred along the entire east-central Florida coastline, and water levels in the coastal lagoon system rose between 1 and 3 feet. Rainfall totals of 10–15 inches were widespread, with the highest amounts recorded from northern St. Lucie County to far southern Indian River County, reaching nearly 22 inches. Flooding affected several homes and rendered many roadways impassable. Additionally, flooding from hurricane rain bands impacted areas such as Fellsmere in Indian River County, where a dozen individuals required rescue, and north Merritt Island in Brevard County. All points along the river reached moderate to major flood stage, affecting adjacent homes and properties, with the river remaining in flood for over a month.

FEMA DISASTER DECLARATIONS

FEMA Declaration	Event	Year	Category at Closest Approach	Local Impacts
DR-1545-FL	Hurricane Frances	2004	Cat 2	Major structural and power damage; prolonged outages
DR-1561-FL	Hurricane Jeanne	2004	Cat 3	Repeat impacts; coastal erosion and extended recovery

FEMA Declaration	Event	Year	Category at Closest Approach	Local Impacts
DR-4280-FL	Hurricane Matthew	2016	Cat 3 (offshore)	Moderate surge, limited structural damage
DR-4337-FL	Hurricane Irma	2017	Cat 1–2 (inland)	Countywide outages, downed trees, localized flooding
DR-4468-FL	Hurricane Dorian	2019	Cat 5 (offshore)	Evacuations; minimal damage
DR-4673-FL	Hurricane Ian	2022	Cat 5 (inland)	Sustained high winds; minimal damage
DR-4675-FL	Hurricane Nicole	2022	Cat 1	Coastal erosion; moderate power and infrastructure disruption
DR-4828-FL	Hurricane Helene	2024	Cat 4 (offshore)	Gusting winds and rainfall caused minimal damage
DR-4834-FL	Hurricane Milton	2024	Cat 5 (onshore)	Heavy rainfall and tornadoes caused major damage and fatalities across St. Lucie County

Probability of Future Conditions

The probability of future tropical cyclone occurrence in the Atlantic Ocean is high, with increasing intensity and frequency. According to the National Hurricane Center, Florida has been hit by more tropical cyclones than any other state: 500 tropical and sub-tropical cyclones have impacted the area since 1851.[58] Due to an increase in sea surface temperatures, a main driver of tropical storms and hurricanes, there has been an overall increase in tropical cyclone conditions. As this trend seems to be increasing, it is likely that the rate and severity of tropical cyclones will continuously increase in the future.[59] In recent years, the proportion of Category 4 and 5 (highest wind rates) storms has increased significantly with warmer sea surface temperatures.[60] With increased intensity, there are more intense impacts: Stronger winds, more hail, larger amounts of rainfall, more flooding and storm surges, and more cloud-to-ground lightning due to higher convective energy. With increased frequency, local resources will be exhausted and strained, and it will be a continuous process to recover and rebuild from any damage.

The probability of future hurricane and tropical cyclone impacts in St. Lucie County is **High**, with the County expected to experience tropical-storm-force winds at least once every 2–3 years and hurricane-force winds approximately every 8–10 years. According to Colorado State University's 2022 Tropical Cyclone Impact Probabilities (using NOAA's Historical Hurricane Tracks data), the probability of a

[58] NHC, "NHC Data Archive," 2025, https://www.nhc.noaa.gov/data/.
[59] Cione, Joseph J., and Eric W. Uhlhorn. "Sea Surface Temperature Variability in Hurricanes: Implications with Respect to Intensity Change." Monthly Weather Review 131.8 (2003): 1783–1796. https://doi.org/10.1175//2562.1.
[60] Hallam, S., McCarthy, G. D., Feng, X., Josey, S. A., Harris, E., Düsterhus, A., & Hirschi, J. J., "The relationship between sea surface temperature anomalies, wind and translation speed and North Atlantic tropical cyclone rainfall over ocean and land," 2023, https://centaur.reading.ac.uk/109401/8/2023-03-23%20Feng.pdf.

hurricane passing within 50 nautical miles of St. Lucie County in any given year is roughly 15%, with named-storm (tropical-storm-force) wind probabilities roughly 36%.

PROJECTED OCEANIC CONDITIONS

Future conditions will be shaped by sea-surface temperatures (SSTs), higher atmospheric moisture, and mean sea level. Under SSP 4.5 (moderate-emissions scenario), global SSTs in the main Atlantic development region are projected to increase by 1.5–2.0 °C by 2100, lengthening the active hurricane season by several weeks. Under higher scenarios, SST increases could exceed 3 °C, supporting more frequent Category 4–5 hurricanes and greater rainfall potential.

SEA-LEVEL RISE AND LOCALIZED EFFECTS

NOAA's Intermediate-High scenario (consistent with SSP 4.5) projects 1.3 feet of sea-level rise by 2050 at the Fort Pierce tide gauge, while higher scenarios exceed 2 feet. Such rise would substantially increase storm-surge reach and compound flooding impacts in barrier-island and lagoon-adjacent neighborhoods, including portions of Hutchinson Island, South Beach, St. Lucie Village, and low-lying sectors of Fort Pierce North. Inland, riverine flood stages along the North Fork of the St. Lucie River could rise 1–2 feet higher under the same return-period storms observed today.

INSURANCE, ECONOMIC, AND HOUSING IMPLICATIONS

As surge exposure and repetitive loss patterns intensify, insurance affordability and availability may decline. Statewide data from Florida's Office of Insurance Regulation show that average homeowner premiums in the Treasure Coast region rose by 42% between 2020 and 2024, with many carriers reducing coastal coverage. If trends persist, it could create economic uncertainty across St. Lucie County by increasing costs for homeowners.

PLANNING INTERPRETATION

Table 53 displays time horizon, likely storm source, expected local intensity, probability characterization and principal modifiers for St. Lucie.

Table 53: Future Plan Interpretation Indicators [61]

Horizon	Likely Storm Source	Expected Local Intensity	Probability Characterization	Principal Modifiers
0–5 Years	Atlantic Basin tropical storm or hurricane	Cat 1–2/ TS winds 50–100 mph	High	Ongoing El Niño/La Niña cycles
6–20 Years	Atlantic and Caribbean hurricanes	Cat 2–3, rainfall 10–15 inches	High	Sea-level rise ≈ 0.7 ft; urban infill drainage stress

[61] Lee, C. Y., Sobel, A. H., Camargo, S. J., Tippett, M. K., & Yang, Q. (2022). New York State hurricane hazard: History and future projections. *Journal of Applied Meteorology and Climatology*, *61*(6), 613–629.

Horizon	Likely Storm Source	Expected Local Intensity	Probability Characterization	Principal Modifiers
21–50 Years	Regional high-SST hurricanes	Cat 3–4; surge > 8 ft possible	Very High	Sea-level rise 1.3–2 ft; higher insured losses

Vulnerability Assessment

St. Lucie County is extremely vulnerable to tropical cyclones, as it is located directly on the Atlantic Coast of Florida, near the warm ocean waters that develop these storms. Most structures and assets in the community are at some level of risk of storm impact either from high winds, hail damage, or water damage. Additionally, most resources depend on electric power or fuel, access to which is often lost during a tropical cyclone event.

IMPACTS TO ASSETS

Tropical cyclones can completely shut down all critical assets in St. Lucie, especially when major damages or power outages occur as shown in Table 54. It is crucial that St. Lucie County is aware of these vulnerabilities to ensure a proper mitigation strategy is taken to reduce loss of life and property.

Table 54: Consequence Analysis

Sector	Consequence
Public	• Social disruption: Following a storm, displaced families may suffer stress from living in shelters and locating new housing. In addition, the closure of community facilities and schools can disrupt lives and support services families depend on.
First Responders	• Health and medical disruptions: Healthcare facilities may not be operational, and there may be an increased demand for resources and support for first responders due to injuries. • Communication disruption: Loss of power and increased demand can shut down communication lines to and from first responders. • Transportation disruption: Vehicles and roadways may be damaged or blocked by debris or floodwater, reducing access for first responders.
Continuity of Operations	• Utility disruption: Interruptions in utilities can affect both emergency services and daily life. • Emergency access disruption: Damage can impede access for emergency responders, delaying rescue and recovery efforts. • Mobility disruption: Damage to roads, bridges, and public transportation systems can hinder mobility, impacting evacuation and response efforts. • Institutional disruption: Hospitals, schools, and emergency services may be impaired, affecting operational capabilities.
Property, Facility, and Infrastructure	• Structural damage: Residential and commercial buildings may sustain extensive damage.

Sector	Consequence
	• Infrastructure damage: Roads and bridges may be damaged or destroyed. • Power and water system damage: Downed power lines and disrupted water systems may cause widespread outages affecting electricity, water, and communications. • Financial impact: High costs for repairs and reconstruction may strain individuals, businesses, and governments.
Environment	• Environmental damage: Destruction of vegetation may lead to soil erosion and disruption of plant and animal ecosystems. • Wildlife habitat disruption: Destruction of wildlife habitats may lead to displacement and population declines, as well as an increased hazard to humans as wildlife travels to new spaces. • Agricultural damage: Farmland damage and crop losses may threaten food production and farmer livelihoods. • Waste management strain: Extensive debris may potentially overwhelm waste management systems, leading to increased pollution of land and water. • Environmental contamination: Water and air may become polluted by dangerous chemicals released during storm or lightning damage.
Economic Conditions	• Economic strain: Local economies may experience strain due to costly repairs and prolonged recovery efforts.. • Business disruption: Local businesses may face temporary closures due to damage or power outages, affecting revenue and potentially leading to layoffs. • Tourism decline: Tourism may decline as potential visitors avoid the area, impacting local hospitality and service industries. • Long-term economic impact: The recovery process can be lengthy and complex, leading to reduced local investment and slower economic growth in the aftermath. • Government fiscal impact: Local governments may face increased spending on emergency services, infrastructure repair, and disaster relief initiatives, which can impact future budgets.
Public Confidence	• Public confidence impact: Effectiveness of response efforts may influence public confidence in local emergency services and their ability to handle disasters. • Media and perception impact: Public coverage of hurricanes and tropical cyclones can shape public perception and confidence, either positively or negatively, based on how events are reported.

IMPACT ON COMMUNITY LIFELINES

Tropical cyclones can lead to significant destruction of property and vehicles, disrupt power supply, and create flooding on roads and runways that are essential for all community services. It is vital to implement mitigation strategies to minimize the potential impact on these resources, ensuring that St. Lucie County can maintain its operations, particularly when the public is in greatest need of assistance. FEMA's community lifelines are shown in Figure 46.

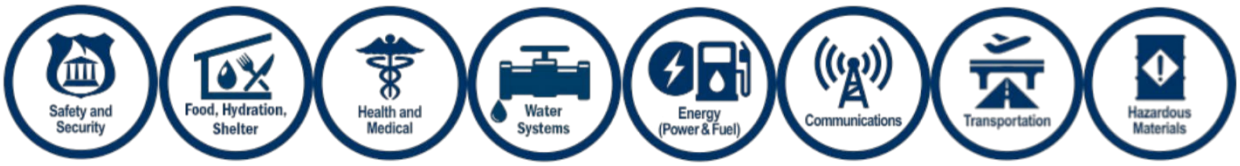


Figure 46: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** Emergency personnel face significant risks during tropical cyclones, including damage to vehicles and equipment from extreme winds, hail, flooding, and storm surge. The strain on resources can deplete personnel availability and energy, impacting their ability to ensure safety and security. Damage to equipment may hinder response capabilities, while power outages can disrupt alarms, communication, and water sources. Flooding and water main breaks further complicate access to citizens and property in need of assistance.
- **Food, Hydration, Shelter:** Days before a tropical cyclone, there may be a rush for groceries and hygiene products as people prepare. Flooding and power outages can lead to boil water advisories, complicating access to safe drinking water. Shelters, including homes and businesses, are at risk of damage from strong winds and storm surges, jeopardizing basic survival and exposing people and belongings to the elements. Food, water, and shelter are critical vulnerabilities during such events.
- **Health and Medical:** Emergency medical personnel and hospitals face risks from wind, hail, flooding, and power outages during tropical cyclones, which can hinder their capabilities. This is particularly concerning as the demand for medical services rises, with increased injuries from transportation accidents, flying debris, hail, lightning strikes, fires from downed power lines, and storm surge inundation.
- **Water Systems:** When storm surge, flooding, power outages, and damage to facilities occur, water systems can shut down completely. This can stop the flow of safe water, back up pipelines, and shut down treatment facilities. Where water is still available, it leads to boil water advisories, causing additional stress on households and businesses.
- **Energy (Power and Fuel):** Critical facilities such as power plants and gas stations are heavily impacted by tropical cyclones. Often there are mass evacuations days prior to the tropical cyclone, increasing demand for gas. It is then common for gas stations to remain out of fuel for days (sometimes weeks) following, as demand is high across the state, and it must be transported in from out of state.[62] Fuel and energy prices rise after a severe tropical cyclone due to increased demand and transportation challenges, often requiring police escorts for fuel trucks. Power outages can also shut down fuel stations, straining community resources.
- **Communications:** Communication lines, especially those that depend on power and cell towers, are at major risk during a tropical storm event.[63] Battery-powered devices like cell phones may be

[62] AccuWeather, "Florida gas flowing again 1 week after Hurricane Milton," 2024, https://www.accuweather.com/en/hurricane/florida-gas-flowing-again-1-week-after-hurricane-milton/1704193.
[63] CISA, "When Disaster Strikes, Emergency Communicators Need to Get Connected and Stay Connected," 2023, https://www.cisa.gov/news-events/news/when-disaster-strikes-emergency-communicators-need-get-connected-and-stay-connected.

unusable if power sources for charging or Wi-Fi are unavailable, or if cell towers are down. While radio communications (e.g., walkie-talkies) are more reliable, they still face signal interference and require power sources or replacement batteries. Further, use (or attempted use) of all communication lines increases during a hazard such as a tropical cyclone, leaving already stretched resources with an even higher demand.[64]

- **Transportation:** All transportation in St. Lucie, including cars, buses, boats, and planes, is vulnerable to tropical cyclones. Roadways, runways, and waterways can become hazardous due to wind, rain, and debris. Traveling during a cyclone is risky because of reduced visibility, strong winds, and potential vehicle damage. Public transportation, especially airports, usually shuts down, with the Treasure Coast International Airport likely closing for days, leading to travel delays.
- **Hazardous Materials:** Power lines and any sharp physical object such as metal or wood are likely to become exposed during or after a severe storm or lightning strike, causing a hazard to passersby. Also, liquid and gaseous chemicals normally safely contained may be exposed when a container is damaged, releasing into the air or water and causing breathing, drinking, or skin-irritation hazard to humans and animals nearby.

IMPACT DUE TO CHANGES IN DEVELOPMENT

There are many land use changes throughout St. Lucie County, including all four of its jurisdictions, that leave the area more vulnerable to impacts from tropical cyclones. With a major increase in population across the county, the number of vulnerable people increases, adding demand and putting additional strain on local resources.

LAND USE CHANGES

St. Lucie County is home to numerous active or recently completed development projects, primarily consisting of residential properties like subdivisions and apartment complexes. This construction is happening in vulnerable areas such as the coast like Fort Pierce and St. Lucie Village. The rest include commercial and industrial energy facilities as well as agricultural land, in areas that include Port St. Lucie and unincorporated areas of St. Lucie County. Although much of the growth is taking place inland, some residential development is also happening along the Atlantic coast of St. Lucie, an area that is particularly vulnerable due to limited critical resources and a heightened risk of storm surge.[65] The expansion of homes, apartment buildings, energy facilities, and farmland over previously undeveloped land or forests increases the number of assets susceptible to damage from wind, water, hail, and lightning. This situation leads to higher costs for building materials and crops and intensifies the challenges associated with recovery efforts. Furthermore, the growth in residential areas will result in an increase in the population of people and pets, further amplifying the vulnerability to tropical cyclones throughout St. Lucie County.

[64] WLN, "How Walkie-Talkies Enhance Communication in Emergency Situations," 2025, https://www.wln-radio.com/how-walkie-talkies-enhance-communication-in-emergency-situations.
[65] St. Lucie County, "Active Development Projects," 2025, https://www.arcgis.com/apps/dashboards/12184ec9b99646619afc66b1f61b78fc.

POPULATION CHANGES AND IMPACTS TO POPULATIONS OF FOCUS

Florida has experienced significant population growth in recent years, largely due to its warm climate and extensive entertainment options. St. Lucie County, including its four jurisdictions, has added approximately 50,000 residents over the past five years, bringing the total to around 400,000 by 2025. The county has an average annual growth rate of 3.79%, which is expected to persist. Census data shows a 1.1% increase in population 60 years of age or older from 2020 to 2024.[66] This population surge heightens vulnerability, as it includes a larger number of at-risk individuals, such as the elderly and young children, who are more susceptible to the dangers posed by hurricanes and tropical storms. Additionally, due to potential limited mobility, the elderly population may have a more difficult time evacuating and travelling to safe areas. For those that are resource limited, evacuation and recovery may be much more difficult as there is not a financial safety net to support them in this time.

STATE ASSET CHANGES

In response to significant population growth, St. Lucie County has begun construction on road widening and improvements along Midway Road and Florida's Turnpike. New lanes, a bicycle and pedestrian path, and new ramps to the Florida Turnpike are being added between 2024 and 2030.[67] While these modifications may improve traffic flow, they also introduce additional infrastructure that is vulnerable to damage from debris and flooding. Furthermore, numerous state parks and beaches, such as Fort Pierce Inlet State Park, have been affected by tropical cyclones. These storms have led to larger waves and shifting sandbars in the park, requiring increased monitoring as the beach becomes increasingly hazardous.[68] Many state parks frequently experience damage to their restroom and concession facilities, resulting in prolonged closures, with some facilities remaining shut down permanently.

The Florida Climate Institute has identified increasing risks and impacts associated with extreme weather events in Florida, including tropical storms and hurricanes. In response to these hazards, Florida state agencies conduct coordinated preparedness, response, and recovery activities supported by emergency management and public safety functions.[69] Overall, the combination of population growth and the increasing severity and frequency of storms places significant strain on state resources, including emergency response capabilities, state highways, state parks, and law enforcement.

LOCAL ASSET CHANGES

Local roads have faced significant stress due to the population increase, resulting in expanded lanes and the construction of additional roads that have improved traffic flow. Additionally, several recent changes to public transit have either been implemented or are currently in progress, particularly in more inland urban areas like Port St. Lucie and unincorporated St. Lucie County jurisdictions, including a $5 million

[66] Census.gov, "Age and Sex St. Lucie County," 2020–2024, https://data.census.gov/table?q=population+growth+by+age+st.lucie+county+florida&y=2019.
[67] Florida Department of Transportation, "Midway Road (County Road 712) Widening Projects," https://www.midwayrd.com/.
[68] Port St. Lucie Talks, "Surf Conditions Rise at Fort Pierce Inlet State Park," 2025.
[69] Florida Climate Institute, "Florida Climate Changes, Variation," 2019, https://floridaclimateinstitute.org/images/newsletter/2019-May/FloridaClimate-Summary-KeyMessages.pdf.

federal grant aimed at modernizing the public transportation system,[70] and a 10-year Transit Development Plan (TDP) designed to ensure efficient access to essential services.[71] These new assets, if not adequately protected from the impacts of tropical cyclones and hurricanes, could be damaged or destroyed by a future storm.

Moreover, the Treasure Coast International Airport near St. Lucie Village, owned by St. Lucie County, is undergoing significant renovations to enhance its facilities and attract more airlines to serve the growing population.[72] This expansion also increases the amount of infrastructure at risk and contributes to higher flight traffic, potentially resulting in more delays during tropical cyclone events. Alongside transportation improvements, St. Lucie County is also implementing upgrades to utilities and stormwater management systems to better mitigate the impacts of hurricanes and tropical cyclones.

PROJECTED FUTURE CHANGES

For the coast of St. Lucie, a Coastal Storm Risk Management Project (CSRM) is planned to protect 3.3 of the 21 miles of Atlantic shoreline in St. Lucie County.[73] This initiative includes beach and dune nourishment to reduce the erosion effects caused by storm surges and heavy rainfall on local beaches. Following initial construction, there will be two renourishment periods scheduled at 18-year intervals. While the project primarily targets large tropical storms, it will also help mitigate the surge and beach erosion resulting from any tropical cyclone.

The population in St. Lucie County is anticipated to continue growing, with an expected increase of over 60,000 residents by 2030. This population growth will place greater demands on transportation systems and emergency response capabilities within the community, thereby increasing the risk to infrastructure, residents, and responders during tropical cyclone events. However, ongoing training, utility upgrades, and heightened awareness of severe storms and lightning will aid in mitigating these risks. It is essential for the county to continue enhancing facilities while considering the growing population and the escalating impacts of tropical cyclones.

[70] WPEC, "St. Lucie County secures $5 million FTA grant to enhance public transportation services," 2025, https://cbs12.com/news/local/st-lucie-county-commissioners-secure-grant-of-over-5-million-to-improve-transportation-services-florida-october-6-2025.
[71] St. Lucie Transportation Planning Organization, "Bus Plus Transit Development Plan," 2020, http://www.stlucietpo.org/portfolio/transit-development-plan/.
[72] WPEC, "Treasure Coast International Airport Changes," 2025, https://cbs12.com/news/local/commercial-airlines-coming-soon-to-treasure-coast.
[73] U.S. Army Corps of Engineers, "St Lucie County, FL. Coastal Storm Risk Management Project (CSRM)," 2025, https://www.saj.usace.army.mil/About/Congressional-Fact-Sheets-2025/St-Lucie-County-FL-Coastal-Storm-Risk-Management-Project/.

Pests and Plant Diseases, Including Agriculture

Definition

Pests are unwanted organisms that can damage plants, humans, and structures, including food crops.[74] They can also cause harm to livestock or stored products, leading to economic losses and reduced quality and quantity. They often compete with plants for nutrients, water, and sunlight, or directly damage plant tissues, and can include insects, invasive weeds, nematodes, rodents, and certain birds.

Insects can damage fruit and vegetable crops. Various grasshoppers, weevils, beetles, and small insects like thrips and certain fly larvae can cause substantial harm. Among the most common harmful insects are *Lepidoptera* (moths and butterflies) and *Homoptera* (aphids and leafhoppers). Damage caused by moth larvae often appears as ragged edges on leaves or holes within them. Homopteran insects, such as aphids, can be hard to spot without a magnifying lens, but their damage can be identified by yellow speckles and a sticky film on leaf surfaces.[75]

Other insects can cause different types of damage, including defoliation and tunneling in stems and fruits. Plant damage can include weak or stunted plants with damaged leaves or fruit. In addition, the underside of leaves may harbor insects and insect eggs. While many insects are harmful, some are beneficial, serving roles in crop pollination or as predators of nuisance insects.[76]

Plants play a crucial role in the ecosystem, showcasing a diversity that goes beyond the variety of species. Each plant exhibits unique characteristics, such as the vibrant colors of its flowers and the intricate design of its leaves, which reflect its adaptations to the environment and its ecological role. There are several different expressions and definitions of plants:[77]

- **Native plants** are species that have evolved over hundreds or thousands of years within a specific region or ecosystem, contributing to the balance of nature.
- **Invasive plants** are non-native species that become established in various locations, grow rapidly, and spread so extensively that they disrupt plant communities or ecosystems.
- **Non-invasive**, or **alien, plants** are species introduced by humans, either intentionally or accidentally, to new locations or habitats where they were not previously found.
- **Exotic plants** are those not native to the continent where they are currently found. For example, plants from Europe are considered exotic in North America and vice versa.

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[74] PennState Extension, "Pests and Pesticides in Agriculture," https://extension.psu.edu/pests-and-pesticides-in-agriculture.
[75] University of Minnesota, "Pests and Diseases: An Introduction," https://smfarm.cfans.umn.edu/pests-and-diseases/pests-and-diseases-introduction.
[76] University of Minnesota, "Pests and Diseases: An Introduction," https://smfarm.cfans.umn.edu/pests-and-diseases/pests-and-diseases-introduction
[77] St. Lucie County Florida, *What Are Invasive Plants?* [Presentation Script], https://www.stlucieco.gov/home/showpublisheddocument/6968/636760783693600000.

- **Weeds** are plants, whether native or non-native, which are not valued where they grow. They pose a significant threat to agriculture and natural ecosystems in the United States.
- **Noxious weeds**, or **noxious plants**, refer to any plant or plant product that can directly or indirectly harm or damage crops (including nursery stock and plant products), livestock, poultry, or other agricultural interests. This also includes threats to irrigation, navigation, the nation's natural resources, public health, or the environment.

Plant diseases are classified as biotic and abiotic. Biotic diseases refer to living organisms, such as fungi, bacteria, and viruses. In contrast, abiotic diseases result from non-living causes, such as herbicides, pollution, road salt, and excessive or deficient levels of certain nutrients.[78]

Biotic disease typically manifests randomly across a field, affecting different plants with varying levels of severity. These diseases often present visible signs, such as fluffy mold growths.

Fungal diseases can usually be identified by their characteristic features, including visible mold, orange pustules, and round leaf spots. *Bacterial diseases* are often marked by wet or "water-soaked" lesions, as well as irregularly shaped leaf spots. *Viral infections* can lead to irregular color changes, like mosaic patterns on leaves or unusual foliage colors, including red leaves.

Additionally, *nematodes*, microscopic worms, are also considered biotic disease agents. They frequently cause root rot and irregular root growth.

Abiotic diseases typically manifest in a distinct pattern, often found along roadsides, and affect all plants in the area similarly. These diseases can also impact various types of nearby plants, including weeds and other crops. Common symptoms of abiotic diseases include brown, dead, or wilted leaf tips, as well as yellowing of older leaves.

INVASIVE SPECIES

Invasive species are non-native species introduced into specific ecosystems, and their introduction can cause or is likely to cause harm to the economy, environment, or human health. These invasive species can include plants, animals, or pathogens.[79] Florida has approximately 1,300 non-native plants and thousands of non-native life forms—including insects, mites, nematodes, fungi, and microbes—making it "ground zero" for invasive species in the United States.[80] Currently, St. Lucie County is home to 170 invasive plant species, 14 plant diseases, and nine invasive insect species, as shown in Table 55, Table 56, and Table 57.[81]

[78] University of Minnesota, "Pests and Diseases: An Introduction," https://smfarm.cfans.umn.edu/pests-and-diseases/pests-and-diseases-introduction.
[79] St. Lucie County Florida, *What Are Invasive Plants?* [Presentation Script], https://www.stlucieco.gov/home/showpublisheddocument/6968/636760783693600000.
[8080] University of Florida/Institute of Food and Agricultural Sciences, "Invasion Science Institute," https://invasionscience.ufl.edu/about/.
[81] EDD Maps, "Species Locator," https://www.eddmaps.org/specieslocator.cfm.

Table 55: Invasive Plants in St. Lucie County[82]

Common Name	Scientific Name	Number of Records
Ilima	*Sida cordifolia*	1
Agave	*Agave* spp.	1
Air-potato	*Dioscorea bulbifera*	38
Akee	*Blighia sapida*	1
Alligatorweed	*Alternanthera philoxeroides*	1
American evergreen	*Syngonium podophyllum*	9
Angleton bluestem	*Dichanthium aristatum*	1
Antilles calophyllum	*Calophyllum antillanum*	1
Arrow bamboo	*Pseudosasa japonica*	2
Arrowleaf elephant's ear	*Xanthosoma sagittifolium*	3
Asian nakedwood	*Colubrina asiatica*	3
Asian swordfern	*Nephrolepis brownii*	1
Asparagus fern	*Asparagus densiflorus*	1
Australian-pine	*Casuarina equisetifolia*	103
Bahiagrass	*Paspalum notatum* var. *saurae*	1
Balsamapple	*Momordica charantia*	5
Bay Biscayne creeping-oxeye	*Sphagneticola trilobata*	67
Beach naupaka	*Scaevola taccada*	67
Blackeyed Susan vine	*Thunbergia alata*	1
Bloodflower milkweed	*Asclepias curassavica*	1
Boatlily	*Tradescantia spathacea*	1
Bottlebrush	*Callistemon viminalis*	6
Brazilian jasmine	*Jasminum fluminense*	7
Brazilian peppertree	*Schinus terebinthifolia*	582
Britton's wild petunia	*Ruellia simplex*	3
Browne's blechum	*Ruellia blechum*	3
Browntop millet	*Urochloa ramosa*	1
Caesarweed	*Urena lobata*	162
Canadian horseweed	*Erigeron canadensis*	2

[82] EDD Maps, "Species Locator," https://www.eddmaps.org/specieslocator.cfm.

Common Name	Scientific Name	Number of Records
Carrotwood	*Cupaniopsis anacardioides*	63
Castorbean	*Ricinus communis*	29
Catclaw-vine	*Macfadyena unguis-cati*	1
Cathedral bells	*Kalanchoe pinnata*	6
Centipede tongavine	*Epipremnum pinnatum*	2
Chandelier plant	*Kalanchoe delagoensis*	1
Chinaberry	*Melia azedarach*	3
Chinese banyan	*Ficus microcarpa*	11
Chinese privet	*Ligustrum sinense*	1
Chinese tallowtree	*Triadica sebifera*	17
Chinese wisteria	*Wisteria sinensis*	1
Citrus	*Citrus* spp.	1
Coat buttons	*Tridax procumbens*	1
Coco yam, wild taro	*Colocasia esculenta*	13
Coconut palm	*Cocos nucifera*	1
Cogongrass	*Imperata cylindrica*	29
Common ragweed	*Ambrosia artemisiifolia*	2
Common water hyacinth	*Pontederia crassipes*	5
Coral ardisia	*Ardisia crenata*	24
Crowfootgrass	*Dactyloctenium aegyptium*	11
Cuban bulrush	*Oxycaryum cubense*	6
Cupid's-shaving-brush	*Emilia fosbergii*	3
Day jessamine	*Cestrum diurnum*	2
Devil's backbone	*Kalanchoe daigremontiana*	2
Dotted duckmeat	*Landoltia punctata*	1
Dotted smartweed	*Persicaria punctata*	1
Earleaf acacia	*Acacia auriculiformis*	138
Eclipta	*Eclipta prostrata*	1
Elephant grass	*Cenchrus purpureus*	2
Emperor's candlesticks	*Senna alata*	2
Eucalyptus	*Eucalyptus* spp.	1

Common Name	Scientific Name	Number of Records
Eulophia ground orchid	*Eulophia graminea*	17
European common reed, Phragmites	*Phragmites australis* ssp. *australis*	1
Flamevine	*Pyrostegia venusta*	1
Florida pusley	*Richardia scabra*	1
Fragrant waterlily	*Nymphaea odorata*	1
Giant rat's tail grass	*Sporobolus pyramidalis*	1
Giant reed	*Arundo donax*	2
Gold Coast jasmine	*Jasminum dichotomum*	2
Golden polypody	*Phlebodium aureum*	1
Golden trumpet	*Allamanda cathartica*	3
Guava	*Psidium guajava*	19
Guava	*Psidium* spp.	2
Guineagrass	*Megathyrsus maximus*	101
Hairy beggarticks	*Bidens pilosa*	1
Hairy indigo	*Indigofera hirsuta*	4
Hedge bamboo	*Bambusa multiplex*	1
Hybrid mother of millions	*Kalanchoe x houghtonii*	1
Hydrilla	*Hydrilla verticillata*	17
Iguanatail	*Sansevieria hyacinthoides*	29
Inchplant	*Tradescantia zebrina*	1
Indigo	*Indigofera spicata*	3
Jamaica feverplant	*Tribulus cistoides*	5
Jamaican nightshade	*Solanum jamaicense*	2
Japanese climbing fern	*Lygodium japonicum*	12
Jaraguagrass	*Hyparrhenia rufa*	2
Java plum	*Syzygium cumini*	21
Javanese bishopwood	*Bischofia javanica*	8
Jimsonweed	*Datura stramonium*	1
John Charles	*Hyptis verticillata*	1
Junglerice	*Echinochloa colona*	1
Knotroot foxtail	*Setaria parviflora*	1

Common Name	Scientific Name	Number of Records
Kudzu	*Pueraria montana* var. *lobata*	1
Lady of the night cactus	*Cereus hexagonus*	1
Lakeshore nutrush	*Scleria lacustris*	3
Largeflower Mexican clover	*Richardia grandiflora*	1
Largeleaf lantana	*Lantana camara*	17
Limpograss	*Hemarthria altissima*	2
Lionsear	*Leonotis nepetifolia*	1
Little ironweed	*Cyanthillium cinereum*	1
Madagascar periwinkle	*Catharanthus roseus*	7
Malabar plum	*Syzygium jambos*	1
Manila grass	*Zoysia matrella*	1
Melaleuca	*Melaleuca quinquenervia*	57
Mimosa	*Albizia julibrissin*	1
Miniature flatsedge	*Cyperus prolifer*	2
Molassesgrass	*Melinis minutiflora*	3
Monk orchid	*Oeceoclades maculata*	1
Mountain ebony	*Bauhinia variegata*	2
Narrow swordfern	*Nephrolepis cordifolia*	7
Natalgrass	*Melinis repens*	15
Natal-plum	*Carissa macrocarpa*	1
Nightblooming cactus	*Hylocereus undatus*	1
Octopus tree	*Schefflera actinophylla*	41
Old world climbing fern	*Lygodium microphyllum*	252
Pacara earpod tree	*Enterolobium contortisiliquum*	1
Paragrass	*Urochloa mutica*	7
Paraguayan purslane	*Portulaca amilis*	1
Pitted beardgrass	*Bothriochloa pertusa*	1
Portia tree	*Thespesia populnea*	8
Primrose-willow	*Ludwigia peruviana*	41
Princess of the night	*Selenicereus pteranthus*	1
Privet	*Ligustrum* spp.	2

Common Name	Scientific Name	Number of Records
Queen palm	*Syagrus romanzoffiana*	10
Red mangrove	*Rhizophora mangle*	1
Red tasselflower	*Emilia sonchifolia*	1
River sheoak	*Casuarina cunninghamiana*	4
Roadside sandmat	*Euphorbia lasiocarpa*	1
Rosarypea	*Abrus precatorius*	156
Rose myrtle	*Rhodomyrtus tomentosa*	1
Royal poinciana	*Delonix regia*	1
Sea hibiscus	*Talipariti tiliaceum* var. *tiliaceum*	4
Sea hibiscus	*Hibiscus tiliaceus*	1
Seagrass	*Halophila stipulacea*	1
Senegal date palm	*Phoenix reclinata*	11
Shoebutton ardisia	*Ardisia elliptica*	94
Showy rattlebox	*Crotalaria spectabilis*	5
Shrubby false buttonweed	*Spermacoce verticillata*	6
Simpleleaf chastetree	*Vitex trifolia*	4
Smooth crotalaria	*Crotalaria pallida*	9
Smooth rattlebox	*Crotalaria pallida* var. *obovata*	1
Smutgrass	*Sporobolus indicus*	2
Snake plant	*Dracaena hyacinthoides*	1
Southern crabgrass	*Digitaria ciliaris*	1
Southern sandbur	*Cenchrus echinatus*	1
Spreading sneezeweed	*Centipeda minima*	1
Sprenger's asparagus fern	*Asparagus aethiopicus*	3
Strawberry guava	*Psidium cattleyanum*	35
Surinam cherry	*Eugenia uniflora*	24
Torpedograss	*Panicum repens*	54
Tropical almond	*Terminalia catappa*	1
Tropical bushmint	*Cantinoa mutabilis*	1
Tropical signalgrass	*Urochloa distachyos*	1
Tropical soda apple	*Solanum viarum*	27

Common Name	Scientific Name	Number of Records
Turkeyberry	*Solanum torvum*	1
Turk's turbin	*Clerodendrum indicum*	1
Twoleaf nightshade	*Solanum diphyllum*	6
Valamuerto	*Senna pendula var. glabrata*	4
Washington fan palm	*Washingtonia robusta*	4
Water fern	*Salvinia minima*	5
Water lettuce	*Pistia stratiotes*	1
Wedge-leaf rattlebox	*Crotalaria retusa*	1
Wetland nightshade	*Solanum tampicense*	2
White cypress-pine	*Callitris columellaris*	1
White leadtree	*Leucaena leucocephala*	4
Widow's-thrill	*Kalanchoe* spp.	1
Wild-proso millet	*Panicum miliaceum*	1
Woman's tongue tree	*Albizia lebbeck*	8
Yellow butterfly palm	*Dypsis lutescens*	1
Yellow nutsedge	*Cyperus esculentus*	1

Table 56: Invasive Insects in St. Lucie County[83]

Common Name	Scientific Name	Number of Records
Corn earworm, tomato fruitworm	*Helicoverpa zea*	3
Fall armyworm	*Spodoptera frugiperda*	4
Fire ant decapitating fly	*Pseudacteon obtusus*	1
Fire ant decapitating fly	*Pseudacteon curvatus*	1
Fire ant decapitating fly	*Pseudacteon tricuspis*	1
Fire ants	*Solenopsis* spp.	4
Formosan subterranean termite	*Coptotermes formosanus*	3
Pink hibiscus mealybug	*Maconellicoccus hirsutus*	2
Tawny crazy ant	*Nylanderia fulva*	1

[83] EDD Maps, "Species Locator," https://www.eddmaps.org/specieslocator.cfm.

Table 57: Plant Diseases in St. Lucie County[84]

Common Name	Scientific Name	Number of Records
Botryosphaeria rots and cankers	*Botryosphaeria* spp.	3
Calonectria	*Calonectria* spp.	2
Cucurbit downy mildew	*Pseudoperonospora cubensis*	3
Heterobasidion root rots	*Heterobasidion* spp.	8
Laurel wilt	*Harringtonia lauricola*	11
Odontoglossum ringspot virus (ORSV)	*Tobamovirus ORSV*	1
Papaya ringspot virus (PRSV)	*Potyvirus PRSV*	2
Pestalotia fungi	*Pestalotia* spp.	1
Phomopsis cankers and twig blights	*Phomopsis* spp.	1
Phytophthora blight	*Phytophthora nicotianae*	2
Powdery mildew	*Oidium* spp.	1
Pythium diseases	*Pythium* spp.	2
Rhizoctonia damping-off, blight, and rot	*Rhizoctonia solani*	4
Texas potato purple top	*Candidatus Phytoplasma asteris*-related strain PPT4-TX	3

In fiscal year 2023–2024, $251,255.65 was spent on controlling and eradicating invasive plants on public conservation lands in St. Lucie County (see Table 58).[85]

Table 58: Invasive Plant Control Costs on St. Lucie County Conservation Lands, FY 2023–2024

Public Conservation Land	Acres	Cost
Coastal Preserves	408.57	$78,483.30
Paleo Hammock Preserve	293.15	$149,933.85
Ancient Oak Preserve	36.25	$22,838.50
Total	**737.90**	**$251,255.65**

[84] EDD Maps, "Species Locator," https://www.eddmaps.org/specieslocator.cfm.
[85] Florida Fish and Wildlife Conservation Commission, "Upland Invasive Plant Control Program," https://myfwc.com/media/wjxho2so/2023-2024-uplands-annual-report.pdf.

Location and Extent

Several cities and areas in St. Lucie County are notably affected by invasive species.

- Port St. Lucie has extensive urban and suburban landscapes where invasive species can thrive, particularly in disturbed areas and along roadsides.
- Similarly, Fort Pierce, which is near the coastal wetlands and estuaries, faces challenges with invasive aquatic plants and other species that can disrupt local ecosystems.
- In developing areas like Tradition (Port St. Lucie), the potential for invasive species to establish in newly disturbed environments increases.
- St. Lucie Village, as a smaller, more rural community, is also susceptible to invasive plant proliferation, particularly in residential gardens and natural areas.

Parks and natural reserves, including places like the Savannas Preserve State Park and the St. Lucie River Preserve Park, are not immune to the threat of invasives. Species such as melaleuca (paperbark tree) and Chinese tallow can establish themselves in these areas, further threatening the integrity of native ecosystems.[86]

Additionally, agricultural land faces challenges from invasive insects and diseases introduced or spread through farming practices. These pests can affect crop yields and contribute to economic losses for farmers. Residential areas also contribute to the issue, as ornamental plants labeled as non-invasive can sometimes escape cultivation and establish themselves in the wild, further exacerbating the spread of invasive species.

EXTENT

The Disease Severity Index (DSI) is a critical tool for assessing the impact of various pathogens and environmental factors on crop health and productivity. By systematically categorizing the severity of disease symptoms, this scale enables farmers, agronomists, and researchers to make informed decisions regarding pest management, disease control strategies, and overall crop management practices. The DSI serves as a quantitative measure of disease impact, reflecting factors such as the proportion of affected plants and the severity of symptoms observed in the field.[87]

This scale typically ranges from 0 to 9, where lower scores indicate minimal damage and higher scores reflect increasingly severe levels of damage (see Table 59). For instance, a rating of 0 signifies no visible symptoms, while a score of 8 or 9 suggests severe damage characterized by significant leaf drop, stunted

[86] Plant Conservation Alliance's Alien Plant Working Group, "Least Wanted," https://www.invasive.org/alien/fact/mequ1.htm; Levi Hoskins, "Tell Me About Chinese Tallow," University of Florida Earth Systems Institute, https://www.floridamuseum.ufl.edu/earth-systems/blog/tell-me-about-chinese-tallow/#:~:text=Florida%20is%20a%20hotspot%20for,how%20the%20soil%20holds%20water.

[87] Kuo-Szu Chiang, Hsuan Liu, and Clive H. Bock, "A Discussion on Disease Severity Index Values: Warning on Inherent Errors and Suggestions to Maximize Accuracy," *Annals of Applied Biology* 171 (2017): 139–154, https://doi.org/10.1111/aab.12362.

growth, and potential plant death. Understanding where a particular plant falls on this scale can help in assessing the overall health and resilience of native species affected by invasive pests.

Table 59: Disease Severity Index for Plants/Agriculture[88]

Disease Score	Lesion Area %	Disease Reaction
0	0	Highly Resistant
1	1–10	Resistant
3	11–30	Moderately Resistant
5	31–50	Moderately Susceptible
7	51–75	Susceptible
9	76–100	Highly Susceptible

Therefore, the intensity of plant disease in St. Lucie County can range from 0 to 9.

JURISDICTIONAL IMPACTS

Hazard impacts refer to the adverse effects stemming from natural or human-induced events. These impacts include physical damage, human health concerns, and economic, environmental, and social impacts. For the most part, the impacts of pests and plant diseases are similar across all of the participating jurisdictions. Invasive pests and plant diseases can lead to significant damage to local vegetation and ecosystems, reducing biodiversity and altering natural habitats. This can result in economic impacts, such as decreased property values and increased costs for pest management and restoration efforts. Human health concerns may arise from the potential for certain pests to carry diseases, posing risks to residents. Additionally, the social effects include reduced recreational opportunities and community aesthetics, which can affect residents' quality of life and local tourism.

In unincorporated St. Lucie County, the impacts of invasive pests, plants, and plant diseases may lead to agricultural losses, affecting yields and livelihoods, while posing health concerns from increased pesticide use.

NATIONAL RISK INDEX

The NRI is a valuable tool for assessing various hazards across communities in the United States. However, it does not evaluate pests and plant diseases as a significant hazard, so they are not included in this particular hazard profile.

[88] Muhammad Tariq, Sajid Ali, and Abdul Rauf, "Assessment of Yield Losses Caused by Bacterial Blight of Rice in Upper Dir, Khyber Pakhtunkhwa Province, Pakistan," *ResearchGate*, 2016, https://www.researchgate.net/publication/308597732_ASSESSMENT_OF_YIELD_LOSSESS_CAUSED_BY_BACTERIAL_BLIGHT_OF_RICE_IN_UPPER_DIR_KHYBER_PAKHTUNKHWA_PROVINCE_PAKISTAN.

Magnitude and Severity

The potential magnitude and severity of invasive pests and plant diseases in the County can be significant due to the region's warm climate and diverse ecosystems. Invasive pests pose a serious threat to the agricultural sector, particularly citrus crops, leading to a decline in yield and quality. Plant diseases like citrus greening can spread rapidly, affecting entire orchards and resulting in heavy economic losses for farmers and associated industries.

Moreover, the presence of invasive species can disrupt local ecosystems, leading to the displacement of native flora and fauna. This shift can alter habitat conditions and reduce biodiversity, ultimately impacting the community's environmental health and resilience. Additionally, the economic ramifications could extend beyond agriculture, affecting tourism, real estate values, and local economies that rely on healthy ecosystems. Overall, the threat posed by invasive pests and plant diseases presents a multifaceted challenge that requires ongoing monitoring.

Historic Events

- **Ongoing – Broad mites:** In recent years, broad mites (*Polyphagotarsonemus latus*) have been recognized as a major agricultural pest in St. Lucie County, particularly impacting pepper crops.[89]
- **Ongoing – Scale insects:** Scale insects are a persistent problem for many crops, and the University of Florida/Institute of Food and Agricultural Sciences (UF/IFAS) Extension has issued alerts regarding scale infestations on mango trees in St. Lucie County.[90]
- **Ongoing – Brazilian Pepper Tree:** The invasive Brazilian Pepper Tree continues to threaten agriculture in St. Lucie County by outcompeting crops and altering ecosystems. Florida spends $2.4 million annually to manage these trees on conservation land while cattle ranchers are spending $250,000 annually to be able to control the species.[91]
- **2020–Present – *Thrips parvispinus* (pepper thrips):** This invasive species of thrips began causing significant damage in Florida. First identified in the state in 2020, this insect has rapidly expanded its range beyond isolated greenhouses and is now affecting a variety of plants in residential landscapes. This species is among the smallest thrips in Florida, making it difficult to spot. The tiny insects move from plant to plant by flying and hopping, using their mouthparts to rasp the surface and extract sap. This feeding can stunt plant growth and diminish crop yields. While researchers have yet to identify

[89] Amir Rezazadeh, "Pepper Problem: Broad Mite," UF/IFAS Extension St. Lucie County, University of Florida, July 8, 2025, https://blogs.ifas.ufl.edu/stlucieco/2025/07/08/pepper-problem-broad-mite/.
[90] Amir Rezazadeh, "Scale Insect on Mango Tree," UF/IFAS Extension St. Lucie County, University of Florida, October 19, 2020, https://blogs.ifas.ufl.edu/stlucieco/2020/10/19/scale-insect-on-mango-tree/.
[91] Megan Lewis, "Experts Scramble to Control Harmful Growth That Has Overrun 700,000 Acres of US Territory — Here's What You Need to Know," *Yahoo News*, September 18, 2025, https://www.yahoo.com/news/articles/experts-scramble-control-harmful-growth-190000720.html.

any viruses specifically transmitted by pepper thrips, it is common for thrips to carry viruses between plants, which can lead to plant mortality.[92]

- **2005–Present – Citrus greening (*Huanglongbing*/HLB):** Citrus greening has become one of the most significant challenges for Florida's citrus industry since its identification in 2005. The plant disease, caused by the bacterium *Candidatus Liberibacter asiaticus* and transmitted by the Asian citrus psyllid, quickly spread throughout the state, resulting in catastrophic declines in citrus production.
- *Historically, the impact of citrus greening was stark. In just 20 years, Florida's citrus output dropped by 90%. Production figures, which reached approximately 300 million boxes (each box representing about 90 pounds of fruit) in 2004, decreased to just 20 million boxes by 2024, with estimates indicating a further decline of 14.1 million boxes by 2025.*
- *The economic repercussions have been equally extensive. Production costs have skyrocketed, more than doubling over the years, worsening financial strains for growers. This crisis has resulted in the loss of about 50 million citrus trees and the disappearance of around 33,000 jobs tied to the industry. The overall economic toll is estimated to surpass $20 billion, greatly affecting rural economies where citrus farming has historically been a vital source of employment and income.*
- *The circumstances surrounding citrus greening are still developing, and the ongoing battle against the disease continues to shape Florida's agricultural future.*[93]
- **2009–Present – Citrus whitefly and rugose spiraling whitefly:** The citrus whitefly is a significant pest in Florida and other Gulf states. It typically infests several trees, including chinaberry, *Ficus*, green ash, Osage orange, tree of heaven, umbrella tree, and oak tree.
- *The rugose spiraling whitefly, a member of the citrus whitefly family, was first identified in Florida in 2009 and has since spread throughout the state. This whitefly poses an increasing problem for homeowners, jurisdictions, and business owners. It feeds on a broad range of host plants, including palms, woody ornamentals, and various fruits.*
- *Heavy infestations of whiteflies can result in leaf wilting, premature leaf drop, and smaller fruit. The insects' feeding can stress plants and lead to dieback. Additionally, the honeydew they produce creates an ideal environment for black sooty mold, which can spread to cover nearby surfaces.*[94]
- **Ongoing – Laurel Wilt:** Laurel Wilt is a serious fungal pathogen that mainly targets woody plants. As of October 2019, Laurel Wilt has been documented in a range of locations, including Florida. The pathogen spreads mainly through insect vectors, which introduce the fungus into trees. Laurel Wilt poses an ongoing threat.[95]

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[92] Tory Moore, "Scientists Warn of Invasive Plant Pest, Say Early Detection, Reporting Key," UF/IFAS News, University of Florida, March 29, 2023, https://blogs.ifas.ufl.edu/news/2023/03/29/scientists-warn-of-invasive-plant-pest-say-early-detection-reporting-key/.
[93] Robin Siktberg, "The Fight Against Citrus Greening: Emerging Biologicals Offer Hope," IR-4 Project, September 25, 2025, https://www.ir4project.org/news/citrusgreeningbiologicals/.
[94] Arborjet, "Whitefly," https://arborjet.com/wp-content/uploads/2019/04/Whitefly-PS-2019.pdf.
[95] National Invasive Species Council, "Laurel Wilt," National Invasive Species Information Center, https://www.invasivespeciesinfo.gov/terrestrial/pathogens-and-diseases/laurel-wilt#:~:text=Laurel%20wilt%20is%20a%20disease,species%20elsewhere%20in%20the%20world.

FEMA DISASTER DECLARATIONS

There are currently no FEMA disaster declarations associated with this hazard.

Probability of Future Conditions

Future conditions can substantially impact pests and plant diseases in St. Lucie County in various ways. One major factor is the rise in temperatures, which can extend the growing season for many pests and pathogens.[96] In Florida's already subtropical climate, warmer temperatures may lead to a rise in populations of pests like aphids, whiteflies, and thrips. These insects not only damage crops but also affect ornamental plants, posing threats to both agriculture and landscaping.

Additionally, changes in humidity and precipitation patterns can create conditions conducive to the spread of plant diseases.[97] For example, increased humidity can promote fungal diseases such as powdery mildew and leaf spot, which thrive in moist environments. On the other hand, during periods of drought, plants may become stressed, making them more susceptible to infestations and disease. This stress response can weaken a plant's defenses, leading to more severe damage from pests.

Another concern is the potential for invasive species to thrive due to atmospheric changes. Warmer conditions may allow new pests that were previously unable to survive in the region to establish themselves. These invasive species can disrupt local ecosystems, outcompete native plants, and create challenges for local agriculture, further complicating pest management efforts.[98]

Moreover, shifts in pest life cycles are another consequence of changing atmospheric patterns. Milder winters may lead to higher survival rates of pests that would typically be controlled by cold weather.[99] This increase may result in more frequent and severe pest outbreaks, creating challenges for farmers and homeowners alike. As plant health and growth are affected by changing atmospheric patterns, stressed plants become more vulnerable to pests and diseases, creating a cycle that can be difficult to manage.

Finally, biodiversity in the region may decline due to atmospheric changes, disrupting existing ecological balances. As certain plants struggle to survive and others thrive in warming conditions, the dynamic relationships within ecosystems can shift. This could lead to an increase in pest populations if natural

[96] Sandra Skendžić, Monika Zovko, Ivana Pajač Živković, Vinko Lešić, and Darija Lemić, "The Impact of Climate Change on Agricultural Insect Pests," *Insects* 12, no. 5 (2021): 440, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8150874/.
[97] Rachid Lahlali, Mohammed Taoussi, Salah-Eddine Laasli, Grace Gachara, Rachid Ezzouggari, Zineb Belabess, Kamal Aberkani, et al., "Effects of Climate Change on Plant Pathogens and Host-Pathogen Interactions," *Crop and Environment* 3, no. 3 (September 2024): 159–170, doi:10.1016/j.crope.2024.05.003, https://www.sciencedirect.com/science/article/pii/S2773126X24000212.
[98] Renée Cho, "How Climate Change Drives the Spread of Invasive Plants," *State of the Planet*, Columbia Climate School, March 12, 2024, https://news.climate.columbia.edu/2024/03/12/how-climate-change-drives-the-spread-of-invasive-plants/.
[99] Léonard Schneider, Martine Rebetez, and Sergio Rasmann, "The Effect of Climate Change on Invasive Crop Pests Across Biomes," *Current Opinion in Insect Science* 50 (April 2022): 100895, doi:10.1016/j.cois.2022.100895, https://www.sciencedirect.com/science/article/pii/S221457452200030X.

predators are diminished or if their habitats are altered unfavorably (see Figure 47).[100] Adapting to these conditions will require integrated pest management strategies and a focus on sustainable agricultural practices to minimize the impacts of atmospheric changes on pests and plant diseases in St. Lucie County.

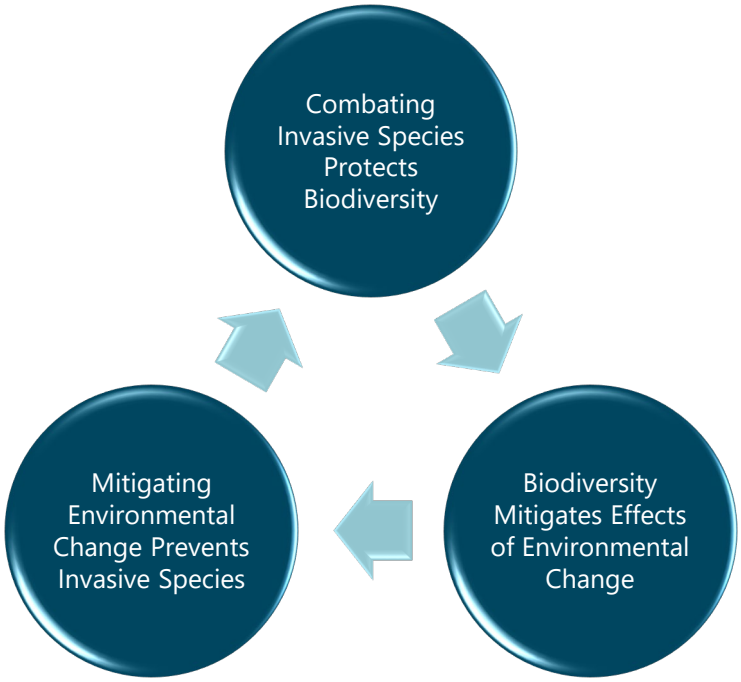

Figure 47: Environmental Change and Biodiversity Cycle[101]

The probability of future atmospheric change is likely to increase pests and plant diseases. As temperatures rise, many pests and pathogens thrive, leading to larger populations that can damage crops and plants. Additionally, changes in humidity and precipitation patterns can create ideal conditions for various plant diseases. This combination of factors suggests that atmospheric changes will worsen existing challenges related to pest management and plant health, making it necessary to adopt sustainable agricultural practices and to integrate pest management strategies to mitigate these impacts.

Vulnerability Assessment

St. Lucie County is vulnerable to a range of invasive pests, plants, and plant diseases due to its favorable climate and diverse ecosystems. The region's subtropical environment, characterized by warm temperatures and plentiful rainfall, creates ideal conditions for invasive species to thrive. This vulnerability is heightened by the presence of extensive agricultural lands, residential areas, and natural habitats, making it essential to assess the potential impacts of these invasive species on state assets, including agriculture, natural resources, and public health.

[100] Invasive Species Centre, "Climate Change," https://www.invasivespeciescentre.ca/invasive-species/what-is-at-risk/climate-change/.
[101] Invasive Species Centre, "Climate Change," https://www.invasivespeciescentre.ca/invasive-species/what-is-at-risk/climate-change/.

Invasive pests, such as the Asian tiger mosquito and the southern chinch bug, pose substantial threats to local agriculture and ecosystems. These pests can reduce crop yields and cause significant economic losses for farmers, particularly within St. Lucie's prominent citrus and vegetable sectors. Additionally, invasive plants like cogongrass and Brazilian pepper encroach upon natural landscapes, outcompeting native vegetation and leading to a decline in biodiversity. The establishment of these invasive species disrupts ecosystem functions and may result in increased management costs for landowners and state agencies tasked with restoration efforts.

Plant disease, often worsened by invasive pathogens, further contributes to the vulnerability of the County's agricultural assets. Diseases such as citrus greening have devastated local citrus production, impacting not only farmers' livelihoods but also the broader economy, including processing and distribution sectors. The interdependence of agriculture and tourism in Florida amplifies the risks, as declines in agricultural productivity could reduce tourist appeal and economic diversity within the County. Additionally, rural populations, often reliant on agriculture or fishing, may experience economic hardships as invasive species disrupt local ecosystems and displace native species that are crucial for their livelihoods.

St. Lucie County is at risk from invasive pests, plants, and diseases that can harm farming, damage natural ecosystems, and affect public health. These invasive species can have serious economic effects on the state. To tackle this issue, the County should continue to strengthen surveillance and control programs, raise public awareness, particularly among vulnerable populations, and coordinate efforts between local, state, and federal agencies. Ongoing research and monitoring are essential to understanding the changing threats from invasive species and to protecting St. Lucie's ecosystem and economy.

IMPACTS TO ASSETS

Table 60 provides a summary of the effects of pests and plant diseases. It discusses the impact on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, and public confidence.

Table 60: Consequence Analysis

Sector	Consequence
Public	• Agricultural yields may decline, which may reduce income for farmers and related economic activities in St. Lucie County, which affects local markets and employment. • Expenses for pest management and disease control may rise, putting financial strain on both homeowners and agricultural producers. • Landscape and ornamental plants may deteriorate, diminishing property values and the aesthetic appeal of communities. • Crop damage may disrupt the food supply chain, affecting local food availability and prices. • The increased presence of pests may lead to health issues, including allergies and the spread of vector-borne diseases such as West Nile virus and Zika virus.

Sector	Consequence
	• Overuse of pesticides in response to pests may contaminate soil and water, harming local ecosystems and wildlife. • Insurance premiums and claim costs may rise for property owners affected by pest- and plant disease–related damages. • Public parks and green spaces may decline in appearance, potentially reducing recreational use.
First Responders	• Managing pest and plant disease outbreaks may divert resources away from emergency response duties, impacting service availability. • Pest management may redirect local funding away from emergency services, while agricultural damage may contribute to broader economic challenges that affect community safety.
Property, Facility, and Infrastructure	• Pests and plant diseases may weaken or destroy landscaping, trees, and vegetation, leading to reduced property values and increased maintenance costs. • Property owners may face higher expenses for pest control, disease management, and restoration of affected areas. • Certain pests, such as termites or rodents, may damage wooden structures, insulation, and wiring, resulting in costly repairs. • Pests and plant diseases may spread to neighboring properties, amplifying the impact and requiring coordinated management efforts.
Environment	• Invasive pests and diseases may disrupt local ecosystems and cause a decline in native plant species. • Some pests and diseases may degrade soil quality, affecting future crop production and land viability.
Economic Conditions	• A decline in landscape aesthetics may reduce real estate values in affected areas. • Revenue losses in impacted sectors may create budget shortfalls for local governments, hindering essential services and infrastructure development. • Decreased crop yields and increased disease management costs may result in significant financial losses for local farmers, affecting their income and livelihoods. • Economic decline in agriculture may lead to job losses, particularly in farming and related industries, affecting family incomes and local economies. • If invasive species diminish the area's natural beauty or recreational spaces, tourism may decline, impacting local businesses that rely on tourism. • Increased health issues from pests, such as mosquito-borne diseases, may raise healthcare costs and reduce productivity due to illness. • Pests and diseases may disrupt local agricultural markets, affecting supply chains and leading to higher prices for consumers. • The loss of native species and ecosystems due to invasives may harm fisheries and wildlife, which are vital for the economy in areas reliant on fishing and outdoor recreation.

Sector	Consequence
	• Funds may need to be redirected to manage invasive species and pests, limiting resources for other community services and development projects.
Public Confidence	• Crop losses and agricultural damage may reduce farmer income and raise consumer prices, eroding public confidence in the local economy. • Pest-borne diseases may cause fear and anxiety, undermining public confidence in local health safety. • Increased pest control spending may reduce public services, lowering confidence in government efficiency. • Community frustration over pest and plant disease impacts may lead to social division, weakening trust and cohesion among residents.

IMPACT ON COMMUNITY LIFELINES

Pests and plant diseases pose a threat to FEMA's Community Lifelines (see Figure 48).

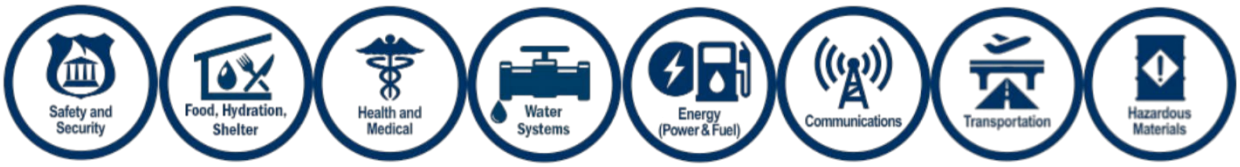

Figure 48: Federal Emergency Management Agency Community Lifelines

- **Food, Hydration, and Shelter:** Invasive pests and diseases can significantly disrupt local agriculture, leading to reduced food production and interruptions in supply distribution.
- **Health and Medical:** Certain invasive pests, like mosquitoes, can carry diseases that pose risks to public health. Invasive plants may also worsen allergies or respiratory issues, affecting overall community health.
- **Water Systems:** Aquatic invasive plants can clog waterways, leading to problems with water quality and availability. This affects both natural ecosystems and the infrastructure that supports community water needs.
- **Energy:** Invasive vegetation can disrupt local ecosystems that support energy production. For instance, invasive plants may take over bioenergy crops such as sugarcane, sweet sorghum, and pine, or obstruct power lines, reducing energy reliability.
- **Transportation:** Invasive plants growing along roadways can obstruct visibility and create hazardous driving conditions. Pests may also damage roadside vegetation, necessitating removal to maintain safe travel routes.

IMPACT DUE TO CHANGES IN DEVELOPMENT

In St. Lucie County, the impacts of invasive species and plant diseases have become more pronounced due to ongoing development. One substantial consequence is the disruption of local ecosystems. Invasive

species such as Brazilian pepper and melaleuca have taken over native habitats, often outcompeting native flora for resources. This invasion leads to a decline in biodiversity, altering ecosystems and disrupting local food chains. As native species dwindle, the resilience of these ecosystems against environmental changes is diminished, jeopardizing the health of local wildlife and plant populations.

Urban development can also create new breeding grounds for pests, particularly when drainage systems are not properly managed and stagnant water accumulates. This, in turn, may increase management costs for local governments and environmental agencies, as resources must be allocated for control measures and public education initiatives. These financial pressures can strain local budgets and divert funds from other critical services. Furthermore, the presence of invasive species like the *Aedes aegypti* mosquito introduces public health concerns, as these mosquitoes are known vectors of diseases, including Zika and dengue fever.

Additionally, ongoing development poses threats to water quality. Invasive aquatic plants, such as hydrilla, can clog waterways, disrupting natural water flow and lowering oxygen levels, which harms aquatic life. The alteration of these habitats impacts not only the flora and fauna but also the communities that rely on clean water for recreational and economic activities.

Moreover, statewide regulations have been updated to decrease the risk of pests and plant disease.

St. Lucie County revised its land development code on April 22, 2025, to address vegetation removal permits. This process ensures that when land is cleared, native vegetation is protected, and landowners are educated to identify and preserve beneficial local species.[102]

St. Lucie County and its municipalities have implemented a fertilizer ordinance to protect local waterways from nutrient pollution, which can fuel harmful algal blooms and weaken plant life. The ordinance, developed in partnership with UF/IFAS, prohibits the use of fertilizers containing nitrogen and phosphorus during the rainy season (June 1–September 30).[103]

The St. Lucie County Mosquito Control District operates an Integrated Mosquito Management program. This approach uses multiple, environmentally sound techniques to control mosquito populations, reducing the risk of mosquito-borne diseases that can also affect plant life in some cases.[104]

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[102] St. Lucie County, FL Municode Codification, "6.00.03. – Notice of Vegetation Removal Required," https://library.municode.com/fl/st._lucie_county/codes/land_development_code?nodeId=CHVIREPRST_6.00.00VEPRPR_6.00.03NOVERERE.

[103] UF/IFAS Extension St. Lucie County, *Keep Yards Green and St. Lucie Waters Clean: A Guide to St. Lucie County's and the City of Port St. Lucie's Fertilizer Management Ordinance,* City of Port St. Lucie Public Works Department, https://www.cityofpsl.com/files/assets/public/v/1/departments/public-works/documents/ufifas-fertilizer-brochure.pdf; City of Port St. Lucie, "Homeowner/Resident Frequently Asked Questions," https://www.cityofpsl.com/files/assets/public/v/1/departments/public-works/documents/homeownerresident-frequent.pdf.

[104] St. Lucie County Mosquito Control District, "St. Lucie County Mosquito Control District," St. Lucie County, https://www.stlucieco.gov/departments-and-services/mosquito-control/mosquito-control-district.

IMPACTS ON POPULATIONS OF FOCUS

In St. Lucie County, at-risk populations face risks from invasive pests and plant diseases, which can lead to adverse economic, health, and social consequences. Disenfranchised communities, particularly resource-limited families, may struggle with food insecurity as invasive species disrupt local agriculture, reducing both the availability and affordability of local produce.

Additionally, elderly individuals and those with pre-existing health conditions may experience heightened health risks. Invasive pests can increase respiratory issues and allergic reactions, especially if agricultural pest management practices are insufficient or unsafe. Without adequate awareness and access to protective measures, these vulnerable groups face greater health challenges that can undermine their overall well-being.

Children in the County are also at an increased risk, as they may be exposed to pesticides used in attempts to control invasive species. Schools and childcare facilities, which may not have the resources to implement effective pest management or provide education on pest-related illnesses, can compound this risk.

The impact of invasive pests and plant disease could also disproportionately affect cross-cultural communities in the County, many of whom work in agriculture. They may face job loss as crop yields decline, and language barriers can hinder effective communication about risks and available resources. This lack of access to vital information can prevent these populations from receiving assistance during and after crop failures, compounding their vulnerability.

In summary, invasive pests and plant diseases pose a complex threat to at-risk populations in the County. Resource-limited families, the elderly, children, and cross-cultural communities are particularly at risk. Limited resources, healthcare access, and ineffective communication about pest management and health risks further exacerbate their susceptibility.

Sea Level Rise

Definition

Sea level rise refers to the increase in the average level of the Earth's oceans and seas over time. This is primarily driven by two main factors: The melting of land-based ice sheets and glaciers, which contribute additional water to the oceans, and the thermal expansion of oceanwater.[105]

Location and Extent

Saint Lucie County has several areas that are at risk of flooding due to sea level rise, particularly in coastal and low-lying regions. One of the most vulnerable locations is Fort Pierce, where neighborhoods close to

[105] Cybersecurity and Infrastructure Security Agency, "Sea Level Rise." https://www.cisa.gov/topics/critical-infrastructure-security-and-resilience/extreme-weather/sea-level-rise.

the ocean and waterfront areas face significant flooding threats. The city's proximity to the Atlantic Ocean makes it particularly susceptible to flooding during heavy rains and high tidal events.

Port Saint Lucie also contains areas at risk, especially those along the Saint Lucie River and its tributaries. Flooding can occur in these regions during significant weather events, exacerbated by rising sea levels. Likewise, the small municipality of Saint Lucie village, located right next to the water, is another area that could experience increased flooding as sea levels rise.

Additionally, southern Fort Pierce beachfront areas are low in elevation and exposed directly to coastal flooding. Hutchinson Island, although technically a barrier island, is vulnerable to both storm surges and the gradual effects of sea level rise, thus increasing the risk for communities located there. Local governments and planning organizations are recognizing these risks and are increasingly working on resilient strategies to address the challenges posed by rising waters. See Figure 49 for a map of areas in St. Lucie County that at risk from 1-foot of sea-level rise, based on the 2022 U.S. Sea Level Change report data.[106]

[106] U.S. Sea Level Change, "Resources." https://earth.gov/sealevel/us/resources/2022-sea-level-rise-technical-report/#slr.

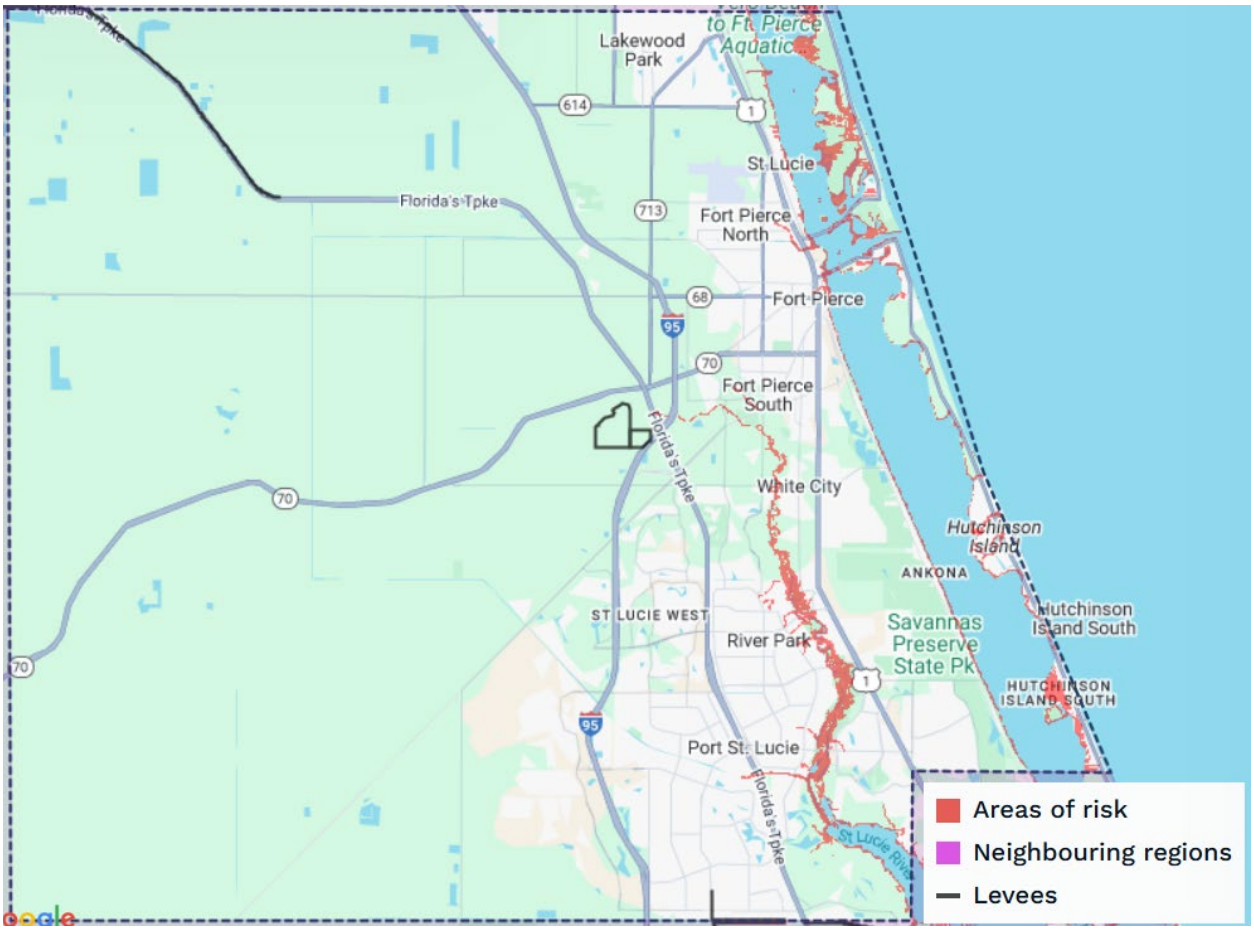

Figure 49: Areas at Risk from One Foot of Sea-Level Rise[107]

Extent

The extent of sea-level rise is measured using a combination of methods. One primary tool is tide gauges, which are installed along coastlines to measure the height of ocean water relative to a fixed point on land. By collecting long-term data from multiple tide gauges, scientists can analyze trends and variations in sea level over time.

In addition to tide gauges, satellite altimetry has become a crucial method. Satellites equipped with radars can measure the distance to the ocean surface with high precision. By calculating the time it takes for radar signals to bounce back, scientists can determine changes in sea level globally, while also accounting for variations due to factors like ocean currents and thermal expansion.[108]

[107] Climate Central, "Coastal Risk Finder," 2025, https://app.climatecentral.org/coastal-risk-finder.
[108] Global Sea Level Change, "How Do We Measure Sea Level Change?" https://earth.gov/sealevel/about-sea-level-change/how-we-measure/the-basics/.

Another important technique is satellite gravimetry, which measures changes in gravitational pull to assess water mass variations. This helps researchers understand how much water is being added to the oceans from melting glaciers and ice sheets, contributing to rising sea levels.

Additionally, remote sensing, which utilizes aerial and satellite imagery, allows for monitoring of coastal ecosystems and land use changes, enhancing understanding of local impacts.

JURISDICTIONAL IMPACTS

Hazard impacts refer to the adverse effects stemming from natural or human-induced events. These impacts include physical damage, human health concerns, and economic, environmental, and social impacts, as seen in Table 61.

Table 61: Impacts of Sea Level Rise on Jurisdictions

Jurisdiction	Impacts
St. Lucie County	• Increased flooding in low-lying coastal areas and areas along the Indian River in the eastern part of the County. • Infrastructure damage, particularly to roads on barrier islands, like S Ocean Dr on Hutchinson Island. • St. Lucie County has 19 parks located on or near the coast or the Indian River which could be damaged from high tide flooding and higher storm surge.[109]
City of Port St. Lucie	• Increased flooding in residential and commercial areas along the St. Lucie River, a tidally influenced river. • High tide flooding and increased storm surge could flood roads, cutting off neighborhoods. For example, flooding on SE Via Terra Bella could leave several houses cut off from support from emergency responders.
City of Fort Pierce	• Fort Pierce Wastewater Treatment Plant is located directly on the Indian River and could be impacted by storm surge exacerbated by sea level rise. • Increased flooding in low-lying areas on the eastern side of the City, particularly roadways which could impede ingress or egress from certain areas. • City parks located on the Indian River and the Atlantic Coast could be damaged by increased coastal erosion or storm surge exacerbated by sea level rise.
Town of St. Lucie Village	• Increased flooding in low-lying residential areas along the Indian River, which includes most of the Town. • North Indian River Dr. runs along the Indian River and is susceptible to flooding and damage due to sea level rise. • Beaches and land along the Indian River could erode at a faster pace as sea level rises, reducing the size of waterfront properties.

[109] St. Lucie County, "Parks of St. Lucie County," 2025, https://www.stlucieco.gov/departments-and-services/parks-recreation/parks-of-st-lucie-county.

NATIONAL RISK INDEX

The National Risk Index (NRI) is a valuable tool for assessing various hazards across communities in the United States. While the NRI does not evaluate sea-level rise as a stand-along hazard it, it is included as a variable when the NRI calculates coastal flooding risk. Table 62 shows the NRI data for St. Lucie County on coastal flooding.

Table 62: National Risk Index Data for Coastal Flooding in St. Lucie County[110]

NRI Score	NRI Rating	Expected Annual Loss – Building Value	Expected Annual Loss – Population Value	Total Expected Annual Loss
65.2	Relatively Moderate	$604,962.32	$97,669.75	$702,632.07

Magnitude and Severity

The potential magnitude and severity of sea level rise is significant due to its coastal location. Sea level rise is expected to continue along Florida's Atlantic coast over the coming decades. NOAA projections for the U.S. East Coast indicate that sea levels could rise by approximately 10 to 14 inches by 2050.[111] For St. Lucie County, this would increase the frequency of tidal flooding and high water events,[112] which can threaten infrastructure, homes, and critical facilities. Additionally, saline intrusion into freshwater resources could pose risks to the drinking water supply and agricultural practices in the region. The economic impact could be enormous, affecting property values, insurance costs, and emergency management resources.

Historic Events

Sea level rise serves as a creeping hazard that slowly intrudes upon communities, presenting challenges that are often difficult to quantify. Unlike historic events such as hurricanes and floods, which leave behind a clear trail of destruction, the gradual rise of the ocean does not provide immediate, measurable impacts that can be readily profiled in a Hazard Mitigation Plan. This slow advancement complicates the ability to assess the full scope of its effects, making it important to recognize the long-term implications it poses on a community's environmental, economic, and social well-being. While there are no specific historic events associated with sea-level rise included in this hazard profile due to its gradual nature, it is estimated that

[110] Federal Emergency Management Agency, "Resilience Analysis and Planning Tool," 2025, https://experience.arcgis.com/experience/0a317e8998534c30a9b2d3861c814d42/page/RAPT-2025#data_s=id%3AdataSource_16-19ae629aea1-layer-126%3A377.
[111] U.S. Sea Level Change, "Resources." https://earth.gov/sealevel/us/resources/2022-sea-level-rise-technical-report/#slr.

sea levels in Florida have risen by 7 inches since 1970.[113] It is likely that this rise in sea level has contributed to King Tide flooding and storm surge but is difficult to quantify.

FEMA DISASTER DECLARATIONS

There are currently no FEMA disaster declarations associated with this specific hazard.

Probability of Future Conditions

The probability of future sea-level rise in St. Lucie County is closely tied to global changing atmospheric patterns, which predict a substantial increase in sea levels over the coming decades. Research indicates, the East Coast of the United States is expected to experience a sea-level rise of 10 to 14 inches by 2050. This rise is attributed to factors such as the melting of ice caps and the thermal expansion of seawater.[114] As a coastal community, the county is highly likely to experience some level of sea level rise.

St. Lucie County is at a substantial risk of flooding due to sea-level rise. The National Risk Index estimates that total estimated expected annual loss from coastal flooding, which includes sea-level rise projections, is $702,632.32.[115] This includes impacts to both buildings and people. It should be noted that expected annual loss is an average derived from past and projected coastal flooding events, not a prediction that loss will happen every year. Much of the loss is projected to fall on the barrier islands off of St. Lucie's coast and low-lying properties along the St. Lucie and Indian Rivers.

Vulnerability Assessment

Sea level rise amplifies the effects of coastal storms by increasing elevation during high tides and raising the base of storm surges. Coastal areas are particularly vulnerable to sea level rise, as well as to shifts in the frequency and intensity of storm events. Rising sea levels and intensified coastal storms can have adverse effects on low-lying inland regions, damage coastal ecosystems, exacerbate coastal erosion and flooding, and introduce saltwater and pollution into various coastal resources, including estuaries.

Low- and moderate-income coastal communities typically have fewer resources to prepare for, respond to, or recover from the impacts of sea level rise and coastal storms. They are also more likely to experience disproportionate consequences from workplace closures, loss of business revenue, and reduction of public services.

Southeast Florida is especially susceptible to sea level rise due to its peninsular shape and low elevation. Mapping different sea level rise inundation scenarios helps to identify areas at risk and supports planning

[113] National Sea Level Explorer, "Florida," 2024, https://earth.gov/sealevel/us/national-sea-level-explorer/?state=FL&scope=section_1.
[114] U.S. Sea Level Change, "Resources." https://earth.gov/sealevel/us/resources/2022-sea-level-rise-technical-report/#slr.
[115] Federal Emergency Management Agency, "Resilience Analysis and Planning Tool," 2025, https://experience.arcgis.com/experience/0a317e8998534c30a9b2d3861c814d42/page/RAPT-2025#data_s=id%3AdataSource_16-19ae629aea1-layer-126%3A377.

for a resilient community. Inundation maps, which show land at elevations below sea level, highlight regions near St. Lucie County's coastline and tidal waterways. Vulnerable inland areas include low-lying regions that may pose future challenges for stormwater management, even if they are not directly connected to tidal waters.

Adapting current structures and implementing mitigation strategies in redevelopment efforts can reduce the economic and social impacts on businesses, government entities, and residents in the county.

IMPACTS TO ASSETS

Table 63 provides a summary of the effects of sea-level rise. It discusses the impact on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, public confidence, and the consequences of these impacts.

Table 63: Consequence Analysis of Sea-Level Rise

Sector	Impacts
Public	• Roads, bridges, and public transportation systems may be at risk of flooding or damage, leading to increased traffic congestion and potential safety hazards. • Homes and neighborhoods in low-lying coastal areas are likely to be adversely affected, threatening property values and displacing residents. • Water supply, wastewater treatment, and stormwater management systems could be compromised, potentially leading to public health issues. • Coastal and waterfront parks, as well as recreational areas, may experience erosion or flooding, limiting public access and enjoyment. • Attractions that rely on coastal access, such as beaches and fishing areas, could see decreased visitation, impacting local businesses and the economy. • Flooded areas could hinder the ability of emergency responders to operate effectively during storms or flooding events.
First Responders	• Fire stations, police precincts, and emergency management offices located near coastal areas or low-lying regions may face flooding, which could disrupt operations. • Roads, bridges, and access routes that first responders rely on could become impassable due to flooding or erosion, delaying emergency response times. • Mobile towers and communication centers that are vulnerable to flooding might hinder effective communication during emergencies. • Public utilities that are affected by rising sea levels could contaminate water supplies or disrupt sewage systems, presenting health and safety risks. • Hospitals and clinics, especially those near the shore, may experience disruptions in services due to flooding or power outages. • Facilities designated as emergency shelters may need to be reassessed if they are located in vulnerable areas, impacting their availability during disasters. • Designated evacuation routes may be compromised, complicating evacuation efforts during hurricanes or floods.

Sector	Impacts
	• Areas used for training first responders might be at risk, impacting preparedness for emergency situations.
Continuity of Operations	• Roads, bridges, and public transportation systems may become prone to flooding, leading to disruptions in daily commutes and emergency services. • Water treatment plants, sewage systems, and power generation facilities could be threatened by rising waters, potentially causing service outages or hazardous conditions. • Businesses, especially those located near the coastline, may face increased flooding risks, which can disrupt operations and affect local economies. • Homes in low-lying regions are at risk, leading to the displacement of residents and increased demand for emergency services and shelter. • Coastal ecosystems, such as wetlands and fisheries, may be harmed, which can affect tourism and local livelihoods reliant on these natural resources. • Fire and police stations situated in vulnerable areas might face operational challenges due to flooding or accessibility issues. • Hospitals and clinics could be impacted, affecting healthcare delivery during emergencies, especially if evacuation or relocation is required.
Property, Facility, and Infrastructure	• Increased flooding and storm surges can threaten homes, especially those close to the coastline or in low-lying areas. • Businesses situated near the waterfront may face risks from flooding, which can disrupt operations and potentially lead to economic losses. • Roads, bridges, and railways that run along the coast or in flood-prone areas may be damaged or rendered impassable due to higher water levels. • Water, sewer, and electrical systems may be compromised by flooding, leading to service disruptions and additional costs for repairs and upgrades. • Government buildings, schools, and community centers located in vulnerable areas may need to be upgraded or relocated to mitigate risks. • Coastal parks and recreational facilities may face erosion and damage from rising tides, limiting access and usability. • Wetlands and coastal habitats are crucial for biodiversity and protective buffers against storms, but they are at risk from rising sea levels, which can disrupt their function. • Fire stations, police departments, and hospitals located in low-lying areas may find their operations disrupted, impacting their ability to respond to emergencies effectively.
Environment	• Coastal wetlands, mangroves, and estuaries could be threatened, which are important for wildlife habitat and water quality. • Saltwater intrusion can diminish soil quality and reduce agricultural productivity, affecting local farming and food supply. • Threatened and endangered species that rely on specific coastal habitats may face increased risk from habitat loss and changing environmental conditions.

Sector	Impacts
Economic Conditions	• Residential and commercial properties near the coastline may face depreciation due to flooding risks, affecting property values and tax revenues. • Roads, bridges, and public transport systems may be at risk of damage or disruption from higher sea levels, leading to increased maintenance costs and potential relocation of essential services. • St. Lucie County's appeal as a tourist destination could be diminished if beaches and waterfront attractions are affected, leading to a decline in visitor spending. • Agricultural land, particularly in low-lying areas, may be adversely impacted by saltwater intrusion, affecting crop yields and local food supply. • Ecosystems such as wetlands and estuaries can be disrupted, impacting fish and wildlife populations relied upon for local fishing and recreational activities. • Water supply and wastewater management systems may face challenges if sea-level rise leads to saltwater intrusion or if flooding impacts infrastructure. • An increase in claims from flood damage could lead to higher insurance premiums, impacting residents' and businesses' economic viability. • Increased demand on emergency response resources during flood events could strain local budgets and divert funding from other essential services.
Public Confidence	• As sea levels rise, the risk of flooding increases, particularly in coastal areas. This can lead to property devaluation, increased insurance costs, and potential loss of business for local industries, such as tourism and real estate. A decline in property values and economic instability can diminish the public's trust in local governance and planning. • If residents feel that local officials are not adequately addressing the threats posed by sea-level rise, through effective emergency planning, infrastructure improvements, and evacuation routes, they may lose confidence in their leadership. Frequent flooding or storms can erode trust in the ability of local agencies to protect citizens. • Effective communication and transparent strategies for adaptation and resilience are key to maintaining public confidence. If the community feels involved in planning and development processes, it can foster a sense of security and trust in how flood risk and resilience are being managed. • Rising sea levels can lead to increased awareness of environmental issues, affecting how the public perceives the local government's capability to address environmental concerns. Effective education on the implications and proactive measures can enhance public confidence, whereas ignorance or neglect can lead to mistrust. • Coastal infrastructure, such as roads, wastewater systems, and drainage, can be greatly impacted by rising sea levels. If residents perceive that these systems are failing or are unprepared for future challenges, confidence in local authorities can erode.

IMPACT ON COMMUNITY LIFELINES

The impact of sea-level rise on FEMA Community Lifelines is substantial and multi-faceted. As coastal areas face increased flooding and erosion due to rising sea levels, each lifeline is affected in unique ways (see Figure 50).

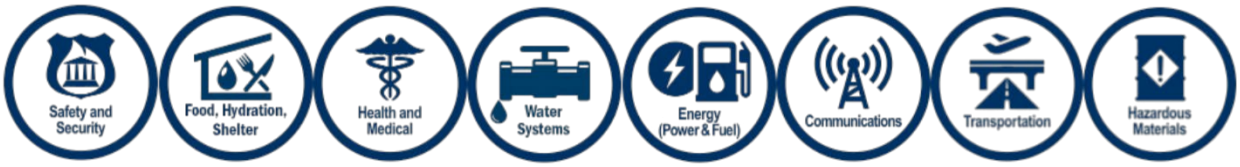

Figure 50: Federal Emergency Management Agency Community Lifelines

- **Safety and Security** can be compromised. Emergency responders may struggle to access affected areas, increasing the risk of injuries and delays in evacuations.
- **Food, Hydration, and Shelter** may be impacted. Coastal agriculture is at risk due to saltwater intrusion into farmlands, which can decrease crop yields, impacting food supply and leading to higher prices and food insecurity. Communities may experience contamination of freshwater resources as saltwater infiltrates drinking water supplies. Additionally, damage to housing from frequent flooding may increase housing disruptions and displacement.
- **Health and Medical Services** may be impacted by increased flooding, which can overwhelm healthcare infrastructure, resulting in reduced access to medical care. Public health emergencies can arise from waterborne diseases resulting from contaminated water supplies and inadequate sanitation.
- **Water Systems,** including water treatment plants and infrastructure, may be damaged by flooding, leading to service interruptions. The ability to provide clean drinking water can escalate health crises during emergencies, as communities rely on these systems for survival.
- Sea-level rise can interrupt **Energy Services,** jeopardizing power generation facilities, especially those located near coastlines. Flooding can disrupt energy distribution networks, leading to blackouts and hindering recovery efforts.
- Rising sea levels can damage **Communications** infrastructures, leading to communication breakdowns during emergencies. Lack of reliable communication can hinder coordination among emergency responders and delay the dissemination of critical information to affected populations.
- Coastal roadways and public **Transportation** systems are at risk of flooding, which can impact the ability to evacuate and deliver aid. Damage to infrastructure can result in communities that lack access to necessary resources and support following disasters.
- The risk of **Hazardous Materials** spills increases with flooding, especially in areas with industrial facilities. Sea-level rise can compromise containment systems, leading to potential contamination of land and water, which poses long-term health and environmental risks.

IMPACT DUE TO CHANGES IN DEVELOPMENT

With 7 inches of sea level rise documented in Florida from 1970 to 2024 and another 9 inches projected by 2050,[116] Saint Lucie County is projected to experience the impacts of sea level rise in various ways in the future. One of the most significant issues could be increased flooding, particularly in low-lying areas. Sea-level rise may worsen the impact of tidal flooding, storm surge, and some rainfall driven flooding in the county. This situation highlights the vulnerabilities of both residential and commercial properties, prompting residents and officials to reassess flood management practices.

The areas developed on Hutchinson Island and directly along the Indian River are at particular risk. Residential and commercial developments on the coast could experience flooding as well as the infrastructure they rely on. According to St. Lucie County Planning and Development Services there are 10 residential projects planned for either Hutchinson Island or along the Indian River, currently.[117] Development in these areas will likely continue and need to be built to withstand a higher sea level.

In addition to flooding, coastal erosion has intensified along the county's beaches and waterways. As sea levels rise, the loss of land poses a significant threat to properties and critical infrastructure, while also disrupting natural ecosystems. This erosion not only affects human activities but also impacts habitats essential for local wildlife, such as mangroves and wetlands. As these crucial areas begin to deteriorate, species that depend on them are increasingly at risk.

Another major concern is saltwater intrusion, which occurs when rising sea levels allow seawater to infiltrate freshwater aquifers. This phenomenon jeopardizes the quality of drinking water and poses challenges for local agriculture and ecosystems that rely on freshwater resources. As the impacts of sea level rise become more pronounced, the vulnerability of infrastructure, such as roads, bridges, and utilities, has also come into focus.

Economically, Saint Lucie County has begun to see shifts in the real estate market, as potential buyers grow wary of properties located in vulnerable zones. This newfound caution can affect property values and investment opportunities. Additionally, local industries that rely on the health of coastal environments, such as tourism, may face significant challenges due to environmental changes and the perception of associated risks.

In response to these multifaceted challenges, local government agencies have begun implementing new policies and strategies focused on sustainability and conservation. This includes revising zoning laws and enhancing coastal management plans to adapt to the realities of will rise. Community engagement and proactive planning are crucial as Saint Lucie County strives to safeguard its residents, economy, and natural resources in the face of ongoing environmental changes.

[116] National Sea Level Explorer, "Florida," 2024, https://earth.gov/sealevel/us/national-sea-level-explorer/?state=FL&scope=section_1.
[117] St. Lucie County Planning and Development Services, "Active Development Projects," 2025, https://www.arcgis.com/apps/dashboards/12184ec9b99646619afc66b1f61b78fc.

IMPACTS ON POPULATIONS OF FOCUS

At-risk populations face significant risks from sea level rise, which could jeopardize their safety and well-being. One affected group includes populations with limited resources.[118] These households typically lack the resources to relocate or implement necessary flood mitigation measures, making them more susceptible to the adverse effects of rising waters, such as property damage, loss of housing, and displacement.

Moreover, the elderly population is particularly vulnerable to the impacts of sea level rise.[119] Many older adults may have mobility issues or health concerns that hinder their ability to evacuate or seek safe shelter during flooding events. Additionally, seniors living in assisted living facilities or nursing homes may rely on caregivers, whose ability to respond may be compromised during flooding events. The combination of their physical limitations and potential isolation during such events increases their risk and shows the need for targeted emergency planning.

Children represent another vulnerable demographic, as they depend on adults for care and protection.[120] Schools situated in low-lying areas may face closure or severe disruption, affecting the education of students. Furthermore, children from populations with limited resources are at risk of compounded trauma, as they may lack access to adequate healthcare or mental health resources, hindering their ability to cope with the stresses associated with displacement and instability caused by rising sea levels.

Seismic Hazards

Definition

An earthquake is a sudden, rapid shaking of the ground caused by the breaking and shifting of rock beneath the earth's surface. Earthquakes result from crustal strain, volcanism, landslides, and collapse of caverns.[121] The shaking can damage buildings and bridges, disrupt utilities and communications, and trigger landslides, flash floods, fires, or tsunamis. Florida's geologic setting explains why earthquakes are rare here: The state lies on the passive (trailing) margin of the North American Plate—far from the active plate-boundary faults that frequently generate earthquakes—so Florida has an extremely low incidence of seismic events, even though earthquakes can occur in all 50 states and U.S. territories.

[118] Substance Abuse and Mental Health Services Administration, "Greater Impact: How Disasters Affect People of Low Socioeconomic Status," 2017, https://www.samhsa.gov/sites/default/files/dtac/srb-low-ses_2.pdf.
[119] Columbia University Mailman School of Public Health, "Large Study Uncovers Specific Impacts of Flooding on Older Adult Health," 2025, https://www.publichealth.columbia.edu/news/large-study-uncovers-specific-impacts-flooding-older-adult-health#:~:text=Older%20adults%20are%20particularly%20vulnerable,medical%20services%20for%20routine%20appointments.
[120] Environmental Protection Agency, "Extreme Weather and Preschool-Aged Children," 2025, https://www.epa.gov/children/extreme-weather-and-preschool-aged-children.
[121] USGS, "Earthquakes", 1986, https://www.usgs.gov/publications/earthquakes-1.

Within this context, St. Lucie County is characterized by *very low local seismicity*. The county's hazard history indicates no recorded soil failures, seismic activity, or sinkhole events, and a damaging local earthquake is considered unlikely.[122] If an event did occur, impacts would be countywide across nearly 600 square miles because of the distribution of people and infrastructure, but the expected shaking intensity would generally correspond to Level 1 of the Modified Mercalli Intensity (MMI) scale as seen in Table 64, "not felt except by a very few under especially favorable conditions."

Table 64: Modified Mercalli Intensity Scale

MMI	Description	Representative Effects
I	Instrumental	Not felt except by very few under especially favorable conditions.
II	Weak	Felt only by persons at rest, especially on upper floors.
III	Slight	Noticeable indoors; hanging objects may swing.
IV	Light	Felt indoors by many, outdoors by few; no significant damage.
V	Moderate	Felt by nearly everyone; small unstable objects displaced.
VI	Strong	Felt by all; some heavy furniture moved; slight structural damage possible.
VII	Very Strong	Negligible damage in well-designed buildings; considerable in poorly built ones.
VIII	Severe	Partial collapse of ordinary structures; chimneys, monuments, and walls fall.
IX	Violent	Considerable damage to substantial buildings; ground cracks; underground pipes broken.
X	Extreme	Most masonry and frame structures destroyed; rails bent.
XI	Catastrophic	Few, if any, masonry structures remain standing; bridges destroyed.
XII	Catastrophic+	Total destruction; ground waves visible; large rock masses displaced.

The county's seismic hazards profile also encompasses sinkholes, a separate geologic hazard related to the dissolution of underlying carbonate rocks. State and federal mapping places St. Lucie County in Area II, where 20 to 200 feet of overlying sand cover reduces sinkhole susceptibility. Sinkholes are rare in the southern part of Florida, and the highest statewide incidence occurs in central Florida and the Big Bend. Where sinkholes do occur in Florida, typical reported sizes are approximately 3 to 4 feet in diameter and 4 to 5 feet deep, though larger features are possible under certain geologic conditions.[123]

Although the probability is low, a significant seismic event could produce cascading effects in St. Lucie County, utility outages, disruptions to surface and air transportation, interruptions to potable water,

[122] St. Lucie County, "Facts and Stats", 2025, https://www.stlucieco.gov/government/facts-stats.
[123] Sinkhole Risk Map: ArcGIS, "Area II", 2025, https://www.arcgis.com/apps/MapTools/index.html?appid=404f2e8dbde44c2baff4a53175e278e7, Data from: Esri, HERE, Garmin, NGA, USGS, NPS | Florida Geological Survey | Esri, TomTom, US Census | FDEP.

wastewater, and telecommunications, and secondary hazards such as fire, flooding, and hazardous materials releases.[124]

Location and Extent

St. Lucie County lies on Florida's Atlantic coast, part of a tectonically stable region far from active plate-boundary faults. This geologic setting contributes to the state's low incidence of earthquakes. The felt earthquakes that affected Florida historically originated far from St. Lucie (e.g., shocks reported near St. Augustine in 1879, Cuba in 1880, Jacksonville in 1893, and Captiva Island in 1948), reinforcing that any shaking in St. Lucie County would most likely result from distant events.

Because there is no identified local earthquake source and no history of damaging earthquakes in the county, the geographic extent of potential shaking is best considered countywide. Impacts would be most significant in areas of concentrated population and infrastructure, particularly Port St. Lucie, Fort Pierce, and St. Lucie Village. The LMS further notes that there have been no recorded soil failures or seismic activity in St. Lucie County, reinforcing the diffuse, low-probability nature of this hazard.

Transportation and utility lifelines that traverse the entire county, such as I-95, the Florida Turnpike, U.S. 1, A1A, and associated bridges over the Indian River Lagoon, form a continuous corridor of exposure rather than discrete hotspots. A regional event, though unlikely, could impact these corridors simultaneously.

Related geologic hazards mapped in the LMS also have a very limited geographic expression locally. As previously noted, sinkhole susceptibility is low, with no recorded sinkhole activity in the county. Accordingly, there are no concentrated seismic or sinkhole hazard zones identified in St. Lucie County. Instead, any effects from distant seismic events would be broadly distributed, with impacts governed by the location of people and critical facilities rather than by mapped local faulting.

EXTENT

St. Lucie County lies in a region characterized by very low seismic activity, consistent with its tectonically stable position.[124] The absence of local earthquakes and mapped faults underpins the understanding of seismic hazards in the area. As noted earlier, historical earthquakes felt in Florida originated from distant locations. These events emphasize that any ground shaking experienced in St. Lucie County is likely to stem from distant seismic sources rather than local geological activity.

Given the lack of identified local earthquake sources and the absence of a history of damaging earthquakes, the geographic extent of potential shaking should be considered on a countywide basis. The most significant effects would likely occur in more densely populated areas such as Port St. Lucie, Fort Pierce, and St. Lucie Village.

Transportation and utility lifelines that traverse the entire county, such as I-95, the Florida Turnpike, U.S. 1, A1A, and associated bridges over the Indian River Lagoon, create a continuous corridor of exposure rather

[124] National Risk Index, "St. Lucie County, FL: Earthquakes." https://hazards.fema.gov/nri/report/viewer?dataLOD=Counties&dataIDs=C12111.

than discrete hotspots. As previously mentioned, a region-wide seismic event could affect these critical corridors simultaneously.

Related geologic hazards also exhibit limited geographic expression in the county. As already described, Area II mapping indicates that 20 to 200 feet of overlying sand reduces sinkhole risk. Sinkholes are rare in the southern part of Florida. Consequently, there are no concentrated seismic or sinkhole hazard zones identified in the county; rather, any effects from distant seismic events would be broadly distributed, with impacts determined primarily by the location of people and critical facilities rather than by local faulting.

JURISDICTIONAL IMPACTS

Although St. Lucie County and its municipalities are located in a region of *very low seismic activity*, all four jurisdictions share indirect exposure to potential ground shaking from distant earthquakes that could be perceptible but rarely damaging. Florida's position on the stable interior of the North American Plate means there are no active or mapped surface faults in the county, and no history of local earthquakes. Nonetheless, planning for seismic hazards remains relevant because even weak regional shaking can affect critical infrastructure and essential services if compounded by secondary effects such as power disruption or soil instability. Specific impacts for each jurisdiction are show in Table 65.

Table 65: Impacts of Seismic Hazards, by Jurisdiction[122]

Participant	Impacts
St. Lucie County	The county as a whole lies in a seismically stable portion of the Florida Peninsula, with *no history of local earthquakes or mapped faults*. Infrastructure such as major highways (I-95, Florida Turnpike, U.S. 1) and essential facilities (Emergency Operations Center, hospitals, water and wastewater treatment plants) would experience *minor, short-duration shaking* only from distant regional events. Potential secondary impacts would be limited to *nonstructural damage* (e.g., ceiling tiles, light fixtures) and temporary interruptions to utilities or communications.
City of Port St. Lucie	As the largest municipality and population center, Port St. Lucie contains the highest concentration of residential and commercial structures that could feel low-intensity shaking. Because development sits atop deep, well-consolidated coastal plain sediments, *liquefaction potential is negligible*. Critical facilities and the City's utility infrastructure are designed for hurricane wind and flood hazards, which incidentally enhance seismic resilience.
City of Fort Pierce	Fort Pierce's urban core and port area rest on similarly stable marine sands and limestones, offering *very low susceptibility to ground failure*. The port and waterfront industrial zones might experience minimal vibration effects on cranes, pipelines, or storage tanks during a distant tremor but are not expected to sustain structural damage. Lifeline systems such as water mains and electrical distribution could experience transient stress but are unlikely to suffer lasting disruption.
Town of St. Lucie Village	This small, low-density community on the Indian River Lagoon barrier system faces *no known seismic risk*. Given its limited built environment, potential effects

Participant	Impacts
	from distant earthquakes would likely be imperceptible aside from light ground motion. Critical concerns are limited to ensuring continued functionality of wells, septic systems, and local access roads should a rare, region-wide tremor occur.

NATIONAL RISK INDEX

While "seismic hazards" is not one of the 10 categories of hazards in the National Risk Index, earthquakes and landslides are included as distinct hazards. Earthquake receives a Very Low score of 46.9, while Landslide is rated Relatively Low at 36.8 (see Figure 51 and Figure 52).[124]

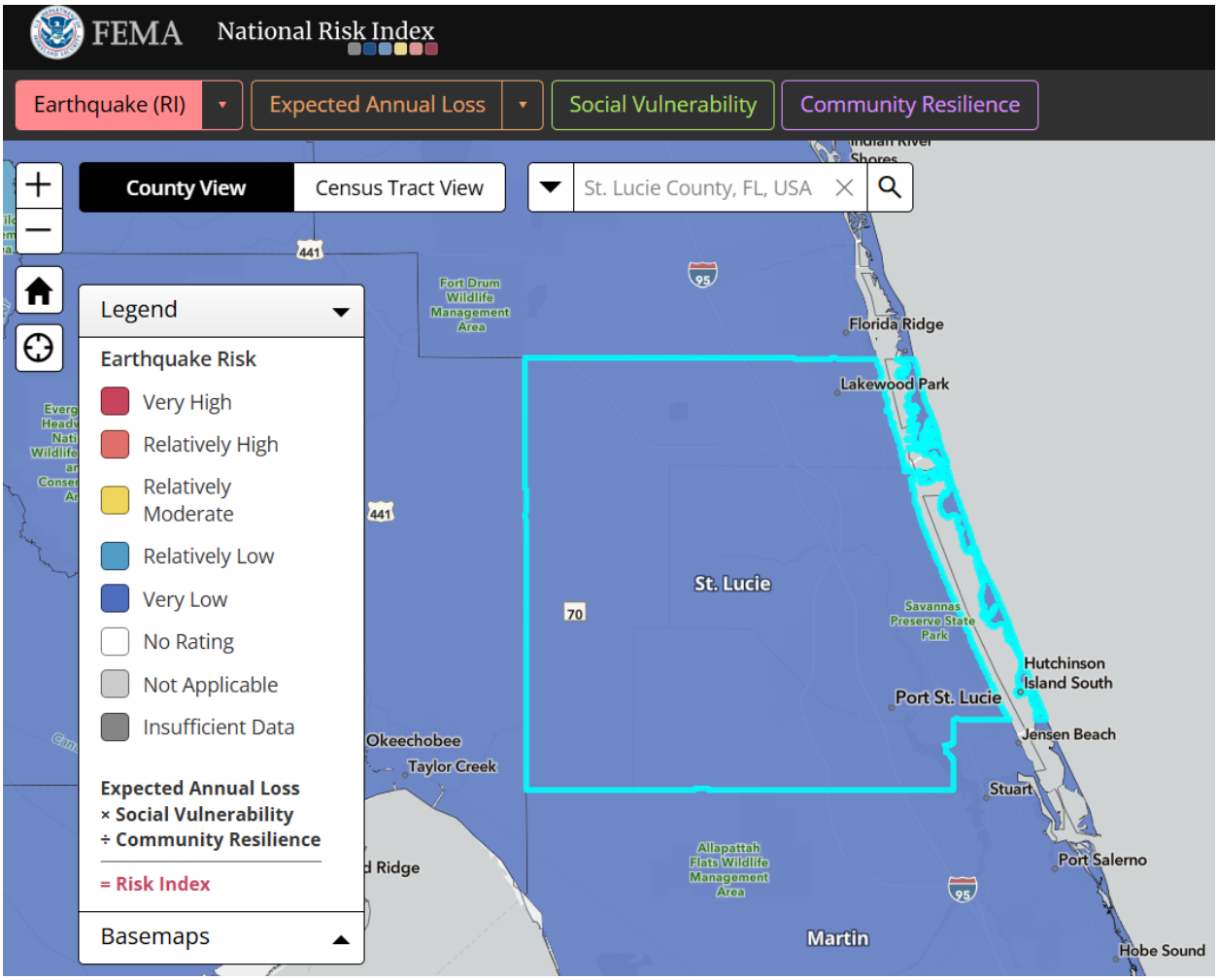

Figure 51: National Risk Index for Earthquake in St. Lucie County

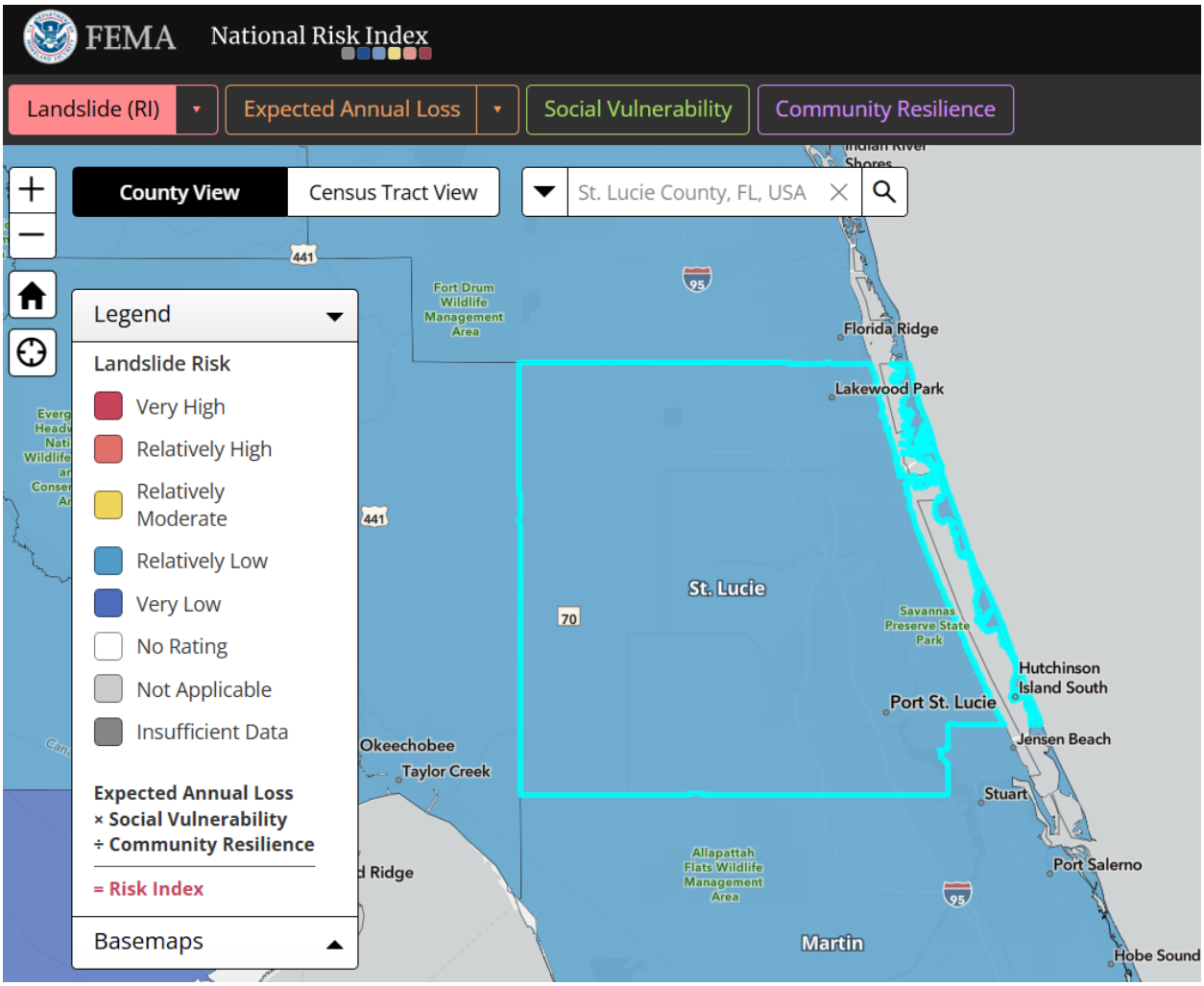

Figure 52: National Risk Index for Landslide in St. Lucie County

Magnitude and Severity

Earthquake severity is expressed through two complementary measures: Magnitude, which quantifies the total energy released at the earthquake's source, and intensity, which describes the observed effects on people, buildings, and natural features at specific locations. While both measures are related, they communicate different dimensions of an earthquake's impact. Magnitude provides a single value for the event, whereas intensity varies by location.[121]

MAGNITUDE

Magnitude is measured using the Moment Magnitude Scale (Mw), which has replaced the older Richter Scale for modern seismological analysis.[125] Magnitude represents the total energy released during fault rupture and is determined from seismic wave data, fault size, and rock rigidity. Because this is a

[125] Geology In, "Moment Magnitude Scale", 2023, https://www.geologyin.com/2023/10/moment-magnitude-scale.html.

logarithmic scale, each whole-number increase represents a 10-fold increase in wave amplitude and roughly 32 times more released energy as shown in Table 66.

Table 66: Earthquake Magnitude Classification

Magnitude (Mw)	Classification	Typical Effects
Less than 3.0	Minor	Generally not felt; detected only by instruments.
3.0–3.9	Very Light	Often felt slightly by some people; no damage.
4.0–4.9	Light	Noticeable shaking of indoor objects; very little damage.
5.0–5.9	Moderate	Can cause damage to poorly constructed buildings near the epicenter.
6.0–6.9	Strong	May cause moderate to severe damage in populated areas.
7.0–7.9	Major	Causes serious damage over large areas.
8.0 or more	Great	Can cause catastrophic, widespread destruction.

SEVERITY

While magnitude measures energy release, intensity captures how strongly the ground shakes and how people and structures respond to that shaking. The Modified Mercalli Intensity (MMI) scale is used to describe observed effects ranging from imperceptible movement to total destruction. Unlike magnitude, which is a fixed value for the event, MMI varies based on distance from the epicenter, local geology, and building characteristics.

St. Lucie County lies in one of the most seismically stable regions in the United States. There are no mapped active or capable faults in the county or the surrounding Treasure Coast region, and no historical record of locally generated earthquakes. Any shaking that could occur in St. Lucie County would result from distant intraplate or regional seismic events (e.g., small magnitude earthquakes occasionally felt in Georgia, Cuba, or the Bahamas).

Under such circumstances, the expected local shaking intensity would likely not exceed MMI Level I or II—*barely perceptible or not felt at all*—as shown in Table 67. Even if stronger regional events were to occur elsewhere in the southeastern United States, modeled ground accelerations for this area are below 0.04 g (less than 4 percent of gravity), well below thresholds for structural or infrastructural damage.

Table 67: Magnitude and Severity of Seismic Activity

Parameter	Expected Range	Interpretation
Anticipated Magnitude (regional source)	Mw less than 4.0	Minor to very light; typically, not damaging.
Potential Local Intensity	MMI I–II	Not felt or weak shaking; no structural impacts.

Parameter	Expected Range	Interpretation
Expected Peak Ground Acceleration	Less than 0.04 g	Insufficient to cause structural or nonstructural damage.
Secondary Hazards (Liquefaction, Landslides, Rupture)	Negligible	No mapped susceptibility zones in the county.

Previous Occurrences

There have been no locally generated earthquakes or earthquake-related FEMA disaster declarations for St. Lucie County; however, residents on Florida's east coast, including the Treasure Coast, have felt shaking from distant regional events, underscoring that perceptible tremors are typically caused by large earthquakes elsewhere in the Caribbean or offshore.

The following regional events were felt in or near the Treasure Coast:[126]

- **Feb 7, 2024 – M4.0 earthquake offshore east of Cape Canaveral (approximately 100 miles offshore):** USGS located a rare M4.0 event offshore of Florida's Space Coast. It was widely felt along the east coast, with no reported damage. Media and U.S. Geological Survey (USGS) reporting confirmed numerous felt reports, and residents on the Treasure Coast also reported shaking.
- **January 28, 2020 – M7.7 earthquake, Caribbean (Jamaica–Cuba):** A major strike-slip event in the Cayman Trough prompted building evacuations in downtown Miami and generated felt reports across Florida. Local press documented USGS "Did You Feel It?" submissions from the Treasure Coast (Vero Beach–Stuart) area. No damage was reported in St. Lucie County.
- **August 14, 2021 – M7.2 earthquake, Nippes, Haiti:** This catastrophic earthquake produced widespread damage in Haiti. In Florida, effects were limited to scattered felt reports, including a single report from Port St. Lucie noted by local media referencing USGS data.
- **August 23, 2011 – M5.8 earthquake, Virginia:** This earthquake, centered near Mineral, Virginia, was felt across a wide area of the East Coast, including Florida. Residents in St. Lucie County reported light shaking, but no damage was reported.
- **January 12, 2010 – M7.0 earthquake, Haiti:** This devastating earthquake caused extensive destruction in Haiti and was felt in Florida, including the Treasure Coast. While there were widespread reports of shaking, no significant damage occurred in St. Lucie County.

There have been no documented sinkhole events in St. Lucie County involving property damage, roadway collapse, or emergency response. Local and state geological data confirm that St. Lucie County remains one of the least susceptible areas in Florida to sinkhole formation due to its geological composition and soil profile.

[126] All Quakes, "Latest Quakes in or Near St. Lucie County, FL.", 2025, https://allquakes.com/earthquakes/usa/florida/saint-lucie.html.

The Florida Geological Survey identifies St. Lucie County in Sinkhole Zone II, characterized by 20 to 200 feet of sand, clay, and shell overlying the limestone bedrock. This deep overburden limits the interaction between groundwater movement and the underlying carbonate rock dissolution, processes that cause true sinkholes in more vulnerable areas such as Hernando, Pasco, Marion, and Sumter Counties.

During this period, the County and its partners report the following:

- No sinkhole-related emergency declarations, insurance claims, or infrastructure failures were reported by the County, municipalities, or the Florida Division of Emergency Management.
- Local monitoring and public works reports documented no incidents of road depressions or ground subsidence attributed to karst activity.
- Occasional minor depressions or settling observed in residential developments were determined to result from drainage, compaction, or construction-related soil settlement, not sinkhole activity.

FEMA DISASTER DECLARATIONS

There are currently no FEMA disaster declarations associated with this hazard.

Probability of Future Conditions

St. Lucie County's probability of damaging seismic activity is very low across all planning horizons. The county is located on the stable interior of the North American Plate, far from active plate-boundary faults. There are no mapped local faults and no history of locally generated earthquakes. Occasional shaking felt in the county has come from distant regional events (e.g., large earthquakes in the Caribbean or rare offshore Florida events), which produced perceptible but non-damaging effects. This pattern is expected to continue through the next planning cycle.

In practical terms, the hazard for St. Lucie is best characterized as "felt but not damaging." If a moderate or large earthquake occurs elsewhere in the region, light shaking may be reported across the Treasure Coast, but intensities would most likely remain in the MMI I–II range (not felt to weak), with no structural impacts. Because there is no local earthquake source, there is no credible scenario in which strong ground motion (e.g., MMI VII or higher) would occur in the county. Several factors help explain and reinforce this low-risk profile:

- **Regional Source–Driven Risk:** The only realistic pathway to felt shaking in St. Lucie County is a distant earthquake (e.g., Cuba/Jamaica Trench, Puerto Rico, Bahamas, or a rare offshore Florida event). These events are infrequent and typically generate low intensities by the time seismic waves reach the county.
- **Secondary Geologic Hazards:** The county's geologic setting—20 to 200 feet of overburden (sand, shell, and clay) above carbonate rock and the absence of known karst features—means liquefaction and sinkhole formation are unlikely. The area is mapped as having low susceptibility, and there have been no documented sinkhole incidents during the 2019–2024 period.

- **Future Environmental and Hydrological Trends:** Future trends do not alter the probability of earthquakes. While extreme rainfall can aggravate landslides in steep terrain, St. Lucie County is a low-relief coastal plain, so weather-related secondary seismic effects are minimal. However, there is a future trend toward intensified precipitation and rising groundwater levels, which could slightly increase the likelihood of localized subsidence or small collapse features in areas with older drainage infrastructure or variable soil compaction.[127] True karst sinkholes remain highly unlikely given the county's deep overburden and geologic composition.
- **Induced Seismicity:** There are no oil or gas fields, geothermal operations, or deep-well injection activities in St. Lucie County known to cause induced seismicity. Therefore, the outlook for induced events remains negligible.

Table 68: Seismic Risk Outlook Planning Interpretation

Horizon	Likely Source of Shaking	Expected Local Intensity	Probability Characterization
0–5 years	Distant regional earthquake (Caribbean/offshore)	MMI I–II (not felt to weak)	Very Low
6–20 years	Distant regional earthquake	MMI I–II	Very Low
21–30 years	Distant regional earthquake	MMI I–II, rarely III in isolated reports	Very Low

Future conditions do not indicate a change in seismic hazard for St. Lucie County. The County will continue to plan for rare, low-intensity shaking from distant events and focus seismic-related preparedness on nonstructural safety measures (e.g., anchoring equipment, securing utilities) and continuity of lifelines, rather than on structural retrofits for strong shaking.

Vulnerability Assessment

Seismic hazards present a very low-probability, low-consequence risk for St. Lucie County.[124] However, because any felt shaking from distant events would be experienced broadly, vulnerability is best understood as countywide, across nearly 600 square miles. The potential for service disruption is possible in all jurisdictions in St. Lucie County, but the areas that are more vulnerable to this are where population and infrastructure are most concentrated: Port St. Lucie, Fort Pierce, and St. Lucie Village.

Available local evidence indicates no recorded local earthquakes, and if shaking is felt, it would most likely occur at the lower end of the MMI scale, Level I (not felt) or Level II (weak). Because there are no mapped local faults, there is no credible scenario for strong, damaging ground motion originating in the county.

St. Lucie County's exposure is countywide, but sensitivity is low, and consequences are expected to be minor under plausible shaking scenarios originating outside the county.

[127] National Water Prediction Service, 2025, https://water.noaa.gov/

IMPACTS TO ASSETS

Given St. Lucie County's very low seismicity, the most credible earthquake scenario is weak, short-duration shaking from a distant event that is felt countywide but not damaging. Under this condition, consequences are concentrated in nonstructural effects (e.g., items toppling, false alarms, precautionary evacuations) and brief service interruptions, rather than structural damage.

Exposure is highest where people and systems are concentrated: Port St. Lucie, Fort Pierce, St. Lucie Village, and along major corridors (I-95, Florida Turnpike, U.S. 1, A1A, bridges over the Indian River Lagoon). The county's 2020 population of approximately 322,000 frames the scale of potentially affected residents even when shaking remains in the MMI I–II range (not felt to weak).[128]

Table 69 provides a summary of the consequences of seismic hazards. It discusses effects on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, and public confidence.

Table 69: Consequence Analysis of Seismic Activity

Sector	Consequence
Public	Most likely impacts include startling sensations and anxiety, brief self-evacuations from multi-story buildings, and minor injuries from falls or unsecured objects (e.g., shelves, light fixtures). Medically dependent residents could be affected by momentary power blips if backup supplies are unavailable.
First Responders	There may be a temporary surge in 911 calls, including reports of shaking, alarm activations, and requests for building checks. However, there is likely to be little or no need for technical rescue. Communications systems may experience congestion, and first responders may need to verify the status of critical facilities and bridges before resuming normal operations.
Continuity of Operations	Precautionary evacuations and post-event safety checks may cause short business or government service interruptions, typically lasting from a few hours to a day. Facilities may activate continuity of operations (COOP) procedures, confirm generator readiness, and conduct nonstructural safety inspections before allowing re-entry.
Property, Facility, and Infrastructure	Structural damage is unlikely. However, credible effects include nonstructural issues such as dislodged ceiling tiles, toppled cabinets, disrupted lab equipment, and affected servers. Automatic system trips may occur, including those involving elevators and chillers. Transportation assets may require visual inspections, traffic signals may reset, and isolated minor water or sewer leaks may occur at joints or valves. Widespread infrastructure failures are not expected.
Environment	There is a low risk of direct environmental impacts. The primary concerns are small, localized spills at fueling or industrial sites and brief wastewater overflows caused by power flickers. Landslides or liquefaction are not expected due to the county's geology and low topographic relief.

[128] Census.gov, "St. Lucie County", https://www.census.gov/quickfacts/fact/table/stluciecountyflorida/PST045224.

Sector	Consequence
Economic Conditions	The primary economic impacts are expected to result from business interruptions, overtime costs for inspections, and the need to secure toppled contents. Supply chains and port or airport functions are expected to resume quickly, with minimal repair costs anticipated.
Public Confidence	A rare felt earthquake event may generate rumors and uncertainty. Clear and coordinated messaging—explaining what occurred, what was inspected, and when services will resume—will help maintain trust and reduce the volume of repeat calls.

IMPACT ON COMMUNITY LIFELINES

Seismic hazards pose a threat to FEMA's community lifelines in St. Lucie County. They are shown in Figure 53.

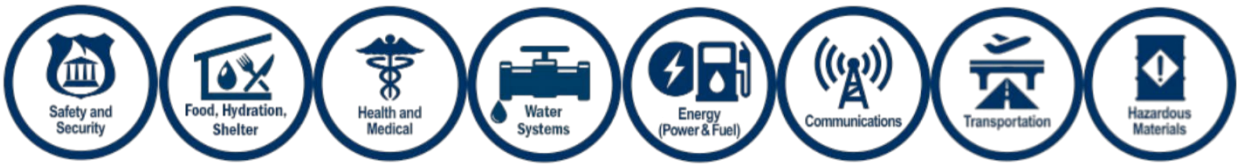

Figure 53: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** A rare, distant earthquake could trigger fire and burglar alarms, brief self-evacuations from multistory buildings, and a short-term spike in 911 calls. Law enforcement and emergency management would prioritize rapid damage reconnaissance and access control for bridges and public buildings, but no sustained disruption to law enforcement or Emergency Operations Center activities is anticipated.
- **Food, Hydration, and Shelter:** Grocery stores, distribution centers, and restaurants may pause operations for safety checks and refrigeration resets, leading to short service interruptions lasting only a few hours. Community shelters are not expected to open for housing; however, facilities may be activated to provide information and device charging if a localized power outage occurs.
- **Health and Medical:** Hospitals, urgent care centers, and Emergency Medical Services would implement drop-cover-hold procedures and conduct quick nonstructural safety checks, such as inspecting ceiling tiles and verifying equipment anchorage. A patient surge would likely consist of minor injuries and anxiety-related complaints. Generators and redundant utilities should ensure continuity of care without disruption.
- **Water Systems:** Water and wastewater plants, storage tanks, and lift stations may experience alarm trips or brief power blips. Utilities would inspect for minor leaks at joints and appurtenances and are expected to restore normal operations quickly. Sanitary sewer overflows are unlikely but could occur at isolated sites if a momentary outage coincides with high flow conditions.

- **Energy (Power and Fuel):** Light shaking can cause automatic protective relays to trip at substations, resulting in short outages and voltage fluctuations before systems are re-energized. Fuel stations that rely on grid power may temporarily suspend pumping until systems are reset. Critical facilities are expected to rely on well-tested standby generators to maintain operations.
- **Communications:** Cellular networks may become congested due to simultaneous calling and increased social media use. Some network equipment may require resets. Public alert and warning systems—delivering clear messages that shaking was felt, inspections are complete, and services are resuming—will help reduce repeat calls and limit the spread of rumors.
- **Transportation**: Transportation agencies would conduct rapid visual inspections of I-95, the Florida Turnpike, U.S. 1, A1A, and bridge crossings over the Indian River Lagoon before lifting precautionary slow orders. Traffic signals may revert to flash mode and require manual resets. Ports and airports are expected to remain operational following brief safety checks.
- **Hazardous Materials**: Structural damage is not expected. The credible risk is small spills from toppled containers at industrial sites, laboratories, fueling stations, or waterfront handling areas. Standard spill control and notification procedures should be sufficient, and no long-term environmental impacts are expected.

IMPACT DUE TO CHANGES IN DEVELOPMENT

Planned growth will increase exposure to rare, distant earthquake shaking primarily by concentrating more people, facilities, and equipment in urbanized areas, not by increasing the underlying seismic hazard, which remains very low for St. Lucie County. The countywide population reached approximately 322,265 in 2020 (including 202,914 in Port St. Lucie, 44,476 in Fort Pierce, and 661 in St. Lucie Village) and is projected to continue rising.[128] As a result, a larger number of residents and businesses could experience MMI I–II "felt but not damaging" shaking when regional events occur.

Several development patterns are especially relevant for seismic planning.[129] In northern St. Lucie County, the buildout of the Towns, Villages and Countryside (TVC) Special Area Plan allows up to 37,500 dwelling units, 5,000,000 square feet of commercial and retail space, and 464 acres of industrial use. As this area develops, more occupants, contents, and utility connections will be present in places that are currently less built out. This increases the *number* of people and systems that could be disrupted by a rare felt event, such as contents falling and alarms tripping, even though no local seismic source is present.

Intensification along major transportation and lifeline corridors, including I-95, the Florida Turnpike, U.S. 1, A1A, and bridges over the Indian River Lagoon, creates longer runs of interconnected assets. These may require precautionary inspections following any felt event, even if no damage is expected.

As water, wastewater, and power infrastructure expand to serve growth areas, additional pumps, lift stations, and control systems introduce more nonstructural points of vulnerability to short power blips or automatic trips from mild shaking. Facility placement and design should emphasize equipment anchorage

[129] St. Lucie County, "Comprehensive Planning", 2025, https://www.stlucieco.gov/departments-and-services/planning-and-development-services/planning-division/comprehensive-planning.

and reliable backup power to avoid cascading service interruptions. Notably, the county's existing vulnerability language already anticipates potential short-term outages for power, water/wastewater, telecommunications, and transportation during rare seismic events.

Finally, development does not meaningfully alter the county's seismic ground-failure susceptibility. St. Lucie County has no recorded soil failures, seismic activity, or sinkhole incidents. Geologic mapping places the county in Area II, with approximately 20 to 200 feet of sandy overburden, conditions that make true karst sinkholes rare in southern Florida.[123]

IMPACT ON POPULATIONS OF FOCUS

- **Low Income Residents:** Low-income populations in St. Lucie County may experience heightened vulnerability during seismic events due to limited resources for emergency preparedness and recovery. Many individuals in this demographic often live paycheck to paycheck, and the average household income for low-income families in the county is around $40,000, which can hinder their ability to stockpile essential supplies or secure adequate housing.[128] In the event of minor shaking, the potential for displacement increases, as many lack insurance coverage for damages.
- **Elderly Population (Fixed Income)**: St. Lucie County's elderly population, which comprises approximately 20% of the county's residents, often lives on fixed incomes that may average around $25,000 annually.[128] This financial constraint can limit their ability to prepare for emergencies, including securing necessary supplies or making home safety modifications. With many elderly residents living alone, the risk of injury during an earthquake increases due to physical limitations that can impede quick responses.
- **Low Lying Areas:** Residents in low-lying areas of St. Lucie County may face increased risks during seismic events due to their susceptibility to secondary hazards like flooding. Even minor seismic activity could exacerbate existing drainage issues, especially in areas where the average elevation is less than 10 feet above sea level. This can lead to localized flooding, particularly if a significant rainfall event coincides with ground shaking.
- **Substandard Mobile Homes:** Individuals living in substandard mobile homes are particularly vulnerable to the impacts of seismic events. These structures, often not built to modern safety codes, face a high risk of nonstructural damage during even minor ground shaking.

Severe Thunderstorms and Lightning

Definition

The NWS defines a severe thunderstorm as a thunderstorm accompanied by one or more of the following phenomena: Hail 1 inch in diameter or larger, winds gusting in excess of 58 mph, and/or a tornado. Severe weather can include lightning, tornadoes, damaging straight-line winds, and large hail. Most individual thunderstorms only last several minutes; however, some can last several hours. Long-lived thunderstorms are called supercell thunderstorms. A supercell is a thunderstorm that has a persistent

rotating updraft. This rotation maintains the energy release of the thunderstorm over a much longer time than typical pulse-type thunderstorms, which occur in the summer months. Supercell thunderstorms are responsible for producing the majority of severe weather, such as large hail and tornadoes.[130]

Severe thunderstorms are ranked on a scale of 0 (no risk) to 5 (high risk), indicating the probability of a thunderstorm occurring in the forecast area. Downbursts are also occasionally associated with severe thunderstorms. A downburst is a strong downdraft resulting in an outward burst of damaging winds on or near the ground. Downburst winds can produce damage similar to a strong tornado. Although usually associated with thunderstorms, downbursts can occur with showers too weak to produce thunder.[130] Strong squall lines also can produce widespread severe weather, primarily very strong winds and/or microbursts. A squall line is a linearly oriented convection zone characterized by a sudden, violent gust of wind, often with rain or snow.

Hail is a showery precipitation in the form of irregular pellets or balls of ice greater than 0.20 inches in diameter falling from a cumulonimbus cloud. Hailstones are formed when updrafts carry raindrops up into the highest parts of the cloud where supercooled liquid droplets collide, falling to the ground when the weight is too much for the cloud to carry. The larger the updraft is, the higher these droplets may travel and the longer they remain surrounded by droplets, resulting in larger hailstones.

Hail is generally measured by its diameter, with common household objects or foods used to describe its size. The "Hail Size Comparison Chart" in Figure 54 describes hail from 0.25 inches to 4.00 inches in diameter, with the following items (in order) to describe it: Penny/dime, quarter, half dollar, golf ball, pool ball, baseball, softball and CD (although many use a grapefruit to describe hail larger than a baseball).[131]

When hail is in its smallest form as pellets less than 0.25 inches in diameter, it is often termed "pea-size." The term "gorilla hail" has recently been coined on the social media side of meteorology to loosely describe hail larger than a grapefruit in diameter—*so* large that the stones may need two hands to hold them. These "gorilla" hailstones occur mostly in the plains, where intense tornadoes and supercells are most common, but they have occurred in severe thunderstorms in Florida.[132]

[130] National Weather Service (NWS), "Severe Weather Definitions," 2025, https://www.weather.gov/bgm/severedefinitions.
[131] NWS, "Hail," 2025, https://www.weather.gov/ffc/hail.
[132] Green Matters, "When Hail Goes Wild: Everything You Need to Know About Gorilla Hail Storms," 2024, https://www.greenmatters.com/weather-and-global-warming/gorilla-hail.

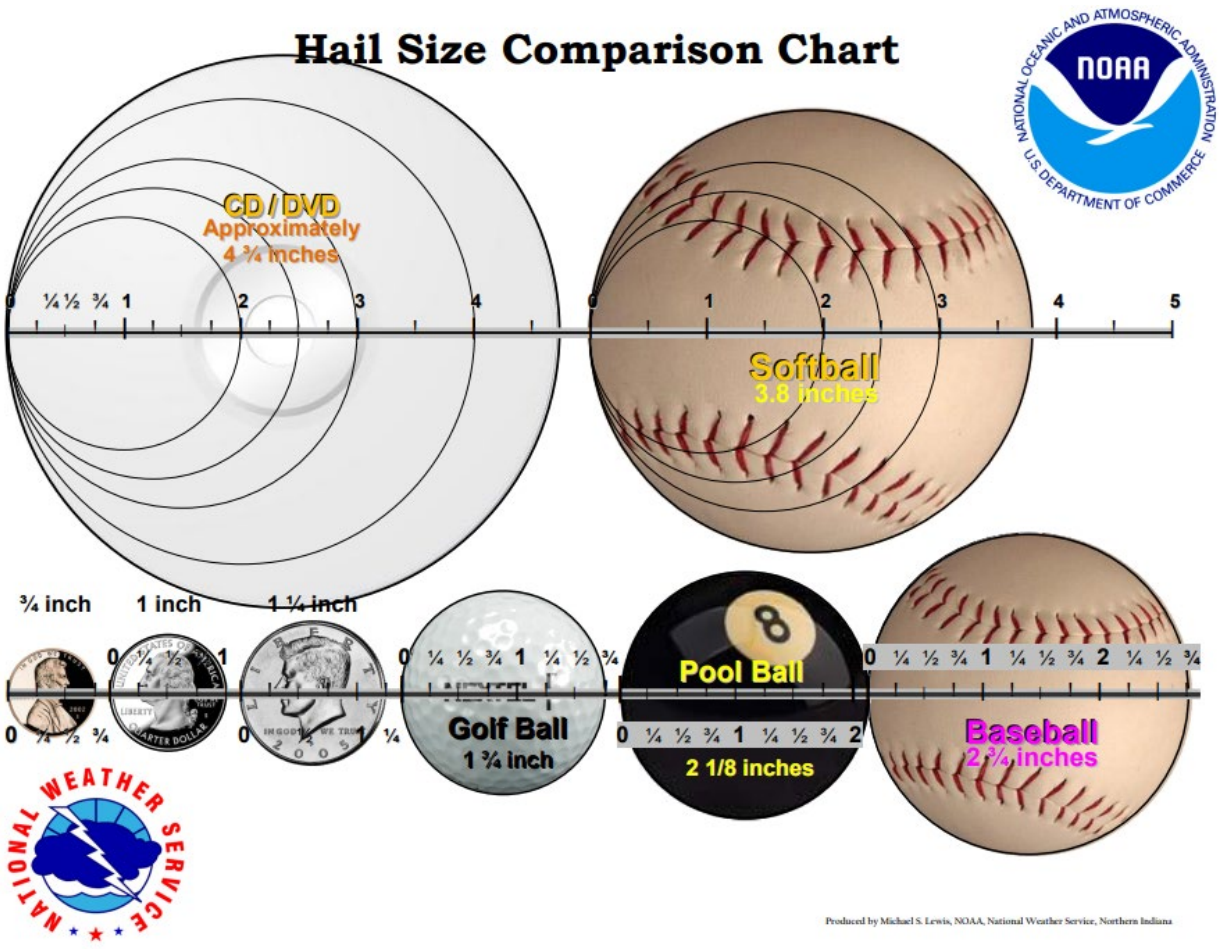

Figure 54: Comparison Chart for Sizes of Hail

Damaging winds that do not reach tornado intensity and structure are more common in severe thunderstorms than actual tornadoes. In fact, many confuse damage produced by "straight-line" winds and often erroneously attribute it to tornadoes. Table 70 is the Beaufort Wind Scale, used by the NWS to describe wind force and effects. Wind gusts above 58 mph (about 50 knots), help classify a storm as severe. There are 13 levels of force on the Beaufort Scale, from 0 (calm) to 12 (hurricane-force). Winds above 74 mph (64 knots) exceed Beaufort Scale level 12 and are classified using the Saffir-Simpson Hurricane Scale. When winds gust higher than level 12 at 74 mph (64 knots), the Saffir-Simpson Hurricane Scale is then used, as hurricane-force winds can reach speeds above 200 mph.

Table 70: Beaufort Wind Scale[133]

Force	Wind (knots)	WMO Classification	Appearance of Wind Effects	
			On the Water	On Land
0	Less than 1	Calm	Sea surface smooth and mirror-like	Calm, smoke rises vertically
1	1–3	Light Air	Scaly ripples, no foam crests	Smoke drift indicates wind direction, still wind vanes
2	4–6	Light Breeze	Small wavelets, crests glassy, no breaking	Wind felt on face, leaves rustle, vanes begin to move
3	7–10	Gentle Breeze	Large wavelets, crests begin to break, scattered whitecaps	Leaves and small twigs constantly moving, light flags extended
4	11–16	Moderate Breeze	Small waves 1–4 ft, becoming longer, numerous whitecaps	Dust, leaves, and loose paper lifted; small tree branches move
5	17–21	Fresh Breeze	Moderate waves 4–8 ft, taking longer form, many whitecaps, some spray	Small trees in leaf begin to sway
6	22–27	Strong Breeze	Larger waves 8–13 ft, whitecaps common, more spray	Larger tree branches moving, whistling in wires
7	28–33	Near Gale	Sea heaps up, waves 13–20 ft, white foam streaks off breakers	Whole trees moving, resistance felt walking against wind
8	34–40	Gale	Moderately high (13–20 ft) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks	Whole trees in motion, resistance felt walking against wind
9	41–47	Strong Gale	High waves (20 ft), sea begins to roll, dense streaks of foam, spray may reduce visibility	Slight structural damage occurs, slate blows off roofs
10	48–55	Storm	Very high waves (20–30 ft) with overhanging crests, sea white with densely blown foam, heavy rolling, lowered visibility	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	56–63	Violent Storm	Exceptionally high (30–45 ft) waves, foam patches cover sea, visibility more reduced	–

[133] NWS, "Beaufort Wind Scale," https://www.weather.gov/mfl/beaufort.

Force	Wind (knots)	WMO Classification	Appearance of Wind Effects	
			On the Water	On Land
12	64+	Hurricane	Air filled with foam, waves over 45 ft, sea white with driving spray, visibility greatly reduced	–

Although lightning frequency does not define a severe storm, lightning is most common and intense during severe thunderstorms due to increased convective activity. Florida is the lightning capital of the United States, mainly due to its geography. The very elements that make the state a great place for outdoor activities, warm temperatures, and plenty of water also make the environment primed to produce thunderstorms, which generate lightning. Lightning is the most lethal component of thunderstorms. As a thunderstorm grows, electrical charges build up in the cloud, and oppositely charged particles gather at the ground below. The attraction between positive and negative charges quickly grows strong enough to overcome the air's resistance to electrical flow. The opposite charges connect and complete the electrical circuit. For cloud to ground lightning, charges then surge upward from the ground at nearly one-third the speed of light and produce a bright flash of light.

Forecasters cannot pinpoint the exact time or location of a lightning strike, as strikes can occur far away from the actual storm. However, lightning forms when opposite electrical charges build up, which is most often just before, during, or just after a thunderstorm. There have also been some cases where lightning occurs during volcanic eruptions, extremely intense forest fires, and surface nuclear detonations when extreme energy and charge separation exist.[134]

There are a few different types of lightning, including cloud-to-ground (CG), intra-cloud (IC), and cloud-to-cloud (CC). A common misconception is the existence of "heat lightning," which is simply IC or CG lightning that occurs far from the observer or storm itself, too far away for thunder to be heard.[135]

Cloud-to-Ground Lightning: CG lightning is the most dangerous type of lightning, responsible for most injuries, deaths, and fires (see Figure 55). A negative charge zigzags downward in a fork-like pattern called a "stepped leader," meeting positively charged "streamer channels" from the ground. This connection produces a bright strike that travels about 60,000 miles per second back toward the cloud and heats the surrounding air to approximately 50,000°F. In most cases, it is a negative "stepped leader" that begins the process downward, but it can occur in reverse, where a positive leader initiates the process. CG lightning tends to strike the tallest objects it can, such as trees, power poles, and buildings, but it can strike people if they are not protected.

[134] National Severe Storms Laboratory (NSSL), "Severe Weather 101– Lightning," 2025, https://www.nssl.noaa.gov/education/svrwx101/lightning/.
[135] NSSL, "Lightning Types," 2025, https://www.nssl.noaa.gov/education/svrwx101/lightning/types/.

Figure 55: Cloud-to-Ground Lightning Flash[135]

Intra-Cloud Lightning: Flashes that remain in the cloud and do not meet the ground represent IC lightning (see Figure 56). At times these IC flashes have visible channels that extend outward into the air (called cloud-to-air [CA] lightning) but still do not meet the ground. Sheet lightning is an IC flash that lights up as a sheet of brightness in the cloud.

Figure 56: Intra Cloud Lightning[135]

Cloud-to-Cloud Lightning: Lightning that travels from one cloud to another, without touching the ground, is CC lightning (see Figure 57). Spider lightning consists of long horizontal flashes on the underside of stratiform clouds.

Figure 57: Cloud-to-Cloud (Spider) Lightning[135]

When a severe thunderstorm approaches, the NWS will issue one of the following two advisories; however, several other advisories, such as an Extreme Wind Watch or Warning or a Flash Flood Watch or Warning, may occur due to the impacts of a severe storm:[136]

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

There are no independent advisories for lightning, as the hazard of lightning is included under severe thunderstorm conditions.

Location and Extent

Severe thunderstorms, including dangerous lightning, high winds, heavy rain, and hail, can occur anywhere throughout St. Lucie County. The County contains more than 3 miles of Atlantic Ocean coastline on the eastern side of Florida. This close proximity to the ocean can increase the likelihood and intensity of severe thunderstorms in all jurisdictions, as warm ocean waters can add heat and moisture to the

[136] National Weather Service (NWS), "Severe Weather Definitions," 2025, https://www.weather.gov/bgm/severedefinitions.

atmosphere, forming a supercharged, more intense storm.[137] All parts of the County share the humid Florida climate that produces severe thunderstorms year-round.

EXTENT

Severe thunderstorms are ranked on a scale from 0 (no risk) to 5 (high risk), indicating the probability of a thunderstorm occurring in the forecast area (see Figure 58).

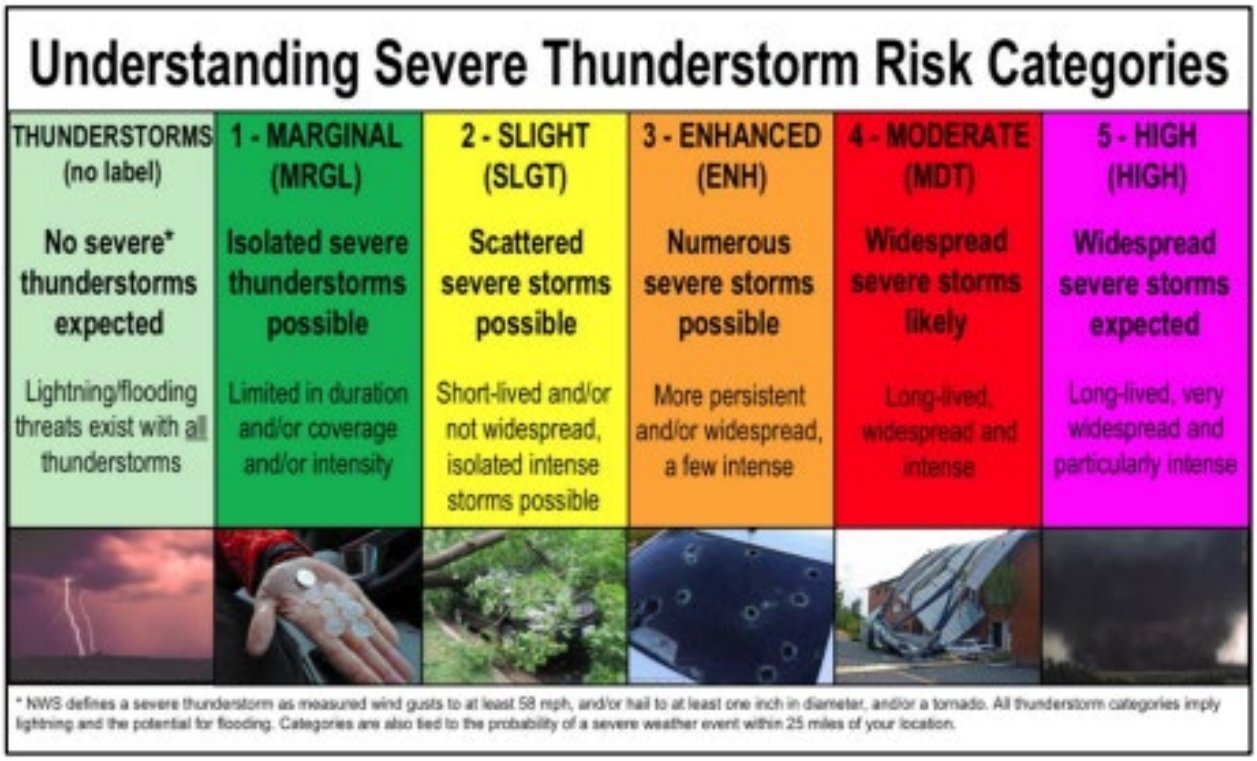

Figure 58: Categories of Risk of Severe Thunderstorms[130]

JURISDICTIONAL IMPACTS

The major jurisdictions in St. Lucie County, such as the cities of Port St. Lucie, Fort Pierce, and the Town of St. Lucie Village, and the unincorporated areas of the County, have relatively similar severe storm damage and operational impacts. High winds, hail, flooding, and lightning strikes all impact the entire County. Table 71 describes the minor differing characteristics between the jurisdictions, which are solely based on development, population, amount and type of infrastructure in each community, the risk of severe storm and lightning impacts is consistent throughout St. Lucie County.

[137] Ocean Learning Hub, "How Does the Ocean Affect Storms?" 2025, https://www.whoi.edu/ocean-learning-hub/ocean-facts/how-does-the-ocean-affect-storms/.

Table 71: Jurisdictions and Hazard Impacts

Participant	Impacts
St. Lucie County	Severe thunderstorms and lightning can cause extensive damage and pose a threat to human life throughout St. Lucie County. The County includes many residences, recreational areas such as state parks and beaches, tourist areas such as shopping districts and resorts, and the Treasure Coast International Airport, all of which are vulnerable to damage from wind, hail, heavy rain, and lightning during a severe storm. The open beach areas and golf courses increase the threat of lightning to human life. The physical damage may cause costly repairs and business closures, resulting in economic challenges for the County. Severe storms and lightning can also lead to environmental challenges, as increases in tree damage and debris can damage wildlife habitats or release unwanted chemical pollutants. Winter residents and tourists may also refrain from the area after damage or when oncoming storms are likely, hurting the community economically and socially.
City of Port St. Lucie	The City of Port St. Lucie has a dense population in a largely developed area, leaving it more vulnerable to the impacts of severe storms and lightning. The city contains many residential areas such as homes, tourist rentals, and senior living centers, as well as 3 large hospitals, some shopping districts, and large golf courses, all of which are at risk of extensive damage from severe thunderstorms and lightning. These impacts are similar to all impacts for St. Lucie County (listed in the previous row); however, with the St. Lucie River running through Port St. Lucie, flooding impacts from heavy rain are more likely in this specific area.
City of Fort Pierce	The City of Fort Pierce also contains many residential homes, hotels, and many recreational areas such as beaches, parks, and golf courses, as well as a large hospital. Impacts are similar to all throughout the county, but the critical infrastructure poses a significant operational risk. Damage to beach areas and local businesses may also cause costly repairs and loss of revenue due to closures or tourists refraining from visiting after major damage.
Town of St. Lucie Village	The Town of St. Lucie Village is a small community of residential homes, government buildings, shops, marinas, and beaches. Due to the small nature of St. Lucie Village, any economic, social, or environmental impact can be more devastating than its neighboring jurisdictions, as there are fewer backup critical facilities to rely on. Physical damage to homes and shopping districts from severe thunderstorms and lightning is similar to that of St. Lucie County and the jurisdictions listed above.

NATIONAL RISK INDEX

The NRI has a relatively moderate rating score of 80.5 out of 100 for lightning in the County of St. Lucie. There are multiple hazards in the NRI dashboard that exist under severe storm conditions. The NRI lists a relatively moderate score of 73.4 for strong wind, which is a large indicator that a storm is severe. There is a relatively moderate score of 78.1 and 93.0 for coastal and riverine flooding, respectively, which are common hazards induced by severe storms. Lastly, hail, which occurs during many severe storms, is listed

as a very low risk, scoring 16.7. Although hail often occurs in severe thunderstorms, it is generally a short occurrence in a small part of the storm, so the likelihood of hail occurring in one single place, such as St. Lucie County, and causing a notable hazard is low compared to the number of severe thunderstorms that pass through the area.[131] Many severe thunderstorms that pass through may produce hail farther west into the state, or east into the ocean as they move.

Overall, St. Lucie County has a relatively high risk Index for all hazards compared to the rest of the United States; it is in the 98.31 percentile, with a relatively high expected annual loss and social vulnerability, and relatively moderate community resilience.[138]

Magnitude and Severity

St. Lucie County can experience anywhere from marginal to high risk severe storms at any time of day during any time of the year. The warmer months, from May to October, have the highest likelihood of high-risk storms, but often have long stretches of daily (or even multiple times in one day) marginal to enhanced thunderstorms when the hot summer humidity is at its highest. During September and October, tropical systems are the most likely to occur at their most intense level, which can spawn small severe thunderstorms and lightning as well. In the cooler months from November to April, high risk severe storms are less likely; the air tends to be drier and cooler, but marginal to enhanced storms still occur when the environment is right.[139]

Historic Events

Throughout the past five years, there have been numerous severe thunderstorm and lightning events with major impacts. These include 28 hail, lightning, and high wind events that were induced by a severe thunderstorm. The maximum hail recorded in this period was 2 inches in diameter, nearing baseball size. The maximum thunderstorm wind was 79 mph (69 knots). Only one event caused a death, a lightning event in Port St. Lucie in which a 41-year-old man was killed on a construction site. Florida is the lightning capital of the nation, so there are often many impacts throughout the County, including physical harm and fires, such as two major brush fires in May and October of 2025. Overall, these 28 events resulted in $6,750 in property damage (see Table 72).

[138] National Risk Index (NRI), "St. Lucie County," 2025, https://hazards.fema.gov/nri/map.
[139] Florida Climate Center FSU, "Data: 1991–2020 Normals," 2020, https://climatecenter.fsu.edu/products-services/data.

Table 72: Severe Thunderstorms and Major Lightning Events in St. Lucie County[140]

Date	Name	Description
4/5/2019	Hail	An area of low pressure over the mid-Atlantic caused moisture to surge across east-central Florida and instability in the atmosphere increased as a result of cold temperatures in the middle atmosphere. As showers and thunderstorms developed, a few tapped into the cold temperatures and instability and became strong to severe. Hail up to golf-ball size fell in Port St. Lucie as the storms moved southeast along the mainland coast.
4/19/2019	Thunderstorm Wind	A strong cold front moved across central Florida producing several reports of damaging winds. A powerful storm system was moving across much of the Southeastern U.S. as high amounts of instability and moisture aided in the development of numerous thunderstorms along a cold front. Winds just off the ground were strong—in excess of 60–70 mph—and the severe thunderstorms that developed tapped into these strong winds and brought them down to the surface. As the line of strong to severe storms moved into Lake County, one severe storm produced wind damage along the Florida Turnpike. Later in the day, another severe storm produced wind damage in St. Lucie County, while a different severe storm produced strong winds at the Cape in Brevard County. Additionally, lightning struck a boat on the Indian River near Cocoa causing it to sink.
6/13/2019	Thunderstorm Wind	Central Florida remained with southwest to west winds as deep moisture moved into the area from the Gulf of Mexico. A weak surface front moved into the area from the north, and combined with daytime heating, ample moisture and a weak disturbance in the middle atmosphere helped to fuel numerous showers and thunderstorms across east-central Florida. These showers and storms first developed on the western side of the peninsula along and ahead of the west coast sea breeze. As these storms pushed east and interacted with the east coast sea breeze two of those storms became severe. One severe storm in Brevard produced wind damage in northeast Palm Bay, while another severe storm in St. Lucie County produced strong winds along the coast.
4/26/2020	Hail	Two severe thunderstorms produced quarter-sized hail in Indian River, southern Brevard, and St. Lucie Counties.
5/21/2020	Hail	Numerous severe thunderstorms produced hail across much of east-central Florida. Very large hail, up to 3 inches, occurred in Seminole

[140] National Centers for Environmental Information (NCEI), "Severe Storms Database," 2025, https://www.ncei.noaa.gov/stormevents/listevents.jsp?eventType=%28C%29+Hail&eventType=%28C%29+Lightning&eventType=%28C%29+Thunderstorm+Wind&beginDate_mm=01&beginDate_dd=01&beginDate_yyyy=2019&endDate_mm=12&endDate_dd=31&endDate_yyyy=2024&county=ST.%2BLUCIE%3A111&hailfilter=0.00&tornfilter=0&windfilter=000&sort=DT&submitbutton=Search&statefips=12%2CFLORIDA. Note: Hail, lightning, and thunderstorm wind are all hazards listed in the NCEI Severe Storms database and can occur during a severe storm; however, there are limitations to whether they actually occurred during a severe thunderstorm, tropical storm, or hurricane.

Date	Name	Description
		County. This ties the size of the largest hail ever documented in east-central Florida.
5/27/2020	Lightning	A 41-year-old man was killed in Port St. Lucie after being struck by lightning at a construction site.
4/11/2021	Thunderstorm Wind	A squall line associated with a mesoscale convective system moved across all of central and south Florida. One storm produced large hail in Orange and Seminole Counties, while a line of severe thunderstorms produced very strong wind gusts along the Treasure Coast, and wind damage in Martin County.
1/10/2022	Hail	Scattered thunderstorms moved from interior south-central Florida to the Treasure Coast. One storm became severe as it moved into St. Lucie County, where it produced ping-pong-sized to two-inch hail that resulted in damage to numerous vehicles.
3/12/2022	Thunderstorm Wind	A squall line moved across east-central Florida ahead of a strong cold front. A few storms in the main line of thunderstorms became severe, producing wind damage in Indian River and a very strong wind gust in St. Lucie County.
5/20/2022	Hail	A thunderstorm that developed along the sea breeze became severe as it moved north into St. Lucie County, where it produced hail.
6/9/2022	Thunderstorm Wind	Scattered afternoon thunderstorms developed along the east coast sea breeze and other outflow boundary collisions. One such collision occurred over St. Lucie County that rapidly led to the development of a severe thunderstorm over Port Saint Lucie. This storm produced wind damage and an EF0 tornado.
4/16/2023	Hail	Strong thunderstorms produced golf-ball-sized hail, gusty winds, and a tornado along the Brevard and Treasure Coasts.
4/24/2023	Hail	A strong thunderstorm pushing offshore of the St. Lucie County coast produced severe hail.
4/26/2023	Thunderstorm Wind	Severe storms moving offshore from the Brevard and Treasure Coasts produced large hail and caused wind damage.
7/23/2023	Thunderstorm Wind	A line of thunderstorms pushing offshore produced tree damage in Brevard and St. Lucie Counties.
5/19/2024	Hail	Scattered thunderstorms developed across east-central Florida during the afternoon and evening hours. One storm intensified as it moved across portions of the Treasure Coast and produced hail in parts of St. Lucie County, with minor localized impacts reported.

FEMA DISASTER DECLARATIONS

There are currently no FEMA disaster declarations associated directly with this hazard.[141]

Probability of Future Conditions

The probability of future thunderstorms with strong winds, hail, and lightning, based on hazard history, is high. According to the Florida Climate Center, Florida experiences about 100 days of thunderstorms annually. With increases in global and sea surface temperatures, evaporation in the atmosphere is rising, leading to changes in weather patterns and more frequent rainfall and storms.[142] It is likely that the rate and severity of severe storms and lightning will continue to increase in the future. All of St. Lucie County is likely to experience greater frequency and severity of severe storms. There is no major atmospheric difference across the county that would make one location more prone to severe thunderstorms; some storms are large enough to affect the entire county at once.

Vulnerability Assessment

St. Lucie County and the other jurisdictions in the planning area are all vulnerable to severe thunderstorms and lightning. Every asset in the community is at risk of some impact because it relies on structural integrity that may be lost due to high winds, hail damage, or water damage. Additionally, most resources depend on electric power or fuel, access to which is often lost during a severe storm and lightning event.

The entire county, whether it is a coastal or inland jurisdiction, shares the same risk of severe storms and lightning. Differences in potential impacts from severe thunderstorms and lightning across jurisdictions primarily reflect variations in asset concentration, population density, and the distribution of critical facilities. Jurisdictions with fewer facilities and limited redundancy may experience localized service disruptions during storm events, while jurisdictions with higher population and development density may face broader exposure due to the greater concentration of built assets and infrastructure. These factors influence the scale and types of impacts that may occur during severe weather events but do not indicate relative levels of preparedness or effectiveness among jurisdictions.

IMPACTS TO ASSETS

Table 73 provides a summary of the consequences of severe thunderstorms and lightning. It discusses effects on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, and public confidence.

[141] Although lightning and severe thunderstorms may occur during major tropical storms and hurricane events, the data is not broken out that way, so it is not possible to distinguish them separately.
[142] Environmental Defense Fund, "Extreme Weather Is Getting a Boost from Climate Change," 2025, https://www.edf.org/climate/climate-change-and-extreme-weather.

Table 73: Consequence Analysis for Severe Thunderstorms and Lightning

Sector	Consequence
Public	• Severe thunderstorms and lightning may cause damage to homes or displace families, necessitating temporary shelter and housing. • Utility interruptions may cause disruptions to daily life and work. • Hail from severe thunderstorms may cause injury to people and pets.
First Responders	• Communication disruptions may occur when power loss and increased demand shut down communication lines to and from first responders, delaying response times and reducing service effectiveness. • Transportation disruptions may occur when vehicles and roadways are damaged or blocked by debris or floodwater, reducing access for first responders. • Resource disruptions may occur when a surge in emergency calls extends response times and leads to a lack of available equipment and aid. • Social disruptions may occur when exposure to traumatic events results in stress, anxiety, and potentially post-traumatic stress disorder (PTSD). • Economic disruptions may occur when costly damage to homes, commercial buildings, and infrastructure leads to loss of income for owners and employees due to damage or power loss at properties and businesses.
Property, Facility, and Infrastructure	• Residential and commercial buildings may sustain extensive damage. • Roads and bridges may be damaged. • Power lines may be downed and water supply systems disrupted, leading to outages in electricity, water, and communication services that affect daily life and emergency services. • Roads, bridges, and public transportation systems may be damaged, hindering mobility and impacting evacuation and response efforts.
Environment	• Vegetation may be destroyed, leading to soil erosion and disrupting flora and fauna habitats. • Farmland may be damaged and crops lost. • Extensive debris may overwhelm waste management systems, leading to increased pollution of land and water.
Economic Conditions	• Economic disruption may occur due to costly damage to homes, commercial buildings, and infrastructure, as well as loss of income for owners and employees from damage or loss of power to properties and businesses. • Local economies and businesses may experience strain due to costly repairs and reconstruction efforts. • A surge in insurance claims can strain insurance resources, potentially raising premiums. • Destruction of roads, bridges, and utilities may require substantial public resources for repairs, diverting funds from other community needs. • Increased demand on emergency services may strain personnel and equipment, requiring additional funding to maintain adequate response.

Sector	Consequence
	• Tourism may decline as potential visitors avoid the area, impacting local hospitality and service industries. • Local governments may face increased spending on emergency services, infrastructure repair, and disaster relief initiatives, which can impact future budgets. • The psychological toll on residents can lead to increased healthcare costs and reduced workforce productivity as residents cope with trauma and stress.
Public Confidence	• The burden of recovery and rebuilding for local governments and taxpayers can be stressful. • Exposure to traumatic scenes may result in stress, anxiety, and potentially PTSD. • Public coverage of severe storms and lightning can shape public perception and confidence, either positively or negatively, based on how events are reported.

IMPACT ON COMMUNITY LIFELINES

Severe storms and lightning pose a threat to FEMA's Community Lifelines in St. Lucie County. This hazard can cause major damage to property and vehicles, knock out power, and cause flooding on roadways and runways that all community lifelines depend on (see Figure 59). It is crucial to prepare mitigation actions to reduce the risk of impact on these resources, so that St. Lucie County can continue its operations, especially when the public needs the most help.

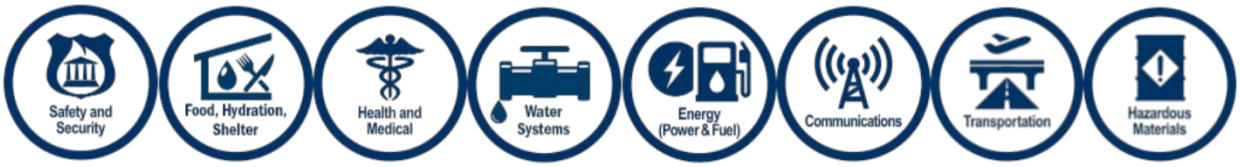

Figure 59: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** Wind and hail may cause power outages and/or road blockages, which can impact emergency vehicles and equipment, rendering them inoperable. Power outages can hinder crucial communication sources needed during a safety rescue or security breach.
- **Food, Hydration, and Shelter:** Food supply logistics may be impacted by severe storms, while power outages can cause food supplies to spoil. Hydration can be impacted significantly, as flooding and power outages can shut off water access and lead to boil water advisories, making it difficult to obtain safe drinking water. All places of shelter from a storm—including homes, community buildings, and even local restaurants and stores—are at risk of damage from a severe thunderstorm or lightning. Wind and hail can completely destroy buildings and knock out power, which makes basic survival difficult and exposes people, pets, belongings, and equipment to the outdoor elements.

- **Health and Medical**: As with safety and security, emergency medical personnel and hospitals are at risk from wind, hail, and water damage, as well as power outages that reduce their capabilities. Emergency medical calls may also cause staffing shortages.
- **Water Systems:** When flooding, power outages, and damage to facilities occur, water systems can shut down completely. This can stop the flow of safe water, back up pipelines, and shut down treatment facilities. Where water is still available, boil water advisories may be issued, causing additional stress on households and businesses.[143]
- **Energy and Fuel:** Critical facilities such as power plants and gas stations are highly vulnerable to severe storms and lightning. A single power outage or damage from winds, hail, lightning, or flood can cause a gas station to shut down, depleting a community resource and putting more pressure on other fuel stations. Additionally, fuel and energy prices tend to increase in the wake of a severe storm as demand increases, and transportation of oil and gas becomes more difficult.[144]
- **Communications:** Communication lines, especially those that depend on power and cell towers, are at major risk during a severe storm or lightning event.[145] Battery-powered devices such as cell phones may be difficult to use if power sources are unable to charge them and provide Wi-Fi, or if cell towers are down, preventing reliable access to calls. Radio communications (like "Walkie-Talkies") are the most reliable during this time but still face challenges with signal interference and must be charged through a power source or have replacement batteries to operate. Furthermore, attempted use of all communication lines increases greatly during a hazard such as a severe storm, leaving already stretched resources with an even higher demand.[146]
- **Transportation:** All types of transportation in St. Lucie—including, but not limited to, personal cars, rideshares, public trains and buses, boats, airplanes, and bikes—are vulnerable to severe storms and lightning. The roadways, runways, rail systems, and bodies of water may become hazardous during or after a severe thunderstorm or lightning strike due to increases in wind, rain, surge, and hail. Not only water, but also dangerous debris may fall into these areas, blocking these pathways from use. Additionally, using any of these transportation methods during a severe storm can be particularly dangerous, as visibility is reduced, winds can make it very difficult to drive or fly, ground surfaces become slippery or flooded, and flying debris or hail may strike vehicles at any time. These objects may also render any vehicle inoperable if the damage is severe enough. Public transportation is known to shut down during these events, especially airports and boat transport, as the elements do not allow safe travel. The Treasure Coast International Airport is likely to shut down briefly during severe storms and lightning events, as it is unsafe to fly during these conditions, causing delays and disruptions of travel for many.

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[143] St. Lucie County, "St. Lucie County Stormwater Management Plan," 2025, https://www.stlucieco.gov/departments-and-services/st-lucie-county-stormwater-management-plan.
[144] Jim Foerster, "How Extreme Weather Disrupts U.S. Oil and Gas Sector," October 9, 2023, *Forbes*, https://www.forbes.com/sites/jimfoerster/2023/10/09/extreme-weather-disrupts-us-oil-and-gas-sector/.
[145] Cybersecurity & Infrastructure Agency, "When Disaster Strikes, Emergency Communicators Need to Get Connected and Stay Connected," April 28, 2023, https://www.cisa.gov/news-events/news/when-disaster-strikes-emergency-communicators-need-get-connected-and-stay-connected.
[146] WLN, "How Walkie-Talkies Enhance Communication in Emergency Situations," September 18, 2025, https://www.wln-radio.com/how-walkie-talkies-enhance-communication-in-emergency-situations.

- **Hazardous Materials:** Power lines and any sharp physical objects, such as metal or wood, may become exposed during or after a severe storm or lightning strike, causing a hazard to passersby. Additionally, liquid and gaseous chemicals that are normally safely contained may be released when a container is damaged, creating breathing, drinking, or even skin-irritation hazards for humans and animals nearby.

FUTURE IMPACTS

Following historical trends, it is projected that population and development will continue to grow in St. Lucie County in the near future.[147] As population and development continue to increase in St. Lucie County and participating jurisdictions more people, structures, and infrastructure are exposed to severe thunderstorms and lightning. Local resources may become strained, and recovery and rebuilding from damage may take longer as more assets are damaged.

IMPACTS DUE TO CHANGES IN DEVELOPMENT

Increased development throughout St. Lucie County, as well as increased population, means an increased number of buildings and people at increased risk for impacts from severe storms and lightning.

LAND USE CHANGES

St. Lucie County has multiple active or recently completed development projects. Most are residential properties, such as subdivisions and apartment complexes. The remainder are commercial and industrial energy facilities and agricultural land. While the majority of growth is inland, some of the residential development is occurring on the Atlantic coastal islands of St. Lucie, a more vulnerable area due to its small size and reduced abundance of critical resources (e.g., fire stations, shelters).[148] Access to these islands is limited through single causeways several miles apart. This increase in homes, apartment buildings, energy facilities, and cropland over previously open land or forest increases the amount of vulnerable assets to wind, hail, and lightning damage. Additionally, more residential areas mean that the number of people and pets in the area will also increase, which leads to a larger population that is vulnerable to severe storms and lightning throughout St. Lucie County.

STATE ASSET CHANGES

Due to the major increase in population and its impact on roadway traffic, St. Lucie County has been adding additional ramps and widening lanes of preexisting roads, such as a new partial interchange on

[147] Florida Office of Economic and Demographic Research, "Projections of Florida Population by County, 2025–2050, with Estimates for 2023," 2023, https://edr.state.fl.us/content/population-demographics/data/MediumProjections_2023.pdf.
[148] St. Lucie County Planning and Development Services, "Active Development Projects," 2025, https://www.arcgis.com/apps/dashboards/12184ec9b99646619afc66b1f61b78fc.

Florida's Turnpike.[149] While these changes may help the flow of traffic, they also add additional infrastructure that is at risk of damage from debris and flooding.

The State of Florida police force has adapted to the increasing frequency of extreme weather events like severe storms and lightning by increasing the number of officers and providing training for specific storm-related response and recovery situations.[150] Overall, the rise in population and the growing severity and frequency of storms place a strain on state assets such as emergency response systems, state highways, state parks, and state police. While many of these assets have adapted to these challenges, the response remains costly and demanding, emphasizing the need for effective mitigation actions.

IMPACTS ON POPULATIONS OF FOCUS

Florida's population has been growing exponentially in recent years due to its year-round warm weather and sprawling entertainment districts. St. Lucie County has grown by about 50,000 people in the last five years, totaling about 400,000 people in the year 2025. There is an annual growth rate of 3.79%, which is projected to continue. Young adults (ages 25–30)—many of whom are couples moving to the area to start families—and older adults nearing retirement (ages 55–60) have shown especially large increases throughout the county.[151] This increases vulnerability, as there are more people at risk, including already more vulnerable populations, such as the elderly and young children from these families, who are susceptible to the harm that severe storms and lightning can cause. This influx of population puts more stress on local resources during a severe storm and lightning event, such as emergency response, food supply, energy, and fuel.

Additionally, the increase in population leads to more traffic on the roads, slowing down any necessary evacuations or emergency response times, and putting more people at risk of traffic accidents during a severe storm. For example, Treasure Coast International Airport, owned by St. Lucie County, has been undergoing significant renovations to improve its facilities and welcome more airlines to accommodate the growing population.[152] This also increases the amount of infrastructure at risk and the volume of flight traffic, leading to more delays during a severe weather event. Along with the transportation upgrades, St. Lucie County has also undergone and plans to undergo upgrades to utilities and stormwater management. These upgrades help manage the impacts of severe storms and lightning. Lastly, the St. Lucie County Sheriff's Office has implemented ongoing training programs to better prepare responders for weather hazards like severe storms and lightning.

[149] St. Lucie County Florida, "Public Works News: State Turnpike," 2025, https://www.stlucieco.gov/departments-and-services/public-works/public-works-news.
[150] Florida Climate Institute, *Florida's Climate: Changes, Variations, & Impacts – Summary and Key Messages* (2019), https://floridaclimateinstitute.org/images/newsletter/2019-May/FloridaClimate-Summary-KeyMessages.pdf.
[151] World Population Review, "St. Lucie County," 2025, https://worldpopulationreview.com/us-counties/florida/st-lucie-county.
[152] Al Pefley, "Commercial Airlines Coming Soon to Treasure Coast," September 17, 2025, *CBS12 News*, https://cbs12.com/news/local/commercial-airlines-coming-soon-to-treasure-coast.

PROJECTED FUTURE CHANGES

Most of the recent state and county-level infrastructure projects related to upgrading or expanding roads, transit, airport function, police training, utilities, and residential land use are projected to continue. Specifically, for the coast of St. Lucie, there is a Coastal Storm Risk Management Project under development to protect 3.3 miles of the 21 miles of Atlantic shoreline in St. Lucie. The plan includes beach and dune nourishment to lessen the erosion impacts of storm surge and heavy rain on local beaches. After the initial construction is finished, there are two scheduled renourishment periods spaced at 18-year intervals.[153] While this project is geared more toward large tropical storms, any severe storm can cause heavy rain and beach erosion that this project would help mitigate.

The population is projected to continue growing in St. Lucie County, with more than 60,000 additional residents expected by 2030.[154] The growth will place greater demand on the community's transportation systems and response systems, increasing the exposure of infrastructure, people, and responders to severe storms. However, ongoing training, utility upgrades, and heightened awareness of severe storms and lightning help mitigate the risk. It is crucial that the county continues to upgrade facilities while keeping the growing population and worsening impacts of severe storms and lightning in mind.

Tornadoes

Definition

A tornado is "a violently rotating column of air touching the ground, usually attached to the base of a thunderstorm."[155] Tornadoes are among nature's most violent and destructive storms, characterized by a rotating column of air that connects the ground to a cumulonimbus cloud or, in some cases, the base of a cumulus cloud. They typically form from powerful thunderstorms known as supercells, which are distinguished by their rotating updrafts. If conditions are favorable, these storms can produce tornadoes capable of causing significant fatalities and devastating entire neighborhoods.

The wind speeds associated with tornadoes can reach a staggering 300 miles per hour (mph), making them capable of inflicting catastrophic damage. The paths of destruction carved by tornadoes can exceed a mile in width and stretch over 50 miles in length, leading to extensive devastation in their wake. Hail often accompanies tornadoes, as the intense thunderstorms that lead to their formation create conditions conducive to hail development. These severe weather phenomena can occur in all states across the United States, highlighting the widespread risk posed by tornadoes.

While some tornadoes are clearly visible, others may be obscured by heavy rain or low-hanging clouds, making them difficult to detect. Tornadoes can develop extremely quickly, often forming within minutes,

[153] US Army Corps of Engineers, "St. Lucie County Coastal Storm Risk Management Project," May 2025, https://www.saj.usace.army.mil/About/Congressional-Fact-Sheets-2025/St-Lucie-County-FL-Coastal-Storm-Risk-Management-Project/.
[154] World Population Review, "St. Lucie County," 2025, https://worldpopulationreview.com/us-counties/florida/st-lucie-county.
[155] National Weather Service, "Tornado Definition," https://www.weather.gov/phi/tornadodefinition.

and may dissipate just as swiftly. Most tornadoes touch down for fewer than 15 minutes, although their impact can be devastating in that brief time frame.

Before a tornado makes landfall, distinct atmospheric changes can occur. The wind may suddenly die down, creating an unsettling stillness, and a noticeable drop in temperature may be felt. A cloud of debris swirling at ground level can be a telltale sign of a tornado's presence, even when the funnel itself is not visible. Tornadoes typically occur near the trailing edge of a thunderstorm, and it is not unusual to witness clear, sunlit skies behind a tornado as it moves through an area.[156]

Tornadoes in the United States can be classified into 10 distinct types. Table 74 provides an overview of each type along with a brief description.

Table 74: Tornado Types[157]

Tornado Types	Description
Rope	The smallest type of tornado, known as a "rope tornado," is typically short-lived, often lasting just a few minutes. Named for its long, slender appearance, this type indicates the beginning of a more powerful funnel cloud's evolution.
Cone	Unlike rope tornadoes, which are slender, cone tornadoes have a larger diameter and greater intensity. Resembling ice cream cones, they widen at the top and taper to a narrow base as they descend.
Stovepipe	In the tornado family tree, the stovepipe tornado is related to the cone tornado, with both types being similar in size but differing in shape. A cone tornado tapers downward, resembling a cone, while a stovepipe tornado does not taper downward but maintains a consistent width from the ground to the base of the parent thunderstorm, taking on a cylindrical form.
Elephant Trunk	"Elephant trunk" tornadoes resemble the size of a cone or stovepipe but curve like an elephant's trunk. These narrow, funnel-shaped tornadoes result from strong updrafts in thunderstorms.
Wedge	The most destructive tornadoes are massive wedge tornadoes, often exceeding a mile in diameter. Nicknamed "ground scrubbers," these tornadoes uproot vegetation and demolish buildings along their paths. EF5 wedge tornadoes, rated for wind speeds over 200 miles per hour, are particularly infamous and are sometimes called the "finger of God" due to their extreme power.
Multi-vortex	Large tornadoes can contain multiple areas of rotation (called multi-vortex tornadoes), with smaller areas of rotation known as vortices, in the main funnel. These secondary vortices can lead to erratic wind patterns and increased destruction. Although difficult to observe during the storm, they become evident during post-storm damage surveys.

[156] National Weather Service, "Tornado Definition," https://www.weather.gov/phi/tornadodefinition.
[157] Brian Lada, "10 Types of Tornadoes that Occur in the US," *AccuWeather*, last updated June 12, 2024, https://www.accuweather.com/en/severe-weather/10-types-of-tornadoes-that-occur-in-the-us/1514270.

Tornado Types	Description
Satellite	Intense tornadoes can generate smaller funnels called satellite tornadoes, which rotate around the main area of circulation, similar to how satellites orbit Earth. These smaller tornadoes can form at various distances from the primary storm and may pose significant dangers. Due to their similar appearance, satellite tornadoes are sometimes mistaken for multi-vortex tornadoes, which consist of multiple rotating columns of air around a single tornado.
Twin	Twin tornadoes are a rare meteorological phenomenon that even seasoned storm chasers may never witness. Unlike multi-vortex or satellite tornadoes, which form from a single swirling system, twin tornadoes develop simultaneously from two distinct areas of low pressure. These "sisters" can cause significant destruction and create a striking visual display. Their formation requires specific atmospheric conditions, including wind shear, humidity, and instability.
Landspout	Unlike tornadoes, which form from rotating thunderstorms, landspouts develop as a column of spinning air near the ground, independent of any storm structure. They typically form during warm weather with weak instability and usually last only a few minutes. While most landspouts are weak, stronger ones can cause damage similar to that of an EF0 or EF1 tornado, including uprooted trees and minor structural damage. It is also important to distinguish landspouts from dust devils. Dust devils arise on sunny, hot days due to localized updrafts, whereas landspouts occur under varying weather conditions.
Waterspout	When severe weather occurs above water, it can create a waterspout, which is a tornado that forms over a water surface. Once a waterspout moves onto land, it is classified as a tornado. Waterspouts and tornadoes have different dynamics and characteristics. A waterspout is usually associated with thunderstorms, not supercells, as tornadoes typically are. Waterspouts are generally weaker than tornadoes and often occur during milder weather conditions. Waterspouts may appear as a spray of water being lifted into a cloud, whereas tornadoes typically display a well-defined funnel shape with a visible debris cloud at the base.

Location and Extent

The state of Florida experiences more tornadoes per 10,000 square miles than any other state. Specifically, the region between Tampa Bay and Fort Myers, along with the western Panhandle and certain areas of the Atlantic Coast, records particularly high tornado activity.[158]

Tornadoes can occur anywhere in the county, but they are more likely to occur along the eastern and central parts, especially during severe weather outbreaks, tropical storms, or hurricanes (see Figure 60). As indicated in red on the map, Census Tract 381402 in Port St. Lucie has a relatively higher tornado risk than

[158] Florida Climate Center, "Tornadoes," https://climatecenter.fsu.edu/kids/topics/tornadoes/full#:~:text=In%20Florida%2C%20measured%20in%20frequency,So%2C%20what%20is%20a%20tornado%3F.

the rest of the county due to its geography, topography, population density, and proximity to certain climatic conditions.[159]

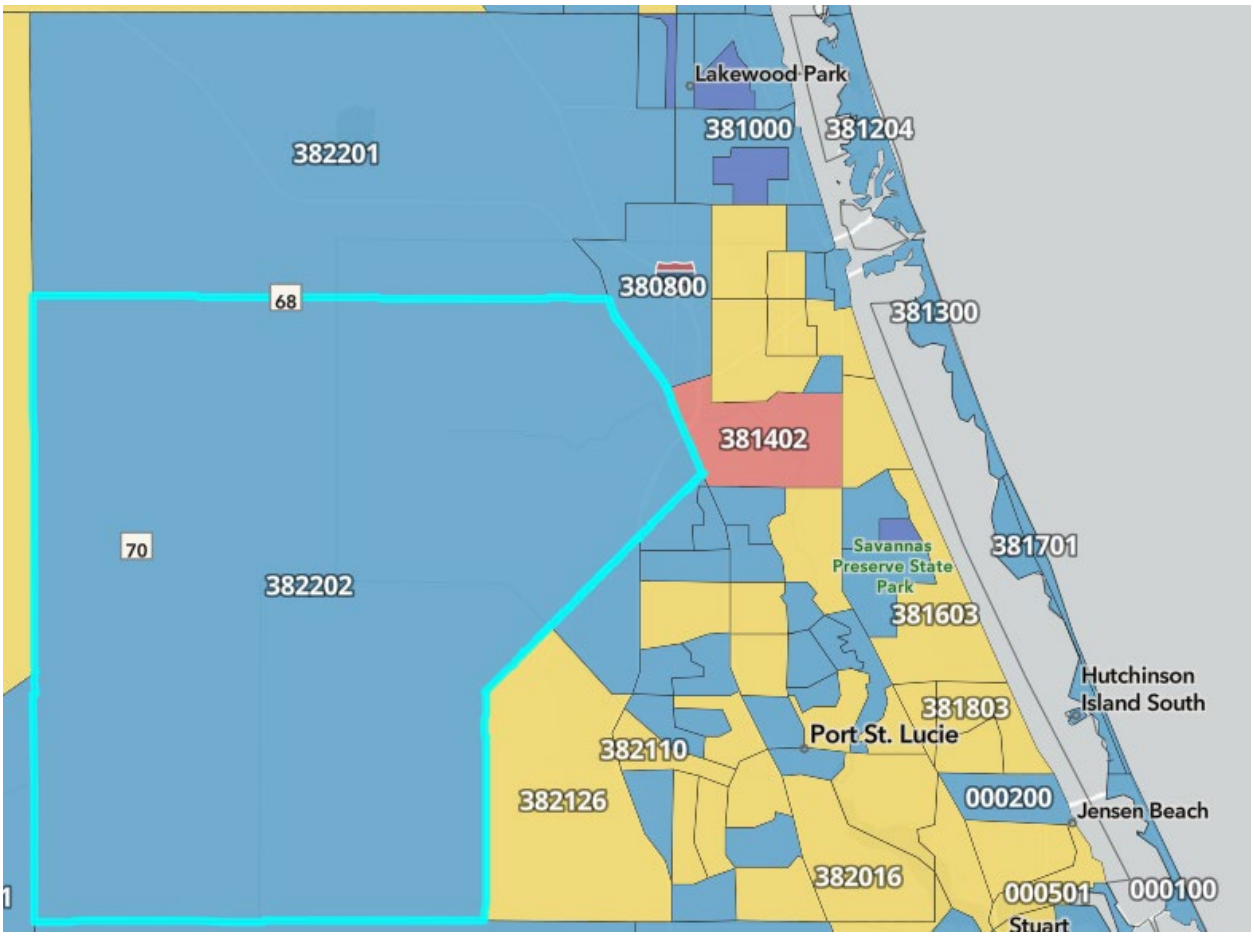

Figure 60: St. Lucie County Census Tract Map

Additionally, a significant majority of tornadoes occur in regions where there is a stark contrast between different landscape types, such as the transition from a city to open farmland. This contrast creates conditions that can enhance the development of tornadoes. Tornado touchdowns in urban environments are most commonly reported within a 1-to-10-mile radius of the city center, a phenomenon attributed to the influence of regional airflow patterns and temperature differences.

Several factors contribute to the dynamics of tornado formation in these areas. The size of the city plays a role, as larger cities create unique wind patterns. The construction materials used in buildings, such as steel, concrete, and glass, along with the heat produced by human activity, can further shape the

[159] FEMA, "National Risk Index," https://hazards.fema.gov/nri/map#.

microclimate. These elements work together to create a localized environment that may either promote or inhibit tornado activity,[160] the complexity of tornado formation in urban settings.[161]

Figure 61 displays the tornado touchdown points in St. Lucie County from 1950 through 2024.

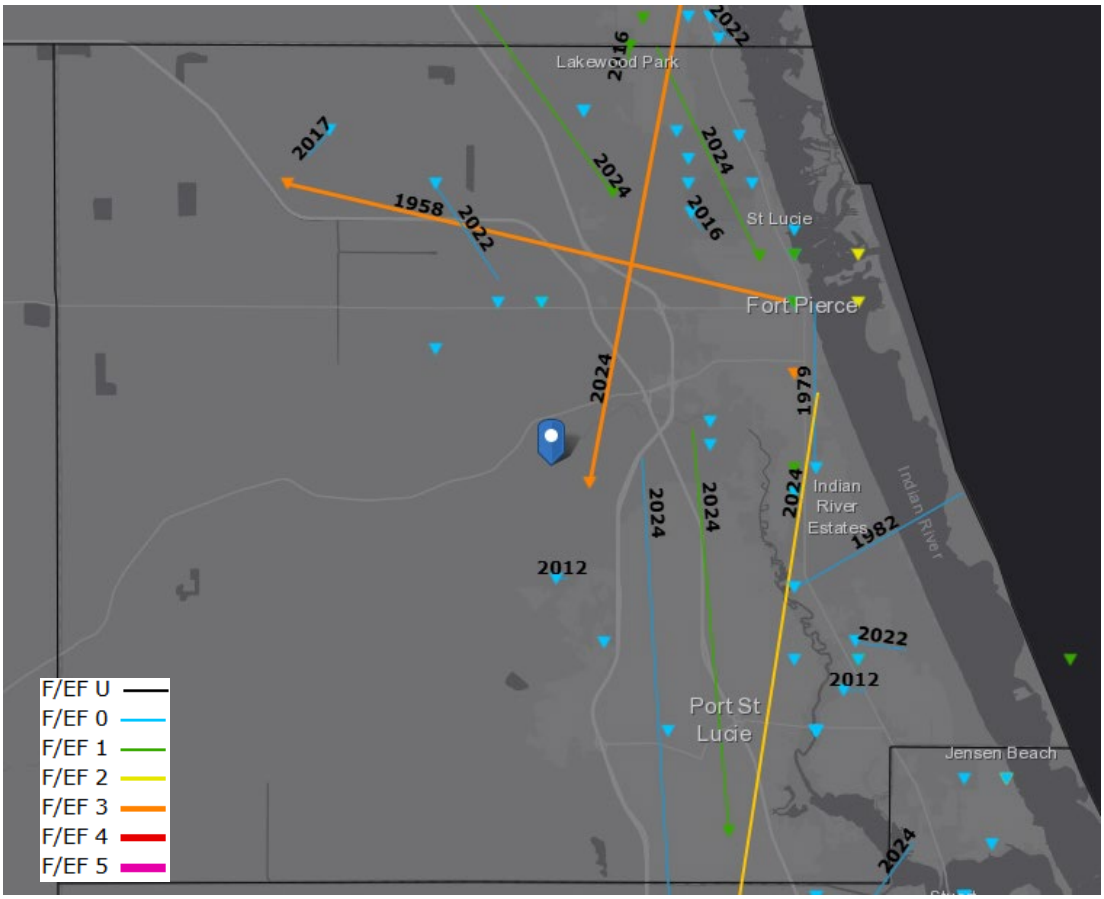

Figure 61: Tornado Touchdown Points, St. Lucie County, 1950–2024[162]

EXTENT

The Enhanced Fujita Scale assesses the intensity of a tornado by examining the destruction it causes to buildings and vegetation. After a tornado occurs, meteorologists and damage assessment teams evaluate the extent of the damage and categorize it using the Enhanced Fujita (EF) Scale. This scale ranges from

[161] Natalie van Hoose, "Landscape 'Transition Zones' May Influence Where Tornadoes Strike," *Purdue University Archive*, April 7, 2014, https://www.purdue.edu/newsroom/archive/releases/2014/Q2/landscape-transition-zones-may-influence-where-tornadoes-strike.html.

[162] Midwestern Regional Climate Center, "Tornado Tracks, 1950–2024," https://mrcc.purdue.edu/gismaps/cntytorn. The map was zoomed to display tornado tracks affecting St. Lucie County, Florida.

EF0, which is the weakest, to EF5, the strongest. The EF rating is determined by identifying damage indicators (DIs) and degrees of damage (DoDs) (see Table 75).[163]

Table 75: Enhanced Fujita Scale Elements

EF Scale	Class	Wind Speed (mph)	Description
EF0	Weak	65–85	Gale
EF1	Weak	86–110	Weak
EF2	Strong	111–135	Strong
EF3	Strong	136–165	Severe
EF4	Violent	166–200	Devastating
EF5	Violent	Over 200	Incredible

The EF Scale incorporates 28 DIs, including types of buildings, other structures, and trees. For each DI, there are eight DoDs, ranging from the beginning of visible damage to complete destruction of the DI. The construction and description of a building should align with the DI being assessed, and the observed damage must correspond to one of the eight DoDs outlined by the scale. The tornado evaluator will then determine whether the wind speed that caused the damage is higher or lower than the expected value for the specific DoD, using a range of upper and lower bound wind speeds. This process is applied to multiple structures, rather than just one, before a final EF rating is assigned.[164]

Table 76 shows how an EF rating is assigned after a tornadic event. Wind speed estimates are based on observed DoDs for a typical building type. Each DoD corresponds to a wind speed used to help determine the EF rating. The example is based on a typical building with the following characteristics:

- Less than 2,500 square feet
- Wood or metal post-and-beam construction
- Wood or metal roof trusses
- Wood or metal panel siding
- Metal or wood roof
- Large doors

[163] National Weather Service, "Enhanced Fujita Scale," https://www.weather.gov/tae/ef_scale.
[164] National Weather Service, "The Enhanced Fujita Scale (EF Scale)," https://www.weather.gov/oun/efscale.

Table 76: Enhanced Fujita Scale Rating Assignment Example[165]

DoD	Damage Description	Expected Wind Speed (mph)	Lower Bound (mph)	Upper Bound (mph)
1	Threshold of visible damage	62	53	78
2	Loss of wood or metal roof panels	74	61	91
3	Collapse of doors	83	68	102
4	Major loss of roof panels	90	78	110
5	Uplift or collapse of the roof structure	93	77	114
6	Collapse of walls	97	81	119
7	Overturning or sliding of the entire structure	99	83	118
8	Total destruction of the building	112	94	131

JURISDICTIONAL IMPACTS

Hazard impacts refer to the adverse effects stemming from natural or human-induced events. These impacts include physical damage, human health concerns, and economic, environmental, and social impacts, as shown in Table 77.

Table 77: Jurisdictions and Hazard Impacts

Participant	Impacts
St. Lucie County, Port St. Lucie, Fort Pierce, and St. Lucie Village	Tornadoes in St. Lucie County, including the areas of Port St. Lucie, Fort Pierce, and St. Lucie Village, can cause extensive damage to homes, buildings, infrastructure, and natural landscapes, and pose risks to human safety. This leads to costly repairs, service disruptions, and instability in the local economy. Human health concerns arise from injuries sustained during these events, as well as the potential for long-term mental health issues such as anxiety and posttraumatic stress disorder (PTSD) due to trauma. Economically, local businesses may face temporary closures and revenue losses, while recovery efforts can strain community resources and affect employment levels. Increased insurance premiums and out-of-pocket expenses place added burdens on the local economy. Environmentally, tornadoes can devastate local ecosystems, resulting in habitat destruction and debris that harms wildlife. Socially, the community may

[165] National Weather Service, "1. Small Barns and Farm Outbuildings (SBO)," https://www.spc.noaa.gov/efscale/1.html.

Participant	Impacts
	experience reduced cohesion and increased anxiety as residents confront the aftermath of disasters.

NATIONAL RISK INDEX

The NRI is a tool developed by FEMA to evaluate and visualize the risk of natural hazards across the United States. It provides data and insights on various hazards. The index combines multiple factors, including the probability of various hazard events, the vulnerability of communities, and potential impacts, to assess overall risks.

St. Lucie County's tornado risk profile includes an overall risk index score of 82.5 (based on the community's Expected Loss Value, risk factors, and an adjustment factor used to calculate the final score); an expected annual loss score of 82.1 (which combines exposure values, annualized frequency, and historic loss ratios); a social vulnerability score of 78.68 (measured using the Centers for Disease Control and Prevention's Social Vulnerability Index); and a community resilience score of 46.21 (measured at the county level using the Baseline Resilience Indicators for Communities). The overall risk score, calculated by multiplying the Expected Annual Loss by the social vulnerability, then dividing by the community resilience score, indicates a relatively moderate risk for tornado events for St. Lucie County as a whole, as shown in Figure 62.

Figure 62: Tornado Risk Rating, St. Lucie County[166]

[166] FEMA, "National Risk Index," https://hazards.fema.gov/nri/map#.

Magnitude and Severity

The potential magnitude and severity of tornadoes in St. Lucie County (and therefore the planning area) can vary considerably. However, tornadoes in the planning area are generally categorized in the EF0 to EF2 range on the EF Scale. EF0 tornadoes produce winds of 65–85 mph and can cause minor damage, while EF1 tornadoes reach 86–110 mph, causing moderate damage to structures and trees. Although stronger tornadoes (EF3 and above) are less common in this area, they can still occur, posing a serious threat to life and property. Tornadoes in St. Lucie County (and the planning area) can cause destruction of homes, disrupt services, and pose risks to public safety. Their occurrence may be influenced by local weather patterns, seasonal changes, and broader climate trends, necessitating ongoing preparedness and response planning.

Historic Events

The National Center for Environmental Information (NCEI) is a comprehensive resource that catalogs data on weather-related events, including tropical storms, hurricanes, tornadoes, floods, and more. It provides critical information to help assess the frequency, intensity, and impact of severe weather events across the United States. The NCEI is maintained by the National Oceanic and Atmospheric Administration.

According to the database, St. Lucie County experienced nine tornado events between January 1, 2021, and August 27, 2025 (see Table 78). St. Lucie County experienced significant activity during this time, resulting in six reported deaths and approximately $497,720,000 in property damage. This data highlights the recurring threat of these severe weather phenomena in the region, underscoring the importance of preparedness and response strategies to mitigate potential impacts on the community. It is crucial to note that the damage on 10/9/2024 caused $15,000,000 in property damage across three separate counties, St. Lucie County is included in this but did not experience that amount of damage independently.

Table 78: Tornadoes in St. Lucie County, 2021–2025*[167]

Location	Date	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
10747 W Midway Rd, Fort Pierce, FL 34945	6/6/2022	EF0	0	0	$10,000	$0
Walton	6/9/2022	EF0	0	0	$210,000	$0
Ft. Pierce – St. Lucie Airport	6/30/2022	EF0	0	0	$0	$0
Port St. Lucie	10/9/2024	EF0	0	0	$750,000	$0
Port St. Lucie	10/9/2024	EF1	0	0	$5,000,000	$0

[167] National Centers for Environmental Information, "Storm Events Database," https://www.ncei.noaa.gov/stormevents/listevents.jsp?eventType=%28C%29+Tornado&beginDate_mm=01&beginDate_dd=01&beginDate_yyyy=2021&endDate_mm=08&endDate_dd=27&endDate_yyyy=2025&county=ST.%2BLUCIE%3A111&hailfilter=0.00&tornfilter=0&windfilter=000&sort=DT&submitbutton=Search&statefips=12%2CFLORIDA.

Location	Date	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
Ft. Pierce – St. Lucie Airport	10/9/2024	EF1	0	0	$250,000	$0
Harmony Heights	10/9/2024	EF1	0	0	$1,500,000	$0
10747 W Midway Rd, Fort Pierce, FL 34945	10/9/2024	EF3	6	0	$475,000,000	$0
Port St. Lucie	10/9/2024	EF1	0	0	$15,000,000	$0

*The figures in this chart may include some damage incurred by counties other than St. Lucie.

FEMA DISASTER DECLARATIONS

On October 11, 2024, a federal disaster declaration was issued for tornadoes related to Hurricane Milton. The declaration number is DR-4834.

Probability of Future Conditions

It is impossible to predict with absolute certainty whether tornadoes will strike St. Lucie County and the associated jurisdictions; however, historical data indicates that they do occur, although infrequently. On average, there is an annualized frequency of approximately 0.30 tornadoes per year or a chance of three tornados occurring over a 10-year period in the region.[168] This statistic suggests that, when observed over an extended period, such as several decades, tornadoes can be expected to occur, even if rarely. Although the probability of a tornado touching down in any given year in St. Lucie County is relatively low, the possibility remains likely.

Vulnerability Assessment

St. Lucie County[169]risk to tornadoes is ranked as relatively moderate by FEMA's National Risk Index.[170] However, this ranking should not lead to complacency regarding the county's vulnerability. Even with a lower overall risk profile, St. Lucie County's unique geographic and climatic conditions still pose substantial threats during tornadic events. The presence of critical infrastructure, vulnerable populations, and structures at risk underscores the need for proactive emergency preparedness measures.

[168] FEMA, "Resilience Analysis and Planning Tool," 2025, https://experience.arcgis.com/experience/0a317e8998534c30a9b2d3861c814d42/#data_s=id%3AdataSource_16-19ae62b8746-layer-137%3A377.

[170] FEMA, "Resilience Analysis and Planning Tool," 2025, https://experience.arcgis.com/experience/0a317e8998534c30a9b2d3861c814d42/.

The county is home to several vulnerable populations, including those 65 and older (24.5%), limited-resource families (7.8%), and individuals with disabilities (15.2%).[171] These groups may require extra assistance and resources during tornado events, making evacuation efforts more challenging.

Mobile homes (6,809 in St. Lucie County) are particularly vulnerable because their structural design often lacks the strength to withstand high winds.[172] In Fort Pierce, approximately 3% of the population lives in mobile homes; in Port St. Lucie, about 8%; and in St. Lucie Village, 4%, with 7% of the county living in mobile homes.[173] When tornado warnings are issued, evacuations can be challenging, as many households may not have transportation (4.5% or 3,180 households in St. Lucie County) or a clear plan for where to seek shelter.[174] In Port St. Lucie, approximately 4,400 households have no vehicle; in Fort Pierce, 1,220 households have no transportation; and in St. Lucie Village, every household owns at least one vehicle.[175] Additionally, after a tornado, these individuals may struggle with recovery due to limited financial resources and inadequate insurance coverage, making it difficult to repair or replace their homes. This highlights the need for targeted community preparedness efforts to better support those living in mobile homes during severe weather events.

Transportation infrastructure is another critical area of concern. Major highways such as U.S. 1 and Interstate 95 are essential for emergency evacuation and response but may become obstructed by debris following a tornado. This can lead to delays in assistance and hinder recovery efforts.

Finally, communication networks that provide vital information during emergencies can also be vulnerable to damage from tornadoes. Disruptions in communication can complicate coordination among emergency services and reduce the effectiveness of response efforts.

Ultimately, the county may not experience tornadoes as frequently as others, but the impact of any event can still be severe, especially given its growing population and developing infrastructure. Therefore, it is crucial for St. Lucie County to maintain a high level of readiness and resilience to mitigate any potential risks associated with tornadic activity.

IMPACTS TO ASSETS

Table 79 provides a summary of the consequences of tornadoes. It discusses the effects on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, and public confidence.

[171] Headwaters Economics, "St. Lucie County, FL," https://headwaterseconomics.org/tools/populations-at-risk/.
[172] Headwaters Economics, "St. Lucie County, FL," https://headwaterseconomics.org/tools/populations-at-risk/.
[173] Census Reporter, "St. Lucie County, FL," https://censusreporter.org/profiles/05000US12111-st-lucie-county-fl/.
[174] Headwaters Economics, "St. Lucie County, FL," https://headwaterseconomics.org/tools/populations-at-risk/.
[175] Data USA, "St. Lucie County, FL," https://datausa.io/profile/geo/st-lucie-county-fl#housing.

Table 79: Consequence Analysis

Sector	Consequence
Public	• Homes, commercial buildings, and infrastructure may sustain extensive damage. • Individuals may experience personal injuries, destruction of healthcare facilities, and mental health impacts. • Owners and employees may lose income due to damage to properties and businesses. • Local governments and taxpayers may bear the burden of recovery and rebuilding. • Local ecosystems may be disrupted. • Vegetation may be destroyed, which can lead to soil erosion and disrupt flora and fauna. • Families may be displaced, creating a need for temporary shelters and housing. • Local emergency services may become overwhelmed, leading to increased demand for resources and support for first responders.
First Responders	• First responders may face risks from debris, downed power lines, and structural collapses, which can lead to injuries or fatalities. • Emergency calls may surge, overwhelming first responders and straining resources, which can extend response times. • Local resources may become strained, leading to mutual aid situations and complications with logistics and coordination. • Exposure to traumatic scenes may result in stress, anxiety, and potentially PTSD.
Continuity of Operations	• Utilities may be interrupted, affecting both emergency services and daily life. • Damage may impede access for emergency responders, delaying rescue and recovery efforts. • Roads, bridges, and public transportation systems may be damaged, hindering mobility and impacting evacuation and response efforts. • Injuries may overwhelm local healthcare facilities, straining resources and emergency services. • Residents forced to leave their homes may increase demand for social services.
Property, Facility, and Infrastructure	• Residential and commercial buildings may sustain extensive damage. • Roads and bridges may be damaged. • Power lines may be downed, and water supply systems disrupted, leading to outages in electricity, water, and communication services. • Repairs and reconstruction may incur high costs. • Hospitals, schools, and emergency services may be impaired, affecting operational capabilities.
Environment	• Vegetation may be damaged, and trees uprooted, leading to loss of wildlife habitats and affecting local ecosystems.

Sector	Consequence
	• High winds may strip topsoil, resulting in increased erosion and degradation of land quality, which can impact agriculture. • Water may become contaminated from debris, chemicals, and sediments, affecting freshwater ecosystems and drinking water supplies. • The destruction of buildings and infrastructure may release harmful substances into the air, potentially leading to respiratory issues for residents and wildlife. • Wildlife may be displaced, and habitats destroyed, leading to population declines in certain species. • The physical alteration of the landscape may affect local weather patterns and microclimates. • Debris may overwhelm local waste management systems, leading to increased litter and pollution. • Farmlands may be devastated, leading to loss of crops and livestock, which can disrupt the local food supply and economy. • Disturbance of natural areas may create opportunities for invasive species to establish and spread, threatening native ecosystems.
Economic Conditions	• Local economies may be strained due to costly repairs and reconstruction efforts. • Local businesses may face temporary closures due to damage or power outages, affecting revenue and potentially leading to layoffs. • Insurance resources may be strained by a surge in claims, potentially raising premiums. • Destruction of roads, bridges, and utilities may require substantial public resources for repairs, diverting funds from other community needs. • Tourism may decline as potential visitors avoid the area, impacting local hospitality and service industries. • Agricultural lands may be devastated, harming crop yields and livestock, which can have broader implications for the local economy reliant on farming. • The recovery process can be lengthy and complex, leading to reduced local investment and slower economic growth in the aftermath. • Local governments may face increased spending on emergency services, infrastructure repair, and disaster relief initiatives, which can impact future budgets. • Business closures and disruptions in agriculture may lead to job losses in the area, affecting household incomes and economic stability. • The psychological toll may lead to increased healthcare costs and reduced workforce productivity as residents cope with trauma and stress.
Public Confidence	• Increased concerns about safety during severe weather may lead to heightened anxiety levels. • Effective response efforts may influence public confidence in local emergency services and their ability to handle disasters.

Sector	Consequence
	• Tornadoes may spur a demand for better education and awareness regarding emergency preparedness, affecting perceptions of whether local authorities are proactive. • Damage from tornadoes may lead to financial losses, affecting how residents view their economic stability and the reliability of insurance claims processes. • Confidence in evacuation protocols may wane if they are perceived as poorly managed. • Tornadoes can strengthen community bonds through collective recovery efforts or create divisions based on differing levels of disaster preparedness. • An increase in tornado activity may lead to calls for stricter building codes and infrastructure improvements, impacting public confidence in local governance. • Coverage of tornadoes can shape public perception and confidence, either positively or negatively, based on how events are reported.

IMPACT ON COMMUNITY LIFELINES

Tornadoes pose a threat to FEMA's Community Lifelines in St. Lucie County (see Figure 63).

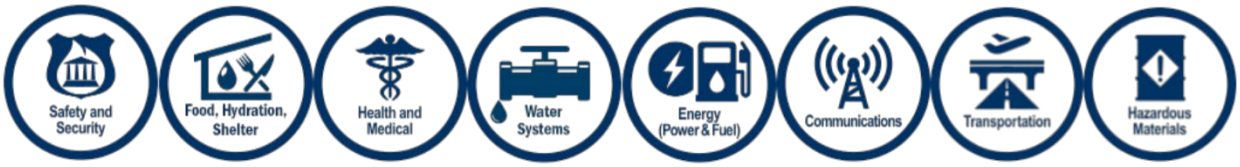

Figure 63: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** Tornadoes can cause destruction, leading to increased risk for residents. Emergency services may be overwhelmed, impacting law enforcement and rescue efforts.
- **Food, Hydration, and Shelter:** Tornadoes can damage homes and critical infrastructure, creating a need for emergency shelters, temporary housing, and assistance with food and clean water supplies.
- **Health and Medical:** Tornadoes can result in injuries among the population, necessitating medical care, behavioral health support, and management of public health concerns.
- **Energy:** Utility lines can be downed during a tornado, leading to power outages that affect homes, businesses, and critical services.
- **Communications:** Tornadoes can disrupt telecommunications infrastructure, making it difficult for residents to communicate and for emergency services to coordinate.
- **Transportation:** Roads can be blocked by debris, making it challenging for emergency responders to access affected areas and for residents to evacuate if necessary.
- **Hazardous Materials**: Storage facilities and infrastructure can be damaged, leading to spills and leaks. These incidents can disrupt transportation routes, hinder emergency response efforts, increase

public safety risks, cause environmental contamination, and highlight the need for community preparedness and awareness.

IMPACT DUE TO CHANGES IN DEVELOPMENT

In St. Lucie County, the local government has implemented specific development changes in response to the challenges posed by tornadoes. Community preparedness programs have also seen revisions, with local officials increasing public education initiatives to inform residents about tornado safety and readiness strategies. These programs are designed to help individuals and families develop emergency response plans.[176]

Following the occurrence of multiple tornadoes in St. Lucie County during Hurricane Milton, new communication software was implemented, along with training for additional staff in multiple roles.[177]

IMPACTS ON POPULATIONS OF FOCUS

In St. Lucie County, various populations are at risk from tornadoes. Populations with limited financial resources may face additional recovery challenges following tornado impacts. Damage to residential structures can result in temporary displacement, and in areas where the availability of affordable housing is limited, displaced households may experience longer recovery timelines and increased difficulty securing suitable temporary or replacement housing.

Elderly populations are also an at-risk group. Many seniors may have mobility issues that impede their ability to seek shelter quickly during a tornado warning. Additionally, they may rely on caregivers or other assistance, which can complicate evacuation efforts during emergencies. The combination of age, health, and socioeconomic status places these individuals at an increased risk for injury or fatality.

Children and single-parent households may also need attention when considering tornado vulnerabilities. Limited access to immediate support during severe weather can leave young children in dangerous situations, especially if parents are unable to secure adequate shelter for them. Likewise, schools, which often serve as safe havens during storms, may be overwhelmed or poorly equipped to handle large groups of students in an emergency.

Furthermore, communities with transient populations, such as migrant workers, may experience increased vulnerability due to their living situations and lack of established local networks for support and information. Their limited resources and language barriers can delay awareness of tornado warnings, leaving them less prepared to respond effectively when a tornado strikes.

[176] St. Lucie County, Florida, Public Safety, *Disaster Preparedness Guide* [brochure], https://www.stlucieco.gov/home/showpublisheddocument/9767/638811054751630000.
[177] WPBF News, "St. Lucie County Emergency Operations Adapt After Historic Tornado Outbreak," *WPBF*, November 13, 2024, https://www.wpbf.com/article/st-lucie-county-emergency-operations-adapt-after-historic-tornado-outbreak/64922500.

Tsunami

Definition

A tsunami is a series of waves created when a large body of water is rapidly displaced. They can last several hours and vary greatly in size. They do not behave like typical ocean waves generated by weather and tides; instead, inundation extent varies widely depending on variables such as wave height, coastal topography, and bathymetry, as shown in Figure 64. Large tsunamis can completely flood entire cities, causing widespread destruction and loss of life.[178] Tsunamis are most often induced by earthquakes, landslides, and volcanic eruptions. While they are rare in the United States, there are several on record, and the entire U.S. coast, including Florida, remains vulnerable. In the past, tsunamis often occurred with little or no warning, as seismic hazards were highly unpredictable. However, as seismic activity monitoring has improved, the U.S. Tsunami Warning System has become more effective in issuing timely alerts, including the following:[179]

- **Tsunami Watch:** Issued when hazards are not yet known, but a potential generating event, like an earthquake, has occurred and residents should be prepared.
- **Tsunami Advisory:** Issued when strong currents and waves are near the area, advising the public to stay out of the water.
- **Tsunami Warning:** Issued when a wave is imminent, and the timing of the wave can be detected down to the hour. Dangerous coastal flooding and powerful currents are likely, and the public is advised to move to high ground or inland.

Two terms are often confused with tsunamis: Tidal waves and rogue waves. A tidal wave is caused by the natural tides of the ocean, which are disrupted by weather systems and moon phases, whereas a tsunami has little connection to tidal activity. waves are unpredictable and may result from regularly spaced ocean swells intensified by natural currents or weather systems, in contrast to tsunamis.[180] Both tidal waves and rogue waves are separate hazards from tsunamis and will not be covered in this hazard profile.

[178] National Oceanic and Atmospheric Administration/National Weather Service (NOAA/NWS), "U.S. Tsunami Warning Center," 2025, https://www.tsunami.gov/.
[179] NOAA/NWS, "Tsunami Message Definitions," 2025, https://www.tsunami.gov/?page=message_definitions.
[180] National Ocean Service, "Rogue Waves," https://oceanservice.noaa.gov/facts/roguewaves.html.

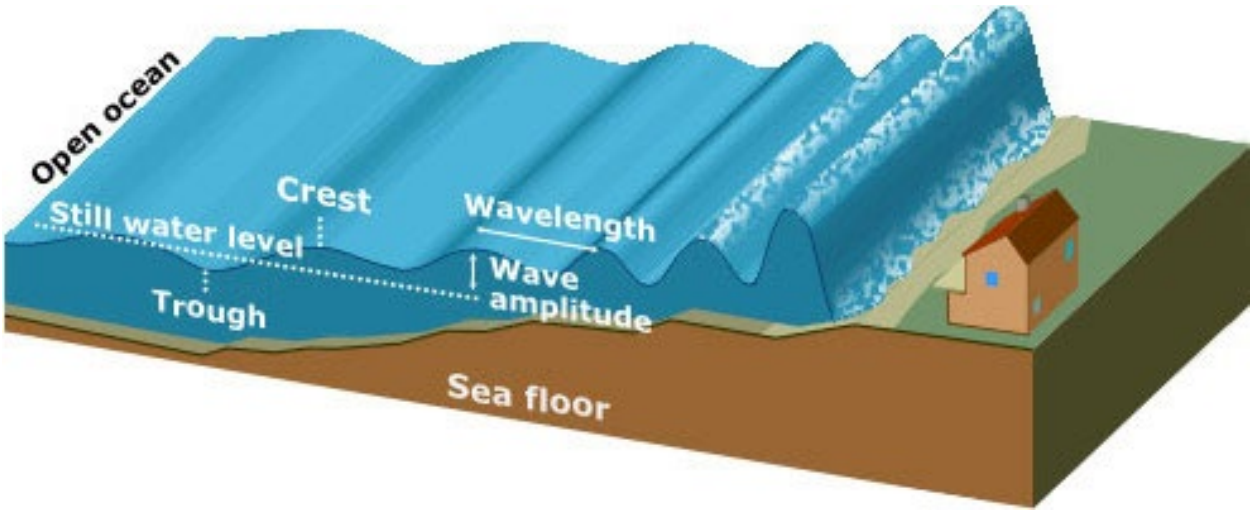

Figure 64: Tsunami Characteristics[181]

Location and Extent

A tsunami can occur anywhere in the ocean where water is rapidly displaced and can therefore impact any coastal land near the ocean. Because this phenomenon is mostly associated with seismic hazards such as earthquakes and volcanoes, the coasts of the Pacific Ring of Fire, where the large Pacific plate interacts with surrounding plates, are most susceptible to tsunamis. The U.S. states most susceptible to these Pacific plate interactions are California, Oregon, Washington, Alaska, and Hawaii. While less common, the Caribbean plate, south of Florida, may also induce earthquakes in places such as Puerto Rico, Haiti, and eastern Mexico.

While the Caribbean plate is much smaller than tectonic plates in the Pacific Ocean, it has historically produced some major earthquakes and tsunamis. Another cause of tsunamis in Florida is landslides, which can occur even from small earthquakes or coastal erosion, both of which are more common in the surrounding area. When a landslide occurs, it can displace a significant amount of water, leading to a tsunami. The collapse of an island or large rockfalls is more common in the regions surrounding Florida than large earthquakes themselves.[182]

JURISDICTIONAL IMPACTS

It is possible for a tsunami to occur anywhere along Florida's Gulf or Atlantic coasts. If large enough, it could impact inland cities. Low-lying coastal areas and barrier islands in St. Lucie County are primarily impacted by tsunamis with minimal impacts further inland. Possible impacts are shown in Table 80.

[181] Pacific Tsunami Museum, "Tsunami Characteristics," 2025, https://tsunami.org/tsunami-characteristics/.
[182] U.S. Geological Survey (USGS), "How Do Landslides Cause Tsunamis?," 2025, https://www.usgs.gov/faqs/how-do-landslides-cause-tsunamis.

Table 80: Impacts of Tsunamis, by Jurisdiction

Participant	Impacts
St. Lucie County	Tsunamis pose a significant threat to human life and can cause considerable damage along the coast of St. Lucie County. The area's residences, recreational spaces, and tourist attractions are vulnerable to the destructive force of large tsunami waves. Smaller tsunami waves, which are more likely in the area, would have a greater impact on the county's coastal regions. These waves can lead to severe flooding and erosion, resulting in costly repairs and business closures, creating economic challenges and stress for residents. The risk of injuries and fatalities heightens the urgency for residents and first responders to prepare. Additionally, the aftermath can lead to environmental issues, as debris and pollutants harm wildlife habitats and water quality. The threat of tsunamis may also deter winter residents and tourists from visiting, negatively impacting the community both economically and socially.
City of Port St. Lucie	Port St. Lucie is not located on the Atlantic coast and would not be significantly impacted from a tsunami. Any impacts would be indirect due to the city's elevation and distance from the coast. Should a tsunami push water up the St. Lucie River, larger impacts could be seen similar to flooding from a hurricane that pushes water up the river.
City of Fort Pierce	The City of Fort Pierce is home to numerous residential properties, hotels, and recreational facilities, including beaches, parks, golf courses, the Treasure Coast International Airport, and the large Lawnwood Hospital. Even as it is located directly on the Atlantic coast, Fort Pierce is at low risk of inundation from tsunamis. Small waves from tsunamis are more likely to produce strong currents that threaten swimmers than inundate the City of Fort Pierce coastline.
Town of St. Lucie Village	The Town of St. Lucie Village is a small community located on Indian River Lagoon that includes residential homes, government buildings, shops, marinas, and beaches. Like all of coastal Florida, the Town of St. Lucie Village is a low risk of tsunami impacts, but could experience some slight flooding in the unlikely case of a large tsunami

NATIONAL RISK INDEX

There is insufficient data on tsunamis for St. Lucie County based on the National Risk Index.[183]

Magnitude and Severity

Tsunamis have a wide range in magnitude and severity. Tsunami waves can range in height (amplitude) from a few feet to over 100 feet. They can have a period ranging from 10 minutes to two hours between waves, and a wavelength exceeding 300 miles.[181] When they pass offshore, the wave has a smaller height and longer wavelength, leaving the impacts unnoticeable at sea. As they come onshore, they take on characteristics of a large, violent, crashing tide but are unrelated to tides themselves. Micro-tsunamis are

[183] National Risk Index, "St. Lucie County," 2025, https://hazards.fema.gov/nri/map.

detectable only by sensitive instruments on the ocean floor, and mega-tsunamis are much larger and can impact entire coasts of land. Even "small" tsunamis are associated with extremely strong currents, capable of knocking someone off their feet. Tsunamis are measured using the Deep-ocean Assessment and Reporting of Tsunami (DART) systems, which detect unusual wave variations as they travel to the United States.[184] Tsunamis are often associated with earthquakes, which are measured on the Richter scale, and are more likely to occur in close proximity to the epicenter of an earthquake that is rated 8.0 in magnitude. However, even a small earthquake can produce dangerous tsunami waves.[185]

Historic Events

There has never been a recorded impact of a tsunami in St. Lucie County. In Florida, there have been a handful of tsunami events over the past few centuries:

- **1886 – Charleston earthquake:** An earthquake in Charleston, South Carolina, triggered a tsunami wave that surged up the St. Johns River to Jacksonville. It is unknown if any deaths occurred in St. Lucie County or the surrounding area.
- **1755 – Portugal earthquake:** A large earthquake in Portugal killed thousands of people, and the tsunami wave was confirmed to have hit much of the East Coast of the United States. It is unknown if any deaths occurred in St. Lucie County or the surrounding area.

FEMA DISASTER DECLARATIONS

There are currently no FEMA disaster declarations associated with this hazard.

Probability of Future Conditions

Tsunamis are not likely in the future for St. Lucie County, but while the risk of a tsunami inundating the area is low, it is possible. Additionally, with rising sea levels, the impacts of even small tsunamis may be higher, as there is more water to travel farther inland.

Vulnerability Assessment

While the likelihood of tsunami occurrence in St. Lucie County is low, impacts of a major tsunami would be devastating. If a tsunami were to occur, it could flood low-lying coastal areas, destroying restaurants and beaches, and flooding resorts and homes. It is also a major hazard to the life of humans and pets, both during and after the event, as critical hygiene, energy, and medical response facilities may shut down. It is crucial for officials to follow through with any mitigation actions to protect life and property from a potential tsunami.

[184] USGS, "Tsunamis and Tsunami Hazards," Water Science School, 2025, https://www.usgs.gov/water-science-school/science/tsunamis-and-tsunami-hazards.
[185] SMS Tsunami Warning, "Richter Scale," 2018, https://www.sms-tsunami-warning.com/pages/richter-scale.

IMPACTS TO ASSETS

If a tsunami were to occur in St. Lucie County, it could impact critical assets located on or near the coast.. The scale of the tsunami would largely influence the extent of impacts, as those farther inland may not experience any effects if a tsunami were only to flood the beaches. Specific outcomes are listed in Table 81.

Table 81: Consequence Analysis

Sector	Consequence
Public	• **Health and Medical Disruptions:** In the event of a major tsunami, significant personal injuries could occur. Local emergency services may be overwhelmed, leading to increased demand for resources, greater pressure on first responders, and urgent mental health care for affected individuals. • **Social Disruption:** The aftermath of a tsunami would place immense pressure on local governments and taxpayers to manage recovery and rebuilding efforts. Displacement of families would create a significant need for temporary shelters and housing solutions, adding to the stress of the recovery process. • **Shelter and Services:** Extensive damage to residential and commercial buildings from a tsunami could leave communities in need of shelter and services. • **Trauma Exposure:** Exposure to traumatic scenes during a tsunami can lead to increased stress, anxiety, and the potential for long-term mental health issues that reduce public confidence during a hazardous event.
First Responders	• **Communication Disruption:** A major tsunami can cause widespread power outages, crippling communication lines and making it difficult for first responders to coordinate rescue efforts. • **Transportation Disruption:** Debris and floodwaters from a tsunami may severely damage roads and vehicles, obstructing access for emergency personnel and hindering evacuation routes. • **Resource Disruption:** A surge in emergency calls following a tsunami can overwhelm response teams, extending response times and depleting critical resources and equipment. • **Social Disruption:** Witnessing the devastation of a tsunami can lead to heightened stress, anxiety, and the potential for post-traumatic stress disorder among survivors and first responders.
Continuity of Operations	• **Utility Interruptions:** A tsunami can disrupt essential utilities, impacting both emergency services and daily life, and leaving communities without water and electricity. • **Access Delays:** Damage from a tsunami can impede access for emergency responders, significantly delaying critical rescue and recovery efforts in affected areas.

Sector	Consequence
	• **Mobility Challenges:** Destruction of roads, bridges, and public transit systems from a tsunami can hinder mobility, complicating evacuation and emergency response operations. • **Healthcare Strain:** Injuries from a tsunami can overwhelm local healthcare facilities, placing a strain on their resources and emergency services during a critical time. • **Operational Impairment:** Hospitals, schools, and emergency services may face operational challenges after a tsunami, limiting their ability to serve the community effectively.
Property, Facility, and Infrastructure	• **Infrastructure Damage:** Destruction of roads and bridges from a tsunami can severely limit access for emergency services and hinder recovery efforts. • **Utility Failures:** Downed power lines and disrupted water supply from a tsunami can lead to outages, affecting communication and emergency response capabilities.
Environment	• **Environmental Disruption:** The destruction of vegetation from a tsunami can lead to soil erosion, negatively impacting local ecosystems and wildlife. • **Wildlife Displacement:** Tsunamis can destroy habitats, causing wildlife to relocate and potentially increasing human-wildlife interactions and risks. • **Waste Management Overload:** Extensive debris from a tsunami can overwhelm waste management systems, leading to increased pollution in land and water sources. • **Pollution Risks:** Water and air quality may deteriorate due to hazardous chemicals released during a tsunami, posing health risks to the community.
Economic Conditions	• **Economic Strain:** Local economies may suffer due to the high costs of repairs and reconstruction efforts following a tsunami, impacting long-term growth. • **Economic Disruption:** A tsunami could cause extensive damage to homes, commercial buildings, and vital infrastructure, resulting in costly repairs. The loss of income for business owners and employees due to property damage or power outages could compound the economic impact on the community. • **Agricultural Impact:** Damage to farmland and loss of crops from a tsunami can disrupt local food supplies and economic stability for farmers. • **Business Disruptions:** Local businesses may experience temporary closures due to tsunami damage or power outages, affecting revenue and employment. • **Insurance Strain:** A surge in insurance claims post-tsunami can strain resources, potentially leading to increased premiums for policyholders. • **Resource Allocation:** Repairing roads, bridges, and utilities after a tsunami may require substantial public funding, diverting resources from other community needs. • **Tourism Decline:** A tsunami can deter potential visitors, negatively impacting the local hospitality and service industries that rely on tourism.

Sector	Consequence
	• **Complex Recovery:** The recovery process following a tsunami can be lengthy and complicated, leading to reduced local investment and slower economic recovery. • **Job Losses:** The combination of business closures and agricultural disruptions from a tsunami can lead to job losses, affecting household incomes and economic stability.
Public Confidence	• **Evacuation Confidence:** Confidence in evacuation protocols may diminish if they are perceived as poorly managed during a tsunami response. • **Public Trust:** Effective response efforts during a tsunami can significantly influence public confidence in local emergency services and their disaster management capabilities.

IMPACT ON COMMUNITY LIFELINES

The distance inland that the tsunami wave travels would have an especially large influence on community lifelines (see Figure 65). The following scenarios are described as if a tsunami were to only inundate the direct coastal areas of St. Lucie County and as if it were to completely inundate St. Lucie County.

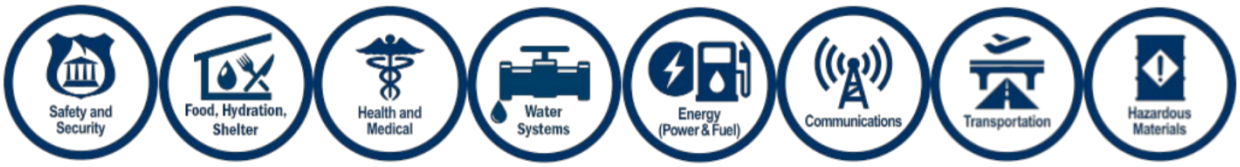

Figure 65: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** In the event of a major tsunami, emergency personnel, their vehicles, and equipment face significant risks from flooding and debris. Damage to vehicles may render them inoperable, hindering their ability to respond to emergencies. Communication systems can be compromised, making it difficult to coordinate rescue efforts. Additionally, water inundation can disrupt security measures, leaving communities vulnerable during critical times when safety is paramount.
- **Food, Hydration, and Shelter:** A tsunami can lead to a surge in demand for food and essential supplies as communities prepare for potential impacts. Grocery stores may quickly run out of items, and food processing facilities could be damaged, disrupting supply chains. Hydration becomes a critical issue as flooding may contaminate water sources, leading to boil water advisories. Shelters such as homes and community buildings can suffer severe damage, exposing residents to the elements and creating a desperate need for safe refuge.
- **Health and Medical:** Tsunamis can overwhelm healthcare systems, putting emergency medical personnel and hospitals at risk of flooding and operational disruptions. The demand for medical services often rises dramatically due to injuries sustained during the event, such as those from debris, drowning, and other tsunami-related incidents. Access to hospitals may be hindered, further complicating the ability to provide timely care.

- **Water Systems:** Tsunamis can cause significant damage to water systems, leading to complete shutdowns of treatment facilities and disruptions in safe water supply. Flooding can back up pipelines, making it impossible to deliver clean water. Where water is still available, boil water advisories may be issued, increasing stress on households and businesses that rely on safe drinking water.[186]
- **Energy (Power and Fuel):** Tsunami impacts can severely disrupt critical energy infrastructure, including power plants and gas stations. Flooding and damage can lead to gas station closures, limiting fuel access for emergency responders and residents alike. Additionally, the demand for fuel often increases in the aftermath of a natural disaster, driving up prices and complicating transportation logistics for recovery efforts.[187]
- **Communications:** A major tsunami poses a significant threat to communication lines, especially those reliant on power and cell towers. Power outages can render battery-operated devices unusable, while damaged cell towers impede access to phone services.[188] Although radio communications are generally more reliable, they still face challenges, such as signal interference and the need for charged batteries. The surge in communication needs during a tsunami can overwhelm already strained resources.
- **Transportation:** All modes of transportation, including personal vehicles, public transit, and air travel, are at risk during a tsunami. Roadways, rail systems, and waterways may become hazardous due to the wave of flooding and debris, complicating evacuation and response efforts. Visibility can be severely limited, and navigating flooded or obstructed pathways poses significant dangers to travelers. Public transportation services are likely shut down during a tsunami.
- **Hazardous Materials:** Tsunamis can expose hazardous materials as containers are damaged by flooding or debris. Sharp objects, chemicals, and other dangerous materials may pose risks to those in the vicinity, creating potential health hazards from exposure to toxic substances. The release of these materials into the environment can also lead to contamination of air and water sources, further endangering public health and safety.

IMPACTS DUE TO CHANGES IN DEVELOPMENT

There are numerous recent land use changes throughout St. Lucie County that heighten the area's vulnerability to the impacts of a major tsunami. As the population in the county continues to grow, the number of vulnerable individuals at risk also rises, increasing demand for emergency services and placing greater strain on local resources during such a catastrophic event.

[186] St. Lucie County Florida, "St. Lucie County Stormwater Management Plan," 2025, https://www.stlucieco.gov/departments-and-services/st-lucie-county-stormwater-management-plan.
[187] Jim Foerster, "How Extreme Weather Disrupts U.S. Oil and Gas Sector," *Forbes*, October 9, 2023, https://www.forbes.com/sites/jimfoerster/2023/10/09/extreme-weather-disrupts-us-oil-and-gas-sector/.
[188] Cybersecurity and Infrastructure Security Agency, "When Disaster Strikes, Emergency Communicators Need to Get Connected and Stay Connected," April 28, 2023, https://www.cisa.gov/news-events/news/when-disaster-strikes-emergency-communicators-need-get-connected-and-stay-connected.

LAND USE CHANGES

St. Lucie County has several active or recently completed development projects, primarily focusing on residential properties such as subdivisions and apartment complexes. Additionally, there are commercial and industrial energy facilities and agricultural lands being built. For example, there has recently been a 100 kW solar carport installation at a Port St. Lucie public park.[189] The structure features translucent solar panels, allowing natural light to pass through while generating energy. There is also a $13 billion hyperscale data center called the Sentinel Grove Technology Park in the works, to be built on former citrus groves in St. Lucie County.

While most of the growth is occurring inland, some residential developments are being built along the Atlantic coast in areas which are more vulnerable to tsunamis risk.[190] This expansion of homes, apartment buildings, and energy facilities into previously open space or forested areas increases the exposure of valuable assets to tsunami-related damage. Furthermore, a growing number of residential areas means a larger population of people and pets, increasing overall vulnerability to tsunamis and their impacts in St. Lucie County. While coastal development in St. Lucie County slightly increases risk from tsunamis, the overall probability and consequence of tsunami impacts remain low.

STATE AND LOCAL ASSET CHANGES

In response to population growth and increased roadway traffic, St. Lucie County is enhancing state infrastructure, such as adding ramps and widening lanes on Florida's Turnpike.[191] While these improvements aim to facilitate traffic flow, they also increase the risk of damage from tsunami-related debris and flooding. State parks and beaches, such as Fort Pierce Inlet State Park, face increasing challenges from tsunamis, including shifting sandbars and larger waves that necessitate expanded lifeguard staffing and heightened public warnings.[192] Additionally, upgrades to utilities and stormwater systems are being implemented to mitigate the effects of flooding and water overflow during hazards such as severe storms or tsunamis.

IMPACTS ON POPULATIONS OF FOCUS

Florida's population has been growing rapidly in recent years, driven by its year-round warm weather and vibrant entertainment districts. St. Lucie County has added approximately 50,000 residents in the last five years, bringing the total to about 400,000 by 2025, with an average annual growth rate of 3.79% projected to continue.[193] This growth includes a significant influx of young families and retirees, increasing the number of vulnerable populations, particularly the elderly and young children. For example, vulnerable

[189] Blue Energy Electric, "How Commercial Solar Panels Are Transforming St. Lucie County Businesses," updated September 23, 2025, https://www.blueenergyelectric.com/post/st-lucie-commercial-solar-panels-transforming.
[190] St. Lucie County, "Active Development Projects," 2025, https://www.arcgis.com/apps/dashboards/12184ec9b99646619afc66b1f61b78fc.
[191] St. Lucie County Public Works, "Public Works News," 2025, https://www.stlucieco.gov/departments-and-services/public-works/public-works-news.
[192] Port St. Lucie Talks, "Surf Conditions Rise at Fort Pierce Inlet State Park," 2025, https://portstlucietalks.com/surf-conditions-rise-at-fort-pierce-inlet-state-park-after-hurricane-erin/.
[193] World Population Review, "St. Lucie County," 2025, https://worldpopulationreview.com/us-counties/florida/st-lucie-county.

populations may have reduced access to transportation, not as readily receive emergency alerts, may be more impacted by reduced healthcare services. People with mobility impairments may require specialized transportation or assistance to evacuate safely, while those with limited English proficiency may not receive or fully understand emergency instructions. Limited-resource households may lack the financial means to prepare for or recover from a disaster, compounding long-term impacts.

As the population rises, the risk during a tsunami event escalates, with more individuals exposed to potential harm. This surge in residents places additional strain on local resources during a tsunami, including emergency response capabilities, food supply, and energy services. Furthermore, increased traffic on local roads can hinder evacuations and slow emergency response times, intensifying overall risk.

PROJECTED FUTURE CHANGES

Recent state and county infrastructure projects, aimed at upgrading or expanding roads, transit systems, airport functions, police training, utilities, and residential developments, are expected to continue into the future. Notably, along the coast of St. Lucie County, a Coastal Storm Risk Management Project is planned to protect the 3.3 miles of Atlantic shoreline. This initiative includes beach and dune nourishment to mitigate erosion that could be caused by tsunami runup. Following initial construction, the project will involve two renourishment cycles at 18-year intervals.[194] While designed primarily for large storms, the project will also help address tsunami-related risks, including significant surge and coastal erosion.

The population in St. Lucie County is projected to grow by over 60,000 residents by 2030, increasing demand on transportation and emergency response systems.[195] This growth places more infrastructure, residents, and emergency personnel at risk during a tsunami event. However, ongoing training, upgrades to utilities, and heightened awareness of tsunami risks can help mitigate these dangers. It is essential for the county to continue enhancing facilities while accounting for population growth and the intensifying impacts of tsunamis.

Water Structure and Levee Failure

Definition

The failure of a water structure or levee has a low-probability. However, when a dam, spillway, or related structure cannot safely contain or release impounded water, the consequences downstream can be catastrophic.[196] Such failures occur when the integrity of the water structure is compromised, whether suddenly or gradually, leading to an uncontrolled release of water that inundates normally dry land.[197]

[194] U.S. Army Corps of Engineers, "St. Lucie County Coastal Storm Risk Management Project," 2025, https://www.saj.usace.army.mil/About/Congressional-Fact-Sheets-2025/St-Lucie-County-FL-Coastal-Storm-Risk-Management-Project/.
[195] World Population Review, "St. Lucie County," 2025, https://worldpopulationreview.com/us-counties/florida/st-lucie-county.
[196] Association of State Dam Safety Officials, "Dam Failure and Incidents", https://damsafety.org/dam-failures.
[197] FEMA, "Federal Guidelines for Dam Safety Risk Management", 2025, https://www.fema.gov/sites/default/files/2020-08/fema_dam-safety_risk-management_P-1025.pdf.

According to FEMA, water structure failures remain a concern, particularly where aging infrastructure exceeds its original design life and experiences hydraulic stress during heavy rainfall events[197] While some failures develop slowly due to seepage, internal erosion, or structural deterioration, others can occur with little to no warning, especially when triggered by intense rainfall, overtopping, seismic activity, or operational errors.

Figure 66: The St. Lucie Lock[198]

Water structures exist in a wide range of settings and serve many functions, including flood control, irrigation, hydropower, industrial water supply, and recreation. Because many are located upstream of populated areas, critical facilities, agricultural operations, and transportation corridors, even a partial breach can produce significant downstream flooding. The extent of inundation depends on the structure's height, storage capacity, breach characteristics, topography, and the velocity of released water. High hazard potential dams, those where failure is expected to cause loss of life, pose the greatest risk. As development expands into downstream inundation areas, the exposure of people and property continues to increase.

The primary causes of failure include structural deficiencies, foundation instability, improper maintenance, overtopping from extreme rainfall, internal erosion (piping), and spillway damage. Heavy rainfall events can exacerbate these risks by placing additional hydraulic stress on water control structures, particularly those with limited capacity or deferred maintenance. Aging infrastructure further compounds the hazard: Many water structures in the United States were constructed over 50 years ago and require significant rehabilitation to meet modern engineering and safety standards. Inadequate inspections, lack of emergency action plans, and deferred maintenance can increase the likelihood of a failure event.

The impacts of a water structure failure extend far beyond immediate flooding. Rapid, high-velocity flows can destroy buildings, roads, bridges, utilities, and agricultural lands, creating debris and hazardous

[198] US Army Corps of Engineers, "St. Lucie Lock and Dam," 1999, https://commons.wikimedia.org/wiki/File:USACE_St_Lucie_Lock_and_Dam.jpg.

materials that hinder rescue and recovery operations. Disruption of water supply systems, power generation facilities, and irrigation networks can lead to cascading impacts across multiple sectors of a community. Long-term effects may include contamination of water bodies, loss of fisheries and wildlife habitat, sediment deposition, and reduced water quality. Social impacts can be severe, as water structure failures often require rapid evacuations, displace residents, and impose long-term economic burdens on affected communities. Effective dam safety programs, including regular inspections, emergency action planning, inundation mapping, and ongoing infrastructure investment, are essential to reducing future risks and protecting downstream populations.

Levee failure is a high-impact hazard that occurs when a levee system, either natural or human-made, can no longer contain rising water levels, resulting in overtopping, structural breach, or seepage that allows floodwaters to inundate normally dry areas. Levees are designed to reduce flood risk by confining rivers, protecting low-lying coastal areas, and preventing storm surge from entering developed corridors. However, according to the U.S. Army Corps of Engineers, many levees across the United States are aging, inadequately maintained, or constructed to outdated design standards, making levee failure a persistent risk for communities protected by these structures. Levee breaches can develop gradually, such as through prolonged saturation or internal erosion (piping), or rapidly during extreme precipitation and storm surge events that exceed design capacity.

Levees protect millions of residents, critical facilities, agricultural areas, and economic assets nationwide. As development increases behind levee systems, the consequences of failure become more severe, particularly in densely populated floodplains, coastal zones, and areas with limited evacuation routes. Levee systems vary widely in construction—earthen embankments, concrete floodwalls, steel sheet piling—and each type presents distinct vulnerabilities. Factors such as soil composition, foundation stability, vegetation, rodent burrows, and maintenance practices all influence a levee's performance during high-water events. When a levee no longer provides its intended level of protection, the resulting inundation can occur rapidly and with considerable depth, often producing impacts more damaging than natural flooding due to the sudden release of confined water.

Common causes of levee failure include overtopping, structural instability, seepage, erosion, inadequate drainage, scour, and storm surge exceeding the levee's design elevation. Levee systems may be stressed during periods of elevated water levels, prolonged rainfall, or rapid canal stage increases, particularly where design limits or maintenance conditions reduce system capacity.

The impacts of levee failure extend well beyond immediate flooding. Because levees are typically designed to protect substantial urban and agricultural assets, breaches can disrupt transportation corridors, utilities, and lifeline systems, including water supply, wastewater treatment, and power infrastructure. Floodwaters released from a levee breach may carry contaminants, debris, petroleum products, and hazardous materials, creating complex public health and environmental challenges. Communities may face long-term economic impacts, including loss of homes and businesses, agricultural damage, recovery of critical infrastructure, and substantial financial burdens associated with repairs and reconstruction. Social impacts can be profound, particularly in vulnerable or rural areas where levees are often the only barrier between populated neighborhoods and high-risk flood zones.

Location and Extent

Although St. Lucie County is not home to a large federal dam, flooding from water structures remains a localized but potentially high-consequence hazard due to the presence of smaller water control structures, agricultural impoundments, stormwater retention systems, and canal-based hydrologic features operated primarily by the South Florida Water Management District (SFWMD) and local jurisdictions. These structures play essential roles in irrigation, drainage, and flood control across the county and are found in both urban and agricultural areas. While the geographic footprint of a potential water structure incident is smaller than riverine or coastal flooding, failures at these facilities can still produce rapid, high-velocity outflows that affect downstream neighborhoods, roadways, and critical infrastructure.

The greatest potential impacts are concentrated near stormwater ponds, spillways, and canal control structures located in Port St. Lucie, Fort Pierce, and western agricultural areas. Many of these systems are designed to manage the county's extensive canal network and overtopping or structural failure during extreme rainfall events could inundate adjacent residential areas, transportation corridors, or agricultural tracts. In the rural western portions of the county, where irrigation reservoirs and agricultural impoundments support large-scale farming operations, a breach could disrupt farm operations, erode soils, and inundate low-lying pasture or cropland.

While the overall extent of water structure flooding is highly dependent on reservoir size and topography, failures can result in sudden downstream flooding in confined channels or canal-adjacent neighborhoods. The flat terrain and interconnected basin system of the Treasure Coast can amplify the movement of released water, potentially affecting areas far from the original breach point. Heavy rainfall events may place additional pressure on small water control structures that were not engineered to manage higher runoff volumes.

St. Lucie County's levee-related risk is closely tied to the regional water management system that connects the county to Lake Okeechobee and the broader SFWMD canal network. While the county does not contain major federal levees, several canal embankments and water-control levees functionally serve as levee systems by containing water in engineered channels such as the C-23, C-24, and North Fork St. Lucie River canals. These structures reduce flood risk by conveying stormwater away from developed areas; however, they also create residual risk where a breach, overtopping event, or structural weakness could release confined water into adjacent communities.

Levee-related impacts are most likely near canal-adjacent neighborhoods in Port St. Lucie and in agricultural areas located along the county's extensive drainage network. In urbanized areas, levee or embankment failure could inundate residential subdivisions built directly adjacent to canals or retention systems, overwhelming local drainage networks. In rural western areas, failure of canal embankments could quickly flood agricultural lands, impede farm operations, and block access routes.

The extent of levee-related flooding is influenced by canal water levels, the height and condition of embankments, and the proximity of development to the canal system. Flat topography in St. Lucie County allows water released from a breach to spread widely and rapidly. Elevated canal stages and prolonged

rainfall may increase hydrostatic pressure on canal levees, particularly during periods of sustained runoff. Table 82 lists the water control structures in St. Lucie County, and Table 83 lists its levees.

Table 82: Water Control Structures in St. Lucie County[199]

Structure Name	NID ID	Owner	Owner Type	State Regulated	Federal Regulated	Hazard Potential	Condition	EAP
S-49	FL00414	SFWMD	Local Government	Yes	No	Significant	Not Rated	No
Control Structure #1	FL00410	North St. Lucie River Water Control District	Local Government	Yes	No	Low	Not Rated	Not Required
Control Structure #3	FL01009	North St. Lucie River Water Control District	Local Government	Yes	No	Low	Not Rated	Not Required
Control Structure #2	FL00413	North St. Lucie River Water Control District	Local Government	Yes	No	Low	Not Rated	Not Required
Capron Trail #1	FL28005	Premier Citrus, LLC	Private	Yes	No	High	Fair	No
Capron Trail #2	FL28006	Premier Citrus, LLC	Private	Yes	No	High	Fair	No
S-99	FL00411	SFWMD	Local Government	Yes	No	Significant	Not Rated	No
G78 Control Structure	FL28002	SFWMD	Local Government	Yes	No	High	Not Rated	No
G79 Control Structure	FL28003	SFWMD	Local Government	Yes	No	High	Not Rated	No
G-81	FL28004	SFWMD	Local Government	Yes	No	Low	Not Rated	No
Water Control Structure 2	FL01010	Ft Pierce Farms Water Control District	Local Government	Yes	No	Low	Not Rated	Not Required
S-50	FL00412	SFWMD	Local Government	Yes	No	Significant	Not Rated	No

[199] National Inventory of Dams, https://nid.sec.usace.army.mil/.

Table 83: Levees in St. Lucie County.[200]

Levee Name	System ID	Location	Levee Length	Average Height	Year Constructed	Structures	Downstream Population
10MI_RES	1405200102	Fort Pierce	3.837 miles	No Data	No Data	0	0
S383CON_1	1405200091	Fort Pierce	1.912 miles	No Data	No Data	0	0
S-97 North Tieback	3405000118	Port St. Lucie	1.799 miles	5 ft	1964	2,107	6,061

[200] National Levee Database, https://levees.sec.usace.army.mil/. This database might not contain data on some non-federal structures.

EXTENT

Water structures in the United States are classified by the potential consequences of failure, commonly referred to as hazard potential classification. This system, used by FEMA, USACE, and the National Inventory of Dams (NID), categorizes dams based on the expected severity of downstream impacts should the structure fail—not on the structural condition of the dam or the likelihood of failure. This distinction means that a well-maintained dam with robust engineering can still be classified as "High Hazard" if populations or critical facilities are located downstream, just as a structurally deficient dam may be classified as "Low Hazard" if failure would cause minimal damage.

Hazard potential classifications help define the extent of the area that may be affected by a water structure failure, including the depth, velocity, and reach of floodwaters. These classifications also influence regulatory requirements for inspections, emergency action plans (EAPs), and mitigation strategies, as well as local emergency operations planning. As downstream development expands and land uses change, a dam's hazard classification can increase even if the dam structure itself has not changed, a dynamic similar to how increasing urbanization expands the extent of flood risk.

Dams are typically categorized into the following three FEMA/USACE hazard potential classes: High hazard potential, significant hazard potential, and low hazard potential, as noted in Table 84.

Table 84: Classification of Water Structure Hazards

Type	Definition
High Hazard Potential	A structure whose failure is likely to cause loss of human life due to the presence of homes, businesses, critical facilities, or occupied structures in the downstream inundation zone.
Significant Hazard Potential	A structure whose failure will not likely cause loss of life but could result in major economic and physical damage.
Low Hazard Potential	A structure whose failure is expected to cause minimal economic or environmental losses, with no probable loss of life.

Levees in the United States are classified based on their intended level of flood protection, structural characteristics, and potential consequences if the levee is overtopped, breached, or otherwise fails. Unlike flood recurrence intervals (e.g., 100-year, 500-year floods), levee classifications focus on the design standard, performance expectations, and risk to people and property behind the levee.[1] The classification system is used by the U.S. Army Corps of Engineers (USACE), FEMA, and the National Levee Database (NLD) to evaluate levee integrity, inspection needs, and eligibility for certain federal programs.

Levee classifications help define the extent of inundation that may occur if an embankment breach or overtopping event takes place. Because levees confine water in canals, rivers, or coastal areas, a single breach can result in rapid, high-velocity flooding, often more severe than natural overbank flooding. As urban development has expanded along St. Lucie County's canal network, particularly along the C-23, C-

24, and C-25 systems, the population and infrastructure exposed to levee-related hazards have increased, even though the levee structures themselves may not have changed.

Levees in St. Lucie County are primarily associated with SFWMD canal embankments, stormwater control features, and flood-control berms rather than large riverine levee systems. These structures play a key role in managing water throughout the county but carry varying degrees of risk depending on their height, condition, water load, and proximity to developed areas.

JURISDICTIONAL IMPACTS

The uncontrolled release of water, whether caused by structural failure, overtopping, or malfunction of water control structures, poses a localized but potentially severe hazard for communities across St. Lucie County. While the county does not contain a federal dam, it relies heavily on a complex network of stormwater retention ponds, agricultural impoundments, and SFWMD-operated canal. A failure or breach in these systems can result in sudden, high-velocity flooding capable of damaging homes, roadways, utilities, and agricultural lands. Because many of these structures are located near residential neighborhoods and critical corridors, even relatively small water structure failures can impose disproportionate impacts on emergency response, infrastructure, and economic activity. The degree of consequences varies across jurisdictions based on development density, proximity to water-control structures, and the presence of vulnerable populations. Table 85 summarizes hazard impacts of water structure failure by jurisdiction.

Table 85: Impacts of Water Structure Failure, by Jurisdiction

Jurisdiction	Impacts
St. Lucie County	Water structure failures of countywide infrastructure, particularly along major drainage canals or agricultural reservoirs, can trigger rapid downstream flooding that damages roads, culverts, and stormwater systems. Response operations may be hindered by debris, restricted access routes, and simultaneous impacts to rural and urban areas. Economically, failures may disrupt agricultural operations west of I-95, damage public facilities, and increase long-term maintenance and mitigation costs. Social impacts include temporary evacuations, population displacement, and heightened demand for county support services.
City of Port St. Lucie	Port St. Lucie faces elevated risk due to the concentration of neighborhoods built adjacent to stormwater ponds, canals, and water-control structures. A breach or overtopping event may flood residential streets, compromise local drainage networks, and isolate subdivisions. Infrastructure damage, including to bridges, culverts, and underground utilities, can lead to prolonged service disruptions and costly repairs. Economic losses often include property damage, business interruption, and recovery-related strain on city operations. Social impacts include evacuation challenges and increased demand for emergency sheltering and assistance.
City of Fort Pierce	Fort Pierce may experience localized but intense impacts from failures involving canal control structures or retention systems near urban and coastal areas. A sudden release of water could overwhelm drainage basins, flood older

Jurisdiction	Impacts
	neighborhoods with limited stormwater capacity, and disrupt critical sectors such as port operations and waterfront commerce. Damage to public infrastructure may include erosion of transportation corridors, utility outages, and impacts to shoreline stabilization features. Recovery may be further complicated by economic reliance on tourism and maritime activities.
Town of St. Lucie Village	The town's geography and proximity to water bodies increase sensitivity to small-scale dam or retention pond failures. Limited stormwater and emergency service capacity may prolong recovery and elevate reliance on county or state support. A failure event could flood local roadways, hinder mobility, impact private wells and septic systems, and restrict access for essential services. Social impacts may include displacement of residents and increased dependence on outside assistance for debris management and restoration.

Levee-related hazards in St. Lucie County primarily involve canal embankments and flood-control berms associated with the SFWMD's regional water management system. Although these structures are not traditional large-scale river levees, they serve similar functions: Confining water in engineered canals and protecting surrounding neighborhoods, farmland, and infrastructure. A breach, overtopping, or structural failure can lead to rapid, uncontrolled flooding that spreads across low-lying terrain, causing significant damage to nearby communities. The extent of levee-related impacts is influenced by canal water levels, storm conditions, and the density of development behind the embankment. Table 86 outlines potential impacts from levee-related hazards across the county's jurisdictions.

Table 86: Impacts of Levees, by Jurisdiction

Jurisdiction	Impacts
St. Lucie County	Levee or canal embankment failures can affect both urban and rural areas, particularly where major SFWMD canals run adjacent to roadways, utilities, and agricultural tracts. Countywide impacts may include damage to transportation corridors, erosion of embankments, and flooding of public facilities. Multiple simultaneous embankment issues during extreme rainfall or storms can strain emergency response and public works operations. Agricultural production may be disrupted by prolonged inundation, while social impacts include mobility restrictions, temporary displacement, and increased demand for public assistance.
City of Port St. Lucie	As the county's most canal-connected municipality, Port St. Lucie is highly vulnerable to levee or embankment failures along the C-23, C-24, and C-25 systems. A breach can cause fast-moving, deep flooding in adjacent neighborhoods, overwhelm stormwater networks, and damage roads, culverts, and utilities. Economic impacts include property damage, business interruptions, and costly repairs to public infrastructure. Social consequences may involve evacuations, reduced access for emergency services, and increased need for emergency shelter and recovery programs.
City of Fort Pierce	Levee-related hazards in Fort Pierce are primarily associated with embankments that support canal drainage into coastal zones. A structural issue or overtopping

Jurisdiction	Impacts
	event can flood residential areas, commercial districts, and older neighborhoods with limited stormwater capacity. Floodwaters may disrupt port operations, tourism, and transportation corridors. Recovery challenges include erosion, debris accumulation, and restoration of stormwater infrastructure, all of which increase maintenance demands and local government expenditures.
Town of St. Lucie Village	Because St. Lucie Village is situated near low-lying coastal and lagoon-adjacent areas, even minor embankment weaknesses can result in localized flooding. Limited stormwater infrastructure and reliance on county-level support increase vulnerability to prolonged disruptions. A levee or canal embankment failure may flood local roads, restrict essential service access, and affect septic systems and private wells. Social impacts may include displacement of at-risk households and a heightened need for external recovery assistance.

NATIONAL RISK INDEX

The NRI serves as a valuable tool for assessing various hazards across communities in the United States; however, it lacks an evaluation of dam and levee failures as a significant hazard and will therefore not be included in this particular hazard profile.

Magnitude and Severity

Failures of water-control structures in St. Lucie County, though less frequent than flooding or coastal hazards, have the potential to cause severe and rapid impacts due to the sudden release of impounded water. The severity of a water structure failure depends on the type of structure involved, reservoir or canal storage volume, breach size, downstream topography, and the proximity of development to the failure point. Many of the county's water control structures are located in Port St. Lucie, Fort Pierce, and agricultural areas near major SFWMD canal systems, meaning that even a localized failure can create intense flooding capable of damaging homes, roadways, utilities, and public facilities.

A dam or spillway failure can result in high-velocity flows that overwhelm stormwater networks, erode embankments, and inundate low-lying neighborhoods. Because many of these structures connect directly to the C-23, C-24, and C-25 canals, a breach could impact multiple downstream areas simultaneously. Transportation routes such as U.S. Highway 1, Okeechobee Road, and portions of I-95 may become impassable, complicating emergency response and evacuation operations. Prolonged inundation following a failure can damage electrical systems, wastewater facilities, and lift stations, slowing recovery and increasing repair costs.

Secondary impacts often include contamination from agricultural runoff, debris accumulation, sediment displacement, and damage to irrigation or drainage networks. In urban areas, sudden flooding from a water structure failure can lead to mold growth, private property loss, and long-term disruption to businesses and commercial corridors. For rural communities, the loss of irrigation reservoirs or water-control structures may interrupt farming operations, reduce productivity, and create extended recovery

periods. Social impacts, such as displacement, limited mobility, and heightened anxiety, can also persist, particularly in neighborhoods with limited resources or access to emergency services.

As development continues along canal corridors, the severity of water structure-related hazards may increase due to higher exposure of people, property, and infrastructure. Ongoing inspection, maintenance, and rehabilitation of stormwater and agricultural impoundments, along with public education on the risks of water structure failure, are critical to reducing future vulnerability and protecting residents across St. Lucie County.

Levee and canal-embankment failures pose a significant hazard to St. Lucie County due to the county's reliance on an extensive network of engineered canals designed to manage water levels and support flood control. A levee or embankment breach can result in sudden, uncontrolled flooding that spreads quickly across the county's flat terrain, particularly in densely populated neighborhoods near the C-23, C-24, and C-25 canal systems. The severity of a levee failure depends on canal water levels, embankment height and condition, breach size, and the concentration of residential or commercial development behind the levee.

A levee breach can immediately overwhelm local drainage capacity, flooding streets, homes, and utilities with little warning. In Port St. Lucie, where many subdivisions are built adjacent to canal embankments, the impacts can include isolation of neighborhoods, widespread property damage, and extended road closures. Transportation routes such as Prima Vista Boulevard, Port St. Lucie Boulevard, and portions of U.S. Highway 1 may become impassable, hindering emergency response and delaying recovery operations. In Fort Pierce, levee failure can exacerbate existing stormwater limitations, causing rapid flooding in older or low-lying neighborhoods and disrupting port activities and local businesses.

The secondary effects of a levee failure may include erosion of canal banks, damage to bridges and culverts, utility outages, and contamination from stormwater mixing with wastewater or hazardous materials. Environmental impacts can include sediment deposition, vegetation loss, and harm to sensitive ecosystems connected to the Indian River Lagoon. For rural or agricultural areas, levee failure can disrupt irrigation systems, wash out cropland, and damage farm roads, leading to economic losses and reduced yields.

Social and public health impacts may be significant, especially in communities with limited mobility or access to emergency assistance. Displacement, loss of personal property, mental-health strain, and extended recovery times are common outcomes of major levee failures. Levee-related hazards may increase in severity where elevated water levels and development patterns place additional stress on existing infrastructure.

Long-term mitigation, such as levee reinforcement, enhanced inspections, improved canal capacity, and public outreach on residual risk, is essential to maintain protection for residents, infrastructure, and essential services throughout St. Lucie County.

Historic Events

There have been no historical failures of water structures or levees in St. Lucie County.

FEMA DISASTER DECLARATIONS

There have been no FEMA disaster declarations as a result of a dam or levee failure in St. Lucie County.

Probability of Future Conditions

Given ongoing urban development and aging infrastructure, the likelihood of water structure-related incidents may increase over time without continued maintenance and system upgrades. More intense and frequent rainfall events associated with tropical systems can exceed design capacities of older stormwater facilities, placing additional stress on small to mid-sized impoundments located near residential areas and transportation corridors.

Urban expansion in Port St. Lucie and Fort Pierce increases the number of structures located near stormwater ponds and canal spillways, raising exposure and potential consequences should a failure occur. As neighborhoods continue to develop adjacent to retention systems and canal structures, even minor structural issues can lead to localized but severe inundation. Agricultural impoundments in western St. Lucie County also face elevated risks during periods of extreme rainfall, especially where aging dikes or berms protect crop fields and rural infrastructure.

Operational stressors such as elevated water levels and prolonged rainfall events may influence the risk related to water structures. Higher groundwater tables, more frequent intense rainfall events, and increased pressure on stormwater networks can accelerate erosion, reduce storage capacity, and increase the likelihood of overtopping. Coordination with the South Florida Water Management District and state dam-safety officials will remain critical to ensure ongoing inspection, maintenance, and monitoring of high-risk or high-exposure structures.

As the county grows and hydrologic patterns shift, proactive investment in stormwater retrofits, enhanced dam safety programs, and community education will be essential to maintain resilience. Although catastrophic water structure failure remains a low-frequency hazard, the potential consequences of even localized failures make continued vigilance and modernization of aging systems a priority for future mitigation efforts.

St. Lucie County's vulnerability to levee-related hazards may increase as development intensifies near major canal systems. The county's levees and canal embankments, particularly those associated with the C-23, C-24, and C-25 canals, play a crucial role in controlling water levels and preventing flooding across both urban and agricultural areas. As rainfall patterns become more intense and sea levels continue to rise, these embankments will face increasing hydrostatic pressure, elevation challenges, and long-term erosion risks.

Urban growth in Port St. Lucie and Fort Pierce has placed more people, homes, and critical infrastructure adjacent to canal levees. As neighborhoods expand toward the canal network, the potential severity of a breach or overtopping event increases. New development also adds impervious surfaces, which elevate runoff and ultimately increase water volume in canals during rain events, contributing to sustained high-water conditions that stress levee systems. In addition, older embankments built to earlier design standards may face accelerated wear, particularly in areas where maintenance access is limited or vegetation growth disrupts structural stability.

Coastal processes and rising groundwater levels further complicate future levee performance. Higher base water levels reduce storage capacity in the regional canal network, making overtopping more likely during tropical storms or prolonged rainfall. Erosion from storm surge events can also degrade levees located near coastal drainage paths, while tidal backflow may increase seepage and internal erosion in canal embankments closer to the Indian River Lagoon.

Given these evolving conditions, partnerships with the South Florida Water Management District, U.S. Army Corps of Engineers, and Florida Division of Emergency Management will be vital in refining levee monitoring programs, updating maintenance cycles, and strengthening early-warning capabilities. Long-term mitigation, such as embankment reinforcement, vegetation management, drainage upgrades, and public outreach on residual risk, will be essential to reduce future vulnerability.

Overall, the likelihood of levee-related incidents in St. Lucie County is expected to rise due to increased water loads, higher exposure from adjacent development, and hydrologic changes. Continued investment in levee system resilience will be critical to protect the county's residents, infrastructure, and economic vitality.

Data Limitations, Coordination, and Mitigation Context for Water Structures

Assessing the risk related to water structures in St. Lucie County is constrained by several important data and programmatic limitations. The Florida Department of Environmental Protection (FDEP) Dam Safety Program notes that engineering studies, dam-break/inundation studies, and portions of Emergency Action Plans (EAPs) are considered confidential under FDEP's interpretation of Chapter 119.071, Florida Statutes. As a result, detailed inundation mapping and structure-specific consequence analyses are not publicly available. This confidentiality limits the county's ability to quantify, with precision, the location and size of downstream populations at risk from individual water structures or embankments.

The FDEP Dam Safety Program also indicates that it does not currently maintain a formal, comprehensive database of water structure failures, near failures, or structure-related emergencies, and reporting of such events to FDEP is not mandatory. As a result, there is no centralized historic record that would capture prior incidents in St. Lucie County, even if they occurred at small stormwater or agricultural impoundments.

From a statewide perspective, FDEP emphasizes that water structures located in series or along the same river or canal system are generally more vulnerable to cascading or secondary hazards. For example, the failure of an upstream structure increases hydraulic loading on downstream water structures or embankments. Potential secondary impacts include loss of water supply, damage to water-treatment systems, downstream flooding, siltation of wetlands, and broader water-quality degradation. These general principles are applicable to St. Lucie County's canal-connected system, where multiple water-control structures and embankments influence shared downstream corridors.

Funding and programmatic challenges also affect the long-term safety and resilience of dam and levee systems. According to FDEP, the biggest hurdles in supporting inspections, maintenance, and retrofits for state and locally owned water structures include:

- Competition from other capital projects and priorities
- Limited or fragmented long-term planning
- Underestimates of short- and long-term maintenance and rehabilitation needs
- Limited assessment data to fully characterize conditions and risk
- Limited and often temporary federal funding streams
- A lack of dedicated state loan and grant programs specifically targeted to dam systems

With funding from the High Hazard Potential Dams (HHPD) Grant Program, FDEP notes that the Florida Legislature would first have to designate a state agency to apply for, receive, and manage HHPD grants. The Florida Division of Emergency Management (FDEM) is identified as a strong candidate to serve as the grant recipient and administrator, while FDEP Dam Safety could support the technical aspects of the program, including development or adaptation of a prioritization methodology for eligible water structures. At present, these structures and processes are not fully in place, but they represent an important opportunity for future mitigation of high-hazard potential structures that could impact communities in St. Lucie County.

Coordination between FDEP Dam Safety and St. Lucie County is ongoing but can be strengthened. FDEP can work directly with county staff on specific water structure-related issues, questions, and concerns. Prior to significant storm events, FDEP sends alert emails, via the Tallahassee Emergency Operation Center, to contacts it has on file, and the program encourages counties to ensure that appropriate local emergency management, public works, and utilities contacts are included on this distribution list. FDEP also maintains a dam safety emergency/incident cell phone number (850-274-3636) that provides regulatory assistance and a communication network for incident support. At the same time, the Florida Dam Safety Program is decentralized. It comprises FDEP and the five water management districts, with permitting, compliance, and enforcement for water control systems in St. Lucie County primarily directed by SFWMD.

For integration with broader resilience efforts, FDEP is not currently aware of specific, active initiatives that formally integrate dam risk-reduction strategies into comprehensive floodplain management and watershed resilience programs for St. Lucie County. This could include integrating dam and canal-

embankment considerations into watershed-scale planning, green infrastructure strategies, and multi-objective flood mitigation projects.

Several mitigation funding opportunities are potentially available. FDEP notes that its Resilient Florida Program may provide grant funding to improve infrastructure resilience, including dam and related water-control systems that are at risk of failure due to flooding. Additional projects may be eligible for federal programs, such as the HHPD Grant Program, once a state-level administrative structure is in place.

Vulnerability Assessment

St. Lucie County's vulnerability to water structure-related hazards is shaped by its extensive stormwater management systems, canal-dependent hydrology, and the proximity of residential and commercial development to water-control structures. Populations living near stormwater ponds, canal-adjacent subdivisions, and areas with aging water-control infrastructure face heightened risk should a breach, overtopping event, or malfunction occur.

Neighborhoods with limited redundancy in drainage networks, particularly in Port St. Lucie and Fort Pierce, are more vulnerable because a sudden release of water can overwhelm nearby roads and stormwater systems. Socioeconomic factors, including lower household income, reliance on mobile-home housing, and limited access to insurance, can increase long-term vulnerability. Residents without personal vehicles or reliable communication access may face challenges during rapid-onset dam incidents, especially when evacuation time is limited.

Rural agricultural areas west of I-95 are also vulnerable due to irrigation reservoir embankments and agricultural dikes that may fail under extreme rainfall conditions. These failures can disrupt farm operations, damage crops, and reduce economic stability. Countywide vulnerability is compounded by aging stormwater infrastructure, limited system capacity during heavy rainfall events, and increasing development pressures near canal systems, all of which elevate future exposure and reduce the margin of safety for many local structures.

IMPACTS ON ASSETS

Table 87: Consequence Analysis for Water Structures

Sector	Consequence
Public	A dam or water-control structure failure can rapidly flood adjacent neighborhoods, leading to displacement, injury, or, in severe cases, life safety risks. Sudden inundation may cut off access to essential services, trap residents in flooded areas, and damage private wells and septic systems.
First Responders	High-velocity flooding can delay emergency response, block access routes, and require water rescues. Personnel may be diverted from other storm-related tasks, straining resources during peak hazard periods.

Sector	Consequence
Continuity of Operations	Damage to drainage infrastructure, flood-control structures, and transportation corridors may disrupt government operations and delay emergency and public works functions. Access to essential facilities such as hospitals or shelters may be reduced.
Property, Facility, and Infrastructure	Homes, businesses, and public buildings near canals and retention ponds are at significant risk of structural damage. Lift stations, culverts, roads, and utilities may fail or require costly repairs after inundation or erosion. High-velocity flows can undermine foundations and embankments.
Environment	A breach may mobilize sediment, agricultural runoff, and contaminants stored in stormwater basins. Environmental consequences may include habitat degradation, water-quality decline, and harm to aquatic ecosystems connected to the Indian River Lagoon.
Economic Conditions	Temporary business closures, agricultural losses, and damage to commercial corridors can result in substantial revenue loss. Repairing damaged water-control infrastructure and roadways increases long-term public expenditures.
Public Confidence	Unexpected structural failures can erode trust in local infrastructure and safety programs. Visible maintenance gaps or slow recovery may heighten public concern, emphasizing the need for clear communication and proactive mitigation.

St. Lucie County's vulnerability to levee-related hazards is closely tied to its extensive canal network, flat topography, and growing development near water-management infrastructure. Canal embankments along the C-23, C-24, and C-25 systems function as levees, preventing elevated water levels from inundating adjacent neighborhoods. As residential and commercial growth continues along these corridors, larger populations and critical assets are placed at risk should an embankment breach, slump, or overtop.

Communities in Port St. Lucie and Fort Pierce with neighborhoods built close to canal embankments face the highest exposure, as levee failures can cause rapid, deep flooding with limited warning. Areas with older or minimally maintained embankments are particularly vulnerable, especially during intense rainfall or prolonged high-water conditions. Socioeconomic vulnerabilities such as limited financial resources, absence of flood insurance, and dependence on vehicles for evacuation further increase risk for certain populations.

Rural and agricultural areas are also at risk from levee failure, as breaches can flush large volumes of water across fields, disrupt irrigation systems, and isolate farmsteads. Smaller jurisdictions such as St. Lucie Village rely heavily on county and state support, potentially facing longer recovery times following a levee-related event. Populations located near canals or downstream of water control structures may face increased risk during high water events and prolonged rainfall, particularly where mobility or resources are limited.

Table 88: Consequence Analysis for Levees

Sector	Consequence
Public	A levee or canal embankment breach can result in rapid inundation of nearby subdivisions, requiring evacuations and posing direct life-safety risks. Flooding may isolate neighborhoods and eliminate access to medical, commercial, and social services.
First Responders	Flooded or eroded canal banks can block emergency access routes, delay response times, and increase the need for high-risk rescue operations. Communication infrastructure may be impacted by sudden flooding or utility damage.
Continuity of Operations	Levee failures can disrupt essential government services, damage public infrastructure, and hinder access to critical facilities. Emergency management operations may be strained by simultaneous impacts across multiple canal corridors.
Property, Facility, and Infrastructure	Homes and businesses adjacent to canal systems are highly susceptible to damage from high-velocity water. Roads, culverts, sewer systems, and electrical infrastructure may fail due to erosion, inundation, or structural undermining. Repairs are often extensive and costly.
Environment	Levee breaches can mobilize debris, pollutants, and sediments throughout the canal network and into the Indian River Lagoon. Sensitive habitats and wetlands may be damaged by scouring, sedimentation, and contaminated runoff.
Economic Conditions	Local economies may experience disruptions to commerce, agriculture, and transportation. Extended closures of major roadways or commercial corridors can reduce revenue and increase recovery expenditures. Long-term impacts may include higher insurance costs and infrastructure maintenance needs.
Public Confidence	Repeated or unexpected levee issues, such as bank sloughing, seepage, or overtopping, can reduce trust in water-management systems and local leadership. Proactive communication, routine maintenance, and visible improvements are critical to maintaining public confidence.

IMPACT ON COMMUNITY LIFELINES

FEMA's community lifelines are shown in Figure 67. Water structure failure poses a threat to these lifelines in the ways listed below.

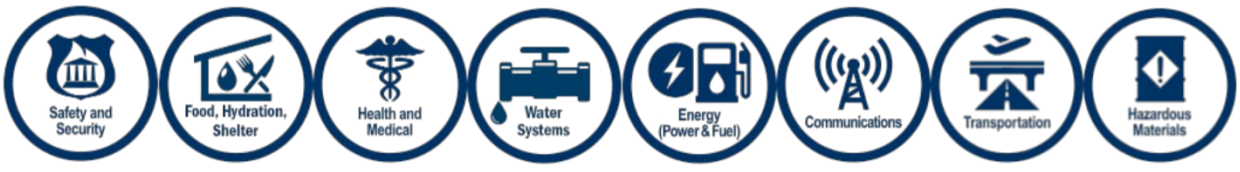

Figure 67: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** Sudden, high-velocity flooding from a dam or water-control structure failure can create immediate life-safety risks, requiring evacuations, water rescues, and law enforcement support. Structural failures may cause debris hazards, restricted access, and increased demand for emergency protective actions.
  - A levee or embankment breach can cause fast-moving, deep flooding that threatens life safety, triggers widespread evacuations, and increases demand for fire/rescue, law enforcement, and search-and-rescue teams. Canal-bank instability may create physical hazards for responders and residents.
- **Food, Hydration, and Shelter:** Flooding may damage homes near canals and retention ponds, displacing residents and increasing demand for temporary shelter, food assistance, and hydration supplies. Loss of refrigeration or contamination of stored food can affect both households and commercial facilities.
  - Flooding from a levee breach can inundate homes and apartment complexes near canal systems, increasing shelter needs and threatening food supplies. Damage to grocery stores, distribution networks, or household food storage can create short-term shortages.
- **Health and Medical:** Rapid-onset flooding can limit access to medical facilities, damage local clinics, and create conditions conducive to mold growth, contaminated water, and increased injury risk. Emergency medical response may be delayed due to blocked roadways or inundated neighborhoods.
  - Flooding may isolate medical facilities or impede ambulance access. Standing water near densely populated areas can increase mold exposure, vector concerns, wastewater intrusion, and risk of injury. Damage to clinics or pharmacies near canals can reduce healthcare availability.
- **Water Systems:** A water structure failure can damage potable water and wastewater systems, including lift stations, wellfields, and septic systems. Floodwaters can infiltrate water lines, overwhelm stormwater networks, and mobilize pollutants stored in retention basins.
  - Levee failures can intrude into drinking-water infrastructure, overwhelm stormwater systems, and disrupt wastewater collection. Infiltration of contaminated floodwaters can impair water quality and damage lift stations, force main pipes, or wellfields.
- **Energy (Power and Fuel):** Electrical substations, utility poles, and underground infrastructure near canal corridors may be damaged or submerged. Power outages can occur if flooding affects transformers or access routes for utility repair crews. Fuel supply operations may be disrupted due to flooded roadways.
  - Canal-adjacent electrical infrastructure, including substations and transmission lines, may be compromised by erosion or inundation. Widespread outages may occur if embankment-related flooding impacts underground utilities or restricts access for repair crews.
- **Communications:** Inundation of utility corridors may cause damage to communication lines and cellular infrastructure. Water-control structure failures may also disrupt monitoring systems, alarms, and telemetry used for canal and stormwater management.

  - Flooding may damage communications equipment, including cellular towers or fiber-optic lines located along canal corridors. Interruption of telemetry used by the South Florida Water Management District can hinder coordination and situational awareness.

- **Transportation:** Roads, bridges, and culverts adjacent to canals may fail or become impassable due to erosion or sudden flooding. Key routes such as U.S. 1, Port St. Lucie Boulevard, and local neighborhood connectors may experience closures, restricting mobility and delaying emergency services.
  - Roadways running parallel to canal embankments, including major commuter routes, may be undermined or submerged during a breach event. Flooding can isolate neighborhoods and disrupt emergency evacuation or supply deliveries. Damaged bridges and culverts may prolong recovery.
- **Hazardous Materials:** Floodwaters may mobilize agricultural runoff, household chemicals, or fuel stored near water-control structures. Industrial sites or maintenance facilities located near canals may release contaminants if inundated.
  - Breaches can mobilize contaminated sediments, agricultural chemicals, fuel, or wastewater stored near canal systems. Industrial zones near Fort Pierce or agricultural operations west of I-95 may release hazardous materials if inundated.

IMPACTS DUE TO CHANGES IN DEVELOPMENT

Over the past five years, St. Lucie County has experienced rapid population growth, extensive urban infill, and widespread infrastructure expansion. These trends have significantly increased exposure to water structure-related hazards, particularly in areas where residential, commercial, and public development intersects with the county's stormwater management systems and regional canal network. As development has expanded into low-lying zones and along the C-23, C-24, and C-25 canal corridors, a larger proportion of the population now resides near stormwater retention ponds, agricultural impoundments, water-control structures, and embankments that function similarly to levees. This has elevated the potential consequences of localized failures, overtopping events, and structural degradation throughout the county.

Urban infill in Port St. Lucie and Fort Pierce has increasingly reduced natural drainage and infiltration areas, leading to higher runoff volumes that place additional stress on stormwater ponds, spillways, and canal embankments. Many of these systems now operate closer to capacity during peak rainfall events, increasing vulnerability to overtopping, erosion, and reduced freeboard. Construction activities, such as grading, soil compaction, clearing, and utility installation, can further compromise the stability of retention pond embankments and canal-adjacent slopes, particularly where maintenance access is limited or vegetation growth goes unmanaged.

Development along canal corridors has also altered hydrologic patterns. Expanded roadways, new drainage features, and utility networks may redirect or concentrate stormwater near levee-like embankments, heightening erosion risk and increasing pressure on canal systems during tropical storms or intense rainfall. Impervious surfaces associated with new subdivisions and commercial centers

contribute to elevated canal stages, which may exacerbate seepage, internal erosion, or overtopping potential, especially in areas where embankments were not originally designed to protect dense populations.

Rural and agricultural areas have experienced their own shifts in risk. Increased irrigation demands have led to larger or modified agricultural reservoirs and dikes, raising potential impacts should an impoundment fail during extreme precipitation. Simultaneously, sediment accumulation and intensified pumping activity across the drainage network can reduce conveyance efficiency and increase long-term instability of canal banks and embankments.

IMPACTS ON POPULATIONS OF FOCUS

Certain populations in St. Lucie County face heightened vulnerability to dam and levee hazards due to socioeconomic, geographic, and demographic factors. Residents living near stormwater retention ponds, agricultural impoundments, and the canal embankments of the C-23, C-24, and C-25 systems are at particular risk, as failures or overtopping events can result in rapid, high-velocity flooding with little warning. Many of these neighborhoods include older adults, low-income households, and individuals with disabilities who may experience difficulty evacuating quickly or accessing emergency information and sheltering resources. Limited mobility, reliance on medical equipment, and lack of transportation options further increase risk during sudden-onset dam or levee incidents.

Low-income residents and renters, especially those living in older housing stock, mobile homes, or multifamily complexes near canal corridors, are disproportionately exposed to infrastructure vulnerabilities and drainage limitations. These populations are less likely to carry specialized insurance that covers losses from water-control structure failures, leading to longer, more expensive recovery periods. Renters may also face displacement if floods caused by embankment breaches damage housing units or render them unsafe for occupancy.

Workers in essential sectors such as healthcare, retail, agriculture, transportation, and emergency services may also be disproportionately affected by dam or levee failures. Flooding of key transportation routes adjacent to canal levees can isolate neighborhoods or impede access to workplaces, reducing income stability and straining essential public services. Agricultural workers in western St. Lucie County face additional exposure due to proximity to irrigation reservoirs, farm impoundments, and drainage canals that may fail during extreme weather conditions.

Children and students are vulnerable when school transportation routes traverse canal-adjacent roads or when school facilities experience flooding from embankment failures. School closures can disrupt education and place additional burdens on families facing employment or caregiving challenges.

Individuals experiencing homelessness or housing insecurity face the gravest risks during dam or levee-related flooding. Many reside in areas near drainage canals, wooded corridors, or low-lying open spaces that can flood rapidly during a breach. Without reliable shelter, transportation, or access to emergency alerts, these individuals may be exposed to immediate harm and significant barriers to recovery.

Wildfire

Definition

Wildfire, often referred to as a forest fire or wildland fire, is an uncontrolled, unplanned fire that spreads through vegetation in natural areas, such as forests, grasslands, and scrublands.[201] These fires can be ignited by various factors, including lightning strikes, human activities, and spontaneous combustion due to extreme heat. Wildfires are characterized by their ability to consume large areas of land quickly. They are promoted by dry weather, flammable materials, and wind, which can carry embers to ignite new fires far from the original source.

Three primary conditions affect fire behavior: topography, vegetation, and weather.[202] Topography describes the shape of the land and includes factors such as slope, aspect, and elevation. Each of these variables changes fire behavior and methods of firefighting. Generally, fires spread faster upslope because the heat from the fire rises up the slope, drying fuels and preparing them to ignite. Aspect, or the direction the land faces, influences fuel moisture content. Fuels tend to be drier on south- and west-facing slopes because they receive frequent direct sunlight, while north- and east-facing slopes tend to hold more moisture. Higher elevation areas tend to have lower temperatures, higher relative humidity, and fewer vegetative fuel types, leading to less-intense fire behavior.

Type, size, continuity, and compactness of vegetation have significant impacts on a fire's rate of spread and intensity. Large fuels do not burn as readily as small fuels and take more heat to ignite. Small fuels ignite more easily, and fire spreads more rapidly through them. For example, light grasses burn rapidly, whereas heavy, dense fuels like large trees burn slowly but with greater intensity. Continuity describes how fuels are arranged across the landscape. Fuels that are in patches burn unevenly and more slowly than uniform fuels. Compactness refers to the vertical arrangement of fuel. Compact fuels on the forest floor burn more slowly than tall, dispersed fuels, which have more oxygen available to feed the fire.

Weather (temperature, humidity, precipitation, and wind) affects the ease with which a fuel ignites, the intensity at which it burns, and how easy it might be to control it. High temperatures heat fuels and reduce water content, which increases flammability. Lower relative humidity causes a proportionate decline in fuel moisture, promoting easier ignition and more intense burning. Wind carries the heat from a fire into unburned fuels, drying them out and causing them to ignite more easily. Wind may also blow burning embers into unburned areas ahead of the main fire, starting smaller spot fires.

Figure 68 shows how these variables impact fire behavior.

[201] National Fire Protection Association, "What Exactly Is a Wildfire?" 2024, https://www.nfpa.org/news-blogs-and-articles/blogs/2024/01/31/what-is-a-wildfire.
[202] National Park Service, "Wildland Fire Behavior," 2025, https://www.nps.gov/articles/wildland-fire-behavior.htm.

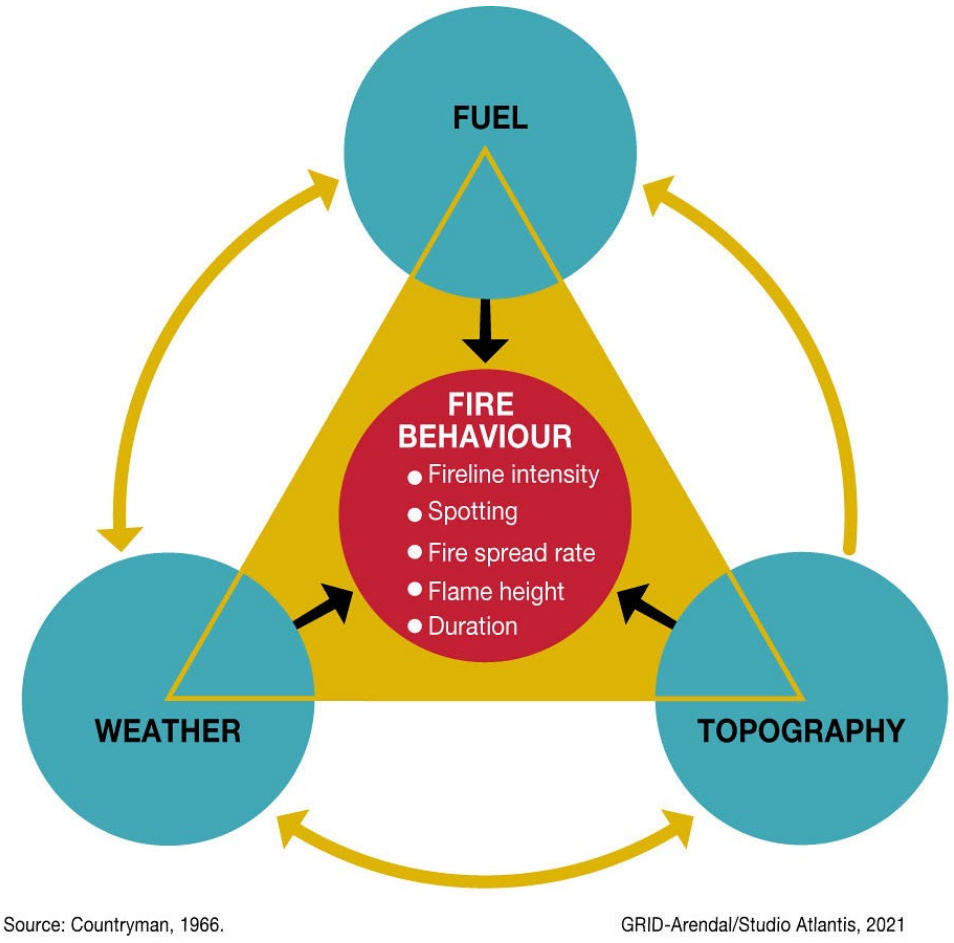

Figure 68: Fire Behavior Triangle[203]

There are three primary types of wildfires: ground fires, surface fires, and crown fires. All three fire types can occur in the same fire, depending on the fire's behavior, but they have distinct characteristics.[204]

- **Ground fires:** Ground fires burn mostly in decayed roots below the surface and in the duff layer. The duff layer is made up of compacted dead plant materials, such as leaves, bark, needles, and twigs. Ground fires are sustained by glowing combustion (without flames) and can go undetected for a long time because they produce little to no smoke and spread slowly.
- **Surface fires:** Surface fires burn loose needles, moss, lichen, herbaceous vegetation, shrubs, small trees, and saplings that are at or near the surface of the ground, mostly by flaming combustion. Surface fires spreading in surface fuels dictate much of a fire's expansion. They can grow in intensity to scorch or even consume the forest canopy.
- **Crown fires:** Crown fires burn forest canopy fuels, which include live and dead foliage/ branches, lichens in trees, and tall shrubs that lie well above the surface fuels. They are usually ignited by a

[203] GRID-Arendal, "Fire Behavior Triangle," 2021, https://www.grida.no/resources/15551.
[204] Northwest Fire Science Consortium, "Types of Fire," 2020, https://www.nwfirescience.org/sites/default/files/publications/Types%20of%20Fire.pdf.

surface fire. Crown fires can be passive or active. Passive crown fires involve the burning of individual trees or small groups of trees (often called torching). Active crown fires, also referred to as running crown fires, present a solid wall of flame from the surface through the canopy fuel layers. Active crown fires spread from one tree crown to the next through the canopy.

The ecological role of wildfires is complex; while they can cause significant destruction to ecosystems and human infrastructure, they also play a crucial role in maintaining the health of many environments. Many plant species have evolved to thrive in post-fire conditions, and some even require heat from a fire to release seeds or to clear away competition. In addition, wildfires can help recycle nutrients into the soil, promoting new growth and biodiversity. However, increasing development in the wildland urban interface and periods of drought and extreme heat can increase wildfire impacts on communities, infrastructure, and fire management operations.

Human encroachment in areas prone to wildfires is called the wildland–urban interface (WUI). The WUI is the line, area, or zone where structures or other human development meet or intermingle with undeveloped wildland or vegetative fuel. Examples include homes, storage sheds, recreational facilities, transmission lines, and other buildings. The WUI creates an environment for fire to move readily between vegetation fuels (e.g., brush and forests) and structural fuels (e.g., houses, sheds, and buildings), making these areas particularly dangerous for people and property.[205] Figure 69 shows the WUI areas in St. Lucie County.

[205] State of Florida Enhanced Hazard Mitigation Plan, "Wildfire Hazard Profile," 2023, https://flshmp-floridadisaster.hub.arcgis.com/pages/wildfire.

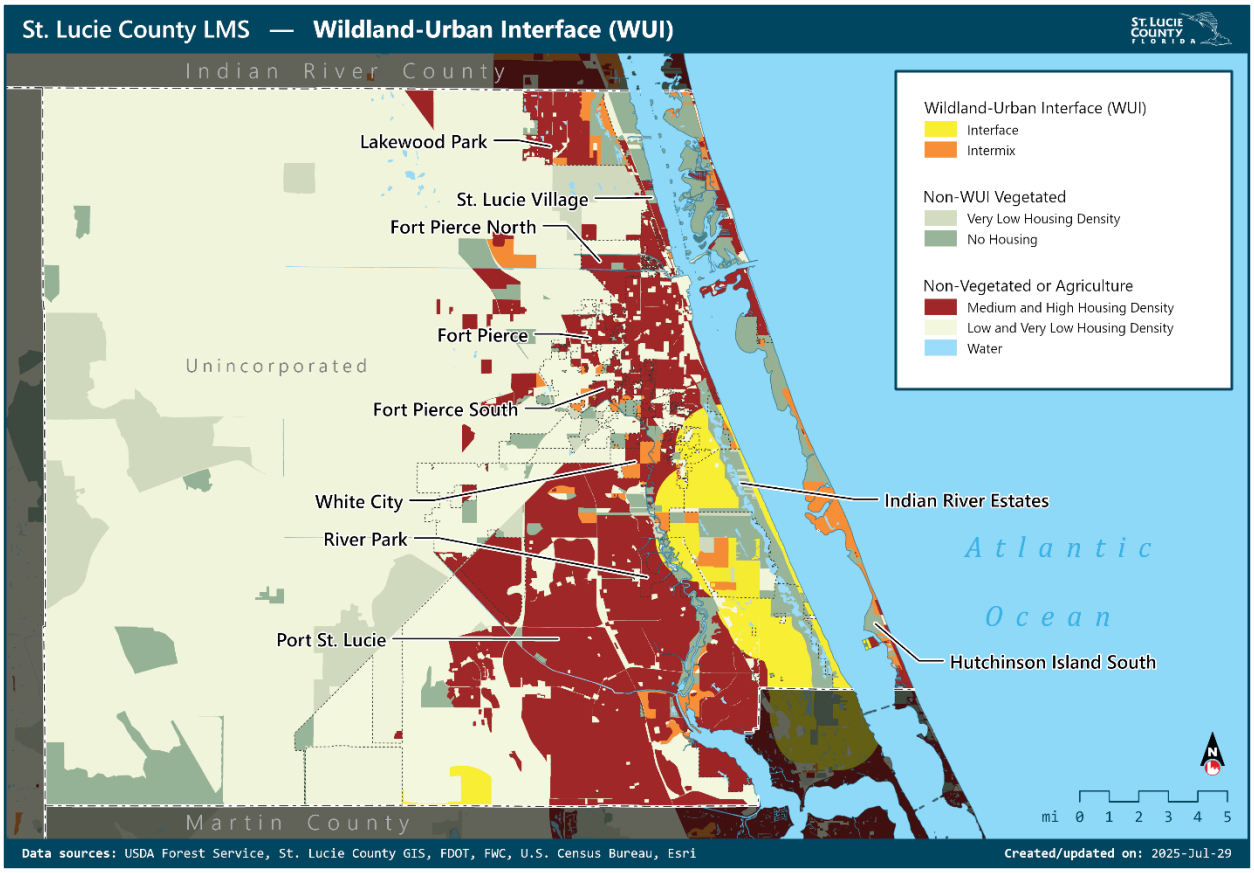

Figure 69: Wildland–Urban Interface Areas of St. Lucie County

Location and Extent

Wildfires can occur anywhere that topography, fuel load (vegetation), and weather align with a means of ignition. Even in relatively small parks, wildfires are a possibility. This includes nearly all areas of St. Lucie County where vegetation and ignition sources are present, with the highest risk concentrated in rural areas and neighborhoods adjacent to natural lands. The intensity, potential for damage, and size of the fire, however, vary across the county. According to the Southern Group of State Foresters (SGSF), wildfire burn probability is widespread in the western rural areas of St. Lucie County (see Figure 70).[206] These areas have lots of fuel available for a fire to burn and have approximately a 0.5%–1% chance of burning in a given year.

Some areas in the eastern region of the state, much closer to homes and infrastructure, have similar burn probabilities and large footprints. Savannas Preserve State Park, a 7,000-acre state park to the east of Port St. Lucie and along the river, has a high burn probability and proximity to homes and facilities. Several areas between Fort Pierce and Lakewood Park also have high burn probability and potential for damage. One large area is an open, natural space between Lakewood Park and US Highway 1 just north of Lake

[206] Southern Group of State Foresters. "Wildfire Risk Assessment Portal." 2025. https://wrap.southernwildfirerisk.com/Map/Public/#map-themes.

Indrio Preserve. Another is just north of Treasure Coast International Airport. If fires ignite in these areas, they will be hard to control and likely to impact surrounding communities.

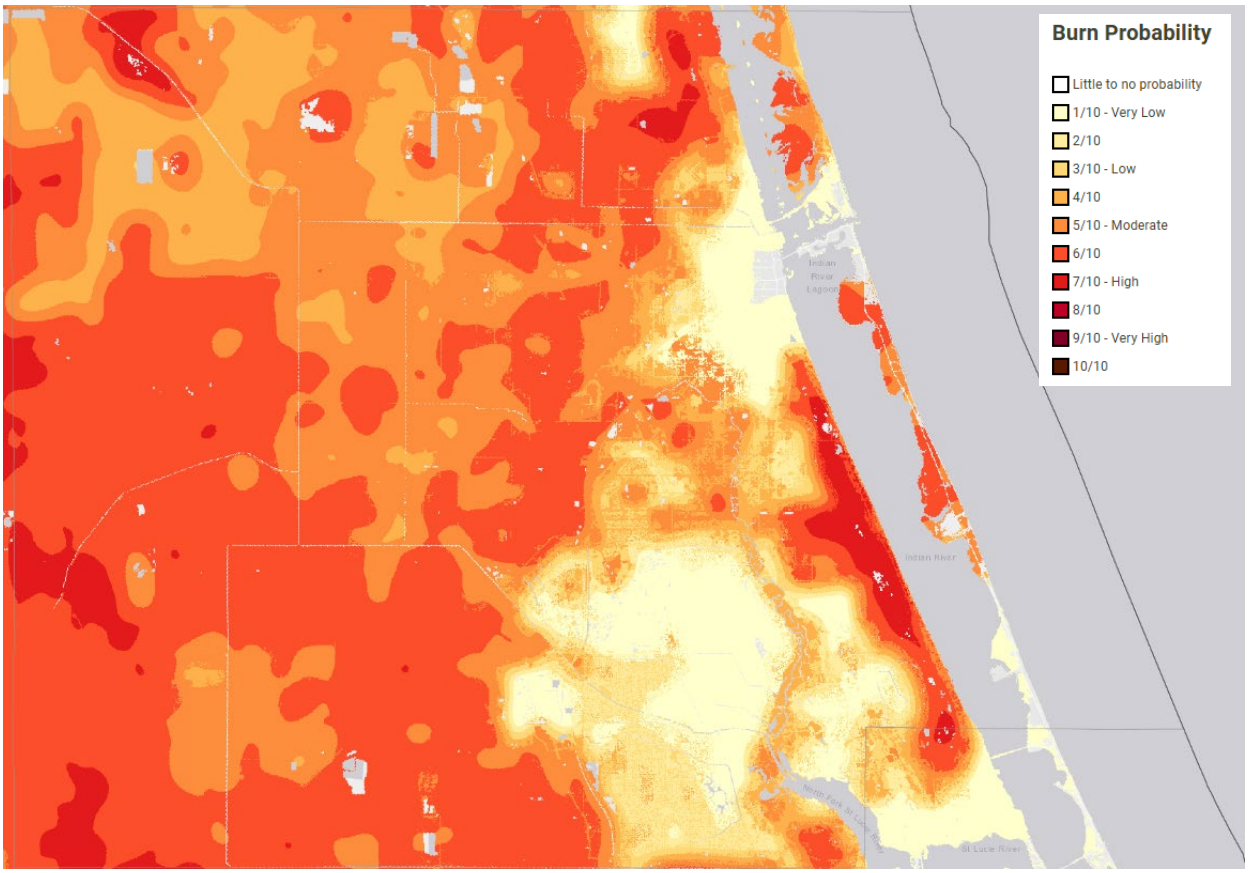

Figure 70: Southern Group of State Foresters Burn Probability for St. Lucie County

Besides these two large areas, there are many smaller areas in the eastern region of the county that pose a danger to people and structures from wildfire. Figure 71 shows the recorded wildfire occurrences in the county between 2020 and 2025. Many of these occurrences fall into high wildfire probability areas, but there are several in and around Port St. Lucie, Fort Pierce, and Lakewood Park that do not. This underscores the fact that wildfires can happen anywhere in the county with sufficient vegetation and the right conditions.

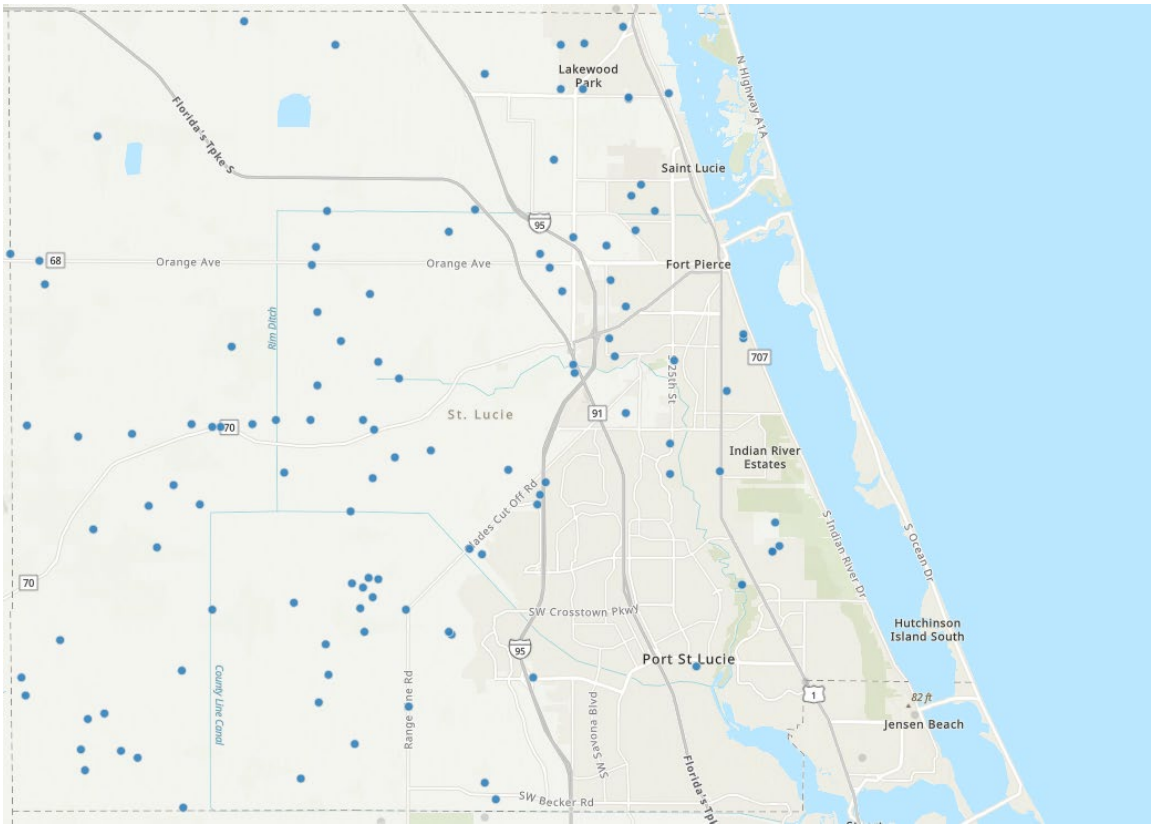

Figure 71: Wildfire Occurrence in St. Lucie County, 2020–2025[207]

EXTENT

The SGSF created the Southern Wildfire Risk Assessment Portal to enable users to assess and identify regions that are most vulnerable to wildfires. By utilizing this tool, individuals and organizations can better understand the level of wildfire risk in specific areas and take the necessary precautions. The portal assigns intensity levels to different locations, categorizing them based on their susceptibility to intense wildfires (see Table 89 and Figure 72). These classifications help in making informed decisions regarding fire prevention, preparedness, and response efforts.

Table 89: Southern Group of State Foresters Wildfire Risk Assessment Extreme Fire Intensity Scale[208]

Level	Definition
1	**Lowest Intensity:** Minimal direct wildfire impacts. Location has a minimal chance of being directly impacted by a wildfire.
2	**Low Intensity:** Small flames usually less than two feet long; small amount of very-short-range spotting possible. Fires are easy to suppress.

[207] National Association of State Foresters. "InFORM Fire Occurrence Data Records." 2025. https://data-nifc.opendata.arcgis.com/datasets/60a94840152b4a89bec467a9f052f135_0/explore.
[208] Southern Group of State Foresters. "Wildfire Risk Assessment Portal." 2025. https://wrap.southernwildfirerisk.com/Map/Public/#map-themes.

Level	Definition
3	**Moderate Intensity:** Flames up to eight feet in length; short-range spotting is possible.
4	**High Intensity:** Large flames up to 30 feet in length; short-range spotting common; medium range spotting possible.
5	**Highest Intensity:** Very large flames up to 150 feet in length; profuse short-range spotting, frequent long-range spotting; strong fire induced winds.

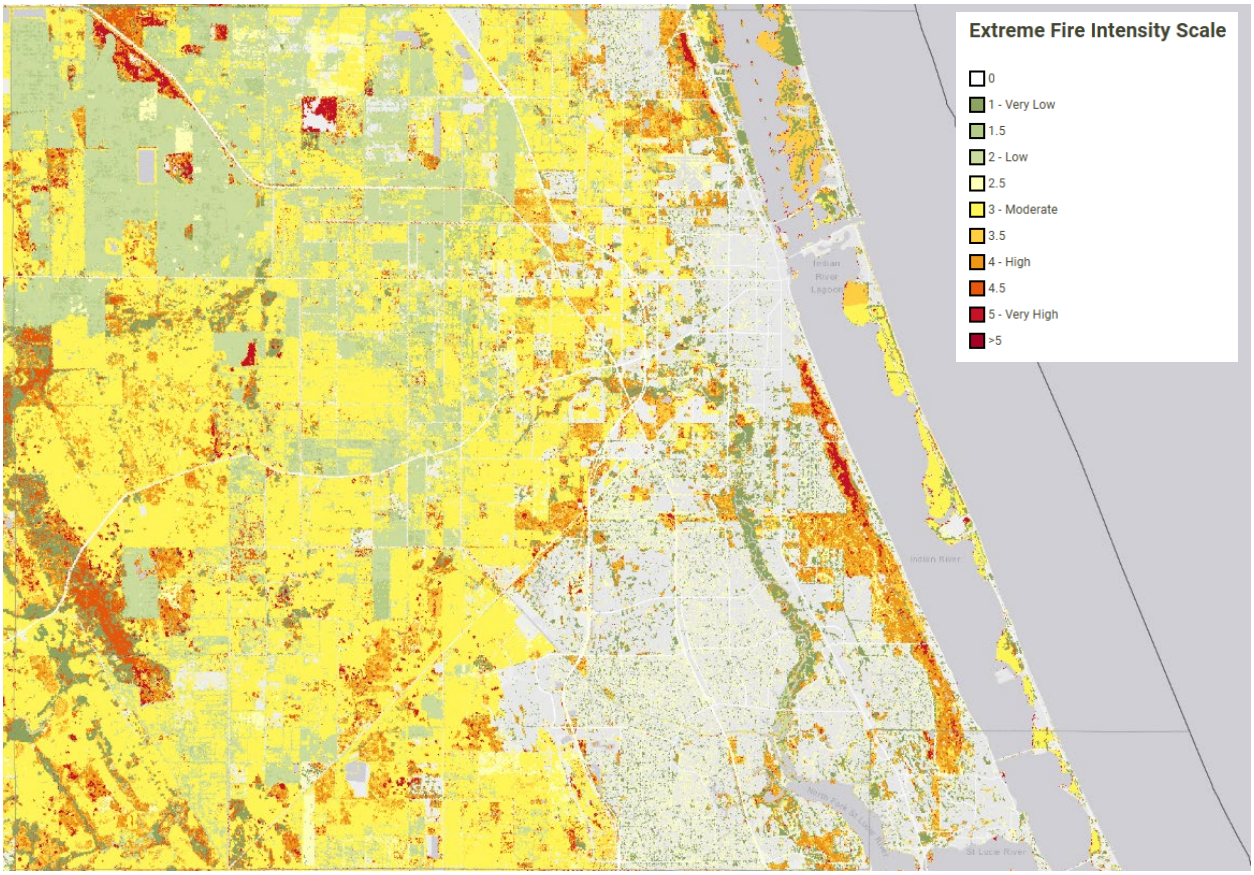

Figure 72: Southern Group of State Foresters Extreme Fire Intensity Scale for St. Lucie County

The burn probability map in Figure 70 and the fire intensity map in Figure 72 highlight natural areas with dense vegetation that can generate powerful fires. These areas can damage homes and property, destroy infrastructure, and worsen air quality through smoke. They can also ignite other fires in surrounding areas by throwing off embers that spot new fires. The types of damage that wildfires can cause depend on the location of the fire in the county. A large fire in western St. Lucie County is more likely to damage or destroy agricultural land and facilities than homes or urban infrastructure. Such a fire along the eastern edge of the county are more likely to spread to urban and suburban neighborhoods, damaging and destroying homes, businesses, and parks. Both types of fires can cause severe damage to life and property.

JURISDICTIONAL IMPACTS

The impacts of wildfires in St. Lucie County and all three jurisdictions can be both direct and secondary, such as air pollution from smoke and disrupted transportation. Table 90 lists such impacts.

Table 90: The Impacts of Wildfire in St. Lucie County

Jurisdiction	Impacts
St. Lucie County	Large swathes of western St. Lucie County are at moderate, high, or very high risk of intense wildfires. These fires can destroy or damage agricultural fields and facilities in the county and impact agricultural laborers. Major transportation arteries also could be damaged or made inaccessible by fires, including Florida's Turnpike in the north and State Road 70 in the south. Unincorporated suburban areas also are at risk of wildfires. Lakewood Park is at particularly high risk due to its high density of housing and proximity to natural spaces. All of St. Lucie County is at risk of exposure to wildfire smoke, which worsens air quality.
City of Port St. Lucie	The primary areas at risk of wildfire in Port St. Lucie are suburban fringe neighborhoods near natural, vegetated spaces. These include the neighborhoods in northeast, east, and southeast Port St. Lucie adjacent to Savannas Preserve State Park; neighborhoods and businesses near First Data Field and Indian River State College in northwest Port St. Lucie; and developments at the southwest edge of Port St. Lucie. These neighborhoods could be directly damaged by intense wildfires. Other parts of Port St. Lucie could experience poor air quality due to wildfire smoke and transportation delays when roads are impacted by wildfires.
City of Fort Pierce	Similar to Port St. Lucie, most of the direct threat of wildfire in Fort Pierce affects fringe suburban neighborhoods near natural spaces. Communities in southeast Fort Pierce near Savannas Preserve State Park are at the greatest risk of fire. Other neighborhoods in Fort Pierce could experience poor air quality and transportation delays.
Town of St. Lucie Village	The northern half of St. Lucie Village near Donald B. Moore Preserve is at the highest risk of wildfire, though these risks are significantly lower than the rest of the jurisdictions in St. Lucie County. St. Lucie Village can still be impacted by smoke from fires in other parts of the county and transportation delays when roads are impacted by wildfires.

NATIONAL RISK INDEX

St. Lucie County has an NRI wildfire risk score of 89.8, indicating relatively moderate risk. This score is an aggregate of the expected annual loss from wildfires, social vulnerability, and community resilience. The NRI calculates expected annual loss from wildfires is $1.4 million (this amount is calculated based on the chance of occurrence and value of property in the county), social vulnerability is relatively high, and community resilience is relatively moderate. Figure 73 shows the NRI results for St. Lucie County.

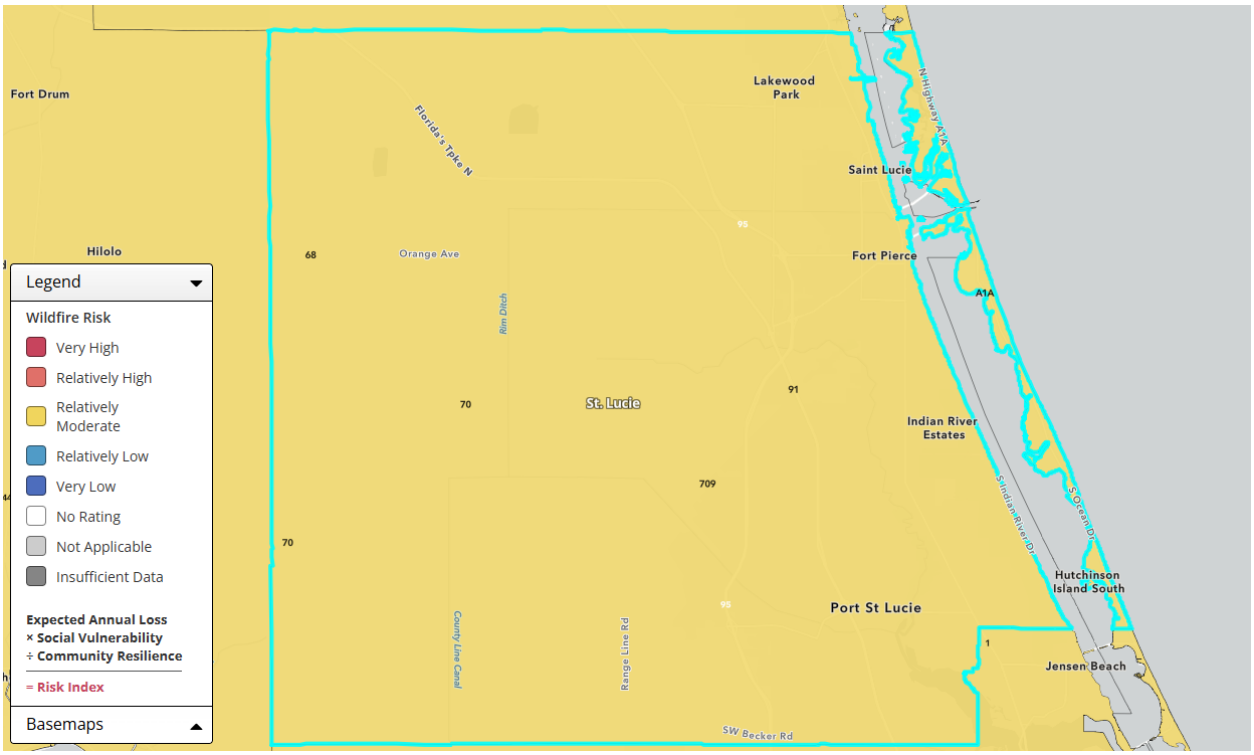

Figure 73: National Risk Index Score for Wildfire for St. Lucie County[209]

Magnitude and Severity

The magnitude of a wildfire is measured by the amount of acreage it burns, its intensity, and its burn severity. Fire size is broken down into seven categories, from Class A to Class G. Class A represents fires that are one-quarter acre or less, and Class G is any fire over 5,000 acres (see Table 91).

Table 91: Classes of Fire Size[210]

Class	Number of Acres Burned
A	One-quarter acre or less
B	Greater than ¼ acre and less than 10 acres
C	Greater than 10 acres and less than 100 acres
D	Greater than 100 acres and less than 300 acres
E	Greater than 300 acres and less than 1,000 acres
F	Greater than 1,000 acres and less than 5,000 acres
G	5,000 acres or greater

[209] Federal Emergency Management Agency, "National Risk Index," 2025, https://hazards.fema.gov/nri/map.
[210] National Wildfire Coordinating Group, "Size Class of Fire," 2025, https://www.nwcg.gov/node/1694359.

Fire intensity is essentially the amount of heat a fire produces, which can be difficult to calculate. It is approximated by the fire intensity scale in Table 89. Burn severity measures the effect of fire on the environment, which is related to but distinct from fire intensity. Burn severity includes the ecological impacts of fire on fuels, vegetation, wildlife, and soils in recently burned areas. It is broken down into three broad levels: low, moderate, and high severity, as noted in Table 92.

Table 92: Classification of Burn Severity[211]

Classification	Description
Low Burn Severity	Primarily occurs on rangeland causing minor erosion. Natural recovery is likely for the ecosystem. Indicators: • Duff and debris are partly burned. • Soil is a normal color. • Standing trees might have some brown needles.
Moderate Burn Severity	Primarily occurs on steep, lightly timbered slopes with grass. Increased erosion from fire damage is likely. Indicators: • Burned needles are still evident. • Ash is generally dark colored. • Soil is brown to reddish-brown, and up to 2 inches of soil is darkened from burning (below ash). • Roots are alive below 1 inch. • Shrub stumps and small fuels are charred but present. • Standing trees are blackened but not charcoal.
High Burn Severity	Primarily occurs in unprotected drainages on steep, timbered, north or east slopes with dense forest canopy. High levels of erosion are likely, and the possibility of natural recovery is limited. Indicators: • Ash is uniformly gray or white (in severe cases, ash is thin and white or light). • No shrub stumps or small fuels remain. • Between 2 and 4 inches of soil is darkened (soil color often reddish orange). • Roots 2 to 4 inches deep are burned. • The soil physically affected (crusting, crystallization, agglomeration). • Standing trees have charcoal up to 1 inch deep.

The severity of a fire can also be measured by the impact it has on human lives and property. Fires that burn through natural areas may cause ecological harm but have relatively few impacts on people. Fires

[211] University of Wyoming, "Wildfire Burn Severity Classification," 2013, https://www.uwyo.edu/barnbackyard/_files/documents/resources/wildfire2013/severityclassification2013wywildfire.pdf.

that burn in populated areas like the WUI can damage or destroy infrastructure, facilities, and homes and injure or kill people. The more buildings and people harmed, the more severe the fire is deemed.

Historic Events

St. Lucie typically experiences one or two fires over 50 acres per year and dozens of smaller fires. According to data collected by the National Association of State Foresters, from 2020 through 2025 there have been 117 wildfires in St. Lucie County that destroyed nearly 3,000 acres. [212] Most of these fires, even larger ones, do not put people or property at direct risk and are quickly put out by firefighters. Occasionally, though, fires do threaten, damage, or destroy property and human life. The following are cases in which wildfire damaged property in St. Lucie County.

- **April 15, 1999:** The worst fire in St. Lucie County started as a small brush fire in western Port St. Lucie. It burned nearly 2,400 acres, destroying nearly 50 homes and damaging 30 others with an estimated $10 million in losses. This fire was part of the larger Okeechobee Fire Complex, which damaged several counties across the Treasure Coast. It was declared a disaster and awarded federal Fire Suppression Assistance.[213]
- **In 2013:** Two wildfires impacted St. Lucie County. In March, the Heather wildfire burned 390 acres near Indrio Road and US-1 in northern St. Lucie County. The fire started from a lightning strike and threatened 244 homes. Another large fire occurred near Bella Road in Port St. Lucie, which jumped the Florida Turnpike and threatened several communities. The fire required an airdrop from the Florida Forest Service to be contained.
- **March 2018:** Two wildfires in Port St. Lucie required significant effort to contain. The Luck Wildfire burned 70 acres near Bella Road and Luck Lane and forced the evacuation of 40 homes. Later that month, a wildfire near Becker Road burned 204 acres over two days.
- **May 9, 2021:** An 89-acre wildfire destroyed two homes and two vehicles in Port St. Lucie near the intersection of Dyer Road and Silver Oak Drive. The fire caused over $800,000 in damage.[214]
- **August 4, 2025:** A five-acre wildfire destroyed a boat and a car. It threatened two structures which were protected by the responding Florida Forest Service firefighters.[215]

[212] National Association of State Foresters, "InFORM Fire Occurrence Data Records," 2025, https://data-nifc.opendata.arcgis.com/datasets/60a94840152b4a89bec467a9f052f135_0/explore.
[213] National Centers of Environmental Information, "Storm Events Database," 2025, https://www.ncei.noaa.gov/stormevents/listevents.jsp?eventType=%28Z%29+Wildfire&beginDate_mm=01&beginDate_dd=01&beginDate_yyyy=1998&endDate_mm=05&endDate_dd=31&endDate_yyyy=2025&county=ST.%2BLUCIE%3A111&hailfilter=0.00&tornfilter=0&windfilter=000&sort=DT&submitbutton=Search&statefips=12%2CFLORIDA.
[214] Ibid.
[215] Treasure Coast News, "Wildfire in St. Lucie County contained; boat, car lost," 2025, https://www.tcpalm.com/story/news/local/st-lucie-county/2025/08/05/car-boat-lost-to-wildfire-in-st-lucie-county/85526194007/?gnt-cfr=1&gca-cat=p&gca-uir=true&gca-epti=z113525p002350c002350d00----v113525b0048xxd004865&gca-ft=172&gca-ds=sophi.

FEMA DISASTER DECLARATIONS[216]

Table 93 lists the one disaster declaration for wildfire in 1999.

Table 93: Disaster Declarations for Wildfire in St. Lucie County

Year	Disaster Declaration	Type	Incident	Event
1999	FSA-2251-FL	Fire Suppression Assistance	Wildfire	Okeechobee Fire Complex

Probability of Future Conditions

The probability of future wildfires in St. Lucie County is shaped by the confluence of climatic conditions, ecological characteristics, and human activities Florida's subtropical weather pattern includes a pronounced dry season from November through April, when lower humidity, limited rainfall, and periodic windy conditions can increase wildfire risk. The county's areas of pine forests, scrublands, and other vegetation types are highly flammable, particularly during drought periods. Seasonal variations, including prolonged dry spells and heavy rainfall followed by dry conditions, can further elevate the risk of wildfire.

The rising frequency and intensity of extreme heat and drought conditions, coupled with the heightened flammability of existing fuels, could influence wildfire dynamics. During periods of drought or extreme heat, the reduction of moisture in living plants, soils, and decaying organic matter is linked to a higher likelihood of wildfires. In addition, changes in vegetation types over time can alter the composition and flammability of fuels. As these shifts take place, the frequency and severity of wildfires may rise with the emergence of more flammable vegetation or decline with the presence of more fire-resistant species. Florida experiences seasonal weather patterns that include both dry and wet phases each year.

Human activity plays a significant role in determining wildfire probabilities in St. Lucie County. The county has seen significant growth over the past 10 years, which has led to new development in previously natural areas. Urban expansion into natural landscapes raises the chances of accidental ignitions from various sources, including campfires, machinery, and discarded cigarettes. It also adds people and structures to the WUI, which could then be impacted by wildfire.[217]

[216] Federal Emergency Management Agency, "Florida Okeechobee Fire Complex," 1999, https://www.fema.gov/disaster/declarations?field_dv2_declaration_date_value%5Bmin%5D=1999&field_dv2_declaration_date_value%5Bmax%5D=1999&field_dv2_declaration_type_value=FSA&field_dv2_incident_type_target_id_selective=All&field_dv2_state_territory_tribal_value%5B%5D=FL.

[217] Federal Emergency Management Agency, "Florida Okeechobee Fire Complex," 1999, https://www.fema.gov/disaster/declarations?field_dv2_declaration_date_value%5Bmin%5D=1999&field_dv2_declaration_date_value%5Bmax%5D=1999&field_dv2_declaration_type_value=FSA&field_dv2_incident_type_target_id_selective=All&field_dv2_state_territory_tribal_value%5B%5D=FL.

Vulnerability Assessment

St. Lucie County features a significant interface between residential areas and wildland vegetation, particularly in the WUI. Homes and buildings in these regions are at heightened risk of wildfires due to their proximity to flammable vegetation and potential sources of ignition. These areas include suburban neighborhoods in Port St. Lucie and Fort Pierce and unincorporated areas of the county, such as Lakewood Park. The architecture and materials of residences often influence their vulnerability as well. Older structures built to outdated standards or situated on lots with dense landscaping face an increased threat. In addition, the population density in these areas means that, in the event of a wildfire, evacuation routes could become congested, complicating emergency response efforts and endangering residents.

Beyond the immediate threat to life and property, wildfires in St. Lucie County can have significant secondary effects. Smoke from wildfires can degrade air quality, leading to respiratory issues and other health problems for both residents and tourists. The economic impact can be profound; wildfires can disrupt local businesses, tourism, and agriculture, creating a ripple effect through the community. The costs associated with firefighting efforts, property damage, and lost economic productivity can strain the budgets of local governments, especially if fire activity increases beyond the current levels.

Certain populations in St. Lucie County are particularly vulnerable to the impacts of wildfires. The elderly, low-income families, and those with disabilities might have limited access to the resources necessary for evacuation and recovery. These groups often lack the mobility or financial means to prepare adequately for a wildfire or to relocate in an emergency, placing them at greater risk during such events. In addition, individuals with preexisting health conditions may be more susceptible to the adverse health effects of smoke inhalation.

IMPACTS ON ASSETS

Table 94 outlines the effects of wildfire, detailing its impact on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, and public confidence. These impacts can occur across all participating jurisdictions in St. Lucie County.

Table 94: Consequence Analysis

Sector	Consequence
Public	• Homes: Homes in wildfire prone areas could be damaged or destroyed from direct exposure to flames, smoke, and intense heat. This may leave residents without shelter or with large bills to cover repairs. • Health: Wildfires can have a significant impact on the health of residents and tourists in St. Lucie County. Flames and heat can cause direct fatalities or injuries to those near the fire. Smoke and ash inhalation can pose health concerns across the county, especially to those with preexisting health conditions and the elderly.
First Responders	• Increased Workload: The demands of firefighting can overwhelm local resources, leading to potential delays in response times. This may call for

Sector	Consequence
	mutual aid from neighboring jurisdictions and the state to fill in needs that cannot be met locally. • Dangerous Conditions: Wildfires, especially during high winds, can be unpredictable and put the health and safety of responders at risk. The physical toll on first responders can be substantial, as they deal with dangerous conditions and the pressure to protect lives and property.
Property, Facility, and Infrastructure	• Transportation: Wildfires can have both temporary and long-lasting impacts on roads in St. Lucie County. Wildfires can make roads temporarily impassible due to dangerous conditions, and they can reduce visibility and damage roads from extreme heat and debris. Major thoroughfares, such as I-95 and Florida's Turnpike, are primarily at risk of temporary blockages, while local roads that pass near high-risk areas are more likely to be of damaged. • Utilities: The direct impact on drinking water, wastewater, and electric utilities from wildfire is relatively low in St. Lucie County and other participating jurisdictions. Wastewater treatment plants and drinking water infrastructure are not in high-risk fire areas, but increased erosion and ash runoff could create complications for water treatment. Electric utilities are at higher risk, especially where electrical lines run through natural areas. These lines are vulnerable to high heat from wildfires and damage from falling trees. These impacts may leave parts of St. Lucie County without power during an extreme fire. • Public Facilities: Any facility near high-risk fire areas is at risk of damage during a wildfire. Schools like Lakewood Park Elementary School, Weatherbee Elementary School, Savanna Ridge Elementary School, and Port St. Lucie High School are adjacent to areas likely to burn regularly. They could face wildfire damage in extreme circumstances or closure due to wildfire proximity. Although most other public facilities are in low-risk areas for fire, St. Lucie County Fire District Stations 7 and 11 and the Lakewood Park branch of the County Library are at heightened risk of damage or temporary closure from wildfire.
Environment	• Public Parks: Many public parks and other natural spaces that residents use for recreation are at particularly high-risk of impact from wildfire. The vegetation in these areas can become fuel for a wildfire, increasing the probability and intensity of the fire. A severe burn in these areas can reduce the recreational and environmental benefits they provide. • Water conditions: A severe wildfire can eviscerate vegetation and destabilize soils. This combination leads to increased erosion and runoff into nearby bodies of water. The ash and other contaminants that end up in water sources can impact aquatic species and reduce the quality of drinking water for humans.
Economic Conditions	• Tourism: In the short-term, wildfire can reduce tourism due to evacuations, travel delays, or the unpleasant environmental conditions it creates. For example, if smoke from a nearby wildfire creates poor air quality, it is less likely that tourists will come for a day at the beach. Depending on the size of the fire,

Sector	Consequence
	these conditions could last a few hours or a few days, impacting local businesses with the loss of revenue. • Local businesses: Local businesses in or near high-risk wildfire areas could be directly damaged from a fire. Country clubs and farms are at particular risk because they tend to be surrounded by vegetation and are highly exposed to environmental conditions.
Public Confidence	Recurrent wildfires can erode public trust if communication and emergency response is delayed or inconsistent. Transparent, timely updates and visible mitigation progress are essential to maintaining public confidence.

IMPACT ON COMMUNITY LIFELINES

Wildfires represent a significant threat to communities in St. Lucie County, particularly in areas where urban development intersects with wildland environments. Figure 74 shows FEMA's community lifelines. Natural disasters can rapidly escalate, endangering lives, property, and essential services. The impact of wildfires extends beyond the immediate danger of flames. They disrupt vital community lifelines that sustain public safety, health, and economic stability. Understanding how wildfires affect these interconnected systems is essential for effective hazard mitigation, ensuring that communities can reduce the impacts of such events.

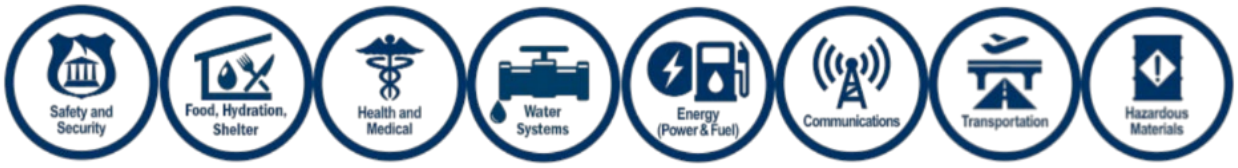

Figure 74: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** Wildfires pose a direct threat to safety and security by endangering lives and property. During a wildfire event, emergency services may become overwhelmed, limiting their ability to respond to calls for help. Evacuations can create chaotic situations, leading to confusion and potential safety hazards as residents attempt to leave their homes.
- **Food, Hydration, and Shelter:** Wildfires can disrupt the supply chain for food and hydration as roads become impassable and businesses are forced to close. Shelters may be overwhelmed by evacuees, leading to inadequate accommodations for those displaced by fire. In addition, the loss of agricultural land due to fire can threaten local food sources, forcing communities to rely on external aid and potentially leading to food shortages.
- **Health and Medical:** The health and medical lifeline can be severely impacted by wildfires, primarily through the deterioration of air quality by smoke and ash, which can exacerbate respiratory conditions and other health issues. Hospitals and clinics may face increased patient loads from wildfire-related injuries and smoke inhalation. In addition, if evacuation is necessary, access to

medications and ongoing medical treatments may be disrupted, posing serious risks to those with chronic health conditions.

- **Water Systems:** Wildfires can threaten water systems by contaminating water sources with ash and debris and complicating water treatment processes. The destruction of infrastructure, such as pipelines and treatment facilities, can lead to water shortages or unsafe drinking water, necessitating emergency measures to ensure public health and safety.
- **Energy (Power and Fuel):** Wildfires can damage power lines and energy infrastructure, leading to widespread outages and disrupting energy supplies. Fuel supplies also may be affected as transport routes become compromised or facilities are forced to close, resulting in shortages for both transportation and emergency services. This disruption can significantly hinder firefighting efforts and community recovery.
- **Communications:** The communications lifeline can be severely affected by wildfires, especially if fire damage impacts cellular towers and internet infrastructure. Loss of communication can impede the dissemination of vital information regarding evacuation orders and emergency services. In addition, residents may struggle to stay connected with family and emergency responders, complicating rescue efforts and information sharing during a crisis.
- **Transportation:** Wildfires can lead to the closure of roads and highways due to fire threats or damage, significantly disrupting the transportation routes needed for evacuation and emergency response. This can trap residents in danger zones and hinder the movement of fire crews and supplies. The resulting congestion on alternate routes can further complicate evacuation efforts, creating additional risks for those trying to flee the fire.
- **Hazardous Materials:** Wildfires can exacerbate the risks associated with hazardous materials by potentially igniting chemicals stored in industrial areas or residential settings. The intense heat can cause containers to rupture or leak, leading to toxic spills that pose serious health risks to both responders and the community. In addition, the destruction of facilities that handle hazardous materials can complicate firefighting efforts and escalate environmental hazards in the aftermath of a wildfire.

IMPACTS DUE TO CHANGES IN DEVELOPMENT

As the population and the built environment grow in St. Lucie County, more people, infrastructure, and facilities are exposed to impacts from wildfires, both directly through damaged property and indirectly through air or water quality concerns. St. Lucie County grew by an estimated 44,000 residents (13%) between 2020 and 2023.[218] That means more roads to accommodate these residents and more buildings and facilities to house and serve them. Development is particularly at risk where it is cheapest, on the periphery of urbanized areas. As Port St Lucie, Fort Pierce, and St. Lucie County continue to develop in the WUI, more houses, people, and infrastructure will be at risk of damage from wildfire.

More residents and more infrastructure also increase the likelihood of wildfires. Most wildfires are caused either by humans directly or by the equipment that humans use. As populations grow, the opportunity for

[218] St. Lucie County, "Facts and Stats," 2023, https://www.stlucieco.gov/government/facts-stats.

human-caused wildfires grows as well, either from a campfire that gets out of hand or a spark from an automobile. This increased risk of ignition, paired with hotter conditions leads to an overall increase in fire risk in St. Lucie County.

IMPACTS ON POPULATIONS OF FOCUS

Particular groups in St. Lucie County may be more susceptible to the impacts of wildfires due to certain health or socioeconomic factors. Wildfires can directly damage property, including expensive assets such as homes and cars. Those without insurance or the means to replace or repair their property could face severe economic consequences. Residents with limited resources may experience greater impacts due to reduced access to evacuation options, temporary housing, and recovery assistance.

People in St. Lucie County with respiratory illnesses, like asthma, also are at increased risk from wildfires. Wildfires release particulate matter into the atmosphere from the fuels that they burn. That particulate matter can then be blown into nearby communities, worsening air quality and exacerbating respiratory illnesses. Those with respiratory illnesses may have to stay indoors or wear masks to be safe outdoors during or after a wildfire.

Communications System Failures

Definition

A communications system failure refers to a breakdown or malfunction in the processes, equipment, or protocols that facilitate the transmission of information between parties. This can occur in various forms, such as hardware malfunctions, software errors, network outages, cyber-attacks, or issues with signal quality. As a result, it can lead to the inability to send, receive, or understand messages, which can disrupt normal operations in personal, business, or emergency contexts.

Key reasons for communications system failures include damage to critical components, such as routers, switches, and fiber optic cables, which can occur due to natural disasters, wear and tear, or accidental impacts. Additionally, disruptions in network infrastructure, such as power outages or equipment malfunctions, can lead to significant outages and hinder data transmission. Furthermore, issues caused by network congestion, where the volume of data traffic exceeds the system's capacity, can result in slower response times, dropped connections, and reduced overall performance, negatively impacting user experience and service reliability.[219] Cyber-attacks can disrupt digital communications by compromising systems or data. In some cases, systems may be taken offline temporarily to protect data integrity or prevent further intrusion.

The most common cause of telecommunications failures during disasters is damage to the communications system parts. Repairing and replacing these parts often takes a lot of time and money,

[219] United Nations Office for Disaster Risk Reduction, "Radio and Other Telecommunication Failures." https://www.undrr.org/understanding-disaster-risk/terminology/hips/tl0212#:~:text=Communication%20system%20failure.,et%20al.%2C%202007).

which leads to long and serious disruptions. This is especially true for critical components, such as cell towers or cables, which can be complex and expensive to repair. While many communications systems incorporate redundancy, failures can still occur when primary and backup systems are simultaneously impacted or overwhelmed.[220]

Outages resulting from damage to supporting network infrastructure can lead to extensive disruptions, severely impacting response and recovery efforts in affected areas. Many communications systems, such as cellular networks, internet services, and emergency response communications, rely heavily on local and regional infrastructure to function effectively. Unfortunately, this supporting framework often lacks the resilience and robustness needed to withstand physical damage caused by natural disasters, accidents, or vandalism. As a result, when critical nodes and pathways in these networks are compromised, the cascade effect can prevent the timely distribution of information, hinder coordination among emergency services, and delay the services.[221]

Congestion is another major cause of communications failures during disasters. This happens when too many people try to use the network at once, resulting in blocked calls and undelivered messages. Disasters typically cause a huge demand for communication, which can overwhelm even the best-managed networks.[222]

Insights gained from previous disaster scenarios indicate that radio and satellite communications consistently demonstrate superior reliability and effectiveness. These communication methods remain operational even when traditional systems, such as wireless phones and landlines, are compromised. During emergencies, these conventional systems are often vulnerable to damage from severe weather conditions or become overwhelmed due to a surge in usage, leading to significant delays in distributing critical information. In contrast, radio and satellite communications provide uninterrupted connectivity, enabling timely updates and coordination efforts that are essential for emergency response and recovery operations.[223]

Although satellite communications offer the most reliable and uninterrupted connectivity, they are not without limitations. Satellites are vulnerable to space weather, particularly during solar storms, which can disrupt data transmission and alter the satellite's trajectory, thereby affecting weather forecasting and communication.

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[220] United Nations Office for Disaster Risk Reduction, "Radio and Other Telecommunication Failures." https://www.undrr.org/understanding-disaster-risk/terminology/hips/tl0212#:~:text=Communication%20system%20failure.,et%20al.%2C%202007).
[221] United Nations Office for Disaster Risk Reduction, "Radio and Other Telecommunication Failures." https://www.undrr.org/understanding-disaster-risk/terminology/hips/tl0212#:~:text=Communication%20system%20failure.,et%20al.%2C%202007).
[222] United Nations Office for Disaster Risk Reduction, "Radio and Other Telecommunication Failures." https://www.undrr.org/understanding-disaster-risk/terminology/hips/tl0212#:~:text=Communication%20system%20failure.,et%20al.%2C%202007).
[223] United Nations Office for Disaster Risk Reduction, "Radio and Other Telecommunication Failures." https://www.undrr.org/understanding-disaster-risk/terminology/hips/tl0212#:~:text=Communication%20system%20failure.,et%20al.%2C%202007).

Space weather, including solar flares and coronal mass ejections (CMEs), can degrade high-frequency (HF) radio communications, which are essential for maritime and aviation operations. GPS signals can become inaccurate due to geomagnetic storms, which may induce currents in power lines, potentially leading to outages and disrupting critical networks.[224]

Cyber-attacks are a persistent threat to digital communications in St. Lucie County. All jurisdictions rely on digital assets for communication including hardware, like computers and cellphones, software, and network systems. All three of these asset types can be damaged or compromised through a cyber-attack which takes them offline. Even short-term interruptions in these assets can seriously disrupt communication flows.[225]

Location and Extent

Communications system failures can occur anywhere in St. Lucie County; however, areas that may have a greater risk of communications system failures typically include locations prone to severe weather events or those with older infrastructure. Rural areas or less urbanized areas, such as St. Lucie Village, for example, can be particularly vulnerable. These locations often have less robust communications networks, which can lead to more frequent outages and disruptions. As such, residents in these areas might experience challenges in sending or receiving information during critical times.

Low-lying regions in the county, such as Fort Pierce, St. Lucie Village, and Port St. Lucie, are also at a higher risk, especially during heavy rainfall or flooding events. These weather conditions can damage communications lines and equipment, making it difficult for residents to contact emergency services or communicate with one another. During hurricane season, strong winds and heavy rainfall can damage communications infrastructure, leading to service disruptions.

Another factor to consider is the presence of older infrastructure, which may be more susceptible to malfunctions during high-demand periods or severe weather conditions. Areas with aging communications systems are more likely to experience disruptions, leading to inconveniences and potential safety risks for the population. Furthermore, neighborhoods with limited-service providers may face vulnerability as reliance on a single provider can result in substantial outages if that network encounters issues.

EXTENT

A severity scale is a critical tool used in communications systems to categorize the impact of failures and operational issues. By assigning a numerical value to each type of failure, the severity scale helps organizations prioritize responses based on urgency and significance of the problem. Ranging typically from 1 to 5, this scale enables teams to quickly understand the severity of an incident. A level 1 indicates a critical failure leading to a complete system outage, while a level 5 represents minor cosmetic issues without functional impact. Utilizing a severity scale not only aids in effective communication during

[224] NOAA, "Space Weather Impacts." https://www.swpc.noaa.gov/impacts.
[225] FEMA, "Planning Considerations for Cyber Incidents," 2023, https://www.fema.gov/sites/default/files/documents/fema_planning-considerations-cyber-incidents_2023.pdf.

incident management but also enhances decision-making processes for maintenance and resource allocation, ultimately supporting the overall reliability and functionality of communications systems. Although severity scales may vary by organization, this plan uses the following general framework to describe the potential impacts of communications system failures. Table 95 shows standard severity levels. The range of intensities in St. Lucie County due to communications system failures is 1–5.

Table 95: Standard Severity Levels[226]

Level	Description
SEV 1	A complete system outage or a major failure in key functionality that makes the system mostly unusable. This is the most severe level and typically affects all users or vital business operations. This could be caused by intense natural hazard, like a hurricane or man-made hazard like a cyber-attack.
SEV 2	A critical component is severely degraded, affecting many users. A partial workaround might exist, but the issue causes significant disruption.
SEV 3	Partial loss of functionality that only affects a small subset of users or has minimal impact on core operations. Users can still use the system, but the experience is less than ideal.
SEV 4	Minor annoyances with minimal impact on functionality. These issues are typically cosmetic or non-essential and don't require immediate action.
SEV 5	These issues have no direct effect on users or system functionality but are tracked for future reference. They are typically part of a longer-term improvement effort.

JURISDICTIONAL IMPACTS

Hazard impacts refer to the adverse effects stemming from natural or human-induced events. These impacts include physical damage, human health concerns, and economic, environmental, and social impacts, as seen in Table 96.

Table 96: Jurisdictions and Hazard Impacts

Jurisdiction	Impacts
St. Lucie County, City of Port St. Lucie, City of Fort Pierce, Town of St. Lucie Village	Communications system failures for all jurisdictions can lead to significant physical damage, particularly in emergency situations where timely coordination is crucial. Human health concerns may arise if critical information regarding health services, emergency alerts, or disaster responses are not effectively communicated. Economically, businesses could suffer losses due to disruptions in operations, while environmental impacts may occur if agricultural alerts or environmental warnings fail. Socially, a breakdown in communication can erode public trust and cohesion, hindering community resilience during crises. Cyber-attacks can

[226] Last 9, "5 Common Incident Severity Levels You Should Know." https://last9.io/blog/common-incident-severity-levels/#:~:text=Severity%201%20(Critical%2FP1),users%20or%20vital%20business%20operations.

Jurisdiction	Impacts
	damage critical hardware and software the jurisdictions rely on for daily functioning.

NATIONAL RISK INDEX

The National Risk Index serves as a valuable tool for assessing various hazards across communities in the United States; however, it lacks an evaluation of communications systems failures as a significant hazard and will therefore not be included in this particular hazard profile.

Magnitude and Severity

The potential magnitude and severity of a communications system failure in St. Lucie County could be significant, impacting both emergency response capabilities and daily operations for residents and businesses. In the event of a failure, crucial lines of communication, including 911 services, would be disrupted, hampering immediate responses to emergencies, public safety alerts, and essential updates on ongoing threats, whether from natural disasters or man-made incidents.

At-risk populations, such as the elderly and those without access to alternative forms of communication, are particularly vulnerable, as they may rely heavily on these systems for information and assistance. Additionally, the loss of communications infrastructure could lead to economic repercussions, affecting businesses that rely on connectivity for operations and transactions. Overall, the severity of a communications failure could result in confusion, heightened anxiety among residents, and complications in coordinating recovery efforts.

Historic Events

- **October 10, 2024:** Hurricane Milton resulted in approximately 6.8% of cell sites experiencing service disruptions within St. Lucie County.[227]
- **July 19, 2024:** A Global cybersecurity outage impacted St. Lucie County and led to some offices being closed.[228]
- **October 27, 2023**: Telephone lines, email, websites, and other services were impacted at county offices, libraries, and attractions countywide.[229] Suspicious activity was detected on the county's

[227] Federal Communications Commission, "Communications Status Report for Areas Impacted by Hurricane Milton, October 10, 2024." https://docs.fcc.gov/public/attachments/DOC-406468A1.pdf.
[228] WPBF, "Global Outages Impact Some Agencies on the Treasure Coast." https://www.wpbf.com/article/florida-global-outage-affects-impact-treasure-coast/61649487.
[229] WPTV, "St. Lucie County Network Issues Impact Communications at Offices, Libraries." https://www.wptv.com/news/treasure-coast/region-st-lucie-county/network-issues-impact-communications-10-27-23.

servers, prompting the county to shut down its main servers.[230] Although the Board of County Commissioners' system was restored, Fort Pierce, which had disconnected from the county to prevent data breaches, remained offline as of December 1, 2023. During this period, both the Fort Pierce Police Department and the Sheriff's Office were unable to process any public records.[231]

FEMA DISASTER DECLARATIONS

There are currently no FEMA disaster declarations associated with this hazard.

Probability of Future Conditions

Severe weather is a significant factor that could affect communications systems in the county. Given its susceptibility to hurricanes, tropical storms, heavy rainfall, power outages, and physical damage to communications infrastructure, such as cell towers and cables, have occurred. Future communications system failures may occur due to continued exposure to hurricanes, severe weather, power outages, aging infrastructure, and increased system demand.

Additionally, other adverse effects should be considered when estimating the probability of CSFs. Cybersecurity threats have become increasingly prevalent, with a growing risk of cyberattacks targeting communications networks, as evidenced by the months-long disruption to the county in October 2023. Likewise, as the population of St. Lucie County grows, the demand for communications services will likely increase, which may strain the existing infrastructure.

Based on the information provided, the probability of future CSFs can be assessed as moderate. This conclusion is drawn from multiple factors, including the historical context of frequent outages during severe weather events, potential vulnerabilities from aging infrastructure and cybersecurity threats, and the increasing demand for communications services as the population grows.

Vulnerability Assessment

This assessment reveals several critical areas of concern that could impact emergency response and daily operations in St. Lucie County, including Fort Pierce, Port St. Lucie, and St. Lucie Village, due to communications system failures. The region's communications infrastructure relies on a combination of traditional landlines, cellular networks, and broadband services, all of which are susceptible to various risks, including natural disasters, technological failures, cyber-attacks, and human error.

In Port St. Lucie and Fort Pierce, dependence on cellular networks can be a vulnerability, as they may experience overloading during emergencies. Additionally, power outages from severe weather can disrupt both fixed and mobile communications networks if backup power systems are not adequately

[230] WPTV, "Computer Outage Impacting St. Lucie County Government Services." https://www.wptv.com/news/treasure-coast/region-st-lucie-county/computer-outage-impacting-st-lucie-county-government-services.
[231] WFLX, "Network Outage Causes Backlog for Multiple St. Lucie County Agencies." https://www.wflx.com/2023/12/02/network-outage-causes-backlog-multiple-st-lucie-county-agencies/.

implemented. The increasing reliance on internet-based calls and messaging further complicates issues, as disruptions in power or internet access could leave residents unable to communicate with emergency services or other people.

St. Lucie Village, with its more rural setting, may face unique challenges concerning coverage and service availability. Areas with lower population density may have fewer redundant communications pathways, which can increase vulnerability during outages., resulting in less reliable service during critical times. This lack of redundancy can lead to a substantial communications gap in emergency situations, hampering the ability of local authorities to coordinate effectively and inform residents of evacuations or safety measures.

Furthermore, the integration of new technologies, such as smart city applications and IoT devices, including smart home appliances, wearable fitness trackers, industrial sensors, and connected vehicles, presents new vulnerabilities that need to be assessed. Cybersecurity threats can compromise communications systems, leading to disinformation or failure in emergency notifications. Cyber threats continue to evolve, which can increase vulnerability if cybersecurity measures are not regularly updated and maintained.

Based on the information provided, the vulnerability of St. Lucie County's communications systems can be assessed as high.

IMPACTS TO ASSETS

Table 97 provides a summary of the effects of communications system failures. It discusses the impact on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, public confidence, and the consequences of these impacts.

Table 97: Consequence Analysis

Sector	Consequence
Public	• Communications failures can disrupt the dissemination of critical safety and health information. • Poor communication can impact utility companies, making it difficult to address outages or infrastructure failures related to electricity, water, and gas services. • Traffic management systems and public transportation services rely on communication for safe and efficient operation. Failures can lead to accidents and congestion. • Schools may struggle to communicate with parents, staff, and emergency services during crises, affecting student safety and academic operations. • Communications breakdown can impede local government functions, affecting everything from emergency planning to public outreach and community services.

Sector	Consequence
First Responders	• Delays in communication can hinder the ability of EMS to quickly respond to medical emergencies, affecting patient care and outcomes. • The ability of police, fire, and medical personnel to coordinate and respond effectively to emergencies can be severely hindered. This could delay responses to incidents or disasters. • These agencies depend on effective communication to coordinate recovery efforts and resource allocation during emergencies. Failures can disrupt the overall emergency response and recovery efforts. • Effective dissemination of information to the public is critical during emergencies. Communications failures can lead to misinformation, confusion, and a lack of vital information reaching the community.
Continuity of Operations	• Communications breakdown can impede local government functions, affecting everything from emergency response to public outreach and community services. • Outages may disrupt communication in health departments and between healthcare facilities, impacting the management of health emergencies and the dissemination of crucial health information. • The Emergency Operations Center (EOC) relies on effective communication to manage resources, coordinate response efforts, and relay information to the public. Failures can severely disrupt these operations. • Communications failures can prevent timely notifications regarding emergencies or safety information from reaching the public, which is critical for community safety.
Property, Facility, and Infrastructure	• Water, electricity, and gas services use communications networks to monitor systems and respond to outages or emergencies. Delays or failures in communication can hinder timely responses to contamination events in local water bodies, affecting drinking water supplies and aquatic ecosystems.
Environment	• The county's coastal areas, including the Indian River Lagoon, rely on effective communication for monitoring and managing pollution events, boating regulations, and conservation efforts. • Inadequate communication can disrupt air quality monitoring systems, making it difficult to respond to incidents of air pollution that may impact public health and the environment. • The ability to coordinate emergency services and environmental protection measures during crises (such as chemical spills or radiological incidents) can be severely compromised, leading to broader environmental impacts.
Economic Conditions	• St. Lucie County relies on tourism as a significant part of its economy. Inadequate communication during emergencies can deter visitors, impacting local businesses and hospitality services. • Businesses rely on communications systems for coordinating deliveries and managing inventory. Disruptions can result in delays, increased costs, and losses for retailers and suppliers.

Sector	Consequence
	• Small and medium-sized businesses often depend on reliable communication for day-to-day operations, customer service, and marketing. Disruptions can lead to decreased sales and customer dissatisfaction. • Businesses rely on effective communication for operational continuity during emergencies. Any disruption in communication can affect local businesses' ability to function, consequently impacting the economy.
Public Confidence	• Effective communication strengthens trust between local government agencies and the community. Failures in the communications systems can erode this trust, making residents less likely to rely on or engage with local authorities in the future. • Clear communication is essential for informing residents about safety protocols and evacuation procedures during emergencies. Communications failures can lead to confusion and hinder individuals' ability to protect themselves and their families.

IMPACT ON COMMUNITY LIFELINES

FEMA's community lifelines are shown in Figure 75. Failures in communications systems can impact several community lifelines, highlighting the interconnected nature of critical infrastructure systems. Here's a closer look at how CSFs can affect these lifelines.

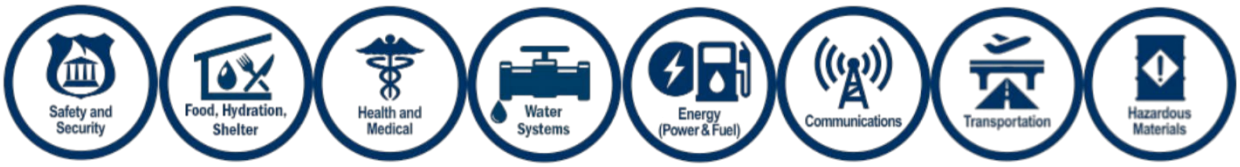

Figure 75: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** Communications failures can hinder emergency response teams and law enforcement from coordinating effectively, impacting public safety.
- **Health and Medical:** Lack of communication can disrupt the sharing of critical health information, coordination of medical services, and dispatch of ambulances or medical supplies.
- **Food, Hydration, and Shelter:** Communications breakdowns can impede the distribution of food by impacting logistics systems and water supplies, by impacted water plants and monitoring systems. as well.
- **Transportation:** Effective communication is crucial for directing traffic, coordinating the transport of supplies, and ensuring safe evacuation routes. Failures can lead to delays and risks during emergencies.
- **Energy:** Communications issues can affect the management and infrastructure of energy supply, leading to outages or mismanagement of resources.

- **Hazardous Materials:** In emergencies involving hazardous materials, clear communication is vital for coordinating response efforts and ensuring public safety. Failures can result in information bottlenecks and increased risk.

IMPACT DUE TO CHANGES IN DEVELOPMENT

St. Lucie as a whole and all of its jurisdictions have seen population growth between 2020 and 2023. St. Lucie County has grown by 13%,[232] Fort Pierce by 2%,[233] Port St. Lucie by 8%,[234] and St. Lucie Village by 33%.[235] Population growth has increased the number of people exposed to the consequences of communications system failures in St. Lucie County. In reaction to the increasing population, rising cybersecurity threats, and the area's susceptibility to hurricanes and severe weather, St. Lucie County has implemented several key developments in its communications systems aimed at reducing vulnerability among residents. By upgrading the public safety radio system to a digital platform and enhancing the 911 dispatch center, the county aims to improve coordination and response times among emergency services. Additionally, expanding broadband internet access ensures that all residents can communicate effectively during emergencies. Despite these advancements, the risk of communications system failures remains due to system complexity, infrastructure dependencies, and exposure to severe weather events.

Port St. Lucie is also experiencing notable achievements in its communications infrastructure, driven by substantial investments from both public and private sectors aimed at enhancing connectivity for businesses. The city has formed strategic partnerships to expand its fiber infrastructure, particularly in key economic development areas such as Tradition and Southern Grove.[236] These municipal fiber initiatives are designed to improve access to high-speed internet, supporting business growth and innovation.

Since the last update, there have been additional investments in smart city projects across the County. These projects have added fiber expansion and boosted connectivity capabilities that benefit both municipal operations and local businesses.[237] These enhancements provide improved efficiency and operational effectiveness and can reduce risks of telecommunication outages.

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[232] U.S. Census Data, "Total Population in St. Lucie County," 2023, https://data.census.gov/all?q=St.+Lucie+County+Florida.
[233] U.S. Census Data, "Total Population in Fort Pierce," 2023, https://data.census.gov/all?q=Fort+Pierce+city,+Florida.
[234] U.S. Census Data, "Total Population in Port St. Lucie," 2023, https://data.census.gov/all?q=Port+St.+Lucie+city,+Florida.
[235] U.S. Census Data, "Total Population in St. Lucie Village," 2023, https://data.census.gov/all?q=St.+Lucie+Village+town,+Florida.
[236] City of Port St. Lucie, "Southern Grove Master Plan," 2021, https://www.cityofpsl.com/files/assets/public/v/2/departments/community-redevelopment/documents/southern-grove-master-plan.pdf.
[237] FEMA, "FEMA Awards Port St. Lucie More Than $1 Million To Improve Emergency Telecommunications System," 2020, https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiA4dzgrNSRAxWmyOYEHfilKXMQFnoECCYQAQ&url=https%3A%2F%2Fwww.fema.gov%2Fko%2Fprint%2Fpdf%2Fnode%2F356600&usg=AOvVaw3Bnd9NGUTgNiTpgIhdCl8X&opi=89978449.

Moreover, major telecommunications carriers are actively improving their infrastructure across the county and deploying 5G infrastructure, with an emphasis on prioritizing business districts. This rollout promises enhanced service availability and faster connectivity options for local businesses.

IMPACTS ON POPULATIONS OF FOCUS

The vulnerability of populations in the county during a communications systems failure raises concerns, especially for certain groups that may be severely affected. At-risk populations, including the elderly, resource-limited individuals, and those with disabilities, face extensive risks in the event of communication breakdowns. For instance, the elderly may rely on timely alerts regarding emergencies or weather-related events. Without effective communications systems, their ability to respond and safeguard themselves is compromised. Similarly, resource-limited households often lack access to alternative communication methods, such as mobile phones or internet services, making them reliant on public announcements and community outreach for critical information.

Additionally, disenfranchised communities, including non-English speakers and those with limited literacy, may struggle to receive essential messages during a crisis. The inability to understand alerts concerning evacuation routes, shelter locations, or health advisories can impede their safety and well-being. Moreover, populations living in rural areas of St. Lucie County may face increased isolation during communications failures, heightening challenges in accessing vital services and assistance during emergencies.

Children and youth are also vulnerable during communications disruptions, particularly in school environments. Without effective communication, schools may struggle to relay crucial information to parents regarding the safety of their children or changes in school operations. This lack of information can lead to increased anxiety and confusion among families. Furthermore, the impact extends to essential services such as healthcare, where patients may not receive necessary medical information or updates on service availability, adversely affecting health outcomes. In summary, a failure of communications systems poses a heightened risk for various at-risk populations, including the elderly, resource-limited individuals, non-English speakers, and children.

Epidemics and Pandemics

Definition

Modern infectious disease control builds on 19th-century scientific breakthroughs which found that microbes cause diseases. These advances are the foundation for today's surveillance systems and disease response networks.[238] In the United States, a legal framework requires that certain infections be reported to health authorities in a prompt manner. In 2000, 99 infectious conditions were designated as

[238] Centers for Disease Control and Prevention. "Morbidity and Mortality Weekly Report." https://www.cdc.gov/mmwr/pdf/wk/mm4829.pdf#:~:text=Public%20health%20action%20to%20control,played%20a%20major%20role%20in.

"notifiable," which mandated regular case reporting.[239] Timely surveillance of notifiable diseases and case reporting allows for the identification of outbreaks quickly and containment before they spread widely.[240]

Respiratory illnesses are among the most common infectious threats. Seasonal influenza is caused by influenza viruses of Types A and B. These viruses undergo small changes every year, which leads to the annual flu season. Influenza A viruses are subtyped by their surface proteins. The strains circulating amongst human beings now include H1N1 and H3N2. However, only influenza A viruses have ever triggered global pandemics. Historic examples of this include the 1918 H1N1 Spanish Flu and the 2009 H1N1 pandemic. Influenza B viruses are classified by genetic lineage. Currently, the B/Victoria-lineage is the predominant strain of Influenza B in circulation.[241] Influenza C typically causes only mild, cold-like symptoms, and type D infects cattle and not humans.[242]

COVID-19 is caused by the SARS-COV-2 coronavirus. This emerged in late 2019 and spread rapidly across the world. It transmits when infected people emit virus-laden respiratory droplets or aerosols that others inhale or when touching contaminated surfaces.[243] SARS-COV-2 infects the respiratory tract by binding its protein to ACE2 receptors on airway cells. The virus's incubation period averages approximately five days. Symptoms range from no ill effects to mild upper-respiratory illness to severe pneumonia and acute respiratory distress that require intensive care.[244] Because SARS-COV-2 spread so easily, COVID-19 prompted an unparalleled global public health challenge in 2020 that resulted in massive case counts.[245]

Respiratory Syncytial Virus (RSV) is another common virus causing respiratory illness, especially in infants, young children, and older adults.[246] RSV typically circulates seasonally in the fall and winter months. In most people, RSV causes only mild, cold-like illnesses, but it is the leading cause of infant hospitalization for respiratory illness.[247] RSV spreads when an infected person coughs or sneezes on others or on a

[239] Florida Department of Health, "Reportable Diseases/Conditions in Florida," 2016, https://hillsborough.floridahealth.gov/programs-and-services/infectious-disease-services/reportable-disease-list-form/_documents/reportable-diseases-list-practitioners-2019.pdf.
[240] Centers for Disease Control and Prevention. "Morbidity and Mortality Weekly Report." https://www.cdc.gov/mmwr/preview/mmwrhtml/mm4939a4.htm#:~:text=This%20issue%20of%20MMWR%20incorporates,NETSS.
[241] Paget J, Caini S, Del Riccio M, van Waarden W, Meijer A. "Has influenza B/Yamagata become extinct and what implications might this have for quadrivalent influenza vaccines?" Euro Surveill. 2022, https://pmc.ncbi.nlm.nih.gov/articles/PMC9524051/#:~:text=Abstract,lineage%20viruses%20have%20become%20extinct.
[242] Centers for Disease Control and Prevention. "Types of Influenza Viruses." https://www.cdc.gov/flu/about/viruses-types.html#:~:text=Influenza%20A%20viruses%20are%20the,to%20cause%20illness%20in%20people.
[243] Centers for Disease Control and Prevention. "COVID-19." https://www.cdc.gov/covid/about/index.html#:~:text=COVID,contaminate%20the%20surfaces%20they%20touch.
[244] Cascella M, Rajnik M, Aleem A, et al. Features, Evaluation, and Treatment of Coronavirus (COVID-19) [Updated 2023 Aug 18]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK554776/.
[245] Centers for Disease Control and Prevention, "CDC Museum COVID-19 Timeline," 2024, https://www.cdc.gov/museum/timeline/covid19.html.
[246] Centers for Disease Control and Prevention. "How RSV Spreads." https://www.cdc.gov/rsv/causes/index.html#:~:text=,and%20peaks%20in%20the%20winter.
[247] Centers for Disease Control and Prevention. "Respiratory Syncytial Virus Infection." https://www.cdc.gov/rsv/index.html#:~:text=Respiratory%20syncytial%20virus%20,S.

surface that can be touched by others.[248] In vulnerable infants and the elderly, RSV can infect the lower airways, causing bronchiolitis or pneumonia.

Beyond direct disease effects, pandemics can trigger cascading hazards that impact society. These can include things such as social unrest, mental health impacts, and prolonged economic hardship. An example of this is COVID-19. Analyses of COVID-19 show that high unemployment and fatalities increased social stress, which impacted many people.[249]

A pandemic can also shrink a workforce in vital sectors of society through illness or quarantine. This can lead to cascading failures, such as power outages due to staff shortages, water treatment delays, or emergency response lags. During COVID-19, hospitals and clinics faced great strain due to staffing shortages caused by the effects of illness, those leaving the healthcare industry, and quarantine. Additionally, pandemics can also increase stressors that exacerbate domestic violence. During COVID-19 lockdowns, reports of domestic violence incidents rose in the United States as families were forces to isolate due to the virus[250].

Location and Extent

Pandemics and epidemics have the potential to significantly affect all jurisdictions in St. Lucie County. COVID-19 is a prime example of the impact a pandemic can have on St. Lucie County. Areas with higher population density, such as Port St. Lucie and Fort Pierce, are especially vulnerable to faster transmission due to greater population density in areas. The county's less-populated or rural areas may experience slower initial spread but face unique challenges related to limited healthcare capacity and longer emergency response times. Table 98 outlines the geographic impacts of epidemics and pandemics.

Table 98: Geographic Extent of Epidemics and Pandemics

Classification	Geographic Impact
Epidemic	Local, community, regional, or state-wide
Pandemic	National or global

EXTENT

An epidemic refers to the sudden increase in cases of a disease outbreak in a specific community or region where it is not normally widespread. According to the World Health Organization (WHO), an epidemic occurs when the number of cases in a population or area exceeds what is typically expected.

[248] Centers for Disease Control and Prevention. "How RSV Spreads." https://www.cdc.gov/rsv/causes/index.html#:~:text=,and%20peaks%20in%20the%20winter.
[249] World Health Organization. "Impact of COVID-19 on People's Livelihoods, Their Health and Our Food Systems." https://www.who.int/news/item/13-10-2020-impact-of-covid-19-on-people's-livelihoods-their-health-and-our-food-systems#:~:text=The%20COVID,the%20end%20of%20the%20year.
[250] Piquero AR, Jennings WG, Jemison E, Kaukinen C, Knaul FM. "Domestic violence during the COVID-19 pandemic – Evidence from a systematic review and meta-analysis." J Crim Justice. 2021, https://pmc.ncbi.nlm.nih.gov/articles/PMC9582712/#s0015.

Events such as these can place a heavy strain on public health systems, which often leads to a shortage of hospital beds, essential medicines, and medical staff. Beyond the immediate health consequences, epidemics can also disrupt economic activity, reducing workforce availability, halting business operations, and driving up healthcare expenditures.[251]

There is currently no comprehensive, agreed upon definition of a pandemic.[252] The WHO's current definition is "the worldwide spread of a new disease."[253] The U.S. government defines a pandemic as, "a disease outbreak that spans several countries and affects a large number of people."[254] While these definitions are vague and can include a wide range of diseases, they both note that pandemics have a multi-country extent.

Historical events, such as the 1918 influenza and the COVID-19 pandemic, show the truly global nature that pandemics can reach. The consequences of pandemics are often far-reaching, leading to widespread illness and death, prolonged social disruption, and extensive economic damage.[255]

The extent of infection during an epidemic or pandemic depends largely on how efficiently the disease spreads, the methods of transmission, and how frequently infected and healthy individuals interact.

JURISDICTIONAL IMPACTS

Epidemics and pandemics, depending on the severity, represent hazards capable of disrupting all aspects of life in St. Lucie County. These events can emerge suddenly, spread rapidly through populations, and overwhelm healthcare, emergency, and social service systems. Countywide impacts often include widespread strain on hospitals, clinics, and emergency medical services, resulting in shortages of medical supplies, personnel, and critical-care capacity. Economic disruption is also a major consequence, as business closures, reduced consumer activity, and workforce shortages slow productivity and affect essential sectors. In addition, school and childcare closures can disrupt family routines and reduce workforce availability, particularly in critical fields such as healthcare and public safety. The social and behavioral health effects of epidemics and pandemics can be equally severe, with isolation, uncertainty, and prolonged emergencies contributing to heightened stress, mental health challenges, and increased demand for community support services. Table 99 provides an overview of additional impacts for each jurisdiction

[251] World Health Organization. (2023). *Managing epidemics: Key facts about major deadly diseases* (2nd ed.). World Health Organization.
[252] Dias RA. "Towards a Comprehensive Definition of Pandemics and Strategies for Prevention: A Historical Review and Future Perspectives." Microorganisms. 2024, https://pmc.ncbi.nlm.nih.gov/articles/PMC11433773/.
[253] World Health Organization, "Pandemics," https://www.who.int/health-topics/pandemics.
[254] Ready.gov, "Pandemics," 2025, https://www.ready.gov/pandemic.
[255] Centers for Disease Control and Prevention. (2022). *Principles of epidemiology in public health practice* (3rd ed.). U.S. Department of Health and Human Services.

Table 99: Impacts of Disease Transmission, by Jurisdiction

Jurisdiction	Impacts
St. Lucie County	Widespread illness could affect all emergency functions, including public safety, waste management, and transportation.
City of Port St. Lucie	High population density and frequent public interaction increase disease transmission risk. The city's large residential workforce and concentration of essential businesses mean that widespread illness could lead to significant workforce shortages and economic slowdown. Vulnerable populations, especially seniors and residents of dense housing complexes, would require targeted outreach and medical support.
City of Fort Pierce	Tourism and port-dependent economy makes the city vulnerable to loss of revenue and employment during outbreaks. Health impacts could be compounded by limited access to care in older neighborhoods. The city's need to maintain public confidence and communication is especially critical given its reliance on tourism and public engagement.
Town of St. Lucie Village	The Town of St. Lucie is smaller comparatively, and this smaller population size may help limit spread, but limited local healthcare capacity and reliance on nearby cities for medical and emergency services create vulnerability during widespread illness. The town's isolation and dependence on external supply chains can exacerbate impacts on mobility, deliveries, and essential goods. Community-based support networks are essential to maintaining continuity.

NATIONAL RISK INDEX

The National Risk Index serves as a valuable tool for assessing various hazards and vulnerabilities across the country; however, it notably lacks specific data on pandemics. As a result, the index does not provide a comprehensive profile of epidemic and pandemic risks; therefore, it will not be included in this profiled hazard.

Magnitude and Severity

Epidemics and pandemics can have countywide consequences for St. Lucie County and its jurisdictions, disrupting health services, emergency response, and the local economy. The magnitude of an outbreak depends on the transmissibility of the pathogen, population density, and public compliance with containment measures. Highly contagious diseases, such as influenza or COVID-19, can cause widespread illness within weeks, affecting thousands of residents and straining hospitals and public health agencies. Some metrics used to measure or predict magnitude of a pandemic or epidemic include:

- **Transmissibility:** Often denoted by the basic reproduction number (R0), transmissibility describes how contagious a disease is. The R0 represents approximately how many people an infected person can infect. The R0 is modeled based on infection period, mode of transmission, and contact rate.256
- **Incidence and Prevalence:** Incidence measures the rate of new cases developing over a period of time. Prevalence, on the other hand, is the number of cases of a disease over a period of time. These terms are similar, and influence each other, but are distinct. Together they show how fast a disease is infecting the population and how much of the population is infected.257
- **Population Density:** Often defined as the number of people per square mile, population density can make a significant difference in how quickly a disease travels through a population and the number of people it infects.[258]

Severity describes the intensity of the impact or damage from epidemics and pandemics. Severity may range from mild community-level outbreaks to devastating ones that lead to significant mortality, economic hardship, and social disruption. Secondary effects include workforce shortages, mental-health challenges, and long-term healthcare burdens associated with post-infection conditions. Some ways to measure severity include:

- **Mortality Rate:** The rate at which people die when they contract a given disease.[259]
- **Morbidity Rate:** The rate at which people become ill when they contract a given disease.[260]
- **Intensive Care Unit (ICU) Admissions:** The number of people that require intensive treatment in ICU wards due to a given disease can indicate how severe a disease is and the amount of healthcare resources it requires.

Historic Events

Over the past several decades, St. Lucie County has been impacted by multiple infectious disease outbreaks. The most significant was the COVID-19 pandemic, which resulted in 112,478 confirmed cases and 1,673 deaths in St. Lucie County between 2020 and 2025.[261] Schools, businesses, and public facilities experienced temporary closures, and essential services were forced to modify operations to ensure staff safety. In 2024, numbers of tuberculosis (15 cases) and salmonellosis (201 cases) infections compared to

[256] Harvard Global Health Institute, "Understanding Predictions: What is R-Naught?" 2020, https://globalhealth.harvard.edu/understanding-predictions-what-is-r-naught/.
[257] Texas A&M University, "Epidemiology Incidence vs. Prevalence," https://public-health.tamu.edu/degrees/mph/blog/epidemiology-incidence-vs-prevalence-explained.html.
[258] Hu, Yue, Ziyi Lin, Sheng Jiao, and Rongpeng Zhang. 2024. "High-Density Communities and Infectious Disease Vulnerability: A Built Environment Perspective for Sustainable Health Development" *Buildings,* *https://www.mdpi.com/2075-5309/14/1/103*.
[259] CDC, "Measures of Risk," https://archive.cdc.gov/www_cdc_gov/csels/dsepd/ss1978/lesson3/section3.html.
[260] CDC, "Measures of Risk," https://archive.cdc.gov/www_cdc_gov/csels/dsepd/ss1978/lesson3/section3.html.
[261] Florida Department of Health, "COVID-19 Cases," 2025, https://www.flhealthcharts.gov/ChartsDashboards/rdPage.aspx?rdReport=Covid19.Dataviewer.

the rest of Florida.[262] Regional public health data indicate periodic surges in vector-borne illnesses such as dengue and West Nile virus, though these have been isolated incidents with limited spread. These events highlight the need for continued investment in surveillance, vaccination, and healthcare capacity.

FEMA DISASTER DECLARATIONS

St. Lucie County was included in FEMA Disaster Declaration 4486-DR-FL (COVID-19 Pandemic), issued in 2020. This declaration provided federal assistance for emergency protective measures, including personal protective equipment (PPE), testing centers, and vaccination distribution. The declaration also supported economic recovery through public assistance and reimbursement programs for local governments and critical healthcare facilities. No other FEMA declarations related specifically to epidemic or pandemic events have been recorded for the county.

Probability of Future Conditions

Given ongoing global mobility, urban growth, and increased human-animal interactions, the likelihood of future epidemic or pandemic events in St. Lucie County is considered a definite possibility. The region's connectivity via major highways (I-95 and Florida's Turnpike), its aging population, and the presence of schools and tourist destinations make it susceptible to rapid disease spread. Seasonal influenza is expected annually, while novel pathogens could emerge periodically, as demonstrated by COVID-19. Future outbreaks may also be influenced by climate variability, which can alter vector habitats and disease dynamics. Continued coordination with the Florida Department of Health and CDC is essential to enhance detection, vaccination coverage, and response readiness.

Vulnerability Assessment

St. Lucie County's vulnerability to epidemics and pandemics stems from its demographic composition, urban density, and public health infrastructure capacity. Populations at higher risk include older adults, individuals with chronic illnesses, and households with limited access to healthcare or transportation. Socioeconomic factors, such as poverty and employment in service sectors, can amplify vulnerability by limiting individuals' ability to isolate or seek care. Rural areas and smaller jurisdictions like St. Lucie Village rely on neighboring cities for hospital services, making them susceptible to delays during regional surges. Vulnerability is further compounded by workforce shortages in healthcare and emergency management sectors, underscoring the need for cross-jurisdictional coordination.

[262] Florida Department of Health, "Infectious Diseases," 2024, https://www.flhealthcharts.gov/ChartsDashboards/rdPage.aspx?rdReport=CountyHealth.InfectiousDiseases&tabid=InfectiousDiseases&islCounty=56.

IMPACTS TO ASSETS

Table 100: Consequence Analysis

Sector	Consequence
Public	Widespread illness may result in school closures, reduced mobility, and disruptions to daily life. Vulnerable residents, including seniors and immunocompromised individuals, face higher hospitalization and mortality rates but healthy individuals may also face risks too.
First Responders	Emergency personnel face elevated exposure risk and staffing shortages due to illness or quarantine, reducing response capacity for other hazards.
Continuity of Operations	Government services, utilities, and critical infrastructure operations may be disrupted by absenteeism and supply chain delays, affecting response and recovery activities.
Property, Facility, and Infrastructure	While physical damage is minimal, essential facilities such as hospitals, emergency operations centers, and shelters may experience operational strain and resource depletion.
Environment	Increased use of disinfectants and medical waste generation during outbreaks can have localized environmental effects if not properly managed.
Economic Conditions	Business closures, tourism declines, and labor shortages can significantly reduce local revenue and tax bases. Recovery may take years depending on the outbreak's duration.
Public Confidence	Prolonged crises can erode trust in public institutions and government, particularly if communication is inconsistent or misinformation spreads. Transparent risk communication is vital to maintaining community compliance.

IMPACT ON COMMUNITY LIFELINES

FEMA's community lifelines are shown in Figure 76. While pandemics and epidemics might disrupt all the lifelines, depending on severity, the most significant effects tend to be on the Health and Medical, Food, Water, Shelter, and Safety and Security lifelines.

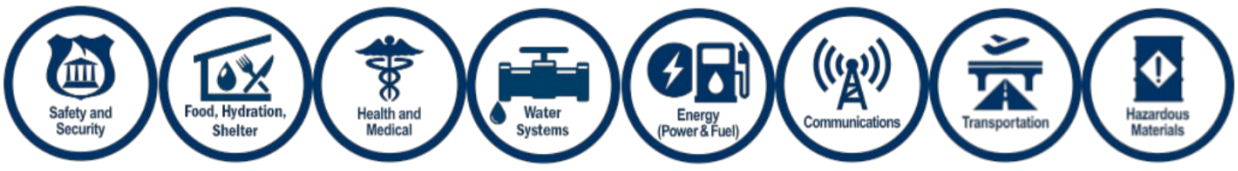

Figure 76: Federal Emergency Management Agency Community Lifelines

- **Health and Medical:** Pandemics and epidemics can directly impact the health of residents including illness and fatalities. Hospitals and clinics may reach capacity, creating delays in both pandemic-related and routine medical care.

- **Food, Hydration, and Shelter:** Supply chains for groceries, fuel, and pharmaceuticals can experience shortages during severe pandemics and epidemics.
- **Safety and Security:** Public health restrictions and illness among first responders may hinder public safety, emergency response, and transportation services.

IMPACT DUE TO CHANGES IN DEVELOPMENT

St. Lucie County has experienced a substantial population increase, urban infill, and infrastructure expansion over the past five years. These trends have reshaped how contagious diseases can spread across the county. In Port St. Lucie and Fort Pierce, denser housing, expanded commercial zones, and more frequent human interactions in offices, retail centers, and transit corridors have accelerated person-to-person transmission during infectious outbreaks. Growth in residential developments has also heightened the risk of rapid spread in shared indoor spaces.

Areas with a greater concentration of residents and mixed-use development experienced more intensive spread during the COVID-19 pandemic. This was in part due to travel patterns, shared public amenities, and overlapping daily networks of interaction. New transportation links and commuting corridors have increasingly connected rural and suburban areas in denser hubs. This means that during an outbreak, one zone can more readily propagate outward.

St. Lucie County has also experienced an increase in senior living communities, which brings more older adults into concentrated areas. This demographic is especially vulnerable to severe influenza, COVID-19, and respiratory infections. This increases the potential for infection in these communities.

Smaller jurisdictions such as St. Lucie Village, which was previously remote or had suburban areas, have become more integrated into the broader fabric of the county through infrastructure upgrades. While this brings significant benefits to the jurisdictions, it can also increase exposure risk during an outbreak. If an epidemic or pandemic occurs, these areas may face delays in medical support, testing, or supply delivery. This is particularly the case if supply chains or transportation routes are stressed.

IMPACTS ON POPULATIONS OF FOCUS

Certain groups in St. Lucie County face greater risks during epidemic and pandemic events due to demographic, economic, and social factors. The county's growing population of older adults is particularly vulnerable to severe illness and higher mortality rates, especially among those residing in long-term care or assisted-living facilities where infections can spread rapidly. Residents in low-income households also face elevated risk because financial instability often limits access to healthcare, paid leave, and secure housing, factors that make it harder to isolate or recover safely. Individuals working in essential sectors such as healthcare, retail, food service, and transportation are more exposed to contagion because their jobs require in-person interaction and cannot easily transition to remote work. People with chronic medical conditions, including respiratory, cardiovascular, or immune disorders, are more likely to experience serious complications if infected. Children and students are also affected when outbreaks lead to school closures, which disrupt learning and childcare arrangements and create ripple effects for working families. In addition, individuals experiencing homelessness or housing insecurity may lack

reliable access to hygiene facilities, medical care, or safe shelter, increasing their vulnerability to illness and exposure. Addressing these disparities through targeted outreach, improved healthcare access, and continued investment in public health preparedness can help reduce the disproportionate impacts on these populations and strengthen community resilience across St. Lucie County.

Power Systems Failure

Definition

Power systems failure (power outage/blackout) is the loss or significant degradation of electric service resulting from a disruption anywhere in the supply chain: Generation, transmission, distribution, or consumption at the customer facility, which interrupts normal operations of homes, businesses, critical facilities, and lifelines.

In St. Lucie County, electric service is provided primarily by Florida Power and Light (FPL) countywide and by the Fort Pierce Utilities Authority (FPUA) in and around the City of Fort Pierce. The County also hosts FPL's St. Lucie Nuclear Plant on Hutchinson Island and is connected to the regional grid through multiple high-voltage transmission corridors. Due to nearly all essential services depend on reliable electricity—including water and wastewater treatment, lift stations, traffic signals and intelligent transportation systems, hospitals and clinics, communications networks, refrigeration, and medical equipment—power reliability is a core public safety concern.

Outages generally occur in four forms, each with different operational implications:

- **Momentary Interruptions (seconds to a few minutes):** These occur when automatic protection systems clear a fault, such as vegetation or wildlife contact or lightning, and reclose. They can cause blinking clocks, traffic signal resets, and abrupt shutdowns of sensitive equipment.
- **Sustained Outages (minutes to hours):** These are typically caused by localized equipment failure, downed distribution lines and poles, or vehicle-into-pole crashes. They may result in business disruption, loss of air conditioning, and service interruptions at facilities that lack automatic transfer to backup power.
- **Extended Blackouts (multi-hour to multi-day):** These are usually linked to severe weather events, including tropical storms, hurricanes, tornadoes, and lightning, or to coastal flooding and salt spray that damage equipment, as well as upstream transmission or generation failures. These blackouts cause cascading effects across lifelines and require fuel-supported backup generation at critical facilities.
- **Power Quality Events (brownouts/voltage sags and surges):** These occur when grid stress or switching causes low or fluctuating voltage. Such conditions can damage motors and electronics and disrupt industrial and medical processes, even when lights remain on.

Common triggers for St. Lucie include high winds and lightning, flooding and salt corrosion near the lagoon and barrier island, equipment or relay failures, vegetation or wildlife contact with lines, vehicle

collisions with poles, construction damage to underground feeders, and, less frequently, cyber or physical security incidents affecting utility control systems or substations. While utilities harden infrastructure and stage crews before storms, the County plans for the possibility that outages may be widespread and prolonged during major tropical events, and that restoration sequencing will prioritize hospitals, emergency services, water and wastewater facilities, and major transportation corridors.

Location and Extent

Power outages in St. Lucie County can occur countywide because the electric grid is highly interconnected: FPL serves most of the County, while the FPUA serves the City of Fort Pierce and nearby areas. High-voltage transmission corridors and major substations traverse the urbanized U.S. 1/I-95 corridors, and the St. Lucie Nuclear Plant on Hutchinson Island ties into the regional grid. Outage likelihood and consequences are elevated where loads, critical services, or single-thread links are concentrated, along interstate and turnpike interchanges, the North Causeway and Seaway (South) Causeway bridges, hospital and water/wastewater campuses, large commercial districts, and the port and airport areas. The most common local triggers include lightning, tropical storms and hurricanes (wind, debris, salt spray), flooding of low-lying equipment, vegetation and wildlife contacts, and vehicle-into-pole incidents; cyber and physical attacks on substations are lower-probability but high-consequence concerns.

EXTENT

Outages range from momentary interruptions (seconds–minutes) due to protective devices clearing faults, to sustained outages (minutes–hours) resulting from distribution equipment damage, and to extended blackouts (multi-hour to multi-day) after major wind or flooding events that require field repairs and staged re-energization. Consequences scale with duration, temperature, time of day, and a facility's reliance on continuous power: Traffic signals fail to default and flash until reset; lift stations and water/wastewater plants shift to generators; telecom sites rely on batteries and backup power; and medically dependent residents and heat-sensitive populations face elevated risk during long, hot outages. Although the St. Lucie Nuclear Plant contributes baseload generation, a plant trip or transmission fault would be managed through grid balancing and does not imply a radiological hazard. Restoration priorities focus on hospitals, emergency operations centers (EOCs) and public safety, water and wastewater, major corridors, and high-density neighborhoods.

JURISDICTIONAL IMPACTS

Hazard impacts refer to the adverse effects stemming from natural or human-induced events. These impacts include physical damage, human health concerns, and economic, environmental, and social impacts, as shown in Table 101.

Table 101: Impacts of Power System Failures, by Jurisdiction

Participant	Impacts
St. Lucie County	Countywide exposure across dispersed neighborhoods and rural subdivisions, with critical facilities (Emergency Operations Center; sheriff's office; fire stations; regional water, wastewater, and solid waste assets) dependent on tested standby generation and fuel resupply. Traffic incident management and public information are essential when outages darken I-95, Florida's Turnpike or U.S. 1 signals, or close drawbridges/causeways for inspections.
City of Port St. Lucie	As the largest load center, Port St. Lucie (primarily FPL-served) concentrates residential and commercial demand along St. Lucie West, Tradition, Crosstown Parkway, and U.S. 1. Outages here produce system-wide traffic impacts, disrupt medical offices and assisted-living facilities, and require reliable generator coverage at lift stations and the utility's water and wastewater facilities to prevent sanitary sewer overflows.
City of Fort Pierce	Within FPUA's electric service area, Fort Pierce includes dense downtown blocks, industrial and port districts, hospitals and clinics, and waterfront infrastructure exposed to wind, salt spray, and tidal flooding that accelerate corrosion. It also serves as the County Seat and therefore is the location of many county administrative functions. A substation or feeder outage can affect drawbridge approaches and the port/inlet working waterfront.
Town of St. Lucie Village	The Town of St. Lucie Village is a small, mostly residential community along the Indian River Lagoon, reliant on a limited set of feeders and nearby substations. Even short outages can delay well and septic systems and in-home medical equipment operations. Evacuation and emergency medical services (EMS) access depend on adjacent U.S. 1 and causeway functionality.

NATIONAL RISK INDEX

The National Risk Index is a valuable tool for assessing various hazards across communities in the United States. However, it does not evaluate power systems failure as a significant hazard, so it is not included in this particular hazard profile.

Magnitude and Severity

MAGNITUDE

Unlike natural hazards with fixed scales, such as the Modified Mercalli Intensity Scale for earthquakes or the Saffir–Simpson Hurricane Wind Scale, power outages are best categorized by their geographic scope, duration, and the cascading effects they produce. Momentary service interruptions are common, but prolonged, wide-area outages can quickly escalate into events affecting public health, emergency response, and the economy, especially during Florida's hot, humid months.

OUTAGE SCOPE AND GEOGRAPHIC EXTENT – U.S. DEPARTMENT OF ENERGY CLASSIFICATION

The U.S. Department of Energy classifies power outages based on the number of customers affected and the extent of grid failure:

- **Localized Outage (Level 1):** This level affects a single building, block, or small subdivision (e.g., equipment failure, vehicle-into-pole incidents, vegetation/wildlife contact, or scheduled maintenance). It typically lasts less than two hours and has minimal community-wide effects.
- **Feeder/Substation Outage (Level 2):** This level affects hundreds to thousands of customers out due to feeder or substation problems (e.g., transformer failure, wind damage to lines, or lightning). It can last several hours to a full day and may impact traffic signals, business operations, and some critical-facility circuits.
- **Area/Regional Outage (Level 3):** This level affects tens of thousands of customers due to transmission element failure or severe weather (e.g., tropical storm or hurricane). The duration ranges from several hours to multiple days, with significant economic impacts and sustained emergency operations.
- **Widespread/Blackout (Level 4):** This level affects multiple counties or utilities due to catastrophic weather, cascading grid events, or major cyber/physical attacks. It can last days to weeks and may cause severe public health and security concerns.

In St. Lucie County, Level 1 and 2 events are most common. Level 3 outages occur primarily during tropical cyclones or large frontal systems. Level 4 events are rare but remain a planning scenario for catastrophic hurricanes or grid-level failures.

OUTAGE DURATION AND RESTORATION COMPLEXITY – IEEE 1366 RELIABILITY INDICES

- **SAIDI (System Average Interruption Duration Index):** This index measures the total annual minutes of interruption experienced by each customer in a utility's service area. It provides a comprehensive view of the reliability of the electrical system by quantifying the average duration of power outages across the customer base. For instance, if the latest reported SAIDI value for FPL is 120 minutes, then on average, customers experienced about two hours of power outages over the course of the year. This metric is crucial for identifying trends in service reliability because it allows utility companies to pinpoint areas for improvement and implement measures to enhance the overall stability and resilience of the electricity grid.
- **SAIFI (System Average Interruption Frequency Index):** This index tracks the average number of interruptions a customer experiences in a year, reflecting the frequency of power outages in a utility's service area. A lower SAIFI value signifies fewer interruptions, indicating a more reliable electrical supply for customers. For example, if the latest SAIFI value for the FPUA is reported at 1.5 interruptions per customer annually, on average, each customer experienced about one and a half power outages during the year. Monitoring SAIFI is essential for utilities to understand how often

outages occur and to strategize ways to improve service reliability and minimize disruptions for customers.

- **CAIDI (Customer Average Interruption Duration Index):** This index calculates the average time needed to restore power after an outage, derived from the ratio of SAIDI to SAIFI. This metric provides insight into the efficiency of a utility's response and restoration efforts during power interruptions. For instance, if the latest CAIDI value for FPL is reported at 80 minutes, on average, customers can expect their power to be restored within approximately one hour and 20 minutes. CAIDI is a critical performance indicator that helps utilities assess operational effectiveness, identify areas for improvement in restoration processes, and set targeted goals for enhancing customer service and minimizing downtime during outages.

SEVERITY

The severity of power outages in St. Lucie County is influenced by several factors, including the duration of the outage, the number of customers affected, the time of day or season, and the critical lifelines that are impacted, such as hospitals, water and wastewater facilities, communications systems, and causeway approaches.

- **Short-Term Outages (less than 2 hours – Low Severity):** Short-term outages are the most common occurrences in St. Lucie County, typically resulting from localized equipment faults or weather-related incidents such as lightning strikes or vegetation contacts. These brief interruptions generally last less than two hours and can lead to minor inconveniences for residents and businesses. For instance, traffic signals may flash, causing temporary confusion and potential traffic disruptions. While businesses might experience brief interruptions, the impact is usually manageable. Residents who rely on electricity-dependent medical devices often mitigate the effects of such outages through battery backups, ensuring that their essential needs are met.
- **Medium-Term Outages (2–12 hours – Moderate Severity):** Medium-term outages, lasting between two and 12 hours, often occur due to incidents such as vehicle collisions with utility poles, feeder line damage, or the effects of summer thunderstorms. The consequences of these outages can be more pronounced, including traffic congestion and heightened crash risks at nonfunctioning traffic signals. Businesses, particularly grocery stores, restaurants, and small manufacturers, may face closures and financial losses due to spoilage of perishable goods. Additionally, residents who depend on electricity for medical devices, such as oxygen concentrators or refrigeration for insulin, face increased medical risks, particularly during periods of high heat and humidity, because the lack of cooling can exacerbate health vulnerabilities.
- **Long-Term Outages (12 hours to multiple days – High Severity):** Long-term outages, which can last from twelve hours to several days, are typically caused by severe weather events such as tropical storms or hurricanes, as well as major transmission failures. The consequences of these prolonged outages can be severe. For example, the loss of refrigeration for food and medications poses significant public health risks, especially for vulnerable populations who rely on these items. Emergency services may experience delays, and the volume of 911 calls may increase as residents seek assistance. Additionally, disruptions to water and wastewater services can occur if generator

coverage or fuel resupply efforts falter, potentially leading to sanitary sewer overflows. In summer, the impacts are amplified; without cooling, residents face increased risks of heat exposure and dehydration, necessitating the establishment of cooling and charging centers, along with wellness checks and targeted outreach efforts to support those in need.

- **Catastrophic Outages (multiple days to weeks – Extreme Severity):** Catastrophic outages, which can last from multiple days to weeks, are rare but plausible following significant events such as a major hurricane or a large-scale cyber or physical attack on the grid. The potential outcomes of these extreme-severity outages can be dire. Hospitals and public safety facilities may depend entirely on backup generators and fuel logistics, making generator failure a critical life-safety issue. Access to potable water, fuel distribution, and communications may become intermittent, prompting evacuations for the most vulnerable populations. The economic impacts can be substantial, with regional business losses escalating due to production stoppages, supply chain failures, and spoilage of perishable goods, resulting in multimillion-dollar financial repercussions that are directly tied to the extent and duration of the outage.

Historic Events

Power outages in St. Lucie County are primarily the result of secondary impacts from tropical cyclones and severe weather events. High winds, flooding, and fallen trees often compromise electrical infrastructure, leading to widespread service interruptions. While localized equipment failures can also cause outages, the most significant disruptions are typically associated with hurricanes and severe storms. Historically, St. Lucie County has experienced several notable power outages, particularly during major hurricane events, which have had long-lasting effects on the community's infrastructure and recovery efforts:

- **Hurricane Frances – September 2004:** Hurricane Frances made landfall on Florida's east coast, bringing sustained winds of 105 mph and causing extensive damage across St. Lucie County. The storm led to widespread power outages, with over 100,000 customers losing service for extended periods. Many residents faced outages lasting several days due to damaged power lines and infrastructure. Almost three million residents of Florida lost power during Frances and it was not until 9 days after the storm hit that almost all residents had power restored.[263]
- **Hurricane Jeanne – September 2004:** Just weeks after Hurricane Frances, Hurricane Jeanne struck the area, compounding the damage already inflicted by its predecessor. The storm caused additional outages, leaving many residents without power again. The cumulative effect of both storms highlighted the vulnerability of the region's electrical infrastructure. Across Florida, power was restored for almost all residents 6 days after Jeanne hit.[264]

[263] Florida Power and Light, "Power Delivery Performance," 2017, https://www.psc.state.fl.us/library/filings/2018/04225-2018/Support/Exhibit%2015/Matthew%20Final%20for%20Release%2011-17-17.pdf.
[264] Florida Power and Light, "Power Delivery Performance," 2017, https://www.psc.state.fl.us/library/filings/2018/04225-2018/Support/Exhibit%2015/Matthew%20Final%20for%20Release%2011-17-17.pdf.

- **Hurricane Matthew – October 2016:** Although Hurricane Matthew made landfall north of St. Lucie County, its strong winds and rain led to power outages affecting thousands of customers. The storm resulted in significant tree damage and downed power lines, with many residents experiencing outages that lasted from hours to days. For Florida writ large, power after Hurricane Matthew was largely restored after 2 days.[265]
- **Hurricane Irma – September 2017:** Hurricane Irma caused widespread destruction across Florida, including St. Lucie County. Over 100,000 customers lost power during the storm, and many remained without electricity for extended periods as utility crews worked to restore service in the aftermath. Many St. Lucie residents lost power on September 10 when the storm hit, and most had power restored by September 13. A small number of residents did not get power restored until September 16, though.[266] The storm underscored the need for improved infrastructure resilience.
- **Hurricane Milton – October 11, 2024:** Hurricane Milton was a Category 5 hurricane which made landfall in Sarasota County on the Gulf Coast of Florida. Its high winds and heavy rainfall led to 24 fatalities and billions of dollars in damage. Although it did not directly hit St. Lucie County, it spawned six tornadoes that caused widespread power outages in northern St. Lucie County. Almost 18,500 residents were without power on October 11, and nearly all of residents had power restored by October 14.[267]

FEMA DISASTER DECLARATIONS

While there are no FEMA declarations issued solely for power outages, several statewide declarations have resulted in widespread electric service interruptions across St. Lucie County. These declarations reflect the severity of the impacts from hurricanes and other significant weather events that have affected the region. They are listed in Table 102.

Table 102: Selected FEMA Disaster Declarations in St. Lucie County Associated with Power Failure

Incident Subcategory	Disaster Number	Declaration Date	Declaration Title
Hurricane	DR-1545-FL	9/10/2004	Major Disaster – Hurricane Frances
Hurricane	DR-1548-FL	9/26/2004	Major Disaster – Hurricane Jeanne

[265] Florida Power and Light, "Power Delivery Performance," 2017, https://www.psc.state.fl.us/library/filings/2018/04225-2018/Support/Exhibit%2015/Matthew%20Final%20for%20Release%2011-17-17.pdf.
[266] US Energy Information Administration, "Hurricane Irma cut power to nearly two-thirds of Florida's electricity customers," 2017, https://www.eia.gov/todayinenergy/detail.php?id=32992#:~:text=Power%20outages%20in%20Florida%20rose,%2C%20affecting%2064%25%20of%20customers.
[267] TCPalm, "Milton power update: Some Treasure Coast homes may not have electricity until Thursday," 2024, https://www.tcpalm.com/story/news/local/st-lucie-county/2024/10/12/hurricane-milton-over-40000-homes-still-without-power-saturday-in-vero-beach-fort-pierce-stuart/75646491007/; South Florida Sun Sentinel, "Map: Here are the updated power outages in Florida after Hurricane Milton," 2024, https://www.sun-sentinel.com/2024/10/10/map-see-where-hurricane-milton-has-knocked-out-power-across-florida/.

Incident Subcategory	Disaster Number	Declaration Date	Declaration Title
Hurricane	DR-4280-FL	10/9/2016	Major Disaster – Hurricane Matthew
Hurricane	DR-4337-FL	9/14/2017	Major Disaster – Hurricane Irma
Hurricane (preparedness)	EM-3419-FL	8/30/2019	Emergency Declaration – Hurricane Dorian
Hurricane (Public Assistance only)	DR-4468-FL	10/21/2019	Major Disaster – Hurricane Dorian
Hurricane	DR-4673-FL	9/29/2022	Major Disaster – Hurricane Ian
Hurricane	DR-4680-FL	12/13/2022	Major Disaster – Hurricane Nicole
Hurricane	DR-4834-FL	10/11/2025	Major Disaster – Hurricane Milton

Probability of Future Conditions

The probability of future power systems failures in St. Lucie County is influenced by a variety of factors, including the increasing frequency and intensity of tropical storms and hurricanes, the aging electrical infrastructure, and the challenges posed by rapid population growth and urban development. With Florida's climate becoming more unpredictable, the likelihood of severe weather events causing power outages is anticipated to rise. This trend necessitates careful planning and investment in infrastructure to ensure that the electric grid can withstand intensified storms and associated risks.

As development continues, particularly in densely populated areas such as Port St. Lucie and Fort Pierce, the demand for electricity is expected to grow. This increase in demand may outpace the capacity of the existing grid to deliver reliable service, resulting in a higher probability of outages, especially during peak load periods or severe weather events. With more residents and critical services reliant on a finite number of feeders, the consequences of even localized outages can be magnified, affecting a greater number of individuals and facilities.

The interconnectivity of the electrical grid in St. Lucie County means that outages can quickly cascade, impacting not just the immediate area but also critical services such as water and wastewater treatment, healthcare facilities, and emergency services. The risks associated with aging infrastructure, including potential equipment failures and the need for ongoing maintenance, further compound the probability of future power systems failures.

Additionally, as the area continues to see growth in electric vehicle (EV) adoption and the electrification of building systems, the demand for reliable power will intensify. This shift may require enhancements to the grid's capacity and resilience to manage increased loads and prevent cascading failures during outages. The development of vertical mixed-use buildings in urban centers will also heighten dependencies on elevators and life-safety systems, making reliable power a critical necessity for the safety and well-being of residents.

Vulnerability Assessment

St. Lucie County's exposure to power systems failure is primarily driven by tropical cyclones, severe thunderstorms, lightning, and indirect regional grid disturbances. Electric service is provided predominantly by FPL across the County and by the FPUA in the City of Fort Pierce; municipal utilities provide water/wastewater services but not retail electric in Port St. Lucie and unincorporated areas. Because both providers depend on a mix of overhead distribution and substation assets, even short outages can disrupt water/wastewater operations, traffic control, healthcare, and communications. Outage consequences concentrate where people and systems are densest, Port St. Lucie, Fort Pierce, the Town of St. Lucie Village, the barrier island (Hutchinson Island), and along major corridors (I-95, Florida's Turnpike, U.S. 1, A1A, SR 70, SR 68, Crosstown Parkway).

IMPACTS TO ASSETS

Table 103 provides a summary of the consequences of power systems failures. It discusses effects on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, and public confidence.

Table 103: Consequence Analysis

Sector	Consequence
Public	Most likely effects are short-term loss of lighting, heating, ventilation, and air conditioning (HVAC), refrigeration, and communications; injuries are typically minor (slips and falls, improper generator use), but risk rises during hot, humid conditions for residents without backup cooling or for those dependent on powered medical devices.
First Responders	There is a temporary surge in emergency (911) calls, alarm activations, and "welfare checks." Radio and cellular congestion can degrade situational awareness. Stations rely on generators and fuel logistics. Extended outages require fuel resupply and prioritized access to traffic-signal control at major intersections.
Property, Facility, and Infrastructure	Structural damage is uncommon. Credible impacts include equipment trips at water and wastewater plants and lift stations, elevator entrapments, traffic signals defaulting to flash, and data and information technology disruptions at government and business facilities. Bridges over the Indian River Lagoon require rapid visual checks before returning to normal operations.
Environment	Principal concerns are localized sanitary sewer overflows from pump stations if backup power fails, and small hazardous-materials releases (fueling areas, cold storage) when refrigeration or containment controls lose power.
Economic Conditions	Losses stem from business interruption, product spoilage (food and biologics), overtime for inspections and generator operations, and supply-chain delays at the Port of Fort Pierce and local industrial and warehouse clusters; tourism-related businesses on the barrier island are sensitive to multi-hour outages.

Sector	Consequence
Public Confidence	Rumors spread quickly during visible outages. Clear messaging on the cause, restoration progress, and safety (generator use, food handling, and traffic) is essential to maintain trust and reduce repeat calls.

IMPACT ON COMMUNITY LIFELINES

FEMA's community lifelines are shown in Figure 77. Power systems failures poses a threat to these lifelines the ways listed below.

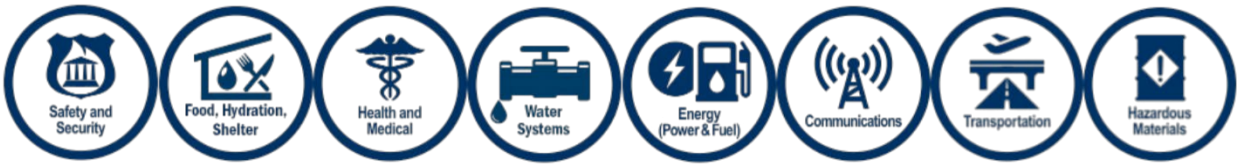

Figure 77: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** Short outages can cause alarm activations and self-evacuations from multi-story buildings. Law enforcement prioritizes intersection control where signals are dark, while Emergency Management coordinates damage reconnaissance and prioritization with utilities and public works.
- **Food, Hydration, and Shelter:** Grocery and cold-storage facilities may pause operations for safety checks or generator transitions. If heat and humidity are high, cooling sites may be opened at facilities with reliable standby power and Americans with Disabilities Act (ADA)-accessible spaces.
- **Health and Medical:** Hospitals (Lawnwood Regional, HCA Florida St. Lucie, Cleveland Clinic Tradition) and dialysis centers operate on generators but require assured fuel resupply. Patient surge is typically from heat stress, anxiety, and power-dependent medical device users seeking charging.
- **Water Systems:** Water plants, wells, storage tanks, and wastewater lift stations depend on continuous power. Utilities prioritize generator coverage and portable pumps to avoid pressure loss and sanitary sewer overflows, with boil-water advisories possible after extended outages.
- **Energy (Power and Fuel):** Substation or feeder trips can cause localized blackouts. Restoration focuses on critical circuits (hospitals, EOC, major intersections) first. Retail fuel availability can be constrained if station generators are absent or fail.
- **Communications:** Cellular networks may congest and some towers can lose backup after prolonged events. Public alerting should use multiple channels (Integrated Public Alert and Warning System [IPAWS] and Wireless Emergency Alerts, social media, local media, municipal text and email lists).
- **Transportation:** Florida Department of Transportation (FDOT), County, and cities conduct rapid visual inspections of bridges and key arterials. Dark signals elevate crash risk until portable stop control or generator-powered temporary signals are deployed. Transit resumes after critical checks.

- **Hazardous Materials:** No systemic release is expected. Credible risks include small spills at fueling depots and industrial sites, and temperature-sensitive chemical instability in laboratories and cold storage. Standard spill control and reporting protocols apply.

IMPACTS DUE TO CHANGES IN DEVELOPMENT

Impacts due to changes in development include more people and assets on existing feeders. Continued growth in Port St. Lucie and infill and redevelopment in Fort Pierce and the barrier island increase the count of customers and critical loads per circuit, raising the number of people affected when a feeder trips, even the outage probability is unchanged.

In North County, the Towns–Villages–Countryside (TVC) Special Area Plan (buildout allowance of up to approximately 37,500 dwelling units, 5 million square feet of commercial/retail space, and 464 acres of industrial land) will add lift stations, booster pumps, data centers/telecom nodes, and cold-storage loads. Design standards should require equipment anchorage, level-of-service targets for standby power, and fuel resupply planning to keep essential services operating during multi-hour events.

Electrification and EV charging are also contributing factors. Growing EV adoption and all-electric building systems increase peak demand and reliance on uninterrupted power at multifamily sites, workplaces, and corridor charging hubs. Resilient design (islanding-capable solar plus storage at community nodes) can reduce cascading mobility impacts.

Vertical development and special occupancies present additional challenges. New mid-rise and mixed-use buildings in activity centers increase elevator and life-safety dependencies. Facilities with high-risk contents (clinics, labs, cold storage) should implement enhanced standby power and temperature-monitoring protocols.

IMPACTS ON POPULATIONS OF FOCUS

- **Low Income Residents:** Low-income residents in St. Lucie County face increased vulnerability during power outages due to limited resources and access to backup power solutions. Approximately 15% of the county's population lives below the poverty line, often relying on public assistance and community services. Many in this demographic do not own generators or battery storage, making them more susceptible to food spoilage and employment interruptions during outages. In addition, the stress of losing access to essential services like refrigeration for perishable items can lead to heightened anxiety and health risks, particularly in hot and humid conditions.
- **Elderly Population (Fixed Income):** The elderly population in St. Lucie County, which comprises about 20% of residents, often lives on fixed incomes averaging around $25,000 annually. This financial constraint limits their ability to invest in backup power solutions, making them particularly vulnerable during power outages. Many elderly individuals depend on electricity for critical medical devices, such as oxygen concentrators, and the loss of power can exacerbate health risks, especially during extreme heat. Additionally, the stress from prolonged outages can lead to increased health complications.

- **Low Lying Areas:** Residents in low-lying areas of St. Lucie County, which include portions of Fort Pierce and the barrier islands, are particularly at risk during power outages due to their susceptibility to flooding and storm surge. These areas often experience outages when severe weather strikes, as flooding can damage electrical infrastructure and disrupt service delivery. With elevations often less than 10 feet above sea level, these communities may face compounded challenges during outages, including the risk of losing access to potable water and essential services.
- **Substandard Mobile Homes:** Residents living in substandard mobile homes, which represent a small percentage of housing in St. Lucie County, are particularly vulnerable to the impacts of power outages. These structures often lack the necessary insulation and resilience to withstand prolonged outages, especially during extreme weather conditions. Many mobile homes do not have built-in backup power systems, making residents reliant on community resources for cooling and medical needs. For example, those who depend on refrigerated medications face significant risks during extended outages.

Radiological Accidents/Incidents

Definition

Radiological incidents involve the release of radioactive materials, which can occur due to nuclear power plant accidents, transportation accidents involving radioactive materials, or the use of radioactive sources in medical or industrial applications. The effects of a radiological incident depend on the type and amount of radiation released. Exposure can lead to acute health effects, such as radiation sickness, or long-term impacts, like increased cancer risk, depending on the level of exposure and the radiological isotopes involved.[268]

Location and Extent

St. Lucie County currently has one nuclear power plant located in Jensen Beach on Hutchinson Island. In the event of a radiological accident at the St. Lucie Nuclear Plant, several factors should be considered regarding the potential impact on nearby communities, including Port St. Lucie, Fort Pierce, and St. Lucie Village. The extent of the impact would largely depend on the severity of the incident, which could range from a minor release of radioactive material to a more serious situation. The prevailing weather conditions would influence how radioactive materials disperse in the atmosphere. Wind patterns could carry contaminants toward populated areas, increasing the risk to residents. Rainfall might also affect how these materials settle on the ground or in water sources. Therefore, the direct hazard location is unknown until the incident extent and weather conditions are determined.

[268] Benton County Minnesota, "Radiological Incident." https://www.co.benton.mn.us/270/Radiological-Incident.

EVACUATION ROUTES

The 10-mile zone surrounding the St. Lucie Nuclear Power Plant has been organized into specific evacuation and shelter areas to help local officials provide clear instructions based on your location during an emergency (Figure 78). Not everyone within the 10-mile radius is likely to be affected, as the impacts depend on factors such as wind speed, direction, and severity.

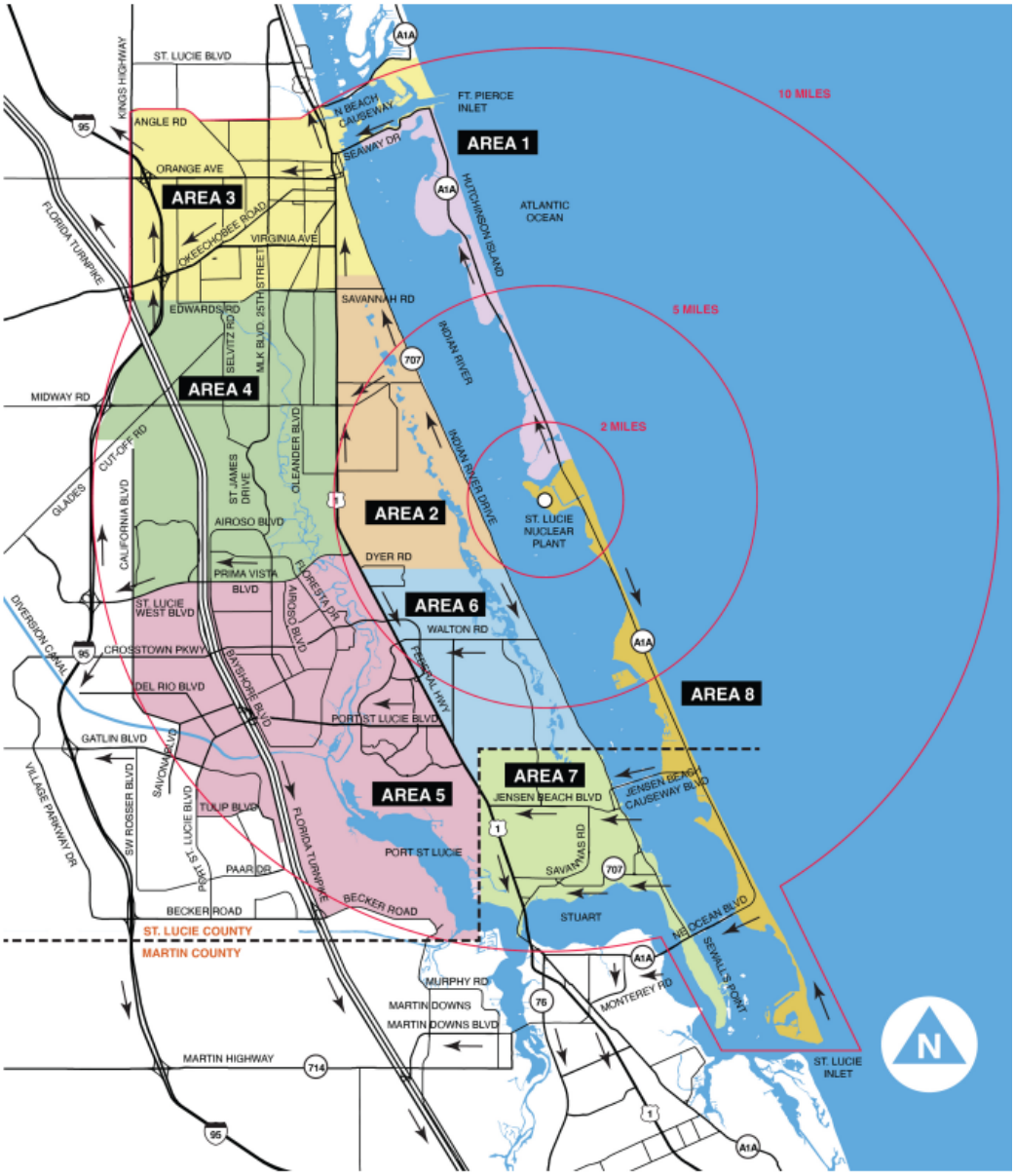

Figure 78: St. Lucie Nuclear Power Plant Evacuation Route Map[269]

[269] FPL, "Port St. Lucie Nuclear Power Plant Fact Sheet." https://www.fpl.com/content/dam/fplgp/us/en/clean-energy/nuclear/pdf/PSL-Fact-Sheet-English.pdf.

Individual evacuation areas are as follows.[270]

- Area 1 covers Hutchinson Island, extending north of the St. Lucie Nuclear Power Plant to Seaway Drive. The boundaries are as follows: North – St. Lucie Nuclear Power Plant; South-Seaway Drive; East – Indian River, and West – Atlantic Ocean.
  - To evacuate from Area 1, proceed southbound on Highway A1A, then west on Seaway Drive to Highway 1. Continue north and follow directions provided by law enforcement. Persons will be directed to a reception center in either Indian River County or Brevard County.
- Area 2 includes the region between the Indian River and Highway 1, from Savannah Road south to Dyer Road. The boundaries are North – Dyer Road; South – Savannah Road; East – Highway 1, and West – Indian River.
  - To evacuate from Area 2, proceed to Highway 1 and head north. Follow the directions given by law enforcement to reach a reception center in Indian County or Brevard County.
- Area 3 consists of the southern tip of North Hutchinson Island, including Fort Pierce Inlet State Park and Hutchinson Island north of Seaway Drive. On the mainland, it encompasses the area between the Indian River and Kings Highway from Belcher Canal south to Edwards Road and Savannah Road. Its boundaries are North – Edwards Road, Savannah Road, and Seaway Drive; South – North Beach Causeway and Belcher Canal; East – Kings Highway; West – Indian River.
  - To evacuate from Area 3, proceed to Highway 1 or Interstate 95 Northbound and continue north. Follow law enforcement directions to reach a reception center in Indian River County or Brevard County.
- Area 4 covers the area west of Highway 1, between Edwards Road and St. Lucie West Boulevard or Prima Vista Boulevard. The eastern boundary includes California Blvd., Interstate 95 (between Glades Cut-off Rd. and the Florida Turnpike), and the Florida Turnpike (north of Interstate 95 to interchange 152). The boundaries are North – St. Lucie West Blvd. and Prima Vista Blvd.; South – Edwards Rd.; East – Florida Turnpike, Interstate 95, and California Blvd.; West – Highway 1.
  - To evacuate from Area 4, proceed to Highway 1, the Florida Turnpike Northbound, or Interstate 95 Northbound and head north. Follow law enforcement instructions to reach a reception center in Indian River County or Brevard County.
- Area 5 includes the region in St. Lucie County west of HWY 1, between St. Lucie West Blvd and Prima Vista Blvd., extending south to Becker Rd. The western border is defined by California Blvd, Savona Rd, St. Lucie Blvd, Paar Dr, and the Florida Turnpike. Its boundaries are North – Savage Blvd. and Becker Rd.; South – Prima Vista Blvd. and St. Lucie West Blvd.; East – California Blvd., Savona Blvd., Darwin Blvd., and Paar Dr.; West – HWY. 1 and the St. Lucie/Martin County line.

[270] FPL, "Port St. Lucie Nuclear Power Plant Fact Sheet." https://www.fpl.com/content/dam/fplgp/us/en/clean-energy/nuclear/pdf/PSL-Fact-Sheet-English.pdf.

  - To evacuate from Area 5, proceed to Highway 1, the Florida Turnpike Southbound, or Interstate 95 Southbound and head south. Follow law enforcement instructions to reach a reception center in Palm Beach County.
- Area 6 comprises the area between the Indian River and Highway 1, from Dyer Rd. south to the St. Lucie County line. The boundaries are North – St. Lucie/Martin County line; South – Dyer Rd.; HWY 1; East – Atlantic Ocean; West – Indian River.
  - To evacuate from Area 6, proceed to Highway 1 and head south towards the Florida Turnpike Southbound or Interstate 95 South. Follow law enforcement guidance to reach a reception center in Palm Beach County.
- Area 7 includes northern Martin County, east of the Indian River and north of the St. Lucie River, which includes Jensen Beach and Sewall's Point. The boundaries are North – St. Lucie River, South – Martin County line; East – Martin County line and St. Lucie River; West – Indian River.
  - To evacuate from Area 7, proceed to Highway 1 and head south towards the Florida Turnpike Southbound or Interstate 95 South. Follow law enforcement directions to reach a reception center in Palm Beach County.
- Area 8 consists of Hutchinson Island from St. Lucie Nuclear Power Plant southward. The boundaries are North – St. Lucie/Martin County line; South – St. Lucie Nuclear Power Plant; East – Indian River; West – Atlantic Ocean.
  - To evacuate from Area 8, proceed to Highway 1 and head south towards the Florida Turnpike Southbound or Interstate 95 South. Follow law enforcement directions to reach a reception center in Palm Beach County.

EXTENT

The International Nuclear and Radiological Event Scale (INES) is a critical framework used to communicate the safety significance of nuclear and radiological events to the public. It helps in understanding the severity of such events through assessments based on three vital areas of impact:[271]

- **Impact on People and the Environment:** This area evaluates the doses received by individuals exposed to radiation and the extent of radioactive materials released into the environment. It helps determine potential health risks and environmental consequences.
- **Impact on Contamination Prevention Systems:** This assesses how effectively the systems designed to prevent the spread of contamination, such as radiological barriers and controls, are functioning. It considers the severity of the event at the facility site and the potential risk it poses to public safety.
- **Impact on Safety Systems (Defense in Depth):** This evaluates events where safety measures intended to prevent accidents did not operate as intended. It provides insight into the potential for

[271] IAEA, "The International Nuclear and Radiological Event Scale." https://www-ns.iaea.org/downloads/iec/ines_flyer.pdf.

the event to cause significant consequences, reflecting how close the event came to resulting in real hazards.

The INES rating assigned to an event is determined by the highest level of impact identified across the three areas.

Figure 79 displays the incident ratings for the INES.

Figure 79: The International Nuclear and Radiological Event Scale[272]

Table 104 lists the INES ratings and their descriptions.

Table 104: International Nuclear Event Scale Ratings[273]

Rating	Description
Below Scale/ Level 0	Represents events that have no significant radiation safety impact. These are minor incidents with no safety repercussions.
Level 1	Denotes a situation where the safety systems intended to prevent events are compromised, resulting in a degradation of safety. While not a significant threat, it indicates areas that need improvement.

[272] IAEA, "The International Nuclear and Radiological Event Scale." https://www-ns.iaea.org/downloads/iec/ines_flyer.pdf.
[273] IAEA, "The International Nuclear and Radiological Event Scale." https://www-ns.iaea.org/downloads/iec/ines_flyer.pdf.

Rating	Description
Level 2 and 3	These levels indicate more severe degradations of safety systems and may involve some consequences for people and the environment, though these are not considered severe.
Levels 4 to 7	Rating in this range indicates serious events, including at least one radiation-related death and/or the release of radioactive materials that necessitate implementing countermeasures to protect public health and safety.

Additionally, radiological incidents specifically pertain to the release or potential release of radiological substances, which can pose a threat to the health and the environment. Therefore, while all radiological incidents are Hazmat incidents, not all Hazmat incidents are radiological in nature.

Radiative material spills pose risks to public health and the environment, necessitating careful classification and response measures. When radioactive substances are inadvertently released, either through accidents or improper handling, they can lead to contamination of air, water, soil, and living organisms. Table 105 lists the radioactive material spill classifications.

Table 105: Radioactive Material Spill Classifications[274]

Radionuclide*	Emitter Type	Minor Spill Level per Millicurie (mCi)	Major Spill Level
C-14 (Carbon-14)	Beta	≤1 mCi	> 1 mCi
H-3 (Tritium)	Beta	≤10 mCi	> 10 mCi
P-32/33 (Phosporus-32&33)	Beta	≤ 0.1 mCi	> 0.1 mCi
S-35 (Sulfur-35)	Beta	≤ 1 mCi	> 1 mCi
I-125 (iodine-125)	Gamma	≤0.1 mCi	> 0.1 mCi
Ca-45 (Calcium-45)	Beta	≤1 mCi	> 1 mCi
Cr-51(Chromium-51)	Gamma	≤ 10 mCi	> 10 mCi
Se-75 (Selenium-75)	Gamma	≤1 mCi	> 1 mCi
Other Radionuclide		≤0.1 mCi	> 0.1 mCi

Note: Radionuclides are atoms that have an unstable nucleus and emit radiation as they decay.

Radionuclides are classified into three main types based on their decay process:[275]

[274] University of Nebraska-Lincoln, "Radioactive Material Spills and Radiation Accidents." https://safety.unl.edu/sites/unl.edu.business-and-finance.police.safety/files/media/file/s-RAM_spills._radiation_accidents.pdf.

[275] United States Environmental Protection Agency, "Radiation Basics." https://www.epa.gov/radiation/radiation-basics#:~:text=Gamma%20rays%20(%CE%B3)%20are%20weightless,beta%20particles%20during%20radioactive%20decay.

1. Alpha emitters: These release alpha particles, which consist of two protons and two neutrons. Alpha radiation can be stopped by a sheet of paper or the outer layer of human skin, but it can be hazardous if ingested or inhaled.
2. Beta emitters: These emit beta particles, which are high-energy, high-speed electrons or positrons. They can penetrate more materials than alpha particles but can still be shielded by materials like plastic or glass.
3. Gamma emitters: These emit gamma rays, which are high-energy electromagnetic waves. Gamma radiation is the most penetrating type of radiation and requires dense materials, such as lead or several inches of concrete, for effective shielding.

The range of intensities for radiological accidents, as classified by the INES, in St. Lucie County ranges from 1 anomaly to 7 major accidents.

JURISDICTIONAL IMPACTS

Hazard impacts refer to the adverse effects stemming from natural or human-induced events. These impacts include physical damage, human health concerns, and economic, environmental, and social impacts, as seen in Table 106.

Table 106: Impacts of Radiological Incidents, by Jurisdiction

Jurisdiction	Impacts
St. Lucie County	Radiological accidents in the county could lead to extensive damage to infrastructure and contamination of land and water sources. Health concerns may arise from radiation exposure, increasing the risk of cancer and other serious illnesses. Economically, the area might experience downturns due to business closures and reduced property values, while social effects could include diminished public trust in local authorities and heightened community anxiety. Additionally, environmental degradation could harm local ecosystems and agriculture, compounding the overall impact on the community.
City of Port St. Lucie	Radiological accidents in Port St. Lucie could lead to significant damage to infrastructure and ecosystems, impacting buildings and natural habitats. Human health concerns would be paramount, with potential exposure to radiation leading to acute and long-term health issues, including increased cancer risks. Economically, the region could face severe repercussions, including loss of property value, disruption of local businesses, and increased healthcare costs. Socially, an incident could erode community trust, lead to displacement, and create long-lasting anxiety in the community.
City of Fort Pierce	In Fort Pierce, accidents could lead to significant physical damage, particularly to infrastructure and the surrounding environment, as radioactive materials may contaminate land and water sources. Human health concerns would arise from exposure to radiation, potentially resulting in acute illnesses or increased long-term cancer risks. Economically, the area could suffer from decreased property values, loss of tourism, and costly cleanup operations. Socially, impacts may

Jurisdiction	Impacts
	include anxiety, displacement of residents, and strained public trust in local authorities and emergency response systems.
Town of St. Lucie Village	Incidents in the Village could lead to physical damage, including contamination of land and infrastructure, which may become uninhabitable or require extensive remediation. Human health concerns would arise from exposure to radiation, potentially leading to acute illnesses or increased long-term cancer risks. Economically, the area could suffer from declines in property values, loss of tourism, and increased healthcare expenses. Additionally, social effects might manifest as community anxiety, disrupted social cohesion, and disruption in local authorities and safety measures.

NATIONAL RISK INDEX

The NRI is a valuable tool for assessing hazards across communities in the United States; however, it does not evaluate radiological accidents as a significant hazard and will therefore not be included in this hazard profile.

Magnitude and Severity

The potential magnitude and severity of radiological accidents in St. Lucie County are significant due to the presence of the St. Lucie Nuclear Power Plant. A severe incident could result in the release of radioactive materials into the environment, posing immediate health risks to nearby residents and workers. Acute effects may include radiation sickness for those closest to the source, while broader populations could face long-term health consequences such as increased cancer risk.

Severity depends on multiple factors: The type of accident, the quantity of radioactive material released, prevailing weather conditions, and the effectiveness of emergency response measures. Beyond health impacts, a major radiological event could disrupt local economies, strain healthcare systems, and necessitate large-scale evacuations. Long-term consequences may include environmental contamination of land and water, impacts on agriculture and wildlife, and economic losses tied to property devaluation and tourism decline. Overall, the potential consequences of a radiological accident in St. Lucie County could be catastrophic, requiring robust preparedness and mitigation strategies.

Historic Events

No historic radiological accidents have occurred during this period in St. Lucie County.

FEMA DISASTER DECLARATIONS

There are currently no FEMA disaster declarations associated with this hazard.

Probability of Future Conditions

The risk of radiological accidents is influenced by several factors, especially related to atmospheric changes and the St. Lucie Nuclear Power Plant. Nuclear power plants can be linked to potential accidents, and important aspects to consider include the plant's structural safety, operational protocols, and regulatory compliance.

Although nuclear accidents are rare, they can have severe consequences. The nuclear industry has strict safety measures in place to minimize risks from environmental changes. The Nuclear Regulatory Commission (NRC) regularly assesses these risks, considering atmospheric changes to ensure the safety of nuclear facilities.

While it's hard to determine the exact likelihood of radiological incidents due to future conditions, there are several factors that suggest an increased risk in certain scenarios. Atmospheric change can lead to more frequent extreme weather conditions, which can potentially compromise the safety of nuclear facilities, storage sites for radioactive materials, and other related infrastructures.

For example, rising sea levels and increased flooding can threaten coastal nuclear power plants, challenging their ability to maintain safe operations. Additionally, extreme heat can strain cooling systems, making it difficult to manage reactor temperatures. On the other hand, droughts could limit water availability for cooling processes.

Conversely, as atmospheric changes increase resource scarcity and prompt population displacement, the potential for human error or malicious intent may also rise in high-stress environments.

Vulnerability Assessment

St. Lucie County faces unique risks associated with radiological incidents from the St. Lucie Nuclear Plant. This assessment evaluates the vulnerabilities of community assets in the event of potential accidents involving the nuclear facility.

A variety of structures, including residential buildings, schools, hospitals, and critical infrastructures, are crucial in the event of a radiological accident at the nuclear plant. The integrity of these structures is vital for preventing exposure to radiation. Older buildings or those that have not been adequately maintained may lack features necessary for radiation protection. Additionally, transportation infrastructure such as highways and bridges should be assessed for their capacity to facilitate swift evacuation and emergency response in the aftermath of an incident at the facility.

The effectiveness of St. Lucie's systems, including public health, transportation, and communication networks, plays a critical role in disaster response to a radiological event. In the context of a nuclear accident, reliable communication channels are important to broadcast timely alerts and safety guidance to residents. Any weakness in these systems could obstruct evacuation efforts, delay emergency responses, and restrict access to medical care for those in need of immediate assistance.

Natural resources, such as parks, wildlife habitats, and historic or cultural sites in the county, may face contamination from a radiological incident at the nuclear plant. Preserving these assets is important for maintaining the community's ecological balance and cultural identity. Planning should prioritize the protection of these resources during a nuclear emergency to mitigate long-term ecological and cultural consequences.

Community activities, such as farmers' markets, cultural festivals, and sporting events, are integral to the social fabric and economic well-being of St. Lucie County. A radiological incident at the nuclear plant could endanger public safety and disrupt these activities, unfavorably impacting local businesses and community cohesion. Implementing resilience strategies is key to protecting these activities and ensuring ongoing community engagement, even during a crisis.

This assessment highlights the critical importance of understanding the numerous assets at risk in the event of a radiological incident at the nuclear plant. By addressing vulnerabilities among structures, systems, cultural resources, and community activities, St. Lucie County can enhance its preparedness and response capabilities. Collaborative efforts should focus on developing comprehensive emergency plans, bolstering infrastructure resilience, and ensuring effective communication to safeguard all community assets in the face of potential radiological risks.

IMPACTS TO ASSETS

Table 107 provides a summary of the effects of radiological accidents. It discusses the impact on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, public confidence, and the consequences of these impacts.

Table 107: Consequence Analysis

Sector	Consequence
Public	• Hospitals and clinics may experience an influx of patients requiring medical treatment due to exposure or injuries related to radiological exposure. • Fire departments, police, and emergency medical services could be directly impacted in their ability to respond effectively to radiological incidents. • Roads, bridges, and transportation systems may need to be closed or restricted during a radiological emergency to ensure public safety and facilitate evacuations. • The county's water supply systems could be affected, either through contamination or the need for shutdowns to prevent exposure. • Schools might be closed or evacuated, disrupting education and posing risks to children and staff. • Community centers could serve as evacuation centers or shelters, and their safety and readiness for such emergencies may be compromised. • Public parks and recreation areas could be contaminated and closed to the public, affecting local ecosystems and outdoor recreational activities.

Sector	Consequence
	• Businesses may experience closures, leading to economic losses and impacts on employment. • Transportation services could be disrupted, affecting commuter travel and access to essential services.
First Responders	• Specialized personal protective equipment (PPE) designed to shield first responders from radiation is critical. The need for more advanced gear can strain existing budgets. • First responders require extensive training in radiological safety and emergency procedures. This necessitates investment in ongoing education and drills, which can divert resources away from other essential training. • Vehicles used by first responders may need to be equipped with specialized tools and equipment for radiological detection and decontamination, requiring modifications or additional expenditures. • Radiological accidents necessitate the use of radiation detection and monitoring devices to assess contamination levels, which can quickly become an added financial burden if not accounted for in existing equipment inventories. • The establishment or enhancement of decontamination stations and facilities is critical for effective response; these require funding and space, impacting other operational facilities. • Effective communication is vital during emergencies. Ensuring that all parties, including inter-agency teams, have reliable systems in place can involve upgrades and costs, particularly for specialized communications during a radiological event. • As first responders may face psychological impacts from handling radiological incidents, mental health services and support systems are essential assets that may not have been fully budgeted previously. • Maintaining community trust and providing education about radiological safety may necessitate additional resources to communicate with the public effectively.
Continuity of Operations	• Fire, police, and emergency medical services may be affected as they respond to radiological incidents, requiring specialized training and equipment. • Hospitals and clinics might face challenges in treating contaminated individuals and managing health consequences. Their ability to operate can be severely disrupted. • Water, electricity, and gas services could be compromised, particularly if contamination affects the infrastructure or requires shutdowns for safety reasons. • Roads and public transit may be impacted due to contamination zones or evacuation routes, limiting access to and from affected areas. • Effective communication is crucial during an emergency; any disruption can hinder communication among agencies and the dissemination of information to the public.

Sector	Consequence
	• The capability of local government to respond effectively to the crisis and manage resources may be strained, affecting overall response time and effectiveness. • Educational institutions and community centers may need to close or adapt their operations based on safety assessments and contamination risks.
Property, Facility, and Infrastructure	• The St. Lucie Power Plant is a primary facility that could be directly affected. An accident at this site could lead to widespread repercussions. • Any industrial operations that utilize radioactive materials may be at risk, including factories and research laboratories. • Hospitals and medical centers that use radiological equipment, such as X-rays and radioactive treatments, could also face risks of contamination or evacuation. • Major roads, highways, and railways used for transporting materials, including radioactive substances, could be impacted, leading to potential access issues or accidents. • Water supply systems and sewage treatment facilities could be affected if contamination occurs, impacting public health and safety. • Homes and communities located near the nuclear power plant or other facilities that store radioactive materials may be impacted in the event of an accident • Local fire, police, and emergency response units may be affected, both in terms of operational challenges and resource allocation during an incident. • Schools, parks, and recreational facilities may also be affected if evacuation or contamination scenarios arise. • Natural resources, including nearby waterways, wildlife habitats, and agricultural land, could sustain environmental damage, affecting local ecosystems and food sources.
Environment	• Contamination of groundwater and surface water bodies, like the St. Lucie River, can occur, affecting drinking water sources and aquatic ecosystems. • Radiological releases can contaminate soil, impacting agricultural land and natural habitats, which may render land unusable for farming or habitation due to the potential health risks. • Local flora and fauna can be adversely affected by radiation exposure, leading to disruptions in the ecosystem and potential declines in species populations. • Inhalation of radioactive particles can degrade air quality, impacting public health and local wildlife. • Sensitive areas such as wetlands and coastal ecosystems may suffer from contamination and long-term ecological damage. • Parks, beaches, and other recreational areas could be rendered unsafe for use, affecting community well-being and tourism. • Areas of historical significance may also be at risk, impacting community heritage.

Sector	Consequence
Economic Conditions	• The county could see a decline in tourism due to safety concerns and negative publicity associated with radiological incidents. • Property values may decrease as residents and potential buyers may be wary of living near a site known for radiological risks. Long-term effects could lead to stagnation in the housing market. • Local farms and agricultural operations may suffer due to contamination fears, reduced marketability of produce, and potential loss of crops if radiation affects their safety. • Similar to agriculture, the fishing industry could be negatively impacted if waterways are contaminated, leading to restrictions on fishing and adverse perceptions about the safety of seafood. • Increased demand for healthcare facilities for radiation-related health concerns could strain resources and increase operational costs for hospitals and clinics. • Both homeowners and businesses may face increased insurance premiums as insurers adjust for the heightened risk associated with the area. • Job losses could occur in sectors directly affected by the radiological accident, as well as in related industries like tourism, agriculture, and healthcare. • Shops, restaurants, and other local enterprises may see decreased foot traffic and sales as residents and tourists avoid the area due to safety concerns.
Public Confidence	• Trust in healthcare providers and emergency response can diminish if the community feels unprepared for radiation exposure or contamination events. • The effectiveness of local authorities in managing emergencies and communicating with residents can greatly influence public confidence. Transparency and responsiveness are essential factors. • Concerns about contamination of local air, water, and soil can erode trust in environmental protection agencies and lead to fears about long-term ecological impacts. • The local economy may suffer from decreased property values, loss of tourism, and diminished business operations, which can undermine public confidence in economic recovery efforts. • Social connections and trust in neighbors can be strained as fear and misinformation spread in the community. • Confidence in disaster preparedness plans and community readiness is critical. If residents perceive that their safety measures are inadequate, trust in public institutions can wane. • Schools may face scrutiny regarding their safety protocols, affecting parental confidence in sending children to school.

IMPACT ON COMMUNITY LIFELINES

Radiological accidents can have the following implications for several lifelines in St. Lucie County.

- One of the first areas affected is Safety and Security. These incidents pose immediate threats to public safety, often requiring the implementation of evacuation or shelter-in-place orders.

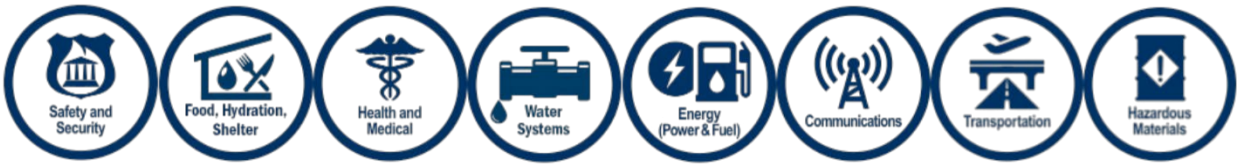

Figure 80: Federal Emergency Management Agency Community Lifelines

- Another critical area impacted is Food, Hydration, and Shelter. Contamination of local food and water supplies could render them unsafe for consumption, disrupting supply chains and potentially leading to shortages. This may require the establishment of temporary shelters for displaced individuals and coordinated efforts to deliver safe food and water to those in need.
- The Health and Medical lifeline also would be heavily impacted. Exposure to radiation can result in acute health effects, along with long-term concerns such as increased risk of cancer. Local healthcare facilities may face overwhelming demand for medical services, placing enormous strain on available resources and personnel.
- Water Systems could be compromised by contamination, necessitating extensive testing and remedial measures to ensure public safety. A loss of energy can directly affect emergency services and essential operations, complicating the response and recovery efforts.
- Communications systems are critical during radiological incidents, as clear and persuasive public communication is essential. Failures in these networks could lead to misinformation and confusion among residents, hindering the overall emergency response and contributing to public panic.
- Transportation networks may experience disruption; access routes could be closed due to safety concerns or contamination zones. This can impede emergency response efforts, complicate evacuation processes, and affect the delivery of goods and services.
- Lastly, Hazardous Materials management is inherently crucial following a radiological accident. The incident presents challenges related to the containment and cleanup of radioactive materials, as well as the proper management of waste to prevent further environmental and public health risks.

IMPACT DUE TO CHANGES IN DEVELOPMENT

Since the previous LMS update in 2021, St. Lucie County has enhanced its radiological accident preparedness by updating evacuation studies, improving emergency plans based on federal assessments, and seeking federal approval for a subsequent nuclear license renewal. These developments primarily focus on the St. Lucie Nuclear Power Plant. These developments have decreased the vulnerability of the entire county.

- Evacuation time estimates: St. Lucie County, in coordination with the state and federal government, completed an updated Evacuation Time Estimate (ETE) study in 2024. This study, developed in accordance with federal guidelines from the Nuclear Regulatory Commission (NRC), assesses traffic

flow during an evacuation and helps emergency planners identify and address potential chokepoints.[276]

- Infrastructure upgrades: The county and Florida Power and Light (FPL) updated the radiological emergency plan to account for equipment changes at the plant. One specific revision, documented in March 2018 but reflecting ongoing work, covered the upgrade of obsolete radiation monitors in Unit 1's Emergency Core Cooling System (ECCS).[277]
- FEMA assessments: In September 2019, following Hurricane Dorian, the Federal Emergency Management Agency (FEMA) conducted a Preliminary Capabilities Assessment (PCA) of St. Lucie County's and the State of Florida's radiological emergency response. FEMA determined that the preparedness of local responders remained adequate and provided "Reasonable Assurance" that the public would be protected in a radiological emergency.[278]
- NRC inspection plan: The NRC conducts ongoing, rigorous oversight of the St. Lucie Nuclear Plant. The latest publicly available inspection plan, updated in August 2025, schedules inspections through mid-2027 to ensure continued safety protocols are followed.[279]

IMPACTS ON POPULATIONS OF FOCUS

In St. Lucie County, at-risk populations face significant risks in the event of a radiological accident. These populations include resource-limited communities, the elderly, individuals with disabilities, and people with limited English proficiency. Resource-limited families may lack the resources to evacuate quickly or to seek medical assistance, increasing their vulnerability in a radiological emergency. The elderly often require specialized care and may have mobility issues, making it difficult for them to access safety measures or healthcare facilities promptly.

Individuals with disabilities may face additional barriers during such emergencies, including challenges in communication and transportation. Communities with limited English proficiency might struggle to understand emergency alerts, evacuation orders, and instructions, leading to confusion and increased risk of exposure to harmful radiation. These populations may not have the same access to information or support systems that others might possess, making targeted communication essential.

Furthermore, institutional settings, such as nursing homes and assisted living facilities, are particularly at risk due to their concentration of vulnerable individuals. In the case of a radiological incident, these facilities would require immediate action plans to ensure the safety and well-being of their residents.

[276] Nuclear Regulatory Commission, "St. Lucie Units 1 and 2-2024 Population Update Analysis." https://www.nrc.gov/docs/ML2422/ML24226A481.pdf.
[277] Nuclear Regulatory Commission, "St. Lucie Units 1 and 2, Radiological Emergency Plan-Revision 66." https://www.nrc.gov/docs/ML1810/ML18107A252.pdf.
[278] Nuclear Regulatory Commission, "(FEMA Letter NRC 09-06-19) Preliminary Capabilities Assessment-St. Lucie Nuclear Power Plant." https://www.nrc.gov/docs/ML1925/ML19253C793.pdf.
[279] Nuclear Regulatory Commission, "Saint Lucie Plant, Units 1 and 2-Report 05000335-2025005 and 05000389/2025005-updated Inspection Plan." https://www.nrc.gov/docs/ML2523/ML25232A212.pdf.

Additionally, the presence of schools and daycare centers in the county serves as another concern, as children are more susceptible to the effects of radiation exposure.

Overall, the interplay of socioeconomic factors, access to education, health care, and mobility notably affects the resilience of these at-risk populations in St. Lucie County during radiological accidents.

Transportation System Accidents

Definition

"Transportation system accident" is a broad term referring to any incident in the county's surface, rail, air, or marine networks that results in fatalities or injuries, damages to public or private property, releases hazardous materials (hazmat), or disrupts essential movement of people and goods.[280] This hazard category includes multi-vehicle crashes and mass-casualty collisions on highways; derailments or collisions on mainline rail; aircraft incidents during takeoff, landing, or overflight; and maritime groundings, collisions, or fuel/chemical spills in navigable waterways and port areas. Causes are typically a combination of human factors (inattention, impairment, excessive speed), mechanical failure, and environmental conditions (heavy rain, flooding, fog, high winds), sometimes compounded by infrastructure vulnerabilities such as work zones, intersections, bridges, or grade crossings.

In St. Lucie County, risk is shaped by the concentration of activity along major north-south corridors, Interstate 95, the Florida Turnpike, and U.S. 1, and by key east-west arterials that connect neighborhoods, employment centers, and the barrier island.[281] Figure 81 shows the primary roadways in the county,[282] and Figure 82 shows the strategic intermodal system facilities in the county. Two causeway bridge connections across the Indian River Lagoon create chokepoints where a serious crash can isolate parts of the barrier island and delay emergency response. The Florida East Coast (FEC) Railway mainline runs through the urbanized corridor, carrying both freight (including hazmat) and intercity passenger service; any derailment or grade-crossing incident can require evacuations, shelter-in-place orders, and prolonged roadway closures.

Treasure Coast International Airport (Fort Pierce) supports general aviation, flight training, air cargo, and federal missions.[283] Aviation incidents, while infrequent, are most likely during approach and departure and could affect adjacent developed areas. The Port of Fort Pierce and the Fort Pierce Inlet support cargo

[280] U.S. Department of Transportation, "Public Transportation Agency Safety Plan – Comparison of Definitions," https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/regulations-and-guidance/safety/public-transportation-agency-safety-program/118431/comparison-definitions-part-673-versus-part-659_1.pdf. Florida State Hazard Mitigation Plan, "Transportation Incident," 2023, https://flshmp-floridadisaster.hub.arcgis.com/pages/transportation-incident.
[281] St. Lucie Transportation Planning Organization, "Smart Moves 2045," 2021, http://www.stlucietpo.org/documents/SmartMoves2045_finalreport_rev.pdf.
[282] St. Lucie Transportation Planning Organization, "Smart Moves 2045," 2021, http://www.stlucietpo.org/documents/SmartMoves2045_finalreport_rev.pdf.
[283] St. Lucie County, "Treasure Coast International Airport," https://www.stlucieco.gov/departments-and-services/county-administration/airport.

movements, mega yacht service, and harbor transits.[284] Maritime accidents can range from vessel groundings to fuel or lubricant releases requiring containment and environmental response.

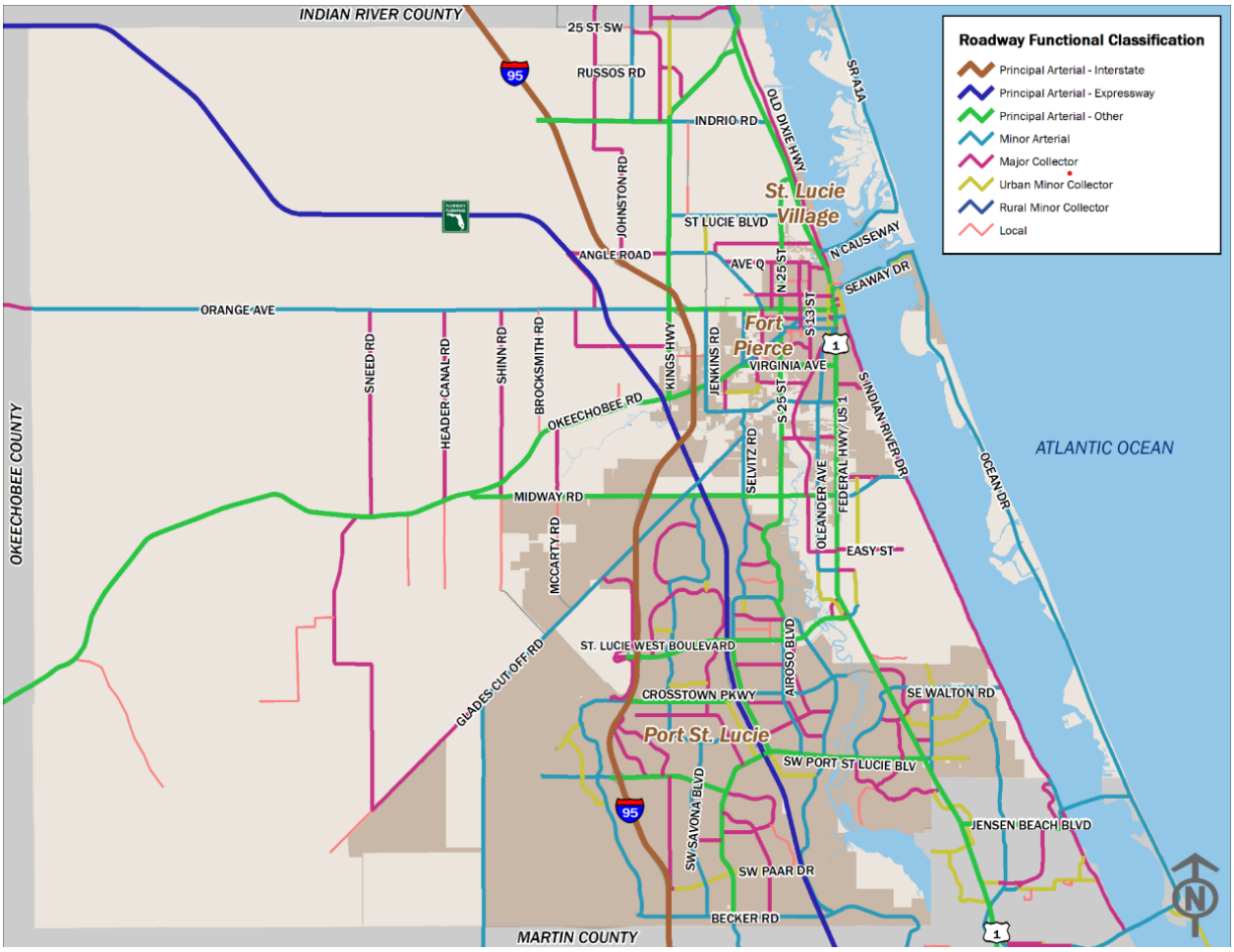

Figure 81: Roadways in St. Lucie County

Because these systems are interdependent, a single major accident, such as a hazmat release on I-95, a rail incident in the U.S. 1 corridor, or an aircraft crash near the airport, can generate cascading consequences. These include mass-casualty incidents, extended closures of critical routes, detours that strain alternate roadways, disruptions to public transit and school transportation, and short-term impacts on utilities, communications, and commerce. The County's planning approach therefore treats transportation system accidents as a multimodal, multi-agency hazard, emphasizing prevention (engineering and enforcement), preparedness (mass-casualty and hazmat capabilities), and rapid clearance and restoration to protect life safety and maintain mobility.

[284] Florida Ports Council, " Port of Fort Pierce," https://flaports.org/ports/port-of-fort-pierce/.

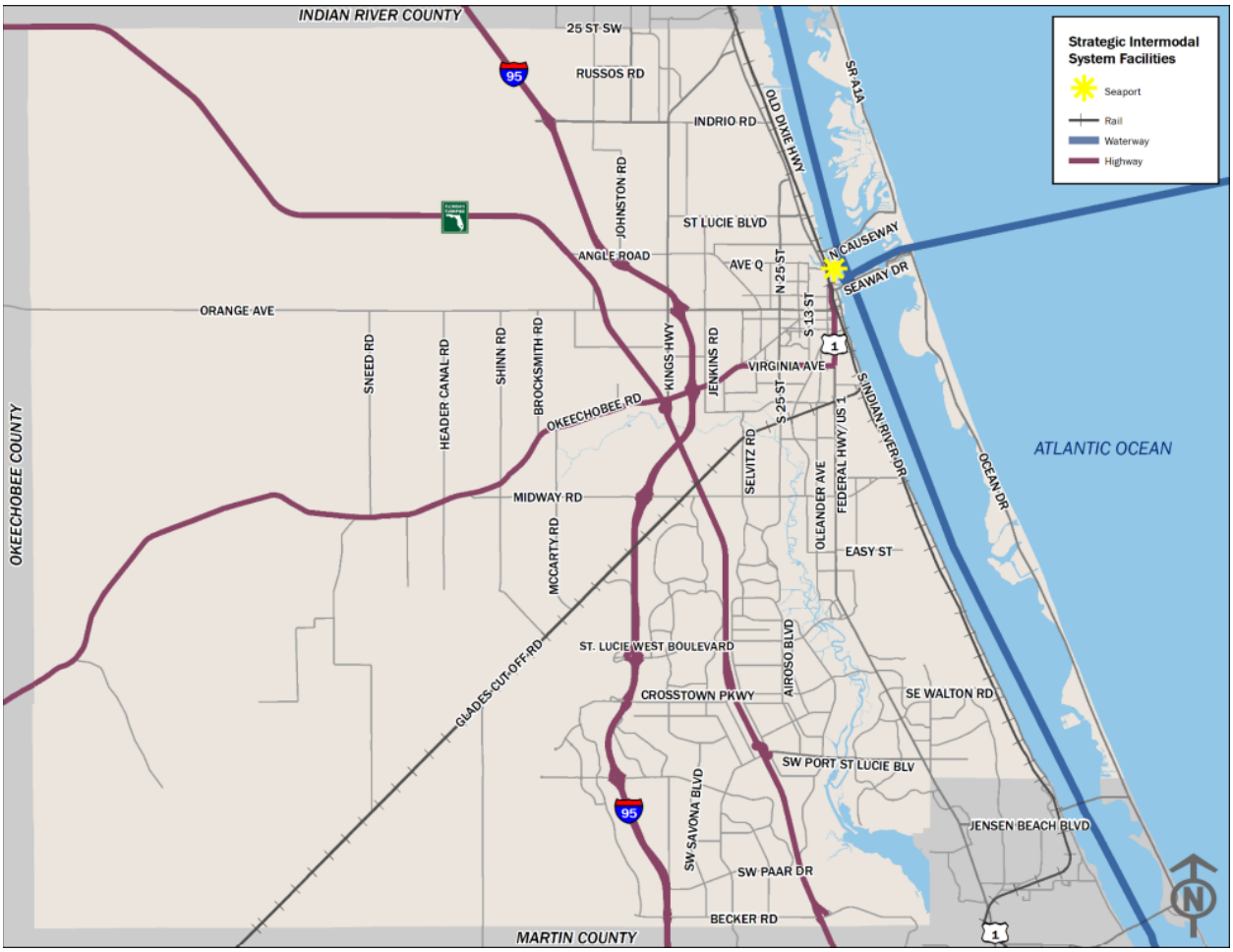

Figure 82: Strategic Intermodal System Facilities in St. Lucie County[285]

Location and Extent

Transportation system accidents can occur anywhere the county's multimodal network operates, but exposure is highest where people, vehicles, trains, vessels, and aircraft converge, and where network chokepoints exist. In St. Lucie County, the primary surface corridors are Interstate 95, the Florida Turnpike, U.S. 1, and A1A, with key east-west arterials such as Orange Avenue (SR 70/Okeechobee Road), W. Midway Road, Indrio Road, Prima Vista Boulevard, and Port St. Lucie Boulevard linking coastal and inland areas.[286] Two causeway bridges, the North Causeway and Seaway Drive/South Causeway, span the Indian River Lagoon to Hutchinson Island. Crashes on these bridges or their approaches can temporarily isolate the Hutchison Island and delay emergency response.

[285] St. Lucie Transportation Planning Organization, "Smart Moves 2045," 2021, http://www.stlucietpo.org/documents/SmartMoves2045_finalreport_rev.pdf.
[286] St. Lucie Transportation Planning Organization, "Smart Moves 2045," 2021, http://www.stlucietpo.org/documents/SmartMoves2045_finalreport_rev.pdf.

A mainline rail corridor parallels the urbanized U.S. 1 corridor through Fort Pierce and Port St. Lucie, creating multiple at-grade crossings where roadway-rail conflicts and hazmat movements elevate the potential for serious consequences. The Port of Fort Pierce and the Fort Pierce Inlet concentrate commercial, service, and recreational marine traffic. Vessel groundings or collisions in the inlet or lagoon can close channels and require environmental response. Treasure Coast International Airport (Fort Pierce) introduces an aviation exposure footprint most relevant during approach and departure. Incidents here, although rare, can affect adjacent developed areas and trigger multi-agency response.

Geographically, the hazard is countywide. High-speed segments of I-95 and the Turnpike present high-severity crash potential. Densely developed corridors along U.S. 1 and major arterials present high interaction density, more conflict points, driveways, and signals, and the two lagoon causeways represent critical single-thread links for the barrier island. Because these modes are interdependent, a serious incident in any one (e.g., a hazmat spill on I-95, a derailment along the rail corridor, a marine collision in the inlet) can cascade into detours, closures, and service delays across the broader network until clearance and inspections are complete.

EXTENT

Transportation system accidents in St. Lucie County encompass a broad spectrum of incidents that can have widespread implications for public safety and mobility. The extent of these accidents is influenced by the high volume of traffic and the variety of transportation modes present, including surface streets, railways, air travel, and maritime activities. Notably, the county's transportation network serves as a critical conduit for both local and regional movement, making it particularly vulnerable to disruptions.

The potential for serious incidents is heightened at key intersections and areas where multiple transportation modes intersect. For instance, high-traffic interchanges on Interstate 95 and the Florida Turnpike can lead to severe multi-vehicle collisions, especially during peak travel periods. Additionally, the presence of hazmat transported via trucks or rail increases the risk of catastrophic incidents that could result in spills or explosions, amplifying the consequences for surrounding communities.

St. Lucie County's extensive reliance on its rail network, particularly the FEC Railway, means that any accidents, such as derailments or grade-crossing incidents, can disrupt not only rail service but also impact the flow of road traffic and emergency responses. The potential for hazmat to be involved in these rail incidents adds another layer of risk, necessitating coordinated responses from multiple agencies to manage evacuations and containment.

Maritime activities at the Port of Fort Pierce and the Fort Pierce Inlet also contribute to the risk landscape. The concentration of commercial and recreational vessels in these waters can lead to accidents such as groundings, collisions, or fuel spills. These incidents can disrupt not only marine traffic but also impact the local economy, tourism, and environmental health, requiring extensive emergency response measures.

JURISDICTIONAL IMPACTS

Serious transportation incidents in St. Lucie County are most likely where high volumes, high speeds, hazmat, or chokepoints intersect along I-95, the Florida Turnpike, U.S. 1, major east-west arterials, the FEC Railway corridor, the Port of Fort Pierce/Intracoastal-Inlet, and the two causeway bridges to Hutchinson Island. Although day-to-day crashes are typically localized, low-frequency/high-consequence events, such as multi-vehicle collisions, rail derailments, hazmat releases, marine groundings, and aircraft incidents, they can create countywide mobility and public safety impacts through closures, evacuations, or detours (see Table 108 for jurisdictional responsibilities and hazard-specific impacts).

Table 108: Impacts of Transportation System Accidents, by Jurisdiction

Participant	Impacts
St. Lucie County	St. Lucie County experienced has countywide exposure across the interstate and turnpike system, the U.S. 1 corridor, and at-grade rail crossings. A major crash or hazmat spill on I-95 or the Turnpike can shut down lanes for hours and force detours onto parallel arterials. Causeway incidents can temporarily isolate Hutchison Island, complicate Emergency Medical Services (EMS) transport, and require coordinated marine and bridge inspections. The County is responsible for mass-casualty response, unified command for hazmat, traffic incident management, and rapid clearance to restore mobility.
City of Port St. Lucie	The City of Port St. Lucie has the highest population and vehicle miles traveled in the county. Multiple entrances and exits along I-95 (Becker Rd, Gatlin Blvd, Traditional Pkwy, Crosstown Pkwy, St. Lucie West Blvd) and the Turnpike (Becker Rd, Port St. Lucie Blvd) concentrate high-speed merge and weave conflicts. There are also busy interstate entrance and exits located at Midway Rd, State Road 70, State Rd 68, and Indrio Rd, and a Turnpike entrance/exit at State Rd 70 just west of I-95. The U.S. 1 corridor and the adjacent FEC mainline create numerous driveway, intersection, and rail grade-crossing conflict points. A derailment or prolonged crossing blockage would affect north-south mobility and delay emergency response. Large commercial districts, including St. Lucie West and Tradition, amplify the potential consequences of a mass-casualty crash during peak periods.
City of Fort Pierce	The City of Fort Pierce faces elevated multimodal risk due to the close proximity of its port, rail, and downtown grid. State Road 70/Okeechobee Road and U.S. 1 carry heavy truck and commuter traffic between I-95, the Turnpike, and the waterfront. Serious crashes or a hazmat release can shut down key gateways into the city. The Seaway Dr. and North Causeway bridges serve as single-thread links to Hutchinson Island. Incidents on the span or at their approaches can restrict access to residential areas, school, and tourist destinations. Port and inlet operations also introduce the potential for marine collisions, groundings, and small fuel releases that may require environmental response.
Town of St. Lucie Village	The Town of St. Lucie Village has lower traffic volumes but limited access routes, including Old Dixie Highway, North Indian River Drive, and connections to U.S. 1. A single major crash, rail blockage, or nearby hazmat incident could constrain ingress and egress and delay EMS. The town's neighborhood streets, older

Participant	Impacts
	subdivisions, and proximity to the lagoon underscore the importance of clear detour planning and shelter-in-place guidance during short-duration closures.

NATIONAL RISK INDEX

The National Risk Index is a valuable tool for assessing various hazards across communities in the United States. However, it does not evaluate transportation system accidents as a significant hazard, so they are not included in this particular hazard profile.

Magnitude and Severity

Transportation system accidents range from frequent, low-severity, single-vehicle crashes to low-frequency/high-consequence events, such as multi-vehicle mass-casualty crashes, rail derailments involving hazmat, aviation incidents during approach or departure, and marine collisions and groundings in the inlet. Severity in St. Lucie County is best expressed by the number of people affected, the duration of network disruption, geographic extent, and hazmat involvement, and this assessment for the possibility that even site-specific incidents can cascade into corridor- or county-wide impacts when they occur at chokepoints, such as interstate interchanges, causeways, rail crossings, and port and airport approaches.

Table 109: County Severity Classification – Transportation System Accidents (all modes)

Level	People Affected	Network Disruption	Geographic Extent	Hazmat/ Secondary Effects	Example
Minimal	0–1 fatalities; 0–4 injuries	Lane closure under 2 hours; localized detour	Single intersection or road segment	None; no release	Single-vehicle crash on arterial; fender-bender at signal; small vessel collision with no spill
Limited	0–2 fatalities; 5–20 injuries	Closure of 2–8 hours; peak-period delay; school/transit detours	1–3 miles of corridor; one causeway approach	Minor fuel spill contained on scene; no evacuation	Multi-vehicle crash on U.S. 1; tractor-trailer jackknife on I-95; small GA aircraft runway excursion (no fire)
Significant	3–5 fatalities and/or more than 20 injuries (mass-casualty incident)	Closure of 8–24 hours; long detours; suspension of bridge openings/rail movements	Corridor or facility closed; barrier island access constrained	Moderate release requiring isolation or shelter-in-place; short-term waterway closure	Bus crash on interstate; major crash on Seaway/North Causeway blocking island access; vessel collision with recoverable fuel spill in inlet

Level	People Affected	Network Disruption	Geographic Extent	Hazmat/ Secondary Effects	Example
Major/ Catastrophic	More than 5 fatalities and/or more than 50 injuries	Closure exceeding 24 hours; multi-day detours; port/airport operations curtailed	Countywide ripple effects; multiple corridors impacted	Significant hazmat release with evacuation; extended channel closure; long-duration utility outage	Freight rail derailment with hazmat on the FEC mainline; large aircraft crash near Treasure Coast International Airport; tanker crash on Turnpike/I-95 with fire

MODE-SPECIFIC CONSIDERATIONS

Each transportation mode presents distinct risks and operational challenges that influence severity and response strategies.

- **Roadway (I-95, Florida Turnpike, U.S. 1, and causeways):** Severity increases with speed, vehicle mix (e.g., heavy trucks and buses), and location, particularly at bridges and interchanges. Incidents on causeways can temporarily isolate Hutchinson Island.
- **Rail (FEC mainline):** Derailments or grade-crossing collisions can close adjacent roadways and, if hazmat is involved, may require evacuation or shelter-in-place.
- **Aviation (Treasure Coast International Airport):** Incidents are most likely during takeoff and landing. Even without fire, airport closures for investigation can disrupt regional logistics and emergency medical transport.
- **Marine (Port of Fort Pierce, Inlet, and Indian River Lagoon):** Collisions or groundings can close channels, delay marine commerce, and cause fuel or lube oil releases that require booming and cleanup.

Minor roadway crashes occur daily and are managed through routine incident response. Significant and major events are rare, but planning treats them as credible threats based on traffic volumes, hazmat flows, and the presence of single-thread links, such as causeways, key interchanges, and the rail corridor.

Historic Events

In the past several years, St. Lucie County has experienced multiple high-profile transportation system accidents involving roadway, rail, marine, and aviation components. While none have risen to the level of a FEMA-declared disaster, several incidents caused significant casualties, roadway closures, and hazmat responses, illustrating the county's exposure along its multimodal corridors. The most frequent events involved major highway crashes on I-95 and the Florida Turnpike, occasional railway fatalities or vehicle-train collisions along the FEC Railway corridor, and isolated aviation and marine accidents near Fort Pierce (see Table 110).

Table 110: Selected Transportation System Accidents

Date	Incident Type	Location	Summary of Impacts
8/27/2019	Multi-vehicle crash/hazmat spill	I-95 northbound near Midway Rd	A collision involving three semi-trailers caused a diesel spill and a multi hour interstate closure. Cleanup required environmental response.
3/6/2021	Vehicle-train collision (fatal)	FEC Railway at Edwards Rd, Fort Pierce	A passenger vehicle was struck by freight train at grade crossing. One fatality occurred, and the rail line was closed for several hours pending investigation.
9/3/2022	Mass-casualty traffic crash	Florida Turnpike near Port St. Lucie Blvd	A multi-vehicle crash resulted in eight injuries and two fatalities. Northbound lanes were closed for approximately six hours, and the incident drew regional EMS support.
3/30/2024	Small aircraft emergency landing	Treasure Coast International Airport	A private aircraft on a training flight with two passengers stalled and crashed at Treasure Coast International Airport. One passenger was injured and the other died.[287]
5/17/2024	Marine collision/ fuel release	Fort Pierce Inlet	A recreational vessel collided with a channel marker, causing a minor fuel spill. The U.S. Coast Guard coordinated containment and conducted a channel inspection.

OBSERVED TRENDS

Patterns observed across transportation modes in St. Lucie County indicate several recurring risk factors.

- Roadway incidents are the most frequent and severe, accounting for the majority of fatalities and injuries. Crash data from the Florida Department of Transportation (FDOT) District 4 and local law enforcement indicate a persistent clustering near I-95 interchanges, U.S. 1, and Crosstown Parkway.[288]
- Rail-related incidents remain relatively infrequent but continue to occur at grade crossings, particularly where high-speed or high-volume roads intersect with the FEC Railway, most notably in Fort Pierce.

[287] Will Greenlee, "Emergency declared before fatal plane crash at Treasure Coast International Airport," *TCPalm,* 2024, https://www.tcpalm.com/story/news/local/st-lucie-county/2024/04/24/emergency-declared-by-instructor-before-deadly-plane-crash-in-slc/73436339007/?gnt-cfr=1&gca-cat=p&gca-uir=false&gca-epti=z111080e111080v000001&gca-ft=206&gca-ds=sophi.
[288] Florida Highway Safety and Motor Vehicles, "Florida Crash Dashboard," 2025, https://www.flhsmv.gov/traffic-crash-reports/crash-dashboard/.

- Marine and aviation events are rare but often consequential, due to the proximity of sensitive waterways and developed corridors. Even minor spills or closures can result in significant operational impacts to port infrastructure and tourism assets.

FEMA DISASTER DECLARATIONS

There are currently no FEMA disaster declarations associated with this hazard.

Probability of Future Conditions

Transportation system accidents in St. Lucie County represent a high-probability, moderate- to high-consequence hazard. Unlike geologic or meteorological events, transportation accidents occur frequently due to constant exposure of the traveling public and freight movement across highways, rail lines, waterways, and airspace. The probability of future incidents is therefore driven not by natural variability, but by factors such as traffic volume growth, infrastructure age, human behavior, hazmat transport, and weather-related influences on mobility and safety.

PROBABILITY CHARACTERIZATION

The following summary outlines the expected likelihood and contributing factors for transportation system accidents over the next five years:

- **Overall Probability:** High
- **Trend:** Increasing slightly due to sustained population and vehicle growth
- **Primary Drivers:** Traffic volume, multimodal freight movement, and aging infrastructure

DRIVERS AND MODIFIERS

- **Highway Traffic Growth and Crash Trends:** FDOT projects continued traffic volume increases along I-95, the Florida Turnpike, and U.S. 1, driven by Port St. Lucie's rapid growth. From 2019 to 2023, the county averaged 35 to 40 traffic fatalities annually and over 3,000 reportable crashes per year, according to FDOT's Crash Analysis Reporting System data. Although most crashes are minor, the high percentage of high-speed and multi-vehicle collisions along the interstate system means the potential for mass-casualty or hazmat incidents remains credible.
- **Freight and Hazmat Movement:** The FEC Railway carries mixed freight, including petroleum products, chemicals, and intermodal cargo. FDOT's Rail System Plan classifies the FEC mainline through St. Lucie County as a Class IV freight corridor with hazmat-carrying potential. Hazmat incidents remain rare, but the risk of low-frequency, high-impact derailments or highway tanker accidents persists, particularly at grade crossings in Fort Pierce or at Turnpike and I-95 rest areas where fuel transport volumes are high.
- **Marine and Aviation Activity:** Port and inlet activity at Fort Pierce Harbor is expected to increase with redevelopment of the Port of Fort Pierce and associated maritime uses, slightly increasing the likelihood of marine collisions or minor fuel releases. At Treasure Coast International Airport, most

operations are general aviation. Although incidents are infrequent, mechanical failures or training accidents occasionally occur, maintaining a low but persistent probability of aircraft emergencies.

- **Environmental Factors:** Environmental factors can directly influence accident probability in the following ways:
  - Heavy rainfall and localized flooding can increase hydroplaning, reduce visibility, and increase crash risk on major corridors.
  - Corrosion and maintenance needs on bridges and causeways may require periodic inspections or short term closures, which can indirectly increase congestion and crash risk on detour routes.
  - Hurricane evacuation surges temporarily increase vehicle volumes across major corridors, raising exposure.
- **Technological and Behavioral Factors:** Driver distraction, speeding, and impaired driving continue to be leading causal factors in severe crashes. FDOT's statewide emphasis on Vision Zero and Complete Streets aims to mitigate these through design and enforcement, though full implementation will take years. Emerging technologies (e.g., automated vehicles, connected traffic systems) may reduce long-term crash rates, but these benefits are unlikely to substantially affect probabilities in the near term.

Table 111 summarizes the expected probability and incident types across three planning horizons.

Table 111: Qualitative Probability Summary

Horizon	Most Probable Incident Types	Expected Frequency	Probability
0–5 years	Highway multi-vehicle crashes, rail–vehicle collisions, small-vessel groundings	Several annually (routine); 1–2 significant (mass casualty or hazmat) events	High
6–20 years	Continued roadway crashes; increasing marine and freight-related exposure	Steady increase driven by population growth	High
21–30 years	Automated systems may modestly reduce routine crashes, but exposure remains due to population and freight expansion	Slight decline in crash rate; increased system complexity	Moderate to High

Vulnerability Assessment

High traffic volumes, aging infrastructure, and the presence of hazardous materials in transit contribute to the likelihood of incidents occurring across the county's extensive multimodal network. Populations with limited mobility, limited transportation options, or limited resources may face greater impacts during transportation incidents due to barriers accessing timely emergency services and detour routes. Additionally, geographical factors such as low-lying areas and chokepoints, like the causeway bridges, further exacerbate the challenges posed by such incidents. As the county continues to grow, the interplay

of these vulnerabilities will necessitate ongoing attention to ensure that all residents are adequately protected and that response strategies are inclusive and effective.

IMPACTS TO ASSETS

Transportation incidents in St. Lucie County most threaten assets where high volumes, high speeds, hazmat, or chokepoints intersect along I-95, the Florida Turnpike, U.S. 1, the two Indian River Lagoon causeways, the FEC Railway corridor, Treasure Coast International Airport, and the Port of Fort Pierce/Inlet. Fort Pierce functions as the county's multimodal hub (including rail yards, trucking centers, and the port), while St. Lucie Village sits beneath the airport approach. Serious incidents at these locations have blocked highways and could require evacuations or shelter-in-place orders near rail lines or hazmat sites. The Port lies in the Indian River Lagoon National Estuary, increasing the environmental consequences of any spill; the County, the U.S. Coast Guard, and partners maintain an Area Contingency Plan for oil-spill readiness. The County also tracks 56 extremely hazardous substance facilities under EPCRA Section 302, underscoring the need for hazmat preparedness along transport corridors.

Table 112 provides a summary of the consequences of transportation system accidents. It discusses effects on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, and public confidence.

Table 112: Consequence Analysis

Sector	Consequence
Public	There is potential for mass-casualty injuries or fatalities in high-speed, multi-vehicle highway crashes. Exposure is elevated at rail grade crossings and on the Seaway and North Causeway bridges, where an incident can temporarily isolate Hutchinson Island and delay EMS access.
First Responders	Demands may include traffic incident management, hazmat operations, and multi-agency unified command. Highway blockages in Fort Pierce and along interstate/Turnpike segments can stretch resources until lanes reopen and rail lines clear.
Continuity of Operations	Closures on I-95, the Turnpike, or U.S. 1 or prolonged rail crossings can disrupt government services, school transport, and hospital access. Documented incidents have blocked highways in Fort Pierce, requiring detours and delaying shift changes.
Property, Facility, and Infrastructure	Damage may range from vehicle and track/bridge impacts to runway or channel closures. The FEC mainline and Strategic Intermodal System-designated corridors concentrate consequence if a derailment or tanker crash occurs. Airport approaches over St. Lucie Village add localized aviation exposure.
Environment	Credible outcomes include fuel/chemical releases from highway tankers, railcars, or vessels; consequences are heightened at the Port of Fort Pierce because it sits in the Indian River Lagoon National Estuary. The County and U.S. Coast Guard use the Area Contingency Plan to coordinate response.

Sector	Consequence
Economic Conditions	Lane, bridge, rail, or channel closures may disrupt freight and tourism, delay just-in-time deliveries, and increase overtime costs. The LMS identifies economic disruption as a core consequence class for transportation accidents.
Public Confidence	High-visibility incidents, such as hazmat spills and derailments, can erode trust. Timely clearance, transparent updates, and clear detour guidance help maintain confidence during investigations and cleanup.

IMPACT ON COMMUNITY LIFELINES

FEMA's community lifelines are shown in Figure 83. Transportation system accidents pose threat to these lifelines in the ways listed below.

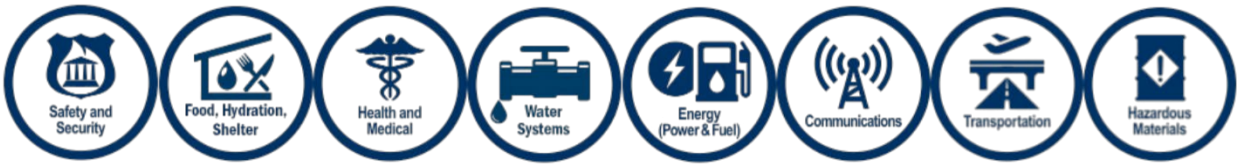

Figure 83: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** Major crashes, rail incidents, or a hazmat release can rapidly overwhelm 911 with calls for assistance and traffic control. Law enforcement and emergency management would stand up unified command, secure perimeters (especially around bridges, grade crossings, and incident scenes), and manage evacuations or shelter-in-place orders if hazmat is involved.
- **Food, Hydration, and Shelter:** Short-duration interstate or causeway closures can delay grocery and fuel deliveries and interrupt store operations until detours clear. If a large accident produces evacuations (e.g., rail or tanker hazmat), short-term sheltering, reception, and feeding may be needed for affected neighborhoods or stranded travelers.
- **Health and Medical:** Mass-casualty highway crashes or multi-vehicle incidents can create a surge at emergency departments and require regional EMS mutual aid. Detours and blocked interchanges may slow ambulance transport times. Hospitals rely on redundant utilities and helipad/air-ambulance access if road routes are constrained.
- **Water Systems:** Collisions that damage hydrants, valves, or lift stations can cause localized service interruptions or sanitary sewer overflows until crews isolate and repair lines. Large scenes may require sustained water supply for firefighting and decontamination, drawing on city and county utility coordination.
- **Energy (Power and Fuel):** Tanker crashes or substation/line strikes during roadway incidents can trigger localized outages and fuel interruptions. Protective relays may trip until inspections are complete. Generators at critical facilities (emergency operations center, hospitals, water/wastewater plants) mitigate impacts, while fuel resupply to responders is prioritized during extended closures.

- **Communications:** Big, visible incidents can congest cellular networks and require priority messaging to reduce rumors and secondary crashes. Public information focuses on detours, estimated clearance times, and protective actions (e.g., avoid the area, shelter-in-place near a rail hazmat scene).
- **Transportation:** Closures on I-95, the Florida Turnpike, U.S. 1, or the North Causeway/Seaway (South) Causeway bridges can cascade into long detours and delay lifeline services to Hutchinson Island and coastal neighborhoods. Rail incidents along the FEC corridor may block multiple cross-streets simultaneously, while marine or aviation incidents can temporarily close channels or runways pending inspection.
- **Hazardous Materials:** Highway tankers, rail tank cars, fuel docks, and vessel bunkering create low-frequency but high-consequence spill potential. A release may require isolation zones, evacuations, environmental containment/booming, and air/water monitoring. Rapid identification of the product, plume modeling, and coordinated cleanup are essential to restore nearby neighborhoods, waterways, and corridors.

IMPACT DUE TO CHANGES IN DEVELOPMENT

Planned and ongoing growth in St. Lucie County will raise exposure to transportation system accidents primarily by putting more people and trips onto a limited number of high-speed corridors and chokepoints. This is not because the transportation network is new to risk, but because volume, mix, and complexity are increasing. The county's population was about 322,000 in 2020 and continues to climb, which translates directly into higher vehicle miles traveled, more freight and delivery traffic, and greater demand for bridge, port, rail, and airport operations.

The following are key development trends with implications for accident consequences:

- **Northern County/TVC buildout:** The North St. Lucie County Towns, Villages and Countryside (TVC) Special Area Plan entitles up to 37,500 dwelling units, roughly 5 million square feet of nonresidential space, and several hundred acres of industrial use. As this area builds out, traffic will intensify at I-95/Florida Turnpike interchanges and along connecting arterials, increasing the likelihood that a single serious crash or hazmat incident produces corridor-length closures and multi-jurisdiction detours.[289]
- **Corridor Chokepoints:** Growth along I-95, the Florida Turnpike, U.S. 1, and the two Indian River Lagoon causeways extends runs of single-thread links. A major crash on Seaway (South) Causeway or North Causeway can temporarily isolate Hutchinson Island, delay EMS, and require coordinated marine/bridge inspections before reopening.
- **Rail Exposure:** The FEC Railway carries freight (including hazmat) and intercity passenger trains through the county. Higher train frequency raises the exposure window at numerous U.S. 1 corridor grade crossings, increasing the consequence of a collision or prolonged blockage for adjacent neighborhoods and emergency response.

[289] St. Lucie County, "Towns, Villages and the Countryside Element," https://www.stlucieco.gov/home/showpublisheddocument/2024/638085263686970000.

- **Port Redevelopment:** Port-related investment (e.g., mega yacht service, cargo handling) concentrates heavy trucking and marine movements near the inlet and downtown grid. A roadway crash, small fuel spill, or marine collision can force channel closures and truck detours, with cascading effects for businesses and tourism.
- **Airport Activity:** Treasure Coast International Airport (Fort Pierce) supports general aviation, flight training, and federal missions. As activity grows, the probability of approach/departure incidents remains low but persistent. Even minor events can close a runway and divert EMS/air ambulance operations.
- **Work Zones:** Capacity, bridge, drainage, and resilience upgrades (including corrosion mitigation on coastal structures) will create more frequent work zones, which are statistically higher-risk environments for secondary crashes and worker safety incidents if queue warning and traffic control are not adequate.
- **Environmental Considerations:** Heavy downpours and roadway flooding can increase crash risk (hydroplaning, reduced visibility) and lengthen clearance times. Maintenance or inspection related closures on bridges and waterfront assets may also shift traffic onto detour routes with additional conflict points.

IMPACTS TO POPULATIONS OF FOCUS

- **Low Income Residents:** Residents with limited resources may face greater impacts during major transportation incidents due to limited flexibility to reroute travel, limited ability to miss work, and greater difficulty absorbing unexpected costs such as fuel, towing, or temporary transportation.
- **Elderly Population (Fixed Income):** The elderly population in St. Lucie County, which constitutes about 25% of residents[290], is especially at risk during transportation system accidents. Many elderly individuals live on fixed incomes, limiting their mobility options and access to transportation. In the event of a serious incident, such as a collision on the Florida Turnpike or a train derailment, older adults may struggle to evacuate or reach safe locations quickly, heightening their risk of injury. Moreover, the potential for delays in emergency medical services during transportation accidents can disproportionately affect this group, particularly those who rely on regular medical care and may require immediate assistance.
- **Low Lying Areas:** Residents in low-lying areas of St. Lucie County are at increased risk during transportation system accidents due to their susceptibility to flooding and road closures. For example, neighborhoods near the Indian River Lagoon may experience significant disruptions if a major accident occurs on key routes like U.S. 1, particularly during heavy rainfall or roadway flooding events This can impede access to emergency services and create challenges for evacuation. The stress of navigating detours or being cut off from essential services during transportation incidents can also exacerbate public health risks, especially for those with mobility issues or medical needs.

[290] U.S. Census Bureau, "ACS Demographic and Housing Estimates," 2023, https://data.census.gov/table/ACSDP1Y2023.DP05?q=population+st.+lucie+county+florida.

- **Substandard Mobile Homes:** Residents living in manufactured housing or older housing stock near major corridors may face elevated impacts if an accident involves a hazardous materials release or extended road closures. Limited sheltering capability and fewer transportation options can increase the need for timely evacuation support and clear public messaging.

Wellfield Contamination

Definition

Groundwater is the water that exists beneath the Earth's surface, filling the spaces and cracks in soil, sand, and rock formations. It is a crucial component of the hydrological cycle, replenished through precipitation that infiltrates the ground and percolates down to aquifers, the underground layers of water-bearing rock or sediment.[291] Groundwater serves as the primary source of water for St. Lucie County, providing drinking water for residents, supporting agriculture through irrigation, and sustaining ecosystems by feeding streams, lakes, and wetlands.[292] A wellfield is a designated area surrounding a permitted well used for extracting groundwater.[293]

Wellfield contamination refers to the pollution of groundwater sources that supply these wells, resulting from various anthropogenic activities and natural contaminants. These contaminants can originate from agricultural practices, industrial discharges, urban runoff, improper waste disposal, and leaching from soil and rocks. Common pollutants include pesticides, fertilizers, heavy metals, solvents, and bacteria, all of which can infiltrate the soil and reach the groundwater, ultimately compromising the quality of the water extracted from wells. The presence of these harmful substances poses significant health risks to individuals and communities relying on groundwater for drinking, irrigation, and other essential uses.

The process of contamination typically begins with the introduction of pollutants at the surface, where they can migrate through the soil and permeate the aquifer systems. Factors such as soil composition, land use, and the depth of the water table influence how quickly and extensively these contaminants spread. In wellfields the risk of contamination can be heightened due to the concentration of water withdrawal and the proximity of potential pollution sources. As contaminants travel through the subsurface environment, they can create zones of pollution that may impact multiple wells simultaneously, complicating remediation efforts.

[291] US Geologic Survey, "What is groundwater?" https://www.usgs.gov/faqs/what-groundwater.
[292] St. Lucie County Utilities, "Source," 2025, https://www.stlucieco.gov/departments-and-services/public-utilities/water-service/water-supply/source.
[293] Florida Department of Environmental Protection, "Wellhead Protection," https://floridadep.gov/water/certification-restoration/content/wellhead-protection.

Location and Extent

The drinking water is St. Lucie County comes from two large aquifers, the Surficial Aquifer and Upper Floridan Aquifer.[294] The Floridan aquifer is one of the highest producing aquifers in the world and provides the primary water supply for St. Lucie County. It is found throughout Florida and extends into the southern portions of Alabama, Georgia, and South Carolina. This aquifer system is comprised of a sequence of limestone and dolomite, which thickens from about 250 feet in Georgia to about 3000 feet in south Florida.[295] The Floridan aquifer system has been divided into an upper and lower aquifer separated by a unit of lower permeability. The upper Floridan aquifer is the principal source of water supply in most of north and central Florida, extending east to St. Lucie County.[296]

The surficial aquifer system in Florida includes any otherwise undefined aquifers that are present at land surface.[297] In St. Lucie County the surficial aquifer is mainly used for limited domestic, agricultural, and localized supply. The surficial aquifer system is generally under unconfined, or water-table, conditions and is made up of mostly unconsolidated sand, shelly sand, and shell. The aquifer thickness is typically less than 50 feet but can range up to 400 feet in Indian River and St. Lucie Counties. Groundwater in the surficial aquifer generally flows from areas of higher elevation towards the coast or streams where it can discharge as baseflow. Water enters the aquifer from rainfall and exits as baseflow to streams, discharge to the coast, evapotranspiration, and downward recharge to deeper aquifers.

Figure 84 and Figure 85 are maps of these aquifers in relation to the location of St. Lucie County (circled in red).

[294] Florida Department of Environmental Protection, "Wellhead Protection," https://floridadep.gov/water/certification-restoration/content/wellhead-protection.
[295] Florida Department of Environmental Protection, "Aquifers," 2021, https://prodapps.dep.state.fl.us/swapp/Welcome/links/aquifers_v#P3.
[296] Florida Department of Environmental Protection, "Aquifers," 2021, https://prodapps.dep.state.fl.us/swapp/Welcome/links/aquifers_v#P3.
[297] Florida Department of Environmental Protection, "Aquifers," 2021, https://prodapps.dep.state.fl.us/swapp/Welcome/links/aquifers_v#P3.

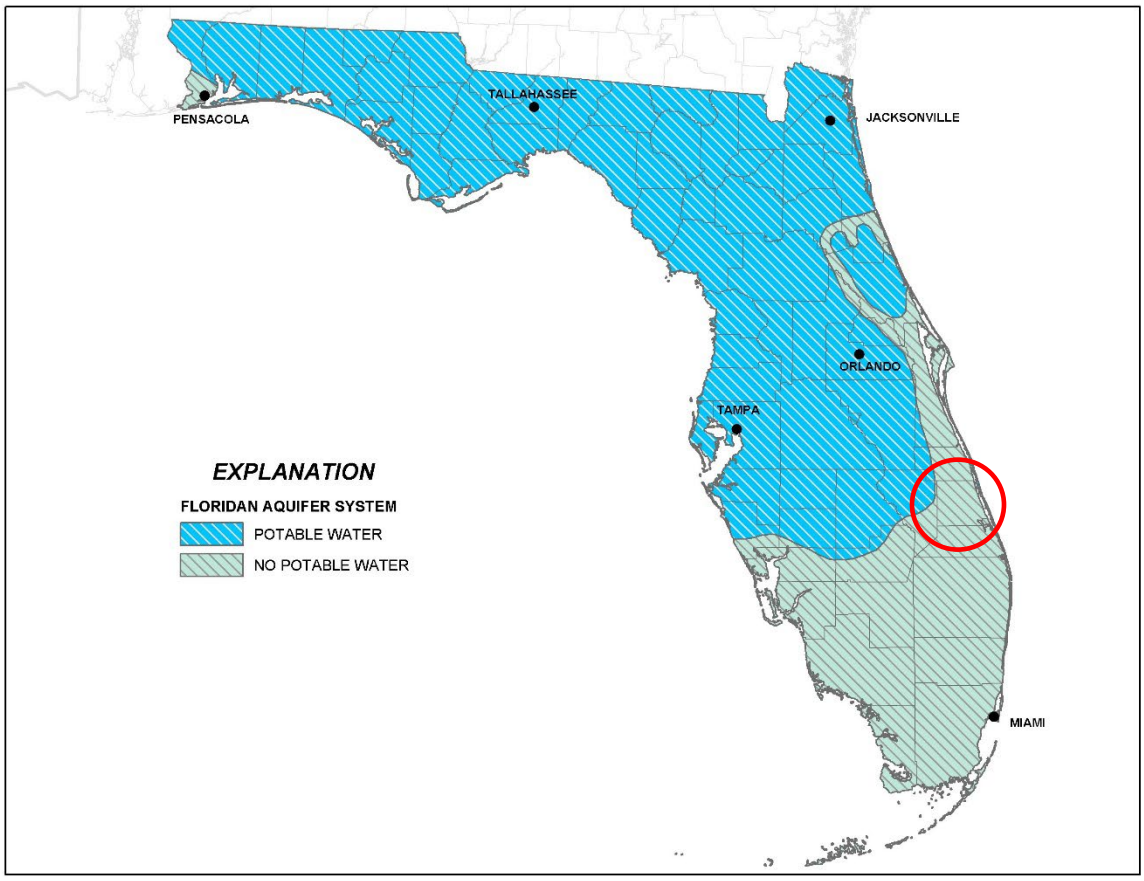

Figure 84: Map of the Floridan Aquifer System[298]

[298] Florida Department of Environmental Protection, "Aquifers," 2021, https://prodapps.dep.state.fl.us/swapp/Welcome/links/aquifers_v#P3.

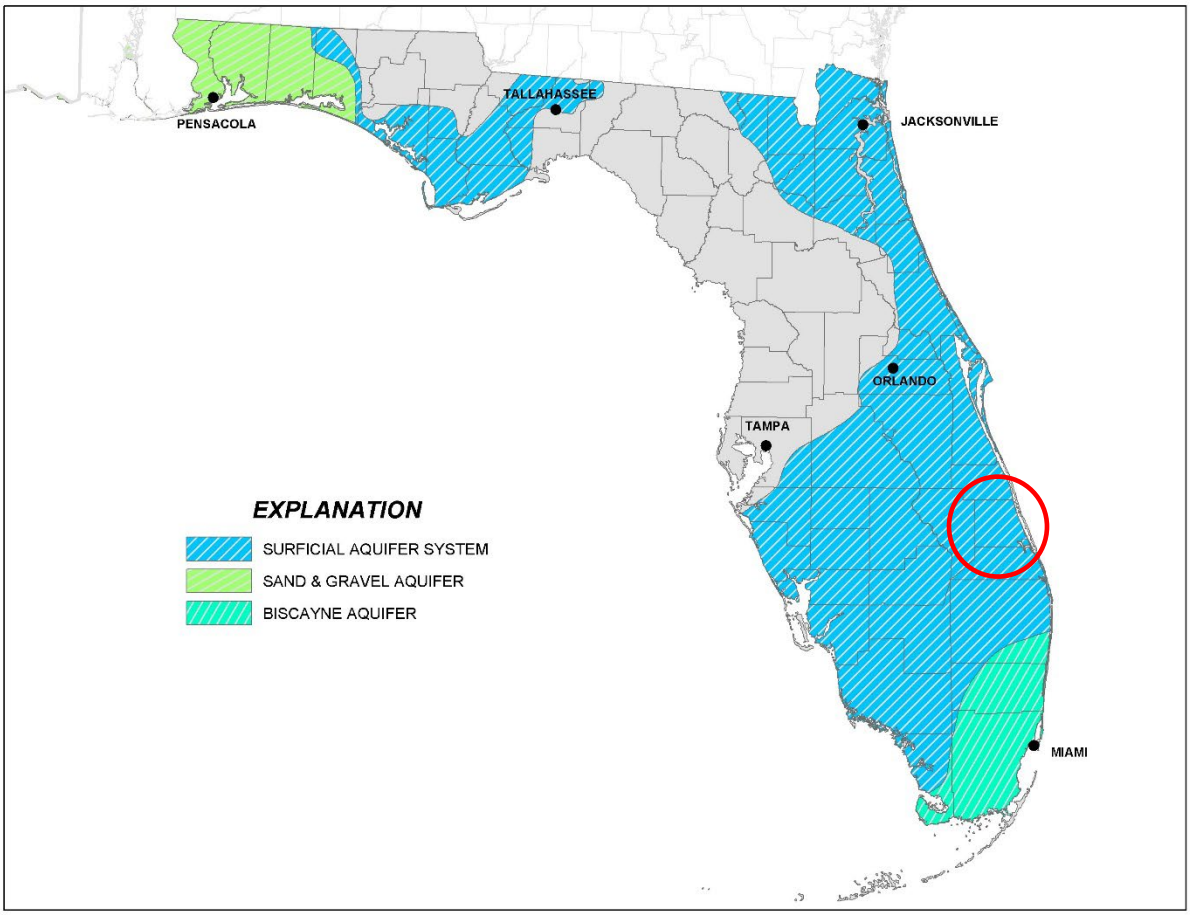

Figure 85: Map of the Surficial Aquifer System[299]

EXTENT

The extent of wellfield contamination refers to the geographical area and depth over which contaminants have spread in a wellfield. This includes the range of pollutants detected, the concentration levels of those contaminants, and the specific wells or sections of the aquifer that are affected. Understanding the extent of contamination is crucial for assessing the severity of the hazard, determining the potential impact on public health and the environment, and developing effective remediation strategies. It helps planners identify which areas require immediate attention, monitor changes over time, and implement measures to prevent further contamination and protect groundwater resources.

Pollutants that are commonly tested for in wells include petroleum, solvents, nitrates, ethylene dibromide, heavy metals, volatile organic compounds, arsenic, and pesticides.[300] These pollutants have varying

[299] Florida Department of Environmental Protection, "Aquifers," 2021, https://prodapps.dep.state.fl.us/swapp/Welcome/links/aquifers_v#P3.
[300] US Environmental Protection Agency, "National Primary Drinking Water Regulations," 2025, https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations#two.

thresholds that St. Lucie County, the other plan participants, and the State measure when tracking wellfield contamination. 500-foot assessment areas around each well are the minimum for most contamination analyses and can extend further based on hydrogeologic conditions as decided by the Source Water Assessment and Protection Program (SWAPP).[301] SWAPP administers the State of Florida Department of Environmental Protection's Wellhead Protection Rule. The rule prohibits certain new installations from locating in wellhead protection areas and specifies additional performance standards for other new installations and activities. DEP regulatory programs also implement specific performance, permitting and monitoring criteria designed to protect ground water on a statewide basis.

JURISDICTIONAL IMPACTS

Wellfield contamination has the potential to impact all of the jurisdictions in St. Lucie County (see Table 113). The aquifers used in St. Lucie County do not follow political boundaries and are shared by the four jurisdictions. Contamination from a source in one jurisdiction could spread to others, impacting residents across the county. Contamination of a wellfield could include exposure of residents to pollutants and increased costs for utilities as they pay for remediation.

Table 113: Impacts of Wellfield Contamination, by Jurisdiction

Jurisdiction	Impacts
St. Lucie County	Wellfield contamination can pose public health risks to the local population in St. Lucie County by exposing them to various contaminants. These include pesticides and nutrients from runoff, and petroleum products or solvents from spills, leaking tanks, or industrial activities.. The health impacts can be short-term or long-term depending on the contaminant and length of exposure. Contamination can also cause environmental damage, negatively affecting local ecosystems, natural spaces, and wildlife in St. Lucie County.
City of Port St. Lucie	As the largest municipality in St. Lucie County, Port St. Lucie has multiple potential sources for groundwater contamination. Gas stations and private businesses with on-site gas storage are a particular risk source for contamination due to spills or leaks. If these spills occurred, they would require expensive remediation and could impact public health in Port St. Lucie.
City of Fort Pierce	Similar to Port St. Lucie, Fort Pierce's urban density brings higher risk of groundwater contamination sources. Florida Department of Environmental Protection (FDEP) lists dozens of gas stations and private businesses with on-site gas storage as sources of contamination risk in the city.[302] Six dry cleaning locations are also listed as risk sources by the Florida Department of Health (FDOH) as the chemicals used in the cleaning process can be toxic if not handled

[301] Florida Department of Environmental Protection, "Wellhead Protection," https://floridadep.gov/water/certification-restoration/content/wellhead-protection.
[302] FDEP, "Contamination Locator Map," 2025, https://mapdirect-fdep.opendata.arcgis.com/maps/bdfa237157c7426a8f552e40a741685e/explore?location=27.456531%2C-80.339837%2C13.

Jurisdiction	Impacts
	correctly.[303] If spills occurred at these locations, it would damage the public health of residents and strain local budgets.
Town of St. Lucie Village	Due to St. Lucie Village's size, there are no direct risks sources for water contamination identified by Florida Public Health. Still, just beyond St. Lucie Village's jurisdiction there are several risk sources, including gas stations, which could impact water quality in the Town. If this occurred water resources could be constrained in St. Lucie Village and public health of residents could be impacted.

NATIONAL RISK INDEX

The National Risk Index only covers natural hazards and therefore does not provide a risk score for wellfield contamination.

Magnitude and Severity

The magnitude and severity of wellfield contamination depends largely on the type and amount of contaminant entering the wellfield. The U.S. Environmental Protection Agency (EPA) sets the National Primary Drinking Water Regulations under the Safe Drinking Water Act of 1974. These regulations outline the Maximum Contaminant Level (MCL) for a wide range of contaminants, including microorganisms, disinfection byproducts, disinfectants, organic and inorganic chemicals, and other harmful substances. These MCLs are measured in the units of milligrams per liter and parts per million. The State has adopted these requirements from the EPA in the Ground Water Rule of 2016.

Regular well testing is done by both local utilities in St. Lucie County and the Florida Department of Environmental Protection. Requirements for testing regiments are laid out in the Ground Water Rule with varying requirements by contaminant. For most contaminants, testing is required on a yearly or quarterly basis. The Ground Water Rule also outlines treatment techniques that a public water system must use if a test comes back above the MCL for a certain contaminant.

Historic Events

The Former Indian River State College Fire Training Facility located in Fort Pierce was used until 2009 when operations moved to a new facility in the city. In 2020 a contractor completed an environmental assessment of the site and found PFAS contamination in the soil and above groundwater cleanup target levels.[304] Testing broadened and found twelve wells that exceeded the Health Advisory Level for PFAS. Monitoring has continued at the site and surrounding areas to make sure that any spread of contamination is contained.

[303] FDOH, "EH Water Well Surveillance," 2024, https://gis.floridahealth.gov/ehwater/.
[304] Florida Department of Environmental Protection, "Former Indian River State College," 2025, https://floridadep.gov/waste/waste-cleanup/content/former-indian-river-state-college.

Florida has also delineated three groundwater contamination areas in St. Lucie County. All three areas are located just west of Fort Pierce along Florida Turnpike S (State Road 91) and have tested positive for the contaminant ethylene dibromide (EDB).[305] EDB was used up until the 1980s as a pesticide and additive to leaded gasoline when it was discovered that exposure could cause cancer and birth defects.[306] Designated groundwater contamination areas are subject to additional restrictions and monitoring requirements under state and federal law.

FEMA DISASTER DECLARATIONS

There have been no federally declared disasters for wellfield contamination.

Probability of Future Conditions

Periods of drought or flooding can increase wellfield contamination risk. Flooding can overwhelm wastewater systems or mobilize pollutants, while drought can reduce aquifer levels and concentrate contaminants.

The growing population in St. Lucie County also increases the risk of wellfield contamination. As more people move to St. Lucie County increased development follows them to provide the necessary infrastructure, goods, and services. Development includes more risk sources for groundwater contamination including gas stations and pesticide use on lawns. The growth trend in St. Lucie County shows no sign of slowing with a 13% increase in population between 2020 and 2023[307]. As the population continues to grow, St. Lucie County will need to prepare for a higher risk of wellfield contamination.

Emerging contaminants also pose a risk to groundwater in the County. Per- and polyfluoroalkyl substances (PFAS) are manufactured chemicals which were heavily used in industry and consumer products since the 1940s. Over time PFAS have leached from products into the soil, air, water, and food sources people consume.[308] Research has shown that some PFAS can cause increased risk of cancer, reproductive, and developmental effects leading to EPA health advisories and proposed regulatory action beginning in 2021 and enforceable standards finalized in 2024.[309] PFAS have been found in St. Lucie County and actions have been taken to limit their exposure,[310] but it is likely that PFAS will be an ongoing contamination issue in the future.

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[305] Florida Department of Environmental Protection, "Groundwater Delineation Map," 2025, https://www.arcgis.com/apps/mapviewer/index.html?webmap=c53a314722db44e3a5f1571939a50fa9.
[306] Florida Department of Health, "What you need to know about Ethylene Dibromide and your well water," https://www.floridahealth.gov/environmental-health/private-well-testing/_documents/EDBENG.pdf.
[307] St. Lucie County, "Facts and Stats," 2023, https://www.stlucieco.gov/government/facts-stats.
[308] U.S. Environmental Protection Agency, "PFAS Explained," 2023, https://www.epa.gov/system/files/documents/2023-10/final-virtual-pfas-explainer-508.pdf.
[309] U.S. Environmental Protection Agency, "Final PFAS National Primary Drinking Water Regulation," 2025, https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas.
[310] Treasure Coast Newspaper, "New EPA rule on PFAS in water could cost Treasure Coast taxpayers millions of dollars," 2024, https://www.tcpalm.com/story/news/local/2024/08/02/treasure-coast-pfas-drinking-water-epa/74171267007/.

Vulnerability Assessment

St. Lucie County, Port St. Lucie, Fort Pierce, and St. Lucie Village have capabilities to monitor and respond to groundwater contamination; however, the County remains vulnerable due to the number of potential contamination sources, shared aquifers, and emerging contaminants. Water utilities follow strict testing and monitoring standards imposed by EPA and DEP, making sure that any contamination is caught early and the spread can be contained. While there are many sources of contamination risk in St. Lucie County, many of these are mapped and tracked by the Florida Department of Health. They are required to be sited in appropriate areas that are at lower risk to wells and build to high safety standards to avoid leaks.

Despite these protectionary measures, all public water utilities in St. Lucie County are vulnerable to emerging contaminants like PFAS. These contaminants are hard to test for and expensive to remove, often costing tens or hundreds of millions of dollars depending on the amount of contamination. Some water utilities in St. Lucie County have already found PFAS present in their system, and it is possible that others will as well. Emerging and unregulated contaminants pose a threat to both public health in the county and the economic functioning of water utilities.

IMPACTS TO ASSETS

Table 114 outlines the effects of wellfield contamination on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, and public confidence. These impacts can occur across all participating jurisdictions in St. Lucie County.

Table 114: Consequence Analysis

Sector	Consequence
Public	Wellfield contamination can impact the health of residents if not contained and remediated quickly. Depending on the contamination, the health impact can be acute and short-term, or chronic long-term effects. Contamination can also add costs to running the public water utility. Utility managers must make sure that emerging contaminants are tested for, and contamination sites are remediated quickly. Adding new equipment to remove PFAS or cleanup of existing contamination can cost tens of millions of dollars, which burden the local residents through higher water fees.
First Responders	Wellfield contamination may have limited direct impact on response operations; however, major incidents can require support for public notification, bottled water distribution, and coordination with utilities and health agencies.
Property, Facility, and Infrastructure	Emerging contaminants, like PFAS, require the upgrading of drinking water infrastructure to detect and remove them. This upgrade can be exceedingly expensive depending on the amount of contaminant present. Jurisdictions in St. Lucie County are already exploring how best to implement these upgrades.
Environment	Contaminated groundwater can negatively affect surface water bodies, such as rivers, lakes, and wetlands, leading to the degradation of aquatic ecosystems and harming fish and other wildlife due to exposure to toxic substances. Additionally,

Sector	Consequence
	these contaminants can leach into the soil, adversely affecting soil health and harming plants by disrupting the vital microorganisms necessary for nutrient cycling and soil fertility. This interplay between groundwater, soil, and aquatic environments highlights the interconnectedness of ecological systems and the far-reaching consequences of groundwater pollution.
Economic Conditions	The presence of contaminants can diminish property values and deter investment in affected areas, impacting local businesses and tourism. Moreover, the costs associated with remediation efforts to clean up contaminated sites can be substantial, often requiring public funds and diverting resources from other essential services. Overall, the economic repercussions of groundwater contamination can be profound, affecting livelihoods, property values, and the overall prosperity of communities.
Public Confidence	Groundwater contamination can significantly undermine public confidence in water safety and the effectiveness of regulatory systems. When communities become aware of contamination issues, it can lead to widespread fear and distrust regarding the quality of their drinking water, prompting residents to question the reliability of governmental agencies responsible for monitoring and protecting water resources. This erosion of trust can result in increased public anxiety about health risks, as well as skepticism toward official communications and advisories.

IMPACT ON COMMUNITY LIFELINES

The FEMA community lifelines, shown in Figure 86, are the most fundamental services in the community that, when stabilized, enable all other aspects of society. When disrupted, decisive intervention (e.g., rapid service re-establishment or employment of contingency response solutions) is required. Below is an overview of how wellfield contamination impacts each of the community lifelines.

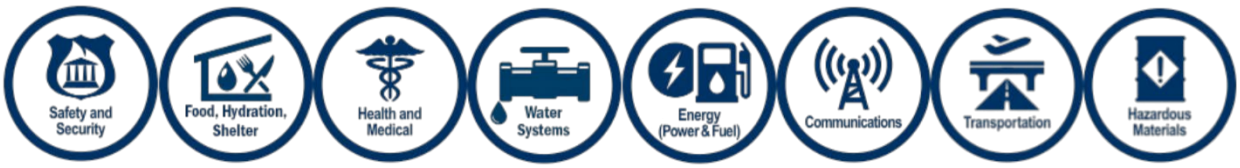


Figure 86: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** Wellfield contamination has no impact on safety and security in St. Lucie County.
- **Food, Hydration, and Shelter:** When groundwater resources become contaminated, water supplies are reduced in the county. This could make hydration harder for residents as water from their tap may no longer be potable. Residents would be forced to find bottled water for hydration, which could be especially challenging if contamination occurs in the midst of another disaster.
- **Health and Medical:** Groundwater contamination poses significant health risks to communities that rely on contaminated sources for drinking water, as it can lead to exposure to harmful substances

such as heavy metals, pathogens, and toxic chemicals. This exposure is associated with a range of health issues, including gastrointestinal illnesses, neurological disorders, and increased cancer risks.

- **Water Systems:** Wellfield contamination strains drinking water systems by requiring complex remediation and treatment to remove contaminants. Depending on the size of the contamination, a water system may need to completely shut down to resolve the issue. These actions can be expensive and time-consuming, reducing staff capacity and funds for other necessary projects.
- **Energy (Power and Fuel):** Wellfield contamination has no impact on energy in St. Lucie County.
- **Communications:** Wellfield contamination has no impact on communication in St. Lucie County.
- **Transportation:** Wellfield contamination has no impact on transportation in St. Lucie County.
- **Hazardous Materials:** Wellfield contamination has no impact on hazardous materials in St. Lucie County.

IMPACTS DUE TO CHANGES IN DEVELOPMENT

Development across St. Lucie County has increased as the population of the county has grown. This includes new sub-divisions, businesses, and infrastructure to house and serve the new residents. From 2020 to 2023 alone the population of St. Lucie County grew by 44,000 people.[311] New development includes potential groundwater contamination sources from new businesses with gas tanks on-site that could leak to pesticide use on new lawns that could leach into groundwater sources. These new contamination sources must be permitted and monitored to ensure they do not negatively impact groundwater resources.

Increased impervious surfaces due to urban development also heightens the risk of wellfield contamination by altering the natural hydrology of an area. When land is paved over with materials such as asphalt and concrete, it prevents water from infiltrating the ground, leading to increased surface runoff. This runoff can accumulate pollutants such as oils, heavy metals, and chemicals from roads, parking lots, and industrial sites, which are then carried directly into nearby water bodies or infiltrate into the groundwater supply. The lack of natural filtration processes, which occur in undisturbed landscapes, means that these contaminants can reach wellfields more easily, compromising water quality and posing health risks to communities relying on groundwater for drinking and irrigation. Additionally, the increased volume and speed of runoff can overwhelm existing drainage systems, further exacerbating the potential for contamination.

IMPACTS ON POPULATIONS OF FOCUS

The impacts from wellfield contamination can impact vulnerable populations in St. Lucie County in two ways. First, increased costs from remediation, treatments, and upgraded equipment to handle contamination puts a strain on households with limited financial resources. For those who are already struggling to pay bills an increase in their water fees could be difficult to manage. Retirees on a fixed

[311] St. Lucie County, "Facts and Stats," 2023, https://www.stlucieco.gov/government/facts-stats.

income could also struggle to pay increased amount for their water fees, especially if there are significant increases.

Second, groundwater contamination poses significant health risks for vulnerable populations such as children, the elderly, pregnant women, and individuals with pre-existing health conditions. These groups are often more susceptible to the adverse effects of pollutants found in contaminated water, which can include harmful chemicals, pathogens, and heavy metals. For instance, exposure to contaminated drinking water can lead to a range of health issues, from acute gastrointestinal illnesses to long-term effects such as developmental delays in children or increased cancer risk. Pregnant women may face additional risks, as certain contaminants can affect fetal development, leading to complications or birth defects.

Civil Disturbances

Definition

Civil disturbance is a broad category that refers to actions which disrupt a community and require intervention to maintain public safety.[312] This can include riots, unlawful gatherings, and other events that disrupt public safety or community operations. Large scale civil disturbances may overwhelm local resources and state or federal resources may be requested to support public safety operations.[313]

Civil disturbances can arise spontaneously as a result of a triggering event, such as looting that occurred after Hurricane Irma.[314] Civil disturbances may stem from peaceful gatherings or demonstrations, or they can be planned and intentional. Protests are a possible triggering event which can transform from peaceful to disruptive under certain conditions. These are often complex, emotionally charged events where the majority of protesters are law abiding citizens intending to protest peacefully. These disturbances are rooted in complex social, economic, and political interactions. Peaceful assembly is a right guaranteed to U.S. citizens under the First Amendment of the U.S. Constitution, making the delineation between a lawful gathering and a disruptive one a challenging distinction for law enforcement.

Any large crowd, even those gathering for benign reasons, can be the cause of civil disturbances and violence. Crowd conditions can change rapidly, increasing the potential for unsafe behavior, property damage, and injuries. It is important for jurisdiction to have a plan to handle these situations with caution, prevention, and de-escalation.

[312] Florida State Hazard Mitigation Plan, "Civil Disturbance," 2023, https://flshmp-floridadisaster.hub.arcgis.com/pages/civil-disturbance.
[313] US Legal Forms, "Civil Disturbance: Legal Insights into Public Disorder and Its Impact," https://legal-resources.uslegalforms.com/c/civil-disturbance/.
[314] Spatz Law Firm, PL, "Looters and Natural Disasters," https://www.spatzlawfirm.com/blog/2017/09/looters-and-natural-disasters/.

CIVIL DISTURBANCE DURING DISASTERS

Disasters often create the necessary environment for civil disturbance to emerge. The emergence of civil disorder during disasters can be attributed to several factors. One factor is the collective distress that a disaster creates, which alters the environment and social norms.[315] This chaos can lead individuals to rationalize actions that would typically be considered unacceptable. Additionally, law enforcement may be displaced or overwhelmed, causing civil disorder to escalate.

Another contributing factor to civil disorder during disasters is the lack, or fear of lacking, basic supplies. Disasters often disrupt a community's ability to provide essentials such as food, clothing, and clean water. In the face of survival fears, some individuals may resort to looting to obtain these necessities. Given the stresses that disasters impose on affected populations, responders and emergency managers should approach these situations with caution. Quickly establishing disaster recovery operations will help residents meet their basic needs, and implementing public information campaigns can inform citizens and alleviate their fears.

LARGE SCALE PUBLIC GATHERINGS AND UNREST

Large scale public gatherings can, in some cases, lead to disruptions to public order and require response actions to protect life safety and property. This can happen through preplanned actions, as a response to significant social events, or spontaneously during large gatherings. Such disorder may manifest in various forms, including rioting, looting, unauthorized gatherings, and other public disturbances. Large scale public gatherings often present a challenging situation for law enforcement. First amendment rights of free speech and peaceful assembly are foundational to the U.S. Constitution and must be respected, but protests are often a triggering event for more disruptive actions. An understanding of the specific local context for a protest can help to maintain order during events.

Location and Extent

While peaceful protests or civil disturbances can occur anywhere in the County, locations such as local parks, community centers, public squares, political offices, and busy intersections are often the venues for demonstrations. These locations are typically accessible, familiar to residents, and highly visible.

Population density is also a factor that can contribute to the likelihood of civic disturbances. Protests are typically meant to attract as many participants as possible, making them more noticeable and impactful. In population dense areas it is easier to gather a large group of people and the message being shared is more likely to reach decision-makers and bystanders. In St. Lucie County this means that densely populated areas, like Port St. Lucie and Fort Pierce, are more likely to experience protests and civil disturbances than rural areas in the western half of the County.

[315] Strategic Security Corp., "Crime During Natural Disasters," https://www.sscctu.com/blog/crimedisasters/.

EXTENT

There is no single, universally accepted severity scale for civil disturbances. However, various governmental, academic, and private institutions have developed frameworks that consider the scale, intensity, and impact of these events. These tools are utilized for tactical planning, resource allocation, and risk assessment. The following are examples various scales and classifications used by different agencies that can help identify the extent of a civil disturbance.

Developed by security consulting firm TAL Global, the TAL Global Severity Scale is one of many tools used to assess and classify levels of civil unrest and political instability in different regions. This scale helps to coalesce many data points into a clear scale that can be easily communicated and used to inform resource allocation and response strategies. The scale ranges from 1 to 4 in severity, providing a framework for understanding the intensity and potential impact of civil unrest (see Table 115). Although not every local law enforcement agency utilizes the TAL scale, it is based on data that most local law enforcement agencies use to evaluate civil unrest, like property damage, crowd size, fatalities, and injuries.

Table 115: TAL Global Severity Scale for Civil Unrest[316]

Level	Description
Level 1 (Low): Spontaneous and localized	Disruption occurs in a single, contained neighborhood, often without a specific target. This was evident during the 1960s and the 1992 Los Angeles riots, when residents damaged their own neighborhoods.
Level 2 (Moderate): Targeted and localized	The disturbance is geographically contained but has clear, specific targets, such as a police station or a particular business district. At this stage, some degree of planning is involved.
Level 3 (High): Escalated and expanded	The unrest grows beyond a localized, targeted area. It may spread to multiple neighborhoods or wider city districts, potentially due to law enforcement efforts to contain the original disturbance.
Level 4 (Critical): Widespread and systemic	Civil unrest spreads across the country or even internationally, reflecting a deeper, systemic crisis.

Based on historic precedent, the range of anticipated intensities for St. Lucie County, as measured by the TAL Global Severity Scale, is Level 1 (Low) to Level 2 (Moderate).

Emergency services and law enforcement often categorize disturbances by operational zones in the affected area. These zones are classified based on severity and safety conditions (see Table 116).

[316] TALGlobal, "Understanding the 4 Levels of Civil Unrest," https://talglobal.com/knowledge-center/the-4-levels-of-civil-unrest/.

Table 116: Classification by Operation Zones[317]

Classification	Description
Hot	The most unstable and unsafe area, experiencing active riot conditions. Only law enforcement personnel are allowed entry; fire departments and other emergency responders must be escorted.
Warm	An area that is relatively safe for operations but shows indicators of potential instability.
Cold	A designated safe area with little likelihood of unrest, typically used for staging resources.

JURISDICTIONAL IMPACTS

Hazard impacts refer to the adverse effects stemming from natural or human-induced events. These impacts include physical damage, human health concerns, and economic, environmental, and social impacts, as shown in Table 117.

Table 117: Jurisdictions and Hazard Impacts

Jurisdiction	Impacts
St. Lucie County, Port St. Lucie, Fort Pierce, and St. Lucie Village	Extensive physical damage can occur, affecting businesses and public infrastructure. Human health concerns arise from injuries, and long-term mental health issues can impact the community. Economically, local businesses face revenue losses and potential layoffs, while at-risk populations often bear the brunt of these disruptions due to limited access to resources and support. Additionally, social cohesion may weaken, leading to increased tensions and a decline in trust in authorities.

NATIONAL RISK INDEX

The NRI is a valuable tool for assessing various hazards across communities in the United States. However, it does not evaluate civil disturbances as a significant hazard, so they are not included in this particular hazard profile.

Magnitude and Severity

The potential magnitude and severity of a civil disturbance in the county can vary greatly depending on several factors, including underlying social tensions, the nature of the disturbance, and the response of local law enforcement and emergency services. The number of people involved in the disturbance also

[317] Everyone Goes Home, "Civil Unrest: Sample SOP," https://everyonegoeshome.com/wp-content/uploads/2020/06/sample-sop-civil-unrest.pdf.

impacts its magnitude and potential severity. Gatherings of large groups of people can quickly escalate into disruptions, impacting public safety and community well-being.

In terms of magnitude, civil disturbances can range from small violent actions to large riots involving crowds which shut down entire areas of a jurisdiction. The severity of these events could include physical harm to participants and bystanders, property damage to businesses and public infrastructure, and economic repercussions that might affect local businesses and community morale.

Furthermore, the response to these disturbances might drain local resources, including law enforcement and emergency medical services, potentially leading to increased vulnerability among the entire community. The loss of public trust in institutions and fear of future disturbances could also have long-lasting effects on community relations and social cohesion in the county.

Historic Events

St. Lucie County has hosted public demonstrations and large gatherings in recent years. These events have generally remained peaceful; however, large gatherings can create the potential for traffic disruption, public safety incidents, or isolated disorder. Law enforcement agencies continue to plan for crowd management, route control, and coordination during large public events. Examples include demonstrations related to national issues, social justice, immigration enforcement, and government services.

FEMA DISASTER DECLARATIONS

There are currently no FEMA disaster declarations associated with this hazard.

Probability of Future Conditions

While the probability of future civil unrest incidents is difficult to predict, civil disturbances from large gatherings, protests, and in the aftermath of disasters will always remain a possibility in St. Lucie County.

Vulnerability Assessment

St. Lucie County faces a low risk from civil disturbances. While the county has experienced several protests over the past five years, none have risen to the level of civil disturbances. All jurisdictions in the county have well-staffed and trained law enforcement agencies which are capable of planning for and managing large gatherings. For most disturbances, jurisdictions in St. Lucie County have the resources and expertise to respond before violence occurs.

Still, areas that typically attract protests and large gatherings are more vulnerable than others. Civic buildings, like Port St. Lucie's City Hall, Fort Pierce City Hall, The County Court House, and St. Lucie County Administrative Building are all potential gathering places for protests. Police Department headquarters have also been a target for protests in the past. These locations are often chosen for gatherings to express discontent with political decisions but have the potential to devolve into violent disruptions.

Locations where large crowds can gather, including event venues, festivals, and public spaces, can also be vulnerable to civil disruption. This could include the Clover Park baseball stadium and MIDFLORIDA event center in Port St. Lucie, the St. Lucie County Fair, and Gazebo Park in downtown Fort Pierce. These locations regularly host large crowds and should have response plans in case of a civil disturbance.

Vulnerability can also change quickly in St. Lucie depending social, political, and economic tensions in each of the participating jurisdictions. National political events, over which local jurisdictions have no control, can spur protests and riots across the county unexpectedly. It is important to maintain an awareness of larger social and political movements that could have repercussions locally.

IMPACTS ON ASSETS

Table 118 provides a summary of the consequences of civil disturbances. It discusses effects on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, and public confidence.

Table 118: Consequence Analysis

Sector	Consequence
Public	• Roads, bridges, and public transit systems could be blocked or damaged, disrupting traffic and impeding emergency response efforts. • Police stations and fire departments may experience increased demand for services, property damage, and strain on resources during civil disturbances. • City halls and administrative offices might suffer vandalism or damage, affecting government operations and public services. • Public parks could become sites of conflict, leading to physical damage to facilities and potential safety hazards for visitors. • Hospitals and clinics may face challenges in managing increased patient loads or services disruptions due to unrest, impacting public health. • Water and energy facilities could be targeted or disrupted, affecting essential services and leading to public health and safety risks.
First Responders	• Increased demand for law enforcement resources to maintain order, manage crowd control, and respond to incidents of violence or vandalism. • Strain on medical services due to injuries sustained during civil disturbances, leading to increased emergency calls and patient transport. • Potential for higher call volumes for fires set during disturbances, as well as the need for fire safety and rescue operations. • Challenges in maintaining public health and safety during unrest. • Increased need for counseling and support services for individuals affected by the trauma of civil disturbances. • Potential disruption of programs aimed at fostering community relations, which can hinder efforts to address underlying issues behind disturbances. • Strain on coordination resources and communication channels during crisis management efforts in response to civil disturbances.

Sector	Consequence
Continuity of Operations	• Civil disturbances can strain emergency response teams, affecting their ability to respond to accidents, fires, or medical emergencies due to resource allocation toward managing unrest. • Increased civil unrest can lead to higher demand for police presence, diverting resources from regular community policing and increasing the potential for conflict. • Hospitals and clinics may become overwhelmed with injuries from disturbances, impacting their ability to provide routine healthcare services and emergency care. • Civil disturbances can disrupt road access and public transportation, affecting the movement of emergency services, goods, and personnel in the county. • Disturbances can damage infrastructure, leading to communication outages that hinder coordination between agencies and the dissemination of critical information to the public. • Local businesses may suffer losses due to property damage or decreased customer traffic, affecting the economic stability of the community.
Property, Facility, and Infrastructure	• Libraries, community centers, and government offices may sustain physical damage, disrupting services and public access. • Police stations may be targeted, leading to damage and reduced law enforcement capacity, which may affect community safety. • Fire stations and ambulance services may experience operational disruptions, impairing their ability to respond effectively to emergencies. • Roads and public transportation systems may be obstructed or damaged, making it challenging for residents to travel and access essential services. • Businesses may face vandalism or looting, which can lead to economic instability for local economies and job losses. • Homes may be damaged or destroyed, resulting in the displacement of residents and a need for shelter and support services.
Environment	• Disturbances can damage local flora through vandalism or unregulated access, which can lead to habitat loss for wildlife and a decrease in biodiversity. • Increased traffic, fires, and other activities associated with civil disturbances can lead to higher levels of air pollution, adversely affecting the health of residents and local ecosystems. • Unauthorized gatherings and movement can contribute to soil erosion and compaction in sensitive areas, impacting agricultural productivity and natural habitats. • Disturbances may result in damage to local cultural, historical, and archeological sites, which can have long-term effects on community heritage and identity. • Public parks and natural reserves may experience degradation from human activity during disturbances, impacting recreational opportunities and community well-being.

Sector	Consequence
Economic Conditions	• Civil disturbances can lead to property damage and looting, resulting in financial losses for local shops and restaurants. This can affect their ability to operate and employ staff. • St. Lucie County relies on tourism, and civil unrest can deter visitors, impacting hotel occupancy and related businesses such as tours and attractions. • Disturbances can create a perception of insecurity, leading to decreased property values and a slowdown in real estate transactions. • Budget reallocations may occur to address unrest and security concerns, leading to reduced funding for essential public services and infrastructure projects. • Increased risk of civil disturbances can lead to higher insurance premiums for businesses and homeowners, straining their financial resources.
Public Confidence	• Civil disturbances can lead to a breakdown in community trust in law enforcement agencies if perceived as ineffective or heavy-handed in managing situations. • Civil unrest can create divisions among community members, fostering mistrust and tension between different demographic groups, affecting social harmony. • Businesses may suffer from vandalism or closures during disturbances, impacting the local economy and leading to job losses and decreases in business confidence. • Civil disturbances can strain local resources and emergency services, reducing their effectiveness in responding to community needs. • Ongoing disturbances can challenge the legitimacy and effectiveness of local governance, impacting public confidence in governmental institutions. • Increases in civil disturbances can lead to heightened perceptions of insecurity and danger in the community, affecting residents' quality of life and willingness to engage in public activities.

IMPACT ON COMMUNITY LIFELINES

FEMA's community lifelines are shown in Figure 87. Civil disturbances pose a threat to these lifelines in the ways listed below.

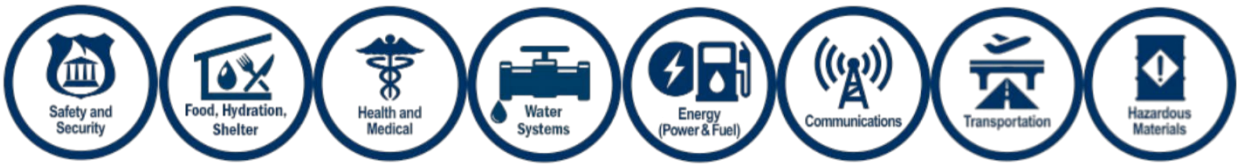


Figure 87: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** Civil unrest can strain law enforcement resources, making it difficult to maintain public order and ensure safety for residents. As violence and unrest escalate, crime rates may rise,

exposing communities to greater risks. This environment creates a climate of fear, where residents may feel vulnerable and unsafe in their own neighborhoods.

- **Health and Medical:** Civil disturbances can put pressure on local healthcare facilities, limiting access to medical services and disrupting the supply of vital medications and resources. This strain on the healthcare system makes it challenging to respond effectively to both urgent medical emergencies and routine patient care.
- **Transportation:** Protests and unrest can lead to traffic jams or unsafe road conditions, complicating transportation for emergency services and everyday commuters. This disruption not only hampers the movement of essential services but also affects the delivery of goods, causing further strain on local resources. Maintaining reliable transportation is critical for sustaining community functions during times of crisis.
- **Communications:** Damage to the communications infrastructure can severely impact the flow of information during civil unrest, limiting access to emergency alerts and updates. This lack of communication can hinder effective responses to crises and leave residents uninformed about safety measures and available resources. Ensuring that communication lines remain open is important for community safety.

IMPACT DUE TO CHANGES IN DEVELOPMENT

St. Lucie County has seen moderate development and population growth in recent years, which can impact social dynamics, including civil disturbances. Population growth and increased activity in commercial corridors can increase the frequency of large gatherings and special events. Larger crowds may require additional planning related to traffic control, public safety staffing, communications, and continuity of operations. As more people settle in the area and as the community continues to address infrastructure and social issues, the potential for civil disturbances may increase.

IMPACTS ON POPULATIONS OF FOCUS

In the county, civil disturbances could pose risks to various at-risk populations, each of which may be impacted in unique ways. Those with access and functional needs including the elderly, children, and people with disabilities, are at heightened risk of impact from civil disturbances. These groups are often less mobile and could be unable to avoid the violence caused by a disturbance. They may also have medical needs that could be exacerbated by the disturbance itself or reaction from law enforcement. It is important that areas where people with access and functional needs may be concentrated, like schools or elder care centers, are identified when responding to a civil disturbance.

Those that rely on transportation routes impacted by civil disturbance in the county can also be adversely affected. Residents that work in person may be unable to access their job due to roads being shut down, public transportation being suspended, or a building being blocked. For households with limited financial resources, missing work due to road closures or transit disruptions can create significant hardship.

In summary, civil disturbances in the county can substantially impact various at-risk populations, including resource-limited families, the elderly, individuals with disabilities, and young children. Addressing these

vulnerabilities requires focused strategies for emergency planning, resource allocation, and community engagement to ensure all residents can effectively navigate and survive these challenges.

Mass Migration

Definition

Mass migration is the rapid movement of a large number of people into, within, or out of a jurisdiction that exceeds the capacity of normal housing, public health, human services, transportation, and public safety systems. Migration may be short-term (days to weeks), medium-term (months), or long-term (years).[318] Triggers can include disasters, prolonged lifeline disruptions, and longer-term relocation from repeatedly flooded areas.

For St. Lucie County, mass migration is envisioned as both receiving and sending scenarios:

- **Receiving/Transit:** The county sits on Florida's I-95 and Florida's Turnpike evacuation spine and can receive large inflows from neighboring coastal counties (and, at times, other states or the Caribbean) when hurricanes threaten or when post-disaster displacement drives people inland. Inflows concentrate demand on shelters, temporary lodging, healthcare, fuel, food supply, schools, and case-management services, and can persist beyond the initial emergency if housing in origin areas is damaged or deemed unsafe.
- **Sending:** Local hazards—most commonly tropical cyclones and associated wind/surge/flood damage, or extended lifeline disruptions—can prompt significant out-migration from barrier-island areas and low-lying neighborhoods to higher ground in the county or outside the region.
- **Managed or Planned Relocation:** Over longer planning horizons, repetitive flooding in low-lying areas may contribute to gradual relocation. Long-term relocation planning requires interagency coordination, funding, and receiving-area capacity.
- **International Migration:** Florida's location adjacent to several countries in the Caribbean basin makes it a primary entry point for numerous migrants seeking to enter the country. A significant influx of international migrants could disrupt the normal operations of a local community, leading to substantial financial costs. International migration impacts are primarily managed at the federal level. Local impacts, if any, would center on short-term humanitarian support and coordination.

Location and Extent

Mass migration affecting St. Lucie County can originate outside the county (e.g., hurricane evacuations from South Florida or the Gulf Coast; post-disaster displacement from the Caribbean), in the county (relocation from barrier-island and other low-lying coastal areas to inland neighborhoods), or internationally (e.g., migrants from Haiti or Cuba). Because St. Lucie sits on Florida's I-95 and Florida's

[318] Florida State Hazard Mitigation Plan, "Mass Migration," 2023, https://flshmp-floridadisaster.hub.arcgis.com/pages/mass-migration.

Turnpike evacuation spine—with U.S. Highway 1 (U.S. 1), State Road 70 (SR 70)/Okeechobee Rd, SR 68/Orange Ave-Indrio Rd, and State Road A1A providing coastal access—large flows funnel through the same corridors that serve daily travel. Two causeways (Seaway Dr./South Causeway and North Causeway) connect Hutchinson Island across the Indian River Lagoon; during coastal evacuations or post-storm displacement, these bridges concentrate movements between the barrier island and the mainland. Additional receiving/transit nodes include the Port of Fort Pierce (relief logistics) and Treasure Coast International Airport (general aviation/medical lift). Lodging clusters along I-95/Turnpike interchanges, U.S. 1, and the barrier island are typical first points of refuge before longer-term placement.

Illegal migrants could access the county from the Atlantic Ocean and could land anywhere along St. Lucie's coastline, likely somewhere on Hutchinson Island. Overall, St. Lucie has 21 miles of coastline accessible from the Atlantic.[319]

EXTENT

The scale of a mass-migration incident is defined by how many people arrive or relocate, how quickly, and how long they remain. Credible patterns include:

- **Short-Term Inflow (days to weeks):** Pre-event hurricane evacuations or immediate post-storm displacement from neighboring counties; demands center on shelter/mass care, lodging, fuel/food, and traffic management.
- **Medium-Term Displacement (weeks to months):** Residents from heavily damaged coastal areas shelter with family/friends or in temporary housing; governments and nongovernmental organizations (NGOs) support case management, school enrollment, and healthcare access.
- **Longer-Term Relocation (months to years):** Gradual in-migration linked to repetitive flooding/sea-level rise—through managed relocation (voluntary buyouts/elevations plus relocation) or unmanaged relocation (market-driven moves when housing becomes harder to insure/finance). Impacts shift to housing availability, infrastructure capacity, employment, and receiving-community services; coastal areas with chronic flooding can experience slowing home-price appreciation or even depreciation, higher insurance premiums/deductibles, policy nonrenewals, and tighter lending—factors that accelerate household decisions to move inland.

The extent of illegal mass migration depends on the how widely dispersed migrants are once they land in St. Lucie County. If there is just one boat carrying migrants, the extent is relatively small and the situation will be easier to manage. If there are multiple boats spread across the coastline, the extent is larger and harder to control.

[319] St. Lucie County, "Facts and Stats," 2025, https://www.stlucieco.gov/government/facts-stats.

JURISDICTIONAL IMPACTS

Hazard impacts refer to the adverse effects stemming from natural or human-induced events. These impacts include physical damage, human health concerns, and economic, environmental, and social impacts, as shown in Table 119.

Table 119: Impacts of Mass Migration, by Jurisdiction

Participant	Impacts
St. Lucie County	Mass migration into St. Lucie County could overwhelm social services, health, and public safety resources. This could mean increased costs for the County and potentially reduced ability to provide services to residents. A significant influx of people could also increase housing pressures, driving up prices for renters and competition for homes.
City of Port St. Lucie	As the largest population center, Port St. Lucie faces the greatest demand for shelter, social services, and schools for migrants. A large influx of migrants in the short term could stress the ability of the City to provide housing and necessary support for them. If, for example, migrants are coming due to a disaster
City of Fort Pierce	Fort Pierce functions as a multimodal hub with downtown services, the Port of Fort Pierce, and the causeways to Hutchinson Island.
Town of St. Lucie Village	This small, primarily residential community along the Indian River Lagoon has limited governmental capacity and few public facilities to support migrants. Even a relatively small number of migrants could disrupt the normal functioning of services, but it is also an unlikely place for migrants end up in St. Lucie County. Overall, the impacts to St. Lucie Village would likely be negligible.

NATIONAL RISK INDEX

The National Risk Index is a valuable tool for assessing various hazards across communities in the United States. However, it does not evaluate mass migration as one of its 18 specified hazards.

Magnitude and Severity

MAGNITUDE

Unlike hazards with fixed physical scales, the "size" of a mass-migration incident is best expressed by how many people move, how fast they arrive or depart, how long they remain displaced, and which systems they stress (housing, schools, health, human services, transportation). For St. Lucie County, situated on the I-95/Florida's Turnpike spine and linked to the Indian River Lagoon via two causeways, magnitude must consider both receiving/transit inflows (from nearby coastal counties or the Caribbean) and internal relocations from barrier-island and lagoon-front neighborhoods to inland areas during storm seasons and, over the long term, as sea-level rise and repetitive flooding intensify. Table 120 shows migration levels and impacts.

Table 120: Planning Scale for Migration Magnitude

Level	People Displaced/ Arriving	Rate/ Duration	Typical Geographic Pattern	Representative System Signals
Level 1: Surge/ Transient	Less than 0.3% of county population (fewer than 1,000 people)	Rapid inflow over 1–7 days; stay less than weeks	Hotel clusters near interchanges; short shelter use	Hotel occupancy spike; limited shelter activation; traffic control at interchanges/ causeways
Level 2: Short-Term Displacement	0.3–1% (between 1,000–3,200 people)	1–4 weeks	Wider distribution across rentals/with family; inland neighborhoods receive evacuees	Multiple shelters; school liaison/case management; temporary clinic demand increases
Level 3: Medium-Term Relocation	1–3% (between 3,200–9,500 people)	1–6 months	Noticeable shifts from coastal/ lagoon-front areas to inland Port St. Lucie/Fort Pierce; some out-migration beyond the county	Sustained shelter alternatives/ temporary housing; school enrollment shifts; rental market tightens; human-services surge
Level 4: Long-Term/Chronic	Less than 3% (more than 9,500 people), cumulative	Greater than 6 months to years	Managed or unmanaged movement off barrier-island/low-lying tracts; inland growth areas absorb long-term	Housing availability and infrastructure capacity become limiting; enduring changes to tax base, service mix, and labor markets

For sending scenarios (out-migration from Hutchinson Island and low-elevation lagoon-front areas), the same levels apply using households at risk rather than arrivals; evacuation orders, repetitive loss designations, and insurance/lending constraints are common triggers.

For illegal immigration, the magnitude largely depends on the number of migrants that arrive. A small number of migrants (less than 10) would be a relatively small burden on St. Lucie County while large number (over 100) could quickly overwhelm the capacity of the County to respond.

Key magnitude indicators to track in real time: Daily arrivals to shelters/lodging; hotel occupancy; requests for disaster case management; school enrollment changes; Emergency Medical Services/clinic visits linked to displacement; applications for housing assistance; and sustained utilization of cooling/charging centers following power-related displacement.

SEVERITY

Severity reflects humanitarian need and system strain, not only headcounts. It grows with duration, vulnerability of affected populations, season (heat/hurricane), and receiving-area capacity (vacancy rates, clinic capacity, school seats, case management bandwidth). Over longer horizons, sea-level rise and repetitive tidal flooding increase the likelihood of coordinated relocation (voluntary buyouts, redevelopment constraints) and overall changes incentivizing individual relocation (market-driven moves as insurance premiums, deductibles, or nonrenewals rise and home-value appreciation slows or reverses in the most exposed waterfront tracts). Table 121 outlines severity levels and their consequences.

Table 121: Consequence Scale for Severity

Level	Duration Class	Primary Needs and Cascading Effects	Operational Posture and Triggers
Level 1	**Short (less than 2 weeks)**	Lodging/shelter, traffic management, fuel/food; limited school/health impacts	Emergency Operations Center (EOC) partial activation; open reception/shelter sites; multilingual risk comms; monitor hotel capacity and causeways
Level 2	**Medium (2–12 weeks)**	Temporary housing placements; school enrollment surges; elevated behavioral health needs; case management grows	Full EOC activation; state/Voluntary Organizations Active in Disaster (VOAD) coordination; points of distribution (PODs) as needed; rental assistance pipelines; expand clinic/mental health surge
Level 3	**Long (3–24 months)**	Persistent housing tightness; rent pressure in receiving areas; workforce/small business disruption; infrastructure and utility loads shift inland	Temporary housing program; zoning/permits fast-track for infill; utility capacity checks; sustained NGO/federal support; relocation assistance and tenant protections
Level 4	**Chronic (over 24 months)**	Structural changes in tax base; market softening and slower appreciation or depreciation in chronically flooded coastal/ lagoon-front micromarkets; demand for schools/clinics permanently rebalanced inland	Integrate spatial zoning and location tools (buyouts, easements, transfer of development rights); capital planning retargets inland corridors; long-term housing and economic-recovery strategies

Similar to internal migration, the severity of international illegal migration depends on humanitarian need and system strain. The amount of support migrants need (e.g., medical care, police protection) and the response time from State or Federal agencies will change the severity of migration on the county. If migrants have high needs and it takes days for State or Federal agencies to respond, the County resources will be strained. If migrants have low needs and the State and Federal agencies respond immediately, the county will be mostly unimpacted.

SEVERITY MODIFIERS (ST. LUCIE COUNTY-SPECIFIC)

- **Housing Capacity:** Low vacancy/limited-affordable stock increases severity; inland City of Port St. Lucie City/Fort Pierce neighborhoods become pressure points during high-severity phases (Levels 3–4.)
- **Insurance/Finance:** Rising coastal premiums/deductibles and policy nonrenewals accelerate relocation from vulnerable areas; appraisal uncertainty and lender conditions can dampen sales and slow appreciation in flood-prone micromarkets, compounding severity.
- **Lifelines:** If migration coincides with power systems failure or post-storm lifeline outages, demand for cooling/charging centers, refrigeration for medications, and medical transport rises sharply.
- **Populations of Focus:** Older adults, people with disabilities, low-income renters, and households with limited English proficiency experience higher per-capita need for sheltering, case management, and healthcare access, raising operational complexity even at lower magnitude levels.
- **Chokepoints:** The Seaway (South) and North Causeway bridges govern barrier-island flows; constrained throughput increases operational severity during evacuations and reentry.

Historic Events

Mass migration affecting St. Lucie County can occur in three forms:

- Acute, disaster-induced internal displacement, typically linked to federally declared hurricanes or tropical storms
- Chronic, long-term migration flows, such as the decades-long population shift from the Northeast and Midwest into Florida and the Sun Belt, which has permanently reshaped the county's demographic, economic, and infrastructural landscape
- Acute international migration from refugees or general immigrants from the Caribbean, Central, or South America.

Since 2021 there have been several examples of migrants entering St. Lucie County illegally:

- August 6, 2021: Homeland Security Investigations officers discovered 28 undocumented migrants working at a company's headquarters in St. Lucie County.[320]
- July 22, 2025: St. Lucie County Sheriff's Office detained 10 undocumented migrants entering a St. Lucie County waterway. The migrants were from several Caribbean and South American countries.[321]

[320] United States Attorney's Office-Southern District of Florida, "St. Lucie County company and woman sentenced for conspiring to harbor aliens by means of employment," 2025, https://www.justice.gov/usao-sdfl/pr/st-lucie-county-company-and-woman-sentenced-conspiring-harbor-aliens-means-employment.
[321] TCPalm, "10 in custody in case involving possible undocumented immigrants 'trying to enter our waterways'"2025, https://www.tcpalm.com/videos/news/2025/07/22/10-in-custody-in-case-involving-possible-illegal-aliens-trying-to-enter-our-waterways/85329287007/.

- August 30, 2025: Local law enforcement and Drug Enforcement Agency officers intercepted three boats as they approached Fort Pierce Inlet. The boats were returning from the Bahamas and carried 35 potentially undocumented migrants from China and the Bahamas.[322]

In the 1980s and 1990s there were several instances of large-scale Cuban and Haitian immigration in Florida, most notably the Mariel Boatlift in which over 165,000 Cuban and Haitian immigrants arrived in Florida.[323] These migrants landed in counties further south than St. Lucie, and many settled in the Miami area.

The county has served both as a receiving area for evacuees during federally declared disasters and as a destination for long-term domestic migration driven by economic opportunity, climate preference, and housing availability. FEMA disaster declarations below illustrate acute population movements, while the broader migration narrative contextualizes how sustained in-migration compounds exposure and vulnerability to future hazards.

FEMA DISASTER DECLARATIONS

Table 122 lists all FEMA disaster declarations related to mass migration in St. Lucie County.[324]

Table 122: FEMA Declarations and Local Migration Effects

Year	FEMA Action	Event	Mass Migration Significance in St. Lucie County
2004	DR-1539-FL (Hurricane Frances)	Frances made landfall near Sewall's Point as a Category 2 hurricane, crossing directly over St. Lucie County.	Widespread countywide evacuations, over 15,000 homes damaged, and power outages lasting weeks displaced thousands. Local shelters housed over 2,500 evacuees. Many sought temporary housing inland or outside the region.
2004	DR-1545-FL (Hurricane Jeanne)	Struck the same area only three weeks after Frances.	Re-evacuation of coastal neighborhoods; overlapping impacts prolonged months of displacement. FEMA provided hundreds of temporary housing units; hotels along I-95 remained at capacity for weeks.
2005	DR-1609-FL (Hurricane Wilma)	Statewide power outages and housing loss prompted secondary displacement.	St. Lucie hosted evacuees from western counties and sheltered over 800 residents. Temporary relocations continued during power restoration.

[322] Hometown News, "40 people arrested in Fort Pierce for smuggling narcotics, illegal immigrants into Florida," 2025, https://www.hometownnewstc.com/crime/st_lucie/40-people-arrested-in-fort-pierce-for-smuggling-narcotics-illegal-immigrants-into-florida/article_205bd656-8a46-53e2-ad84-dda7bb9aa00c.html
[323] Florida State Hazard Mitigation Plan, "Mass Migration," 2023, https://flshmp-floridadisaster.hub.arcgis.com/pages/mass-migration.
[324] Federal Emergency Management Agency, "Disasters and Other Declarations," 2025, https://www.fema.gov/disaster/declarations.

Year	FEMA Action	Event	Mass Migration Significance in St. Lucie County
2011	DR-4017-FL (Hurricane Irene)	Though Irene's center stayed offshore, coastal surge and winds led to voluntary evacuations.	Demonstrated the county's continuing role as a receiving jurisdiction for adjacent coastal evacuees.
2016	DR-4280-FL (Hurricane Matthew)	Paralleled Florida's east coast as a Category 3 hurricane.	Mandatory evacuations for Hutchinson Island displaced nearly 10,000 residents; inland shelters and hotels filled quickly. Verified St. Lucie's reliance on causeways as evacuation chokepoints.
2017	DR-4337-FL (Hurricane Irma)	Largest evacuation in Florida's history: ≈6 million residents statewide.	St. Lucie opened multiple shelters and hosted evacuees from southern and western Florida. Post-storm flooding displaced local households for weeks.
2019	DR-4468-FL (Hurricane Dorian)	Offshore track prompted precautionary evacuations along Florida's east coast.	Three shelters opened, housing over 570 residents; inland location made St. Lucie a regional refuge and staging area.
2022	DR-4673-FL (Hurricane Ian)	Gulf Coast landfall but statewide emergency declaration.	St. Lucie served as a support and hosting area for evacuees transiting eastward.
2022	DR-4680-FL (Hurricane Nicole)	Landfall south of Vero Beach; high tides and surge along Treasure Coast.	Included in 51-county declaration; local mass care and traffic management coordinated with state partners.
2023	DR-4734-FL (Hurricane Idalia)	Major Gulf Coast event; statewide evacuations influenced East Coast corridors.	St. Lucie acted as a transit and receiving node, accommodating evacuees and logistics operations.

OBSERVED PATTERNS AND LONG-TERM MIGRATION CONTEXT

- **Repetitive Evacuation History:** The 2004 hurricane season (Hurricanes Frances and Jeanne) remains the most significant acute displacement episode, causing tens of thousands of temporary relocations and hundreds of FEMA housing placements.
- **Inland Refuge Role:** St. Lucie's inland, higher-elevation areas consistently provide refuge for evacuees from barrier islands and adjacent coastal counties. Hotel clusters near I-95 and the Turnpike serve as recurring mass care corridors.
- **Infrastructure and Access:** Every major event underscores the centrality of U.S. 1, I-95, and Indian River Lagoon causeways for evacuation and reentry management. These corridors experience severe congestion during multi-county evacuations.

- **Economic and Housing Impacts:** Following the 2004–2005 hurricane seasons, housing price growth temporarily stalled and insurance premiums spiked. Similar, though less severe, effects followed Hurricane Irma (2017), when statewide claims increased by over $11 billion. These pressures influence longer-term migration, encouraging some coastal residents to relocate inland or out of state.
- **Future Mobility:** Over future planning horizons, increased coastal flooding in low-lying areas may influence gradual relocation patterns and increase housing demand in inland receiving areas.

The Broader "Mass Migration" to Florida Beyond episodic disaster movements, Florida's population story exemplifies one of the largest internal migrations in modern U.S. history. Since the 1950s, the state has transitioned from rural and agricultural to the nation's third-most-populous, driven largely by northern in-migration:

- Between 1970 and 2020, Florida's population grew from 6.8 million to 21.5 million, with over 80% of net migration originating from the Northeast and Midwest.
- St. Lucie County reflects this trend directly: Population expanded from 87,000 in 1990 to around 322,000 in 2020, a 270% increase, fueled by retirees and remote-work households seeking affordable coastal access and lower taxes.
- This long-term demographic inflow constitutes a macro-scale migration event, altering the built environment, infrastructure demands, and hazard exposure across the Treasure Coast.
- The same factors that attracted newcomers, coastal amenities and warm climate, now heighten vulnerability to storm surge, sea-level rise, and insurance volatility,

Probability of Future Conditions

The probability of mass illegal immigration remains low in St. Lucie County.[325] Historically, migrants that have entered Florida from the Caribbean by boat have done so in counties further to the south. Tracking technology used by the US Coast Guard has continued to improve and migrants are more likely to be intercepted before landing than to reach the St. Lucie coastline. While some factors might push more people to try and migrate to the U.S., like increasingly severe hurricanes in the Caribbean and political instability in Haiti, it is unlikely those people will end up in St. Lucie County.

Over the next five years, the probability of short-term displacement from hurricanes and tropical storms in St. Lucie County remains high, while the likelihood of medium- to long-term sea level rise and flooding-related relocation from lagoon-front and barrier-island areas is low to moderate but rising. Over a 20- to 30-year horizon, projected sea-level rise and repetitive flooding are expected to make both coordinated (planned, programmatic) and individual (market-driven) relocation increasingly consequential. These shifts will shape population distribution, property values, tax base dynamics, and insurance affordability across all four jurisdictions: St. Lucie County, the City of Port St. Lucie, the City of Fort Pierce, and the Town of St. Lucie Village.

[325] Florida State Hazard Mitigation Plan, "Mass Migration, " 2023, https://flshmp-floridadisaster.hub.arcgis.com/pages/mass-migration.

In the near term, most population movements will continue to arise from storm-driven evacuations. Major hurricanes and tropical storms will displace residents for periods ranging from days to weeks, depending on the extent of damage and restoration timelines. However, chronic flooding and sea-level rise will increasingly influence population patterns over coming decades. Higher high tides, storm-surge stacking, and elevated groundwater levels will increase the frequency of nuisance flooding and degrade septic and drainage performance, particularly along Hutchinson Island and other low-elevation neighborhoods fronting the Indian River Lagoon. These same areas, long prized for their waterfront amenities, will face growing functional vulnerability as routine flooding affects access, safety, and property maintenance costs.

Insurance and financing pressures will accelerate these shifts. Rising premiums, nonrenewals, higher deductibles, and stricter lending requirements, especially for flood and wind coverage, will influence household and business decisions about whether to remain in high-risk zones. Where carrying costs outpace income or perceived safety declines, property markets may stagnate, producing slower appreciation or even depreciation. Over time, this dynamic will create a spatial divide: Inland neighborhoods will retain or increase value, while coastal micromarkets see flattening or declining prices.

Inland areas, particularly Port St. Lucie and upland portions of Fort Pierce, are poised to absorb population growth both from continued in-migration and the gradual inland shift of coastal residents. If housing supply lags, these areas may experience higher rents, elevated home prices, and pressure on utilities, transportation, and schools. Over the long term, this pattern will resemble a slow redistribution of population rather than an abrupt exodus, yet it will steadily reshape service demands and infrastructure investment priorities throughout the county.

The ranges in Table 123 reflect southeast Florida planning magnitudes, aligned with NOAA and regional sea-level guidance.

Table 123: Planning Horizon and Implications

Horizon	SSP4.5[326] (Moderate Scenario)	Implications for People, Property, Markets, and Revenue
2030	4–6 inches of sea-level rise (SLR)	More frequent sunny-day flooding in the lowest coastal frontages; early signals of insurance repricing (higher deductibles, coverage limits). Housing appreciation begins to lag in repeatedly flooded micromarkets. Countywide tax base remains stable, but localized fiscal stress emerges.
2050	10–15 inches SLR	Regular nuisance flooding on Hutchinson Island and select lagoon-front blocks; National Flood Insurance Program (NFIP) and private-market premiums rise, and lender conditions tighten. Property values

[326] SSP4.5 (Shared Socioeconomic Pathway) refers to an intermediate scenario from the IPCC which assumes intermediate greenhouse gas emissions. It is commonly used in regional planning to estimate future sea-level rise.

Horizon	SSP4.5[326] (Moderate Scenario)	Implications for People, Property, Markets, and Revenue
		in affected zones flatten; inland demand and prices accelerate. Tax base shifts inland; coastal maintenance costs rise.
2070	16–24 inches SLR	Tidal flooding windows lengthen; septic performance and drainage degrade in low-lying tracts. Voluntary buyouts, easements, and elevation retrofits become cost-effective. Insurance availability deteriorates; some waterfront markets experience persistent discounts. Coordinated programs to disincentivize development in vulnerable areas, if funded, can stabilize markets and preserve value.
2100	24–40 inches SLR	Chronic inundation of lowest-lying frontage drives significant population redistribution. Some waterfront neighborhoods transition toward open space or nature-based buffers. Coastal property values decline, shifting tax base inland; service delivery costs increase unless offset by policy adjustments.

Even under the moderate SSP4.5 scenario, sea-level rise will amplify drainage limitations and compound surge effects during storms. Small increments in sea level can transform occasional flooding into regular tidal inundation. By mid-century, many lagoon-front parcels may flood during seasonal high tides; by 2070, under the high-emissions scenario, chronic flooding and infrastructure deterioration could render some coastal properties economically unviable. Table 124 shows how risk evolves across planning horizons.

Table 124: Evolution of Risk Across Planning Horizons

Horizon	Short-Term Evacuation and Displacement (Days–Weeks)	Medium-Term Displacement (Weeks–Months)	Long-Term Relocation (Months–Years)
0–5 years	High – annual hurricane season displacement	Moderate – storm-specific, event-driven	Low–Moderate – early market signals in most flood-prone zones
6–20 years	High – recurring storms and outages	Moderate–High – more frequent recovery delays	Moderate under SSP4.5; Moderate-High under higher scenarios for select lagoon-front or barrier-island areas
21–30 years	High	High – frequent, costlier recovery periods	High – reduction of property values in repeatedly flooded neighborhoods; relocation becomes fiscally competitive with protection under higher scenarios

For residents, repeated flooding, road closures, and utility interruptions will gradually normalize, prompting preemptive moves inland, especially among older adults, lower-income households, and those

reliant on electricity-powered medical equipment. Property owners in low-lying areas will face mounting costs to elevate or retrofit structures and drainage, while those in inland areas will see growing appreciation pressures and heightened infrastructure demand.

Insurance affordability is poised to be the key accelerant of migration. As wind and flood claims rise, both NFIP and private insurers will continue to increase rates and deductibles. Many coastal homeowners already face premium escalations exceeding 25% annually under NFIP risk-rating reform, while private carriers selectively withdraw from the market. This trend will widen the affordability gap between coastal and inland markets, potentially creating a bifurcated housing system where lower-risk inland properties continue appreciating and flood-prone areas stagnate or depreciate.

Fiscal and tax-base impacts will mirror these shifts. As property values erode along vulnerable shorelines and repetitive-loss properties multiply, the ad valorem tax base will shift inland. Meanwhile, service costs, such as drainage maintenance, seawall repair, and emergency response, will remain disproportionately high in coastal neighborhoods, leading to long-term budget imbalances unless mitigated by adaptation funding or cost-sharing programs.

Vulnerability Assessment

St. Lucie County's vulnerability to mass migration manifests in three ways: (1) acute, disaster-driven surges of evacuees during major hurricanes and post-storm displacement, (2) chronic, climate-driven relocation from barrier-island and low-lying Indian River Lagoon neighborhoods toward higher-elevation inland areas over years to decades, and (3) acute international migration from refugees or general immigrants from the Caribbean, Central, or South America. Because the county sits on the I-95/Florida Turnpike spine with key east–west connectors (SR 70/Okeechobee Rd, SR 68/Orange Ave-Indrio Rd) and two causeways (Seaway/South Causeway and North Causeway) that tie Hutchinson Island to the mainland, even modest flows can quickly stress sheltering, traffic, health, and human services. With a 2020 population of around 322,000, short-term surges of a few hundred to a few thousand people (e.g., precautionary evacuations) are operationally significant, while multi-month displacement or longer-term inland shifts reshape housing markets, tax base distribution, and service demand.

Vulnerability to illegal mass migration is relatively low. The county could handle small to medium numbers of migrants with its current medical system and police force. State and Federal resources would likely be available soon after the migrants landed to help support the county and relieve them of the responsibility of caring for and transporting the migrants. In the unlikely scenario that hundreds of migrants land on the coast of St. Lucie County, medical and safety services would likely be stressed to their breaking points, requiring additional resources.

IMPACTS TO ASSETS

Table 125 provides a summary of the consequences of mass migration. It discusses effects on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, and public confidence.

Table 125: Consequence Analysis

Sector	Consequence
Public	Short-term needs apply to both internal migration and international illegal migration and could include shelter, lodging, food, fuel, medications, and information; prolonged displacement elevates behavioral-health needs, school transitions for children, and case-management demand (documents, insurance, benefits). Heat and power disruptions increase risk for older adults and medically dependent residents.
First Responders	Spikes in 911 calls (wellness checks, medical transport, traffic incidents near interchanges/causeways); sustained operations for shelter security and mass care; mutual-aid coordination and staffing for points of distribution (PODs) and reception centers.
Property, Facility, and Infrastructure	Shelters, schools, and community centers operate at or near capacity; water/wastewater loads rise in receiving neighborhoods; traffic operations strained at I-95/Turnpike/U.S.-1 nodes; temporary housing sites require utilities, solid-waste service, and ADA access; ports/airport may support relief logistics.
Environment	Increased solid-waste and debris volumes; potential septic stress in low-lying areas during flood periods; need for temporary sanitation at shelters and staging areas; risk of small spills at fueling or distribution sites during high-tempo operations.
Economic Conditions	Hotels near interchanges fill rapidly; local spending shifts toward essentials; some small businesses lose staff or clientele during prolonged displacement; construction, repair, and human-services sectors see short-term booms; rents and entry-level home prices rise in receiving areas if supply is tight.
Public Confidence	Clear, multilingual messaging on shelter locations, transportation, temporary housing, and assistance programs is critical; confusion over insurance/eligibility erodes trust; transparent data on capacity and reopening timelines stabilizes expectations.

IMPACT ON COMMUNITY LIFELINES

FEMA's community lifelines are shown in Figure 88. Mass migration poses a threat to these lifelines in the ways listed below.

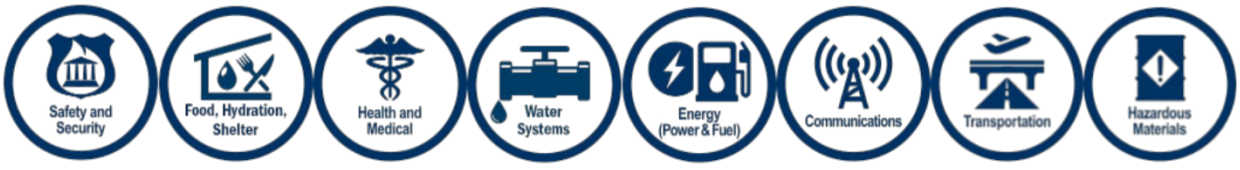


Figure 88: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** Large inflows require perimeter control at shelters and reception hubs, traffic management at interchanges and causeways, and coordinated law-enforcement presence at points of

distribution (PODs). Evacuation/reentry timing and bridge status (Seaway/North Causeway) are pivotal for order and access.

- **Food, Hydration, and Shelter:** Demand concentrates first in hotels near I-95/Turnpike and then in County-managed shelters and faith-based/NGO sites. Medium-term displacement requires temporary housing pathways, school nutrition continuity, and supply chains that can keep groceries and fuel available during peak demand.
- **Health and Medical:** Hospitals, including Lawnwood Regional, HCA Florida St. Lucie, and Cleveland Clinic Tradition, and clinics experience surges from heat illness, injuries, chronic-care interruptions, and stress. Durable medical equipment support (e.g., oxygen concentrators, refrigeration for insulin) and behavioral health services become sustained needs.
- **Water Systems:** Receiving-area neighborhoods see elevated potable demand; wastewater flows increase with shelter occupancy and temporary housing sites. Utilities must monitor pressure/quality, deploy portable sanitation where needed, and coordinate with environmental health for boil-water advisories after flood events.
- **Energy (Power and Fuel):** Higher, localized demand at shelters, hotels, and temporary housing sites increases generator fuel needs; retail fuel availability can tighten during statewide evacuations. Power restoration priorities should reflect shelter grids, hospitals, and major corridor signals.
- **Communications:** Cellular networks may congest during peak movement; redundancy in public warning, such as the Integrated Public Alert and Warning System (IPAWS), short message service (SMS)/email lists, broadcast media, and social platforms, and multilingual materials (English/Spanish/Creole) are essential for wayfinding, aid enrollment, and reunification.
- **Transportation:** I-95, the Turnpike, U.S. 1, SR 70, SR 68, and A1A carry most flows. Traffic management plans, such as hard shoulder use, reversible lanes where applicable, tow/quick-clearance operations, fuel resupply, are crucial. Public transit must be adapted to serve shelters, clinics, and temporary housing clusters.
- **Hazardous Materials:** No systemic release is expected. Credible risks include small spills at fueling depots, maintenance yards, and temporary staging areas. Standard containment, notification, and cleanup protocols apply.

IMPACTS DUE TO CHANGES IN DEVELOPMENT

Planned and ongoing growth, especially in Port St. Lucie and upland Fort Pierce, increases the exposure of receiving areas by concentrating population on existing arterials and utility systems. As sea-level rise and repetitive flooding incrementally reduce desirability or insurability for lagoon-front and barrier-island micromarkets, demand shifts inland, tightening vacancy rates, and elevating rents and entry-level home prices unless new supply comes online. The TVC build-out and other greenfield or infill areas should be planned as receiving neighborhoods with right-sized water/wastewater capacity, multimodal access, and resilient community facilities (shelters/resilience hubs with standby power, solar plus storage). Without supply and infrastructure to match inflows, schools and clinics face sustained crowding, and congestion worsens at I-95/Turnpike interchanges and along U.S. 1. Over time, the ad valorem tax base (i.e., property

taxes based on assessed value) shifts inland while per-capita service costs rise in the most flood-prone coastal tracts, reinforcing the fiscal case for voluntary buyouts, conservation setbacks, and nature-based buffers where protection is not cost-effective.

Changes in development in St. Lucie County do not change the impact of illegal migrants landing in the county.

IMPACTS ON POPULATIONS OF FOCUS

- **Low Income Residents:** Low-income residents in St. Lucie County, who comprise approximately 15% of the population, are particularly vulnerable during mass migration events due to limited resources and access to support services. The stress of displacement can exacerbate existing financial hardships, as they may face job loss during prolonged absences from work. Additionally, the rising costs of housing in receiving areas can lead to increased instability, with many families struggling to find affordable accommodations amid spikes in rental prices during times of high demand.
- **Elderly Population (Fixed Income):** The elderly population in St. Lucie County, which accounts for about 20% of residents, often lives on fixed incomes. This financial constraint limits their ability to prepare for emergencies, such as securing backup power or temporary housing during mass migration events. Furthermore, the need for wellness checks and accessible transportation to shelters becomes critical, as many elderly individuals may struggle with mobility during evacuations.
- **Low Lying Areas:** Residents in low-lying areas of St. Lucie County, particularly those near the Indian River Lagoon, are at heightened risk during mass migration events due to their vulnerability to flooding and storm surge. These areas often experience chronic flooding, which can lead to repeated evacuations during severe weather events. With elevations often less than 10 feet above sea level, these communities may face significant challenges in accessing safe shelter and essential services. The cumulative stress of frequent evacuations can also affect mental health and community cohesion, as residents cope with ongoing instability in their living conditions. These areas are most likely to be impacted by cumulative impacts of increased coastal flooding from sea-level rise and most likely to see reductions in home value appreciation or even reductions, impacting local tax bases and the ability of residents to sell their homes.
- **Substandard Mobile Homes:** Individuals living in substandard mobile homes, which represent a small but significant portion of housing in St. Lucie County, face unique challenges during mass migration events. These structures may not withstand prolonged power outages or severe weather, leaving residents vulnerable to displacement. The combination of inadequate housing quality and limited financial resources can significantly hinder recovery efforts for these residents during and after mass migration incidents.

Terrorism and Sabotage

Definition

Terrorism and sabotage are both tactics that involve the use of violence or disruption to achieve specific political or ideological goals, but they have distinctive characteristics. *Terrorism* is defined as an "activity that (1) involves a violent act or an act dangerous to human life, property, or infrastructure; and (2) appears to be intended to intimidate or coerce a civilian population; to influence the policy of a government by intimidation or coercion; or to affect the conduct of a government by mass destruction, assassination, kidnapping, or hostage-taking."[327]

Terrorism is broken down into two distinct categories:[328]

- **International:** "Violent, criminal acts committed by individuals and/or groups who are inspired by, or associated with, designated foreign terrorist organizations or nations (state-sponsored)." An example is the September 11th attacks, coordinated by the extremist group al-Qaeda, which involved the hijacking of four airplanes. The destruction of the World Trade Center and substantial damage to the Pentagon are both examples of international terrorism.
- **Domestic:** "Violent, criminal acts committed by individuals and/or groups to further ideological goals stemming from domestic influences, such as those of a political, religious, social, racial, or environmental nature." One example of this is the Oklahoma City Bombing, in which Timothy McVeigh and Terry Nichols carried out a truck bombing of the Alfred P. Murrah Federal Building.

Sabotage refers to the "deliberate destruction of property or slowing down of work with the intention of damaging a business or economic system or weakening a government or nation in a time of national emergency."[329] For example, hackers breached the Colonial Pipeline's network, causing the company to shut down operations, which resulted in fuel shortages across the East Coast. This act of sabotage had significant economic impacts.[330]

While both tactics aim to disrupt and draw attention to specific grievances, terrorism typically targets civilians to evoke fear and political change. Sabotage, however, tends to focus more on disrupting logistical or operational capabilities.

For the purposes of the Local Mitigation Strategy, this hazard includes acts of violence, disruption of public services, cyberattacks that degrade or disable essential systems, and intentional damage to infrastructure that could impair community functions. While St. Lucie County has no history of terrorist

[327] U.S. Department of State, "Executive Order 13224," https://www.state.gov/executive-order-13224.
[328] Federal Bureau of Investigation, "Terrorism," https://www.fbi.gov/investigate/terrorism.
[329] Britannica, "Sabotage," https://www.britannica.com/topic/sabotage-subversive-tactic.
[330] Cybersecurity and Infrastructure Security Agency, "The Attack on Colonial Pipeline: What We've Learned and What We've Done Over the Past Two Years," https://www.cisa.gov/news-events/news/attack-colonial-pipeline-what-weve-learned-what-weve-done-over-past-two-years.

attacks, the county recognizes the need to assess potential vulnerabilities and ensure that essential systems remain resilient.

Location and Extent

Terrorism and sabotage can occur in any part of St. Lucie County. As with most communities, potential exposure relates primarily to the presence of critical infrastructure, public gathering spaces, transportation corridors, and facilities that support commercial and maritime activity.

Countywide, certain types of locations may present opportunities for disruption based on their function, not their jurisdiction. These include public venues, government buildings, schools, commercial centers, marinas, waterfront facilities, and transportation nodes. The Port of Fort Pierce, Treasure Coast International Airport, regional utilities, and local maritime facilities operate under state and federal security requirements and represent assets that require coordinated protection, regardless of where they are located.

The St. Lucie Nuclear Power Plant on Hutchinson Island is a federally regulated facility with its own robust security posture. While it is a critical national asset, it does not create disproportionate terrorism risk for any single city or community in the county.

Overall, the exposure to terrorism and sabotage remains generally consistent across St. Lucie County. Risk is driven more by the nature of the asset or activity rather than by municipal boundaries or population size.

EXTENT

Terrorism: In 2011, the Department of Homeland Security (DHS) created the National Terrorism Advisory System (NTAS) to replace the color-coded alerts of the Homeland Security Advisory System.[331] The NTAS was established to communicate information about terrorist threats to the public and law enforcement more effectively, providing the American public with timely and transparent updates.

The NTAS consists of two main types of alerts: Elevated and Imminent (see Table 126).[332]

Table 126: Terrorism Scale[333]

Alert Type	Description
Elevated	Indicates a credible threat of terrorism or a plot that is likely to occur
Imminent	Warns of a specific and credible threat that is expected to happen soon

[331] U.S. Department of Homeland Security, "National Terrorism Advisory System," https://www.dhs.gov/national-terrorism-advisory-system.
[332] State of West Virginia, "Update to the National Terrorism Advisory System," https://emd.wv.gov/About/News/Documents/NTAS%20Bulletin%20Fact%20Sheet.pdf.
[333] State of West Virginia, "Update to the National Terrorism Advisory System," https://emd.wv.gov/About/News/Documents/NTAS%20Bulletin%20Fact%20Sheet.pdf.

In addition to these alerts, the NTAS issues bulletins that provide detailed information on potential threats or trends in terrorism. These bulletins inform the public and enhance situational awareness without necessarily indicating an impending attack.

Cybersecurity Sabotage: The Cyber Incident Severity Schema is a framework adopted by the U.S. Federal Cybersecurity Centers, in collaboration with various departments and agencies focused on cybersecurity and cyber operations. This schema serves to standardize the evaluation and assessment of cyber incidents that impact the homeland, U.S. capabilities, or U.S. interests.

Key components of the schema include the following:[334]

- **Severity Assessment:** This component establishes a standard method for determining how serious a cyber incident is, helping agencies prioritize response efforts.
- **Response Urgency:** This categorizes the urgency required for responding to different types of incidents to ensure timely mitigation.
- **Coordination Seniority Level:** This component defines the seniority level necessary for coordinating response efforts, ensuring that appropriate personnel are involved based on the incident's severity.
- **Investment Level:** This outlines the level of resources and investment required for effective response, guiding agencies in allocating funding and personnel.

To support these components, the Cyber Incident Severity Schema also defines a six-level scale for classifying the intensity of cyber incidents (see Table 127).

Table 127: Levels of Cybersecurity Severity[335]

Level	Description
5 – Emergency (black)	Poses an imminent threat to the provision of wide-scale critical infrastructure services, national government stability, or to the lives of U.S. persons.
4 – Severe (red)	Likely to result in a significant impact to public health or safety, national security, economic security, foreign relations, or civil liberties.
3 – High (orange)	Likely to result in a demonstrable impact to public health or safety, national security, economic security, foreign relations, civil liberties, or public confidence.
2 – Medium (yellow)	May impact public health or safety, national security, economic security, foreign relations, civil liberties, or public confidence.

[334] The White House, *Cyber Security Severity Schema*, https://obamawhitehouse.archives.gov/sites/whitehouse.gov/files/documents/Cyber%2BIncident%2BSeverity%2BSchema.pdf.
[335] The White House, *Cyber Security Severity Schema*, https://obamawhitehouse.archives.gov/sites/whitehouse.gov/files/documents/Cyber%2BIncident%2BSeverity%2BSchema.pdf.

Level	Description
1 – Low (green)	Unlikely to impact public health or safety, national security, economic security, foreign relations, civil liberties, or public confidence.
0 – Baseline (white)	Unsubstantiated or inconsequential event.

Therefore, the range of intensities spans from Emergency (5) to Baseline (0).

JURISDICTIONAL IMPACTS

Hazard impacts refer to the adverse effects stemming from natural or human-induced events. These impacts include physical damage, human health concerns, and economic, environmental, and social impacts, as shown in Table 128.

Table 128: Jurisdictions and Hazard Impacts

Participant	Impacts
St. Lucie County, Fort Pierce, Port St. Lucie, and the Village of St. Lucie	The impacts would be similar across all jurisdictions. Terrorism and sabotage could lead to physical damage to infrastructure, including public buildings, transportation systems, and utilities, disrupting daily life. Human health concerns may arise from exposure to hazardous materials or psychological stress on the community, leading to increased anxiety and fear. Substantial economic losses could stem from business interruptions, heightened security costs, and potential declines in tourism. Environmental damage may occur if attacks involve chemicals or other pollutants, resulting in long-term degradation of local ecosystems and reduced community well-being. Cyberattacks can shut down or corrupt digital systems that jurisdictions rely on to function. These attacks can interrupt important services to residents and integral communication systems.

NATIONAL RISK INDEX

The NRI is a valuable tool for assessing various hazards across communities in the United States; however, it does not evaluate terrorism or sabotage as a significant hazard and will therefore not be included in this particular hazard profile.

Magnitude and Severity

The potential magnitude and severity of terrorism and sabotage vary depending on the nature of the attacks and the assets targeted. Given the county's infrastructure, which includes critical facilities such as power plants, hospitals, and transportation networks, an act of terrorism could result in widespread physical damage, service disruption, and threats to public safety. Impact may include not only immediate casualties and injuries but also long-term economic repercussions, such as job losses and declines in property values.

Additionally, psychological effects on the community could be profound, leading to heightened fear and anxiety among residents. Severity is further compounded by the potential for cascading impacts on the community services, including healthcare and emergency response systems, which may struggle to meet demand following an incident.

Historic Events

Since 2019, there have been no reported terrorist attacks in St. Lucie County. However, there have been several instances of cyberattacks which align with the definition of sabotage. These cyberattacks impaired essential services and required significant recovery times. These attacks illustrate the need for strong system security, redundancy, and coordinated cybersecurity practices across all county agencies.

In 2019, the St. Lucie County Sheriff's Office was the victim of a malware attack. The attack disrupted multiple internal systems and required an extended recovery process, though no confidential information was compromised. The source of the intrusion was never publicly identified.[336]

In November 2023, the St. Lucie County Tax Collectors Office was struck with a ransomware attack. A ransomware group publicly claimed responsibility for the incident which resulted in temporary service interruptions and a coordinated remediation effort. While local office data was compromised, no sensitive public data was accessed since that data is stored in secured hard drives off premises. While the incident appeared financially motivated, it demonstrates the potential for cyber disruption to impair essential services.[337]

FEMA DISASTER DECLARATIONS

There are currently no FEMA disaster declarations associated with this hazard.

Probability of Future Conditions

Terrorism remains a low-probability hazard in St. Lucie County, consistent with trends across similar Florida jurisdictions. There is no intelligence indicating specific targeting of local facilities or communities.

Sabotage and cyber disruption are comparatively more likely due to the increasing reliance on digital systems, interconnected infrastructure, and automation in critical services. Continued population growth, increased reliance on digital systems, system interdependence, and the expansion of commercial and government services may modestly increase probability of cyber or operational disruption over time.

[336] Will Greenlee, "Cyber Attack Is 'New Wave of Terrorism,' St. Lucie County Sheriff Says," *TCPalm*, January 29, 2020, https://www.tcpalm.com/story/news/crime/st-lucie-county/2020/01/29/sheriff-ken-mascara-said-cyber-attack-new-wave-terrorism/4607260002/.
[337] Wicker Perlis, "Hacker gang claims St. Lucie County breach, tax collector says sensitive info not at risk," *TCPalm,* November 14, 2023, https://www.tcpalm.com/story/news/local/st-lucie-county/2023/11/14/ransomware-group-claims-it-took-sensitive-information-but-did-it/71571855007/.

These trends highlight the need for robust cybersecurity practices, redundancy, and protective measures across county agencies and partner organizations.

Vulnerability Assessment

Vulnerability to terrorism and sabotage is influenced by the presence of critical infrastructure, essential government functions, public venues, and interconnected digital systems rather than by municipal boundaries.

Countywide vulnerabilities include utilities, water and wastewater facilities, communication systems, transportation routes, health care facilities, and emergency services infrastructure. Cyber vulnerabilities may arise from system interdependence, remote access functions, and the integration of new technologies without adequate safeguards.

Certain populations, including older adults, limited-resource residents, individuals with disabilities, households with limited resources, and those facing language or technology barriers, may experience disproportionate impacts if services are disrupted or if emergency information is difficult to access.

IMPACTS ON ASSETS

Table 129 provides a summary of the effects of terrorism and/or sabotage. It discusses the impact on the public, first responders, continuity of operations, property, infrastructure, the environment, economic conditions, public confidence, and the consequences of these impacts.

Table 129: Consequence Analysis

Sector	Consequence
Public	• The public may suffer from injuries, health risks, mental trauma, financial loss, or disruption of daily life.
First Responders	• First responders may face heightened risks when responding to incidents, as well as increased calls for service related to arson or explosive incidents. • There may be increased demand for personnel and resources to investigate incidents. This demand, along with efforts to improve preparedness for potential attacks, can strain existing staffing capacity. • Public health agencies may need to expand services to address potential outbreaks of disease or mental health issues arising from the aftermath of terror-related events.
Continuity of Operations	• Water treatment facilities, power plants, and communications systems may be targeted, leading to outages that affect residents' access to essential services. • Terrorism and sabotage can disrupt police, fire, and emergency medical response, leading to delays in emergency assistance and increased risk to public safety. • Hospitals and clinics may be overwhelmed by a crisis, hindering the ability to provide medical care and exacerbating health concerns.

Sector	Consequence
	• Key transportation routes may be targets, impacting evacuations and the delivery of essential goods and services. These disruptions may also complicate the movement of emergency response teams. • Disruptions in communication networks can limit the dissemination of critical information and hinder coordination among emergency response efforts. • Attacks on public gathering places or designated shelters can diminish resources available for displaced individuals during emergencies.
Property, Facility, and Infrastructure	• Roads, bridges, and railways may be damaged or obstructed, disrupting transportation, emergency response efforts, and local commerce. • Educational institutions and community centers may face threats, affecting community safety.
Environment	• Contamination of local water supplies could occur through deliberate tampering with water treatment facilities, leading to public health crises and waterborne illness. This contamination may also have long-term environmental impacts. • Damage to power plants or renewable energy sites can result in widespread outages, affecting not only the environment but also the economic stability of communities dependent on these resources. • Sabotage of industrial plants may lead to harmful emissions, degrading air quality, and posing health risks to residents in the vicinity.
Economic Conditions	• Terrorism or sabotage could lead to decreased tourism visits, affecting local businesses such as hotels, restaurants, and attractions. This decline may reduce overall revenue. • Damage to retail establishments from attacks may lead to property losses and decreased consumer confidence, resulting in lower sales and potential business closures. • Damage to transportation systems could disrupt supply chains and access to goods and services, impacting the local economy and increasing repair costs. • Concerns about safety can lead to declining property values, affecting investment and the local housing market, amid potential long-term economic impacts. • Increased risks related to terrorism and sabotage may lead to higher insurance premiums for businesses and property owners, increasing operational costs across various sectors.
Public Confidence	• Terrorism and sabotage can undermine public trust in local emergency response capabilities, leading to increased fear and hesitation to seek help during emergencies. • Incidents can heighten concerns about personal safety in public spaces, affecting community cohesion and participation in social events. • Businesses may experience reduced foot traffic and sales due to fear of attacks, impacting the overall economic stability and growth of St. Lucie County. • Damage to critical infrastructure from attacks can result in service disruptions and erode confidence in the community's resilience.

Sector	Consequence
	• Terrorism can create an atmosphere of fear, leading to decreased participation in community events and changes to daily routines.

IMPACT ON COMMUNITY LIFELINES

FEMA's community lifelines are shown in Figure 89. Terrorism and sabotage pose a threat to these lifelines in the ways listed below.

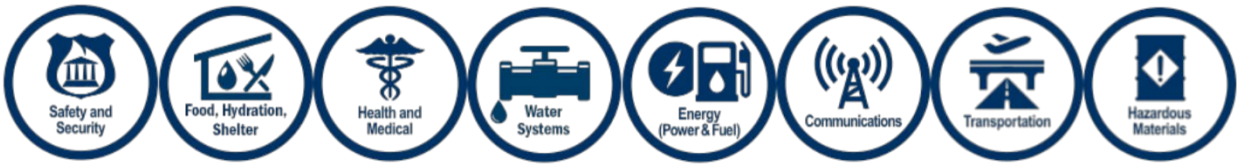


Figure 89: Federal Emergency Management Agency Community Lifelines

- **Safety and Security:** One of the first areas affected is safety and security. This lifeline would likely face the most immediate threats, as acts of terrorism could destabilize local law enforcement, create public panic, and strain emergency response capabilities.
- **Food and Hydration:** Food and hydration could also be impacted, as terrorism could disrupt food supply chains, leading to shortages and increased prices. Vulnerable populations who rely on local resources would be particularly affected, facing challenges in accessing necessary food and drinking water.
- **Health and Medical:** Attacks on health and medical facilities could hinder access to essential services, stressing the healthcare system and potentially causing delays in treatment for those in need. Such disruptions can have long-lasting effects on the community's overall health and well-being, as individuals may avoid seeking care out of fear or in response to compromised facilities.
- **Water Systems:** The water system could be compromised by sabotage that targets local water supplies, resulting in contamination threats that would jeopardize public health. This would not only create immediate health risks but could also lead to widespread panic and distrust in public resources, making effective management and communication challenging.
- **Transportation:** Transportation lifelines could experience disruptions during incidents of terrorism and sabotage. Attacks on transportation infrastructure, such as bridges or roads, can hinder the movement of people and goods, complicating evacuation efforts and logistics in times of emergency.
- **Energy:** Energy supply distributions could lead to power outages, affecting businesses and households. Such outages can exacerbate existing vulnerabilities during crises, making it difficult for residents to access essential services and maintain safe environments, especially in extreme weather conditions.
- **Communications:** Lastly, communications systems may be targeted to cause confusion and hinder emergency response efforts. Ineffective communication during crises can lead to misinformation,

which hampers coordination among response teams and prevents residents from receiving timely information about available safety measures and resources.

IMPACTS DUE TO CHANGES IN DEVELOPMENT

As St. Lucie County has increased in population and become more developed, its risks to terrorism and sabotage have increased in some ways but decreased in others. St. Lucie County's rapid population growth, particularly in cities like Port St. Lucie, has contributed to an increased risk of terrorism and sabotage.[338] Key investments, including the Southern Jobs Corridor, an armored car manufacturing facility, and the Kings Landing redevelopment project, create new high-density targets for potential attacks, increasing the potential for casualties and public panic in the event of an attack.[339]

To support the growing population and diversifying economy, the County is adding more critical infrastructure, which in turn creates more potential targets for sabotage.[340] Utility infrastructure, like the new deep injection well at the Prineville Water Treatment Facility in Port St. Lucie, is a critical system vulnerable to disruption.[341]

As government and private sector systems become more integrated to improve efficiency, this interdependence can increase the scope of a successful cyberattack. This was demonstrated in a 2020 ransomware attack on the St. Lucie County Sheriff's Office, which affected the department's network and services.[342]

On the other hand, the County has reduced its risk in some ways. In recent years, considerable efforts have been made to harden the County's digital infrastructure against cyberattacks, which are now considered a "new wave of terrorism." For example, following the 2019 ransomware incident, the St. Lucie County Sheriff's Office extensively upgraded its IT security, implementing next-generation firewalls and managed detection and response solutions.[343] Additionally, the County is developing redundancies in

[338] St. Lucie County Florida, "Facts and Stats," https://www.stlucieco.gov/government/facts-stats#:~:text=In%20recent%20decades%2C%20St.,Lucie%20Combined%20Statistical%20Area.
[339] Skyler Shepard, "St. Lucie County's Growth Brings Big Opportunities for Jobs and Infrastructure," *CBS12 News*, October 1, 2025, https://cbs12.com/newsletter-daily/st-lucie-countys-growth-brings-big-opportunities-for-jobs-and-infrastructure-south-florida-treasure-coast-economic-development-council-news-october-1-2025.
[340] Skyler Shepard, "County Commissioners Respond to Port St. Lucie Mayor's Concerns about Development Plans," *CBS12 News*, September 17, 2024, https://cbs12.com/news/local/county-commissioners-respond-to-port-st-lucie-mayors-concerns-about-development-plans-growth-congestion-traffic-rift-communication-port-st-lucie-city-county-commission-september-17-2024.
[341] Wicker Perlis, "What's That 130-Foot-Tall Tower at the Port St. Lucie Water-Treatment Plant on Prineville?," *TCPalm*, July 30, 2025, https://www.tcpalm.com/story/news/local/st-lucie-county/2025/07/30/deep-injection-well-installation-ongoing-at-port-st-lucie-water-plant-treasure-coast-florida-news/85308520007/?gnt-cfr=1&gca-cat=p&gca-uir=true&gca-epti=z116932p119650c119650e002100v116932b0042xxd004265&gca-ft=220&gca-ds=sophi.
[342] Will Greenlee, "Cyber Attack Is 'New Wave of Terrorism,' St. Lucie County Sheriff Says," *TCPalm*, January 29, 2025, https://www.tcpalm.com/story/news/crime/st-lucie-county/2020/01/29/sheriff-ken-mascara-said-cyber-attack-new-wave-terrorism/4607260002/?gnt-cfr=1&gca-cat=p&gca-uir=true&gca-epti=z114932e002600v114932b0055xxd005565&gca-ft=156&gca-ds=sophi.
[343] St. Lucie County Florida, "Systems, Security and Telecommunications," https://www.stlucieco.gov/departments-and-services/information-technology/systems-security-telecommunications.

essential systems to limit the impact of a targeted attack or sabotage. For instance, the new deep injection well at the Port St. Lucie water plant provides a second, redundant system for disposing of mineral byproducts.[344]

In St. Lucie County, vulnerabilities and sabotage vary across different jurisdictions due to local factors. Port St. Lucie faces heightened vulnerability from rapid population growth and critical infrastructure expansion, including investments that create potential targets. However, the city has enhanced its defenses through improved cybersecurity measures and compliance with the Florida Cybersecurity Act, following past incidents. Fort Pierce experiences similar risks due to its growing population and infrastructure, but local initiatives aimed at building redundancy in essential systems are helping to reduce vulnerability. In contrast, the Village of St. Lucie, being smaller and less populated, maintains a stable vulnerability profile, though still impacted by the county's overall infrastructure and cybersecurity landscape. Overall, while growth and expansion increase risks, proactive measures like cybersecurity improvements and system redundancies reduce some of the threats.

IMPACTS ON POPULATIONS OF FOCUS

Terrorism and sabotage pose substantial risks to vulnerable populations in the county. Throughout the area, limited-resource families, senior citizens, individuals with disabilities, and minorities often lack the resources necessary for effective preparedness and response to potential acts of violence or disruption. As threats of terrorism and sabotage continue to emerge, the likelihood of physical harm and property damage increases, leading to potential loss of community stability and safety. This situation is particularly concerning for those with limited mobility or financial means, who may struggle to evacuate or find shelter during emergencies.

The current and future assets at risk due to terrorism and sabotage include not only the most vulnerable individuals but also critical infrastructure and community resources that support them. Affordable housing units, community centers, and areas with a high concentration of minority populations may become targets or suffer collateral damage from violent acts, threatening to displace residents and diminish access to essential services. Furthermore, public services such as transportation networks and emergency response systems could be compromised, making it increasingly difficult for these populations to access necessary assistance during and after such events.

Minority communities often face systemic inequities that worsen their vulnerability during times of crisis. Economic gaps, language barriers, and historical marginalization can delay their access to emergency information and resources. The potential impact of terrorism and sabotage on these communities highlights a growing threat to social equality and community resilience. As acts of violence lead to injuries or fatalities, the risk of displacement and psychological trauma increases, particularly impacting those

[344] Wicker Perlis, "What's That 130-Foot-Tall Tower at the Port St. Lucie Water-Treatment Plant on Prineville?," *TCPalm*, July 30, 2025, https://www.tcpalm.com/story/news/local/st-lucie-county/2025/07/30/deep-injection-well-installation-ongoing-at-port-st-lucie-water-plant-treasure-coast-florida-news/85308520007/?gnt-cfr=1&gca-cat=p&gca-uir=true&gca-epti=z116932p119650c119650e002100v116932b0042xxd004265&gca-ft=220&gca-ds=sophi.

without adequate financial means or support networks. The degradation of access to crucial public services can severely disrupt daily life, affecting healthcare, transportation, and emergency assistance.

Mitigation Strategy

This section outlines St. Lucie County's strategy for minimizing losses from hazards identified in Section 4, Hazard Identification, Risk Assessment, and Vulnerabilities, consistent with 44 CFR §201.6(c)(3). The mitigation strategy includes goals and objectives guiding the mitigation strategy, specific actions proposed by the County, available funding sources, the agencies or departments responsible for implementation, and how these resources are effectively utilized to reduce risk to people, property, critical facilities, infrastructure, and natural systems.

Mitigation actions are proactive measures designed to reduce long-term risks, including acute hazard events and chronic stressors, such as sea-level rise, increased rainfall intensity, and extreme heat, as identified in the County's Regional Resilience Vulnerability Assessment (2025). These initiatives may involve regulatory frameworks, technological advancements, and community programs aimed at minimizing harm and enhancing resilience. Mitigation actions are developed in direct response to vulnerabilities identified in the risk assessment and are designed to be achievable within existing legal authority or through identified partnerships and funding programs. Examples include infrastructure improvements, educational initiatives, and land-use planning adjustments that target specific hazards, such as flooding, hurricanes, sea-level rise, power system failures, and population displacement. These actions emphasize reducing risk to existing buildings, infrastructure, and critical facilities, while limiting future risk associated with new development and redevelopment. Through this approach, St. Lucie County aims to create a safer, more resilient environment for its residents while reducing future disaster costs and reliance on post-disaster assistance.

The mitigation strategy highlights the importance of strengthening county and municipal resilience to hazards while improving residents' quality of life. By reducing unnecessary exposure to risks, communities can save lives, decrease property damage, and lessen the social and economic disruptions that follow hazard events, including service interruptions, housing instability, and public health impacts. Where limitations in authority, staffing, funding, or jurisdictional control affect the ability to expand or improve mitigation capabilities, these limitations are acknowledged and considered in the prioritization and phasing of mitigation actions.

Relationship to the Project Prioritization List and Resilient St. Lucie

The mitigation strategy for the St. Lucie County Local Mitigation Strategy (LMS) is informed by multiple, complementary planning efforts that together support a coordinated, whole-community approach to risk reduction and resilience. Besides the hazards, vulnerabilities, goals, and objectives identified in this LMS,

mitigation actions also may be informed by the County's ongoing Project Prioritization List (PPL) process and by actions and strategies emerging from the St. Lucie County Regional Resilience Plan, coordinated by Resilient St. Lucie, the County's community-wide resilience planning initiative.

The PPL serves as a standing, countywide mechanism for identifying, evaluating, and prioritizing mitigation projects across jurisdictions and departments. Although the PPL is informed by the LMS, it is not specific to this or any other single LMS update and is maintained continuously to reflect evolving needs, completed projects, and emerging opportunities. Similarly, the St. Lucie County Regional Resilience Plan is being developed to address longer-term climate, infrastructure, and community resilience challenges, many of which overlap with hazard mitigation objectives and address chronic and compounding risks identified in the County's vulnerability assessments.

As a result, some mitigation actions included in this LMS intentionally reflect or reinforce projects and strategies identified through the PPL and Resilient St. Lucie processes. This intentional alignment is designed to strengthen consistency across planning efforts, reduce duplication, and enhance the competitiveness of projects when seeking funding through federal, state, and regional programs. Project competitiveness can be strengthened when mitigation actions align across adopted plans, include identified funding sources, and demonstrate readiness for implementation.

By aligning mitigation actions across the LMS, the PPL, and the Regional Resilience Plan, St. Lucie County and its partner jurisdictions demonstrate an ongoing commitment to reducing risk, advancing resilience, and implementing mitigation actions both within and beyond the formal five-year hazard mitigation planning cycle. This integrated approach helps ensure that mitigation investments are strategic, cost-effective, and responsive to current and future hazard conditions while clearly supporting implementation, monitoring, and future updates of mitigation priorities.

Changes in Priorities

Since the adoption of the previous Local Mitigation Strategy update, St. Lucie County has refined its mitigation priorities to reflect emerging risks, updated hazard data, and recent disaster experience. These changes are informed by the St. Lucie County Regional Resilience Plan (2025), the Regional Resilience Vulnerability Assessment (2025), recent storm and flooding events, evolving insurance market conditions, and increased coordination with state and federal resilience initiatives.

Key changes in mitigation priorities include the following:

- Increased emphasis on flooding, storm surge, sea level rise, and stormwater management, driven by observed increases in repetitive flooding, tidal backflow, groundwater rise, and stormwater system limitations in low-lying and canal-adjacent neighborhoods, as well as along the Indian River Lagoon and barrier island areas, consistent with identified vulnerabilities affecting existing development and critical infrastructure.
- Greater focus on infrastructure resilience and service continuity, particularly for power, communications, water, and wastewater systems, recognizing the cascading impacts of infrastructure

failure on public safety, healthcare, emergency response, and economic recovery during recent hurricane events, and the need to reduce risk to critical facilities identified in the risk assessment.

- Elevated priority for power system reliability and backup energy solutions, including generators and distributed energy systems at critical facilities, based on extended outage durations experienced during recent storms and the increasing risks associated with extreme heat events, including impacts on medically vulnerable populations.
- Expanded consideration of voluntary acquisition, relocation planning, and housing stability, reflecting long-term sea level rise projections, insurance affordability and availability pressures in higher-risk areas, and growing pressures on housing, shelters, and public services in inland receiving areas, where mitigation actions may be constrained by existing land use, regulatory authority, or funding availability.
- Enhanced integration of public health, social vulnerability, and vulnerability considerations, including extreme heat, pandemics, and post-disaster stressors, to ensure that mitigation actions address the needs of elderly, low-income, medically vulnerable, and socially isolated populations.
- Improved alignment with FEMA mitigation funding priorities and eligibility criteria, including Flood Mitigation Assistance (FMA), the Hazard Mitigation Grant Program (HMGP), and other identified state and federal funding programs, to increase competitiveness for grant funding and accelerate implementation of high-impact projects.

These shifts in priorities ensure that the mitigation strategy remains responsive to current and projected risk conditions, supports cost-effective investment in resilience, and reflects lessons learned from recent hazard events. The updated priorities also strengthen coordination across County departments, municipalities, regional partners, and state and federal agencies, helping to ensure that mitigation actions contribute to long-term community resilience, fiscal sustainability, and public safety.

Mitigation Goals and Objectives

Hazard mitigation plans must identify goals for reducing long-term vulnerabilities to identified hazards (44 CFR, Section 201.6(c)(3)(i)). The LMS Working Group reviewed the guiding principle, goals, and objectives from the 2021 Hazard Mitigation Plan as part of the 2026 LMS update process, including consideration of updated hazard profiles, recent disaster events, and changes in community conditions. It was determined that the 2021 plan's guiding principle and objectives continue to reflect community priorities and the results of the updated risk assessment and vulnerability analysis and remain consistent with the hazards identified in this plan.

The guiding principle, goals, objectives, and actions in this plan all support one another and are intended to be mutually reinforcing across multiple hazard types, including flooding, hurricanes, sea-level rise, extreme heat, and infrastructure failures. The goals represent broad, long-term policy statements describing what the community seeks to achieve through hazard mitigation, while objectives were selected that met multiple goals and addressed both structural and nonstructural mitigation needs. Mitigation actions were prioritized based on their ability to meet multiple objectives and to reduce risk to people, property, critical facilities, and essential services identified as vulnerable in the risk assessment.

The LMS Working Group developed four (4) goals and numerous objectives to guide its work in developing this plan, program, and strategies for the St. Lucie Whole Community, including unincorporated areas, municipalities, special districts, businesses, and residents. The goals and objectives help focus efforts and resources on reducing hazard-related losses and damage in the future and avoiding duplication of efforts, funding, and implementation by coordinating mitigation activities across departments and jurisdictions, with consideration of existing capabilities, authorities, and resource constraints.

After examining changes in development patterns, population growth, climate conditions, hazard frequency and severity, mitigation program requirements, building code updates, and ongoing resilience initiatives, the LMS Working Group decided to keep the same goals and objectives from the 2021 LMS. Although the goals and objectives remain unchanged, the mitigation actions supporting them have been refined and expanded to reflect current conditions, updated data, and funding opportunities, and to better address both existing development and future growth and redevelopment. As such, the goals and objectives used as a guide for the development of the 2026 LMS, as well as mitigation plans, programs, and incentives implemented across the board for the St. Lucie Whole Community, are as follows:

Table 130 outlines the specific goals and objectives that support St. Lucie County's hazard mitigation efforts and provide the framework for prioritizing mitigation actions and investments over the five-year planning horizon.

Table 130: St. Lucie County Mitigation Goals and Objectives, 2026

Goal and Objective Number	Description
Goal 1	**Reduce the loss of life and property.**
Objective 1.1	Reduce flooding and wind damage.
Objective 1.2	Eliminate or retrofit repetitive-loss properties.
Objective 1.3	Retrofit or construct new critical facilities.
Objective 1.4	Protect and restore areas susceptible to erosion.
Objective 1.5	Improve local roadways to ensure safe, efficient evacuation.
Objective 1.6	Reduce the potential threat of fires—wildland and structural.
Objective 1.7	Increase public awareness of hazards and their impacts.
Objective 1.8	Evaluate codes, policies, ordinances, and regulations for natural hazards.
Objective 1.9	Reduce exposure to potential environmental hazards.
Goal 2	**Achieve safe and fiscally sound, sustainable communities.**
Objective 2.1	Integrate hazard reduction into local planning and development processes.
Objective 2.2	Enhance environmental quality and the function of natural resources.

Goal and Objective Number	Description
Objective 2.3	Prepare informational materials explaining the positive relationship between sustainable communities and disaster-resistant and resilient communities.
Objective 2.4	Create and maintain an all-hazards database.
Objective 2.5	Promote implementation of cost-effective mitigation projects.
Objective 2.6	Enhance geographic information system (GIS) capabilities for use in hazard analysis.
Goal 3	**Facilitate orderly recovery during post-disaster redevelopment.**
Objective 3.1	Create more resilient, disaster-resistant businesses.
Objective 3.2	Ensure the economic viability of the local business community following disaster events.
Goal 4	**Optimize the effective use of all available resources.**
Objective 4.1	Establish public-private partnerships.
Objective 4.2	Establish procedures to strengthen intergovernmental coordination and cooperation.

Mitigation Initiatives

The LMS Working Group is tasked with discussing new ideas and concepts and identifying projects and activities that will affect the entire St. Lucie, including unincorporated St. Lucie County, the Cities of Fort Pierce and Port St. Lucie, special districts, and relevant public and private sector partners involved with the Working Group. The aim is to effectively implement the LMS's goals and objectives through coordinated planning, information sharing, and joint project development that leverage existing capabilities and authorities across participating jurisdictions.

Several mitigation initiatives were developed and implemented in jurisdictions' planning processes and mechanisms to serve the LMS Working Group's goals and to support implementation of achievable mitigation actions identified through the risk assessment:

4. **Community Rating System (CRS) User Coordination:** Flood-related mitigation coordination in St. Lucie County is supported through informal, staff-level coordination among the designated CRS Coordinators for St. Lucie County and the Cities of Fort Pierce and Port St. Lucie, rather than through a standing or formally constituted CRS User Group. This coordination occurs on an as-needed basis, particularly in advance of CRS cycle verifications, Flood Insurance Rate Map updates, public information activities, and implementation of CRS-creditable mitigation actions. CRS Coordinators collaborate through direct communication, targeted working discussions, and participation in LMS Working Group meetings to align floodplain management practices, outreach strategies, and regulatory activities where appropriate. When coordination occurs, key outcomes and relevant CRS-related activities are communicated to the LMS Working Group through the participating

coordinators to support implementation of flood-related mitigation actions identified in the LMS. The Town of St. Lucie Village does not currently participate in the CRS program; however, countywide flood mitigation strategies, public education efforts, and nonstructural mitigation actions coordinated through the LMS benefit all jurisdictions, including non-CRS communities.

5. **Program for Public Information (PPI) Subcommittee:** Under the auspices of the LMS Working Group, the PPI Subcommittee was created to ensure that marketing strategies promoting CRS programs and flood awareness for St. Lucie County and the Cities of Fort Pierce and Port St. Lucie are coordinated and not duplicated, and that implementation efforts benefit all three (3) participating jurisdictions. The PPI Subcommittee was created in 2020 to identify, assess, and implement marketing opportunities through community events, trainings, outreach campaigns, and exercises conducted countywide. The PPI document, reviewed annually to monitor the effectiveness of messaging, change messaging when needed, and update outreach projects as necessary, is the heart of the program and informs jurisdictions throughout the year on topics and messages to share with the public to increase their awareness and preparedness for hazard mitigation. These activities support education and awareness mitigation actions and help reduce risk by improving public understanding of hazards, insurance, and protective measures. These efforts support participation in the CRS program and contribute to meeting the criteria and earning points identified in the CRS Coordinators' Manual.
6. **Project Prioritized List (PPL) Scoring Review Subcommittee:** The LMS Working Group discussed opportunities to improve the evaluation and scoring of new and resubmitted mitigation projects submitted by LMS Working Group member agencies. As a result, the Working Group formed the PPL Scoring Review Subcommittee to review the existing process in detail and evaluate the scoring system. The Subcommittee convened multiple times during the plan update process to assess scoring criteria and weighting. The PPL scoring methodology was revised to ensure greater transparency, consistency, and alignment with LMS goals and objectives, consideration of risk reduction benefits and feasibility, and to promote equitable ranking of projects across jurisdictions.
7. **Review Subcommittee:** The LMS Working Group created a Review Subcommittee to assess the information in the 2021 LMS, update its format and content, and provide recommendations to ensure that the updated version would be clear, internally consistent, and compliant with FEMA mitigation planning requirements, while reflecting the progress and development achieved by the Working Group.
8. **Hazards Review Subcommittee:** The LMS Working Group created a Hazards Review Subcommittee to address changes in vulnerability and exposure from hazards impacting the St. Lucie Whole Community. The Subcommittee assessed hazard data and profiles included in the 2021 LMS and made recommendations to ensure that recorded impacts of hazards are consistent throughout the document, and that new hazard data, recent disaster impacts, and updated risk information from 2021 through 2026 are incorporated.
9. **Resilient St. Lucie:** Although not an initiative of the LMS Working Group, St. Lucie County and its municipalities have established Resilient St. Lucie, a partnership to build long-term resilience for St. Lucie County. Resilient St. Lucie is guided by a leadership committee consisting of department directors and senior staff from St. Lucie County, the Cities of Fort Pierce and Port St. Lucie, and regional partner agencies, including the Florida Department of Health–St. Lucie County, Treasure

Coast Regional Planning Council, St. Lucie County School Board, and other stakeholders, and a draft Regional Resilience Plan has recently been developed. The goal of the resilience planning effort is to adopt a systems-thinking approach that prioritizes the health, safety, and welfare of residents, and aligns resilience, mitigation, and long-range planning initiatives across jurisdictions.

National Flood Insurance Program (NFIP) Compliance

St. Lucie County, the City of Fort Pierce, the Town of St. Lucie Village, and the City of Port St. Lucie are participating communities in the NFIP program. These jurisdictions participate in the NFIP Regular Program and are assigned FEMA Community Identification Numbers (CIDs) used for flood maps and insurance administration. Each jurisdiction in the county participates in the NFIP through the adoption and ongoing administration of local floodplain management regulations, meeting or exceeding NFIP minimum requirements. Each jurisdiction also designates a Floodplain Administrator responsible for NFIP implementation, and this designee is formally appointed by the chief administrative authority of the jurisdiction (e.g., County Administrator or City Manager) in accordance with local ordinance or administrative procedures. The appointing authority retains responsibility for ensuring the designee has the authority and resources necessary to administer floodplain management regulations.

To ensure continued compliance with the NFIP, each participating community will:

1. Continue to enforce their adopted floodplain management ordinance requirements, which include regulating all new development and substantial improvements in Special Flood Hazard Areas (SFHA), consistent with 44 CFR Part 60, including requirements for permits, elevation standards, and flood-resistant construction.
2. Continue to maintain all records pertaining to floodplain development, which shall be available for public inspection (including permits, Elevation Certificates when required, and documentation supporting substantial improvement/substantial damage determinations), and designate qualified staff or departments to administer and enforce floodplain management regulations.
3. Continue to notify the public of proposed changes to the floodplain ordinance or Flood Insurance Rate Maps (FIRM) and related flood hazard data updates and provide opportunities for public review and comment as required.
4. Maintain the FIRM map and Letter of FIRM Map Change repositories (including Letters of Map Amendment/Revision and other FEMA determinations affecting mapped flood risk) and ensure that these resources are used in development review and permitting decisions.
5. Continue to promote flood insurance for all properties because flood losses also occur outside the SFHA, and standard homeowners' insurance typically does not cover flooding, with targeted outreach to repetitive loss areas and vulnerable populations where feasible.
6. Continue their CRS public outreach programs, as applicable, and implement substantial improvement and substantial damage provisions following flood events to ensure compliance and reduce future flood risk. Following flood events, each jurisdiction conducts Substantial Damage determinations for affected structures in the SFHA using the NFIP definition, including application of the 50 percent rule

based on the market value of the structure prior to damage. Where structures are determined to be substantially damaged, they are required to be brought into compliance with current floodplain management standards, which may include elevation, floodproofing, relocation, or demolition, as applicable. Reconstruction and repair activities are subject to permitting and must meet all applicable NFIP and local ordinance requirements, including elevation to or above the Base Flood Elevation. The Floodplain Administrator coordinates with local permitting officials to ensure compliance, and non-compliant development is subject to enforcement actions consistent with local codes and NFIP requirements. Documentation of substantial damage determinations and associated permitting decisions is maintained to support ongoing NFIP compliance.

The summary of the National Flood Insurance Program for each jurisdiction in St. Lucie County (Table 131) outlines the effective dates for initial identification, the areas designated on the initial Flood Insurance Rate Map, and the current effective map date as reported in FEMA's Community Status Book data, demonstrating each jurisdiction's ongoing participation and compliance with NFIP requirements.

Table 131: NFIP Summary per Jurisdiction[345]

NFIP#	Jurisdiction	Initial Identification	Initial FIRM	Current Effective Map Date
120286	Fort Pierce	05/24/74	12/01/77	02/19/20
120287	Port St. Lucie	12/13/74	03/15/82	02/19/20
120288	St. Lucie Village	11/29/74	04/01/80	02/19/20
120285	Unincorporated St. Lucie County	01/24/75	08/17/81	02/19/20

Community Rating System (CRS)

The CRS is a voluntary incentive program that recognizes and encourages community floodplain management practices that exceed the NFIP minimum requirements. In CRS communities, flood insurance premium rates are discounted to reflect the reduced flood risk from the community's efforts that address the three goals of the program:

1. Reduce and avoid flood damage to insurable property.
2. Strengthen and support the insurance aspects of the National Flood Insurance Program.
3. Foster comprehensive floodplain management.
4. Participation in the Community Rating System (CRS) program can reduce flood insurance premiums by up to 45 percent for eligible NFIP policies in the SFHA (Class 1), and up to 10 percent for eligible policies outside the SFHA, depending on the community's CRS class. Participation requires the adoption, implementation, and ongoing administration of floodplain management activities that exceed NFIP minimum standards, as verified by FEMA through the CRS review process. The number of mitigation actions taken to lessen the impacts of flooding directly correlates with lower insurance

[345] FEMA, Community Status Book Report for Florida, https://www.fema.gov/cis/FL.pdf.

premiums. CRS credits are earned through verified activities (e.g., public information, mapping and regulations, flood damage reduction, and flood preparedness), and CRS class ratings may change based on continued implementation and FEMA verification. Table 132 provides CRS information on participating jurisdictions.

Table 132: Community Rating System Data, by Jurisdiction[346]

CID#	Jurisdiction	CRS Entry Date	Current Effective Date	Current Class	% Discount for SFHA	% Discount for Non-SFHA	Status
120286B	Fort Pierce	5/1/2012	05/01/2012	6	20	10	Active
120287B	Port St. Lucie	10/1/1996	04/01/2023	5	25	10	Active
120285B	Unincorporated St. Lucie County	5/1/2009	04/01/2024	5	25	10	Active

Note* The town of St. Lucie Village does not participate.

Mitigation Programs

Mitigation Funding Programs

- HUD sponsors various programs that can advance hazard mitigation goals in a community. The Community Development Block Grant (CDBG) Program (including Florida's CDBG Small Cities Program, administered at the state level) provides funding to improve local housing, streets, utilities, and public facilities, and can support eligible mitigation activities that reduce risk to people and property when tied to community development objectives. Community Development Block Grant–Disaster Recovery (CDBG-DR) funds are provided for disaster relief, long-term recovery, and mitigation activities in areas affected by a presidential disaster declaration and may be used to support mitigation measures that address vulnerabilities identified in the LMS.[347]
- The Hazard Mitigation Grant Program (HMGP) is a federally funded initiative that supports states and communities in implementing long-term hazard mitigation measures after a disaster declaration, such as floods or hurricanes. The program funds projects aimed at reducing future disaster risks, including retrofitting buildings, developing early warning systems, and restoring natural landscapes, and generally requires an approved, FEMA-compliant hazard mitigation plan for eligibility and identification of responsible implementing agencies and potential funding match sources.[348]

[346] FEMA, Community Status Book Report for Florida, https://www.fema.gov/cis/FL.pdf.
[347] Florida Jobs, "Community Development Block Grant Disaster Recovery CDBG-DR Overview," https://www.floridajobs.org/docs/default-source/office-of-disaster-recovery/office-of-long-term-resiliency-main-page/cdbg-disaster-recovery-overview-2024.pdf?sfvrsn=f0d222b0_1.
[348] FEMA, "Hazard Mitigation Grant Program (HMGP)," https://www.fema.gov/grants/mitigation/learn/hazard-mitigation#:~:text=FEMA's%20Hazard%20Mitigation%20Grant%20Program,When%20You%20Apply.

- Flood Mitigation Assistance (FMA). This program provides financial support for a range of projects to reduce or eliminate the long-term risk of flood damage to structures covered by the National Flood Insurance Program (NFIP). The funding can be used for various initiatives, such as elevating buildings, acquiring and demolishing properties in high-risk areas, or implementing floodproofing measures (including dry floodproofing of eligible nonresidential structures and specific localized flood risk reduction projects, as allowed by FEMA), with priority given to repetitive loss and severe repetitive loss properties.[349]
- Public Assistance Grant Program (PA) is a federal initiative managed by the Federal Emergency Management Agency (FEMA). It provides aid to state and local governments and certain nonprofits to help recover from major disasters or emergencies. The funding is designed to cover costs of response and recovery efforts, including immediate response activities, debris removal, and emergency protective measures to ensure public safety. In addition, the program supports the restoration of damaged infrastructure, including bridges, roads, public buildings, and utilities, through FEMA's established categories of work (including Category A, Debris Removal; Category B, Emergency Protective Measures; and permanent work categories for eligible facilities), and may incorporate hazard mitigation measures that reduce the risk of future damage.[350]
- Elevate Florida is a statewide residential mitigation program administered by the Florida Division of Emergency Management (FDEM). This program is strategically designed to safeguard residences and communities by mitigating damage from natural disasters, such as hurricanes and floods, and is implemented through federally funded mitigation grant sources administered by FDEM for eligible residential projects, including elevation, reconstruction, and other flood risk reduction measures.[351]
- The Florida Inland Navigation District (FIND) provides funding support for waterway, shoreline stabilization, and coastal resilience projects, including eligible inlet management and erosion mitigation activities.. These include navigation channel dredging, the installation of channel markers, navigation signs, and buoys, as well as the construction of boat ramps and docking facilities. In addition, FIND supports the development of fishing and viewing piers, waterfront boardwalks, and inlet management. The organization also focuses on initiatives, such as environmental education, the provision of law enforcement equipment, and the promotion of boating safety programs. Other important projects include beach renourishment, dredged material management, environmental mitigation, and shoreline stabilization, all aimed at enhancing the quality and sustainability of waterways through programs, such as the Waterways Assistance Program (WAP) and the Cooperative

[349] Florida Division of Emergency Management, "Flood Mitigation Assistance Program," https://www.floridadisaster.org/dem/mitigation/flood-mitigation-assistance-program/#:~:text=100/0-,Resources,National%20Flood%20Insurance%20Program%20(NFIP).
[350] Florida Division of Emergency Management, "Public Assistance Grant Program," https://www.floridadisaster.org/dem/recovery/public-assistance-program/#:~:text=Cost%20Share,or%20in%2Dkind%20donations).
[351] Florida Department of Emergency Management, "Elevate Florida: FDEM's Residential Mitigation Program," https://www.floridadisaster.org/dem/mitigation/elevate-Florida/.

Assistance Program (CAP), which may support mitigation actions addressing coastal erosion and flood-related hazards.[352]

- Florida Boating Improvement Program (FBIP) is a grant program that provides financial assistance to local governments for public boating access facilities, such as ramps, docks, and other eligible boating-related infrastructure and access improvements administered by the Florida Fish and Wildlife Conservation Commission (FWC).[353]
- The Resilient Florida Program is managed by the Florida Department of Environmental Protection (FDEP). The program provides grants to local governments for projects addressing sea-level rise and flooding and supports both planning and implementation projects that may be incorporated into the Statewide Flooding and Sea Level Rise Resilience Plan, including projects identified through this LMS and supported by documented vulnerability and risk information.[354]
- The Hurricane Loss Mitigation Program (HLMP) is a state-funded program administered by FDEM for wind and flood mitigation and retrofitting of residential and commercial properties and is funded through the Florida Hurricane Catastrophe Trust Fund; recent HLMP funding cycles have identified approximately $3.5 million available statewide (subject to annual appropriation and program guidance).[355]

Updating the Plan and Project List

There are two update processes associated with the LMS. One describes how the Prioritized Project List (PPL) is updated annually. A detailed description of the PPL updating procedure is provided below. The second updating process involves the formal five (5)-year update of the Plan sections of the LMS, which is required to maintain FEMA approval under 44 CFR §201.6 and ensure continued eligibility for FEMA mitigation funding programs.

The PPL is a rank order of priority projects that, if implemented, will result in a more disaster-resistant and resilient community. Although the PPL is informed by the goals, objectives, and risk analysis of the LMS, it is not specific to this or any other single LMS update, but rather is an ongoing prioritization tool used by

[352] Florida Inland Navigation District, FL., "Atlantic Intracoastal," https://www.aicw.org/about_us/index.php#:~:text=Mission,Waterway%2C%20ensuring%20navigability%20and%20safety.
[353] Florida Department of Environmental Protection, "Additional Funding Resources," https://floridadep.gov/lands/land-and-recreation-grants/content/additional-funding-resources#:~:text=Coastal%20Partnership%20Initiative%20Grants,Working%20Waterfronts%20and%20Coastal%20Stewardship.
[354] Florida Department of Environmental Protection, "Resilient Florida Program," https://floridadep.gov/rcp/resilient-florida-program#:~:text=The%20program%20enhances%20our%20efforts%20to%20protect,sea%20level%20rise%2C%20intensified%20storms%20and%20flooding.
[355] Florida Department of Emergency Management, "Mitigation," https://www.floridadisaster.org/dem/mitigation/#:~:text=Mitigation%20Grants.,the%20Hurricane%20Loss%20Mitigation%20Program.

the County and its partner jurisdictions to identify, track, and advance feasible mitigation actions that address documented vulnerabilities.

When current projects are completed, new needs surface, new funding opportunities arise, and events occur that affect priorities, it is important that the PPL be a dynamic document. For this reason, the window to submit projects to the PPL is always open. All applicants desiring to have their project included in the PPL must submit their proposed project using the Mitigation Measure (Project or Initiative) Proposal Form (Appendix C). Projects submitted to the PPL are evaluated for consistency with the LMS goals and objectives and their ability to reduce risk to people, property, critical facilities, and infrastructure, but may be advanced, refined, or implemented outside the formal LMS update cycle. The following sections identify the multi-step prioritization methodology used to evaluate feasibility, benefit, and alignment with identified hazards.

Project Prioritization List

The goal of creating a countywide Priority Project List (PPL) for mitigation projects is to help City and County governments more effectively direct their mitigation efforts and resources, while keeping a historical record of mitigation investments and progress over time. Having this list will expedite the local receipt of federal disaster mitigation funds and enhance St. Lucie County's competitiveness when applying for other non-disaster-related mitigation grants, by demonstrating readiness, prioritization, and alignment with identified risks.

To develop the Project Priority List (PPL), each local government was invited to submit a list of mitigation projects for inclusion in a unified, countywide list. A project prioritization methodology was established to enable the working group to score and rank submitted projects according to stakeholders' priorities and the extent to which projects support LMS goals, reduce risk, and are feasible to implement within existing authorities, capabilities, and anticipated funding sources. If funding becomes available during the year, the Committee will review the top-ranked projects to decide which ones should be submitted for funding.

The development of the Project Prioritization List (PPL) is an ongoing process rather than a one-time task. To be effective, the list must be dynamic, serving as a living document that tracks the status of projects, including completed, deleted, and projects in different phases. The continued maintenance of the PPL demonstrates that St. Lucie County and its partner jurisdictions remain committed to mitigation, resilience, and risk reduction actions even outside the formal five-year hazard mitigation planning cycle. It will be revised as progress is made on projects and as new hazards or increased vulnerabilities are identified through updated risk assessments, disaster experience, or changes in community conditions. The PPL process will be updated and implemented, to the greatest extent possible, on a quarterly basis. The current version of the PPL is available in Appendix E.

To keep track of projects, there is an Eliminated Projects List. This list includes projects that have been removed from the Project Priority List (PPL) for various reasons, such as completion, deferral, or deletion. You can find the current list in Appendix E, alongside the PPL.

Methodology

Potential LMS mitigation projects and activities will be evaluated based on the following six criteria:

1. LMS goals addressed
2. Hazards addressed
3. Alignment with relevant jurisdictional plans or policies
4. Population benefiting from the mitigation project
5. Immediate threat to public health, safety, and welfare
6. Project benefit-cost ratio

Mitigation Prioritization Method

The mitigation strategy analyzes a range of actions or projects to address the vulnerabilities identified in the risk assessment and hazard profiles. These actions focus on reducing risks to people, existing buildings, structures, and infrastructure, while limiting risks to new development through both structural and nonstructural mitigation measures. It is essential to include actions that benefit vulnerable populations and high-risk populations as identified through social vulnerability indicators, repetitive loss data, and public engagement input.

All documented actions should be specific and clearly linked to the vulnerabilities identified in Section 4 of this Plan. This includes actions to address data gaps or enhance mitigation implementation capabilities, such as improved mapping, monitoring, coordination, or planning capacity.

The Working Group determined that the proposed LMS mitigation projects and activities will be evaluated and prioritized using the following scoring system and procedures to ensure consistency, transparency, and alignment with LMS goals and FEMA funding requirements.

1. Projects will be scored based only on documents submitted by the individual or agency proposing the mitigation project.
2. Projects may be submitted to the LMS Working Group at any time. Organizations are encouraged to do so as soon as the need is identified. However, projects of a time-sensitive nature, such as HMGP projects requiring LMS Working Group ranking, shall be submitted to the LMS Coordinator no later than one month in advance of when the LMS Working Group ranking is due.
3. Each project will be scored on the eleven Scoring Factors listed in Table 133.
4. Each Scoring Factor is assigned point criteria ranging from 0 to 3.
5. Each Scoring Factor is assigned a weight. The weight indicates the relative importance of each Scoring Factor.
6. To determine a project's score on each scoring factor, the number of points is multiplied by the weight.

A project's total score is the sum of the scores of the eleven Scoring Factors. The highest possible score is 120.

Table 133: Scoring Factors and Weights for the Project Priority List

Scoring Factor	Point Criteria	Weight	Points	Score
1. **Consistency with LMS Goals**			4	
	3: Addresses the highest LMS goal (reduce the loss of human life through provision of sheltering, evacuation, disaster preparedness, emergency response, hazard mitigation, or other services.)			
	2: Addresses the second-highest LMS goal To ensure orderly, effective, short-term recovery and redevelopment by establishing a program that provides adequate shelters, community health services, food and water, debris removal, and promotes rapid economic recovery following a disaster.			
	1: Addresses at least one of the three lowest LMS goals A. To minimize public and private exposure to loss of property and economic disruption in the event of natural, technological, and human-caused hazards. B. To achieve safe and financially sound, sustainable communities through thoughtful long-range planning of natural and human-caused environments. C. To optimize the effective use of all available resources by establishing public/private partnerships and by promoting intergovernmental coordination and cooperation.			
	0: Fails to address any of the listed LMS goals.			
2. **Consistence with Hazard Impact**		4		
	3: Addresses at least one of the three highest hazards A. Hurricanes/Tropical storms/Storm surge B. Flooding C. Severe thunderstorms and lightning			
	2: Addresses at least one of the three second-highest hazards: A. Radiological incidents B. Droughts C. Erosion			
	1: Addresses at least one of the remaining hazards: A. Wildfire			

Scoring Factor	Point Criteria	Weight	Points	Score
	B. Extreme temperatures C. Epidemics/Pandemics D. Cyber attacks E. Power failure F. Hazardous Materials accidents G. Transportation system failures H. Dam/levee Failure I. Sea level rise J. Tornados K. Agricultural pests and diseases L. Terrorism/sabotage M. Wellfield contamination N. Communication failures O. Civil disturbances P. Seismic hazards (earthquakes, sinkholes) Q. Mass migration R. Tsunami			
	0: Fails to address any LMS listed disasters			
3.	**Consistence with Laws and/or Policies**	2		
	3: Consistent with existing laws/policies			
	2: New legislation or policy changes needed, but no conflicts identified			
	1: New legislation or policy changes needed, but may conflict with existing laws, regulations, and/or policies			
	0: Inconsistent with laws and/or policies			
4.	**Consistency with Local Plans**	4		
	3: Supported in both the Comprehensive Emergency Management Plan and a jurisdiction's Comprehensive Plan			
	2: Supported in either the Comprehensive Emergency Management Plan or each jurisdiction's Comprehensive Plan			
	1: Supported in other government plans			
	0: Not supported in any government plan			

Scoring Factor	Point Criteria	Weight	Points	Score
5.	**Scope of Benefits – Jurisdictions**	4		
	3: Benefits the health and safety of all municipalities and the unincorporated county			
	2: Benefits the health and safety of 2 to 3 jurisdictions (municipality or the unincorporated county)			
	1: Benefits the health and safety of 1 jurisdiction (municipality or the unincorporated county)			
	0: Provides no significant benefits to any jurisdiction			
6.	**Scope of Benefits – County Population**	4		
	3: Benefits 67% to 100% of the County population			
	2: Benefits 33% to 66% of the County population			
	1: Benefits 1% to 32% of the County population			
	0: Provides no significant benefit			
7.	**Importance of Benefits – Essential Services**	4		
	3: Needed for essential services: Medical, Shelter, Custodial Care, Educational, Emergency, Utility, Police, Food			
	0: Not needed for essential services			
8.	**Importance of Benefits – Critical Facilities**	4		
	3: The project facility is a designated primary critical facility			
	2: The project facility is a designated secondary critical facility			
	0: The project facility is not a designated critical facility			
9.	**Benefit-Cost Ratio**	2		
	3: 4.0 or higher			
	2: Between 2.0 and 3.9			
	1: Between 1.0 and 1.9			
	0: Less than 1 or a formal analysis has not been completed			
10.	**Financing**	4		
	3: Eligible for more than one grant and is scheduled for future funding in the jurisdiction's approved budget or capital plan			
	2: Eligible for grant funding from at least two grant sources			
	1: Eligible for grant funding			

Scoring Factor	Point Criteria	Weight	Points	Score
	0: Not scheduled for funding in the jurisdiction's approved budget or capital plan and is not eligible for grant funding			
11.	**Time Necessary for Implementing**	4		
	3: Less than 2 years			
	2: 2 to 3 years			
	1: 3 to 4 years			
	0: Greater than 4 years			

Mitigation Action Prioritization

Each plan participant was responsible for prioritizing its mitigation actions as a part of this plan update. The ultimate goal of this plan is to maximize loss reduction, and this perspective is incorporated into the region's mitigation strategy. While a full cost–benefit analysis is not required for a hazard mitigation plan update, the STAPLEE criteria were considered to help the plan participants prioritize the actions with the highest potential benefits compared with the costs.

The identified mitigation actions were prioritized, based on the following terms:

- **S – Social:** The public must support the overall mitigation implementation strategy and specific mitigation actions. Consider, will the action disrupt housing or cause the relocation of people? Will the proposed action adversely affect one segment of the population? Is the action compatible with present and future community/agency values?
- **T – Technical:** It is important to determine if the proposed action is technically feasible, will help reduce losses in the long term, and has minimal secondary impacts. How effective is the action in avoiding or reducing future losses? Does the action solve the problem or only a symptom? Will the action create more problems than it solves? Consider the root cause of the issue at hand to determine whether the action is a whole or partial solution, or not a solution at all.
- **A – Administrative:** This category examines the expected staffing, funding, time, and maintenance requirements for the mitigation action to determine if the jurisdiction/special district has the personnel and administrative capabilities to implement the action or whether outside help will be necessary. Consider, a) Staffing (enough staff and training): does the jurisdiction/special district have the capability (staff, technical experts) to implement the action? b) Funding allocated: does the jurisdiction/special district have the funding to implement the action or can it readily be obtained? c) Time: can it be accomplished in a timely manner? d) Maintenance/Operations: can the jurisdiction/special district provide the necessary maintenance? It is important to remember that most federal grants will not provide funding for maintenance.
- **P – Political:** This considers the level of political support for the mitigation action. Is there political support to implement and maintain this action? Have political leaders participated in the planning

process so far? Is there a local champion willing to help see the action to completion? Is there enough public support to ensure that the success of the action? Have all stakeholders been offered an opportunity to participate in the planning process?

- **L – Legal:** The jurisdiction/special district must have the legal authority to implement the action or consider what new laws or regulations would be needed to carry out the mitigation action. Evaluate, are the proper laws, ordinances, and resolutions in place to implement the action? Are there any potential legal consequences? Is the action likely to be challenged by stakeholders who may be negatively affected?
- **E – Economic:** Economic considerations must include evaluation of the present economic base and projected growth. Cost-effective mitigation actions that can be funded in current or upcoming budget cycles are more likely to be implemented than actions requiring general obligation bonds or other instruments that would incur long-term debt in a jurisdiction/special district. Consider benefits and costs at a planning level. A detailed benefit-cost analysis will be performed as project-specific funding becomes available. What financial benefits will the action provide? Does the cost seem reasonable for the size of the problem and the likely benefits? What burden will be placed on the tax base or local economy to implement this action? Does the action contribute to community economic goals, such as capital improvements or economic development? Are there currently sources of funding that can be used to implement the action?
- **E – Environmental:** The impact on the environment is an important consideration because of public desire for sustainable and environmentally healthy communities. Also, statutory considerations, such as the National Environmental Policy Act (NEPA), have to be kept in mind when using federal funds. How will this action impact land/water? Impact on endangered species: how will this action impact endangered species? How will this action impact hazardous materials and waste sites? Is this action consistent with community environmental goals? Is the action consistent with federal laws, such as the National Environmental Policy Act (NEPA)?

The actions were also assigned a prioritization category of low, medium, or high, based on the following definitions:

- **Low:** Based on one to two STAPLEE criteria, the action is feasible and important, with multiple potential challenges. The action should be implemented as funding becomes available.
- **Medium:** Based on three to four STAPLEE criteria, the action is feasible and important, with some potential challenges. Its implementation is not as urgent as a high priority action item and can be implemented over time.
- **High:** Based on five or more STAPLEE criteria, the action is feasible and important, with minimal to no concerns. It is very important to the jurisdiction to implement and may be prioritized in the short term.

Each jurisdiction considered the STAPLEE factors and assigned the above prioritization ranking for each of their mitigation actions. For actions that included multiple jurisdictions representatives from each jurisdiction talked through their ranking and came to an agreed upon priority level.

Cost-Benefit Review

Cost-benefit considerations are incorporated into project prioritization through Scoring Factor 9 in Table 133. At the Local Mitigation Strategy (LMS) level, cost-benefit review is used as a preliminary screening tool to compare the anticipated mitigation benefits of proposed projects with their estimated costs and expected lifecycle performance. This screening approach supports prioritization decisions while recognizing that the formal Benefit-Cost Analysis (BCA) required for Hazard Mitigation Assistance (HMA) funding is conducted by the State of Florida and FEMA using the FEMA BCA Toolkit at the time of grant application.

For LMS screening purposes, projects are evaluated using a simplified benefit-cost ratio framework, consistent with FEMA BCA principles, expressed as:

Benefit–Cost Ratio (BCR) = Estimated Benefits ÷ Estimated Project Costs

Where:

- *Estimated Benefits* represent the anticipated reduction in future losses over the project's useful life, including avoided structural damage, reduced repair or replacement costs, avoided service disruption, and other quantifiable or qualitatively supported risk-reduction outcomes; and
- *Estimated Project Costs* include planning, design, construction, and anticipated maintenance costs associated with the mitigation action.

In some cases, project screening may also consider net benefits using the simplified relationship:

Net Benefit = Estimated Benefits – Estimated Project Costs

This preliminary, comparative approach allows the LMS Working Group to assess relative cost-effectiveness across projects, particularly for multi-jurisdictional, multi-hazard, or population-serving actions, and to identify projects that are likely to be competitive when subjected to a full FEMA BCA during grant review.

Because certain mitigation benefits, such as avoided displacement, continuity of critical services, protection of vulnerable populations, and reduced long-term recovery costs, are difficult to fully monetize at the local screening stage, these factors are considered qualitatively alongside estimated quantitative benefits during project evaluation. Projects that demonstrate strong potential cost-effectiveness through this screening process, even if a full BCA has not yet been completed, may be prioritized in the LMS to support readiness for future funding opportunities.

Final benefit-cost determinations for funding eligibility are completed by the State of Florida and FEMA using the FEMA BCA Toolkit and supporting project-specific data at the time of grant application.

Tie-Breaking Methodology

This project prioritization methodology may lead to tie scores for projects that address the same hazards. For instance, most stormwater management projects address the same goals and hazards, which may lead to tied ranking scores. As a result, it is important to develop a tie-breaking methodology to ensure consistent and defensible project ranking.

1. For projects with identical ranking scores that address different LMS Goals, the project that addresses the highest LMS Goal shall be ranked higher.
2. For instance, if a tornado project and a hazardous materials accident project received identical ranking scores, the tornado project would be ranked higher because the overall hazard priority is higher than that of hazardous materials accidents. For projects with identical ranking scores that address identical LMS Goals, the project that addresses the highest-ranked hazard shall be ranked higher.
3. For projects with identical ranking scores that address the same LMS Goals and the same hazards, the project that serves the greatest percent of the County's population or protects critical facilities serving countywide or regional functions shall be ranked the highest.
4. For projects with identical ranking scores that address the same LMS Goals, the same hazards, and the same percent of the County's population, the project that has the highest benefit-cost analysis or demonstrates greater long-term risk reduction, feasibility, or resilience benefit shall be ranked the highest.

Previous Mitigation Action Status

Table 134 provides information on mitigation actions from the 2021 LMS, including the status of each action and whether they are being carried forward into the 2026 LMS update.

Table 134: Previous Mitigation Actions Found in the 2021 Plan

Hazard	Mitigation Action (from the 2021 Plan)	Lead Agency	Status	Notes/Next Steps
St. Lucie County, Port Saint Lucie, Fort Pierce, and St. Lucie Village				
Flooding	Participate in the CRS User Group to coordinate CRS activities and training.	St. Lucie County CRS Coordinator	Active	Meets 2× per year; seek statewide CRS best practices
Flooding/ Public Information	Participate in the Program for Public Information (PPI) Subcommittee	LMS Working Group/ County	Active	Implement the PPI Plan (Annex B) across events and trainings

Hazard	Mitigation Action (from the 2021 Plan)	Lead Agency	Status	Notes/Next Steps
Multi-Hazards	Participate in the PPL Scoring Review Subcommittee to revise project scoring.	LMS Working Group	Active	Ensure that scoring aligns with LMS goals and transparent methodology
Multi-Hazards	Participate in the LMS Review Subcommittee to update plan format/content	LMS Working Group	Completed (2021 update)	Review and update all 2016 LMS content for consistency
Multi-Hazards	Participate in the Hazards Review Subcommittee	LMS Working Group	Completed (2021 update)	Updated hazard data 2016–2020; ensure consistent hazard impacts
Multi-Hazard/ Resilience	Participate in the Community Resilience Steering Committee	St. Lucie County + all jurisdictions	Active	Supported by DEP and CDBG-MIT grants; complete vulnerability, capacity, and adaptation planning
Multi-Hazard (Risk Assessment)	Participate in countywide THIRA (led by PSL)	City of Port St. Lucie (lead), LMS Working Group, Resilience Group	In Development	THIRA supports emergency management capability planning and helps identify preparedness gaps but does not replace the LMS hazard assessment.
Flooding (NFIP)	Enforce floodplain ordinance requirements in SFHAs	St. Lucie County Floodplain Management	Ongoing	Continue regulating new development and substantial improvements
Flooding (NFIP)	Maintain records of floodplain development	St. Lucie County	Ongoing	Keep all records available for public inspection
Flooding (NFIP)	Notify the public of floodplain ordinance/ FIRM changes	St. Lucie County	Ongoing	Required for continued NFIP participation
Flooding (NFIP)	Maintain FIRM and LOMC repositories	St. Lucie County	Ongoing	Maintain accessible map change documentation

Hazard	Mitigation Action (from the 2021 Plan)	Lead Agency	Status	Notes/Next Steps
Flooding (NFIP)	Promote flood insurance countywide	St. Lucie County	Ongoing	Outreach required by NFIP and CRS

Considered Mitigation Actions

Table 135 shows actions considered by participating jurisdictions for inclusion in the mitigation action strategy.

Table 135: Considered Mitigation Action

Mitigation Action	Type of Action	Selected? (Y/N)	If not selected, why not?
St. Lucie County			
Residential wind mitigation retrofits (roof to wall connections, opening protection, structural strengthening)	Structure and Infrastructure Projects	Y	
Residential Acquisition and Demolition with Return to Open Space	Structure and Infrastructure Projects	Y	
Localized drainage and stormwater system improvements	Structure and Infrastructure Projects	Y	
Critical facility hardening and emergency power upgrades	Structure and Infrastructure Projects	Y	
Use of comprehensive planning, land development regulations, and post-storm redevelopment procedures to implement LMS mitigation priorities and reduce future hazard exposure	Local Plans and Regulations	Y	
Application of floodplain management standards and building code enforcement to exceed minimum requirements and reduce future flood and wind losses	Local Plans and Regulations	Y	

Mitigation Action	Type of Action	Selected? (Y/N)	If not selected, why not?
Incorporation of wildfire mitigation considerations into land use planning and development review	Local Plans and Regulations	Y	
Nature-based stormwater improvements, wetland preservation, and green infrastructure where feasible	Natural Systems Protection	Y	
Protection and management of natural lands to reduce wildfire risk and extreme heat impacts in wildland-urban interface areas	Natural Systems Protection	Y	
Targeted flood risk education and outreach through the CRS Program for Public Information to support informed mitigation and insurance decisions	Education and Awareness Programs	Y	
Residential wind mitigation education and outreach designed to increase participation in voluntary mitigation retrofits and reduce future storm damage	Education and Awareness Programs	Y	
Utility undergrounding of overhead electrical infrastructure	Structure and Infrastructure Projects	N	Cost prohibitive and dependent on third-party utility coordination; not feasible at a countywide scale.
Targeted nature-based shoreline stabilization projects where feasible to reduce localized erosion and wave impacts	Natural Systems Protection	Y	
Port St. Lucie			
Hardening Critical Facilities	Structure/Infrastructure	Y	
Resident Outreach and Education	Education and Awareness Campaigns	Y	

Mitigation Action	Type of Action	Selected? (Y/N)	If not selected, why not?
Consider increasing building elevation on new structures to BFE + 24 inches	Local Plans and Regulation	N	Limited political or public support for doubling the existing ordinance elevation
Consider increasing building elevation on new structures to BFE + 18 inches	Local Plans and Regulation	Y	
Build or Acquire an EOC Building rated for a Category 5 hurricane	Structure and Infrastructure	Y	
Improve stormwater system in problem areas where retrofitting has been identified	Structure and Infrastructure	Y	
Acquisition – Home acquisitions by governmental jurisdictions, although possible, are a rare occurrence in South Florida, due to the fact that money is not specifically budgeted for such things, and finding available grant funding to purchase (acquire) a home from a homeowner is difficult to find.	Structure and Infrastructure Projects	N	There are mitigation grants out there that do provide for this, however, in recent history, there have been no acquisition projects that score high enough in the project scoring process to allow for the project to be prioritized high enough on the prioritization list to successfully get money.
Elevation – Home elevation projects are getting more and more difficult to perform, mostly due to the myriad of requirements on monitoring required by all mitigation grant streams, which requires a full-time employee just to monitor the grant and complete the reporting (for a home that belongs to a private homeowner). The other drawback is that if a project was priced at, for example, $150,000 when applying for the funding, and by the time the funding came through (which on most mitigation grants is greater than 12–18 months), then the price	Structure and Infrastructure Projects	N	The LMS recommends that all jurisdictions reach out to their Federal delegation and urge them to correct this injustice in the mitigation grant programs, which is precluding governmental entities from performing these type of common sense mitigation techniques out of concern of having to tap into taxpayer funds to complete the project. For these reasons, we are not aware of any governmental entities in our area who are willing

Mitigation Action	Type of Action	Selected? (Y/N)	If not selected, why not?
ends up being $200,000, the sponsoring governmental entity to the project (city, county) ends up having to pay the difference using taxpayer funds to elevate a private homeowner's home.			to undertake an elevation project using Federal mitigation funds at this time.
Relocation – Relocation projects are rarely, if ever completed anymore, due to the extreme amount it costs to relocate a home. Decades ago, home relocation was an affordable solution to getting a home out of the floodplain but today may actually exceed the costs of demolishing and rebuilding the home. Furthermore, homeowners own the land they are on, and do not want to purchase new land to put their old home on and ask the sponsoring entity if that also can be funded by the government (most times it cannot). In this part of Florida, you also run into home relocations actually not meeting codes of the area they want to move to, which also is a burdensome process to bring the home up to code.	Structure and Infrastructure Projects	N	Funding sources include many of the mitigation programs such as HMGP, FMA, and others, but often times do not meet the total cost of a relocation, particularly if the homeowner does not own a new piece of land to put it on. We do not have any requests within our jurisdictions trying to relocate homes but would cooperate with homeowners if they were able to fund it on their own and not through grant funding.
Structural Retrofits – this may be the most affordable option available to homeowners who have flooding issues with their homes. Wet or dry proofing a home is more affordable than elevating, relocating, or having a home acquired by the government.	Structure and Infrastructure Projects	Y	
Storm Shutters – South Florida is the storm shutter capital of the U.S., if not the world. One can get anything from	Structure and Infrastructure Projects	Y	

Mitigation Action	Type of Action	Selected? (Y/N)	If not selected, why not?
traditional aluminum shutters that are manually put on before a storm, to Bahamas shutter, to accordion shutters, to impact-rated fabric, and impact-rated glass. However, funding for these is limited to the homeowner's personal funds. However, many municipal and county-owned buildings have applied for and received various mitigation funding streams (mostly through HMGP) to have their buildings hardened, which includes the entire envelope of the building (roof, windows, doors, all openings).			
City of Port St Lucie – The city continues to monitor, enforce, and strengthen our stormwater management regulations that helps to keep the natural and beneficial functions of the floodplain protected. Although regulations are able to be updated and maintained for little to no funding (excluding personnel work hours), there are other ways written into our code of ordinances that can help protect these natural functions, such as sediment and erosion control, stream dumping regulations, and watershed management. There has even been discussion about wetlands preservation and/or restoration. The City will continue to seek funding and look for other ways to protect the natural and beneficial functions of the floodplain in our jurisdiction.	Natural Systems Protection	Y	

Mitigation Action	Type of Action	Selected? (Y/N)	If not selected, why not?
Warning Systems – In a partnership with the State of Florida Division of Emergency Management, all of our jurisdictions are participants through the County Division of Emergency Management in the Everbridge suite of notification and warning tools, branded locally as Alert St. Lucie. The alert system will now be implemented in PSL and upgraded as funding is available.	Emergency Services Activities	Y	
Protection of critical facilities – all jurisdictions have some sort of early warning plan for critical facilities in the event of an incoming flood, hurricane, or other disaster which may affect them, in accordance with CRS Activity 610. The benefit of this is to allow critical facilities, especially those which must continue to operate constantly and without interruption, to prepare their facilities and activate their internal response plans to ensure they are able to continue providing their critical services without interruption.	Emergency Services Activities	Y	
Social Media – All PPI Topics/Messages are scheduled to be delivered during flood awareness week and throughout hurricane season by all jurisdictions.	Education and Awareness Programs	Y	
RL Mailer – SFHA/Repetitive Loss Areas – each jurisdiction is scheduled to complete an outreach project annually to the SFHA/Repetitive Loss Areas.	Education and Awareness Programs	Y	
City Website – City of PSL website updated to include all	Education and Awareness Programs	Y	

Mitigation Action	Type of Action	Selected? (Y/N)	If not selected, why not?
PPI topics and all outreach materials and public information from Emergency Management steers citizens to our website.			
STK events – The City of Port St. Lucie hosts a Hurricane Expo each year that is sponsored by several private businesses with a vested interest in the community. All jurisdictions are welcome to participate in the development and execution of the Expo, and St Lucie County has participated for the past several years.	Education and Awareness Campaigns	Y	
Fort Pierce			
Consider increasing building elevation on new structures to BFE + 24 inches	Local Plans and Regulation	N	Limited political or public support for doubling the existing ordinance elevation
Targeted flood risk education and outreach through the CRS Program for Public Information to support informed mitigation and insurance decisions.	Education and Awareness Programs	Yes	
Town of St. Lucie Village			
Localized drainage and stormwater system improvements	Structure and Infrastructure Projects	Yes	
Consider increasing building elevation on new structures to BFE + 24 inches	Local Plans and Regulation	N	Limited political or public support for doubling the existing ordinance elevation

New and Continuing Mitigation Actions

This section presents a comprehensive list of mitigation actions that address both newly identified hazards and ongoing vulnerabilities carried forward from the previous plan. Table 136 contains all new and continuing mitigation actions identified by the St. Lucie County Local Mitigation Strategy (LMS) Working Group to reduce risk and enhance community resilience. These actions reflect the County's commitment to proactive risk reduction and long-term sustainability. Each action has been developed in alignment

with federal, state, and local mitigation priorities and includes details on responsible agencies, potential funding sources, estimated costs, implementation timeframes, and priority rankings. By advancing these initiatives, St. Lucie County seeks to protect lives, property, and critical infrastructure while promoting mitigation strategies for future growth. The following hazards are addressed in that table.

- Dam/Levee Failure
- Erosion
- Extreme Temperatures
- Flooding
- Hurricanes/Tropical Storms
- Pests & Disease (Including Agricultural)
- Sea Level Rise
- Seismic Hazards
- Severe Thunderstorms & Lightning
- Tornadoes
- Tsunami
- Wildfire
- Communication System Failures
- Epidemics/Pandemics
- Power Systems Failure
- Radiological Accidents
- Transportation Systems Accidents
- Wellfield Contaminations
- Civil Disturbances
- Mass Migration
- Terrorism and Sabotage

Table 136: New and Continuing Mitigation Actions

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
AGR-1	Agricultural Pest & Disease Monitoring	Pests & Diseases	Expand surveillance and early detection programs for invasive pests and crop diseases through field inspections, trapping programs, and coordination with UF/IFAS, targeting citrus, row crops, and nurseries.	N/A	St. Lucie County	UF/IFAS Extension/ Agriculture Dept.	USDA grants; State funds	$75K annually	1–2 years	High
AGR-2	Integrated Pest Management (IPM) Education	Pests & Diseases	Provide annual IPM training workshops, technical assistance, and demonstration projects to growers and land managers to reduce chemical reliance and improve resilience to climate variability.	N/A	St. Lucie County	UF/IFAS Extension	USDA; Local funds	$75K annually	1–3 years	Medium
AGR-3	Vector Control & Public Health Coordination	Pests & Diseases	Strengthen coordination between mosquito control, public health, and emergency management during warm, wet, and post-storm periods,	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Health Dept./ Mosquito Control in each jurisdiction	State health grants; Local funds	$1M	1–2 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			including enhanced surveillance and targeted treatment.							
CIV-1	Community Conflict Prevention & Engagement Program	Civil Disturbances	Expand community engagement, mediation, and outreach initiatives in Port St. Lucie and Fort Pierce neighborhoods with higher post-disaster stress indicators by establishing at least three standing community liaison teams, partnering with faith-based and nonprofit organizations, and conducting quarterly engagement forums before and after major disaster events.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce	St. Lucie County Human Services/ Sheriff's Office in each jurisdiction	Local operating funds: DOJ Community Policing Grants	$150K annually	1–2 years	Medium
CIV-2	Law Enforcement Training & Mutual Aid Enhancement	Civil Disturbances	Provide annual advanced training in crowd management, civil disorder response, and de-escalation for 100% of Sheriff's Office command staff, and update mutual aid	N/A	St. Lucie County, Port St. Lucie, Fort Pierce	Sheriff's Office/ Emergency Management in each jurisdiction	DHS SHSP; FEMA EMPG	$100K annually	1–2 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			agreements with neighboring counties for large-scale or prolonged incidents.							
CIV-3	Public Facility Hardening for Crowd Management	Civil Disturbances	Assess and retrofit 10–15 priority public facilities (including City Halls, EOCs, and parks used for demonstrations) with controlled-access entry points, reinforced glazing, exterior lighting, and clearly marked emergency egress routes to safely manage large gatherings and protests.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Facilities Management/ Sheriff's Office in each jurisdiction	Local CIP; DHS SHSP	$2M	1–3 years	High
COM-1	Hardened Communications Infrastructure	Communication System Failures	Elevate and floodproof priority radio towers, data centers, and dispatch facilities in flood-prone zones, and require resilience standards for new communications infrastructure.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	IT/ Public Works in each jurisdiction	Local CIP	$4M	2–5 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
COM-2	Redundant Emergency Communications Network	Communication System Failures	Expand redundancy for 911, EOC, and public safety communications through satellite phones, mobile cell towers, and secondary fiber routes, ensuring 100% coverage for critical facilities during outages.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management/ IT in each jurisdiction	FEMA EMPG; DHS grants; Local funds	$2M	1–3 years	High
COM-3	Canal, Levee, and Water Control Structure Assessment Program	Dam & Levee Failure	Conduct routine inspections and risk assessments of SFWMD canals (C-23, C-24, C-25), local drainage canals, levees, and control structures, incorporating updated rainfall conditions and sea-level rise stressors into condition ratings and maintenance priorities.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Public Works in each jurisdiction and SFWMD	Local funds; FEMA (planning)	$150K-$300K	1–2 years	High
DAM-1	Dam & Levee Emergency Action Planning	Dam & Levee Failure	Update Emergency Action Plans (EAPs) for critical dams, levees, and control structures, and	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management in each jurisdiction	FEMA EMPG; Local funds	$100K	1–2 years	Medium

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			integrate public warning, evacuation routes, and sheltering procedures into the County CEMP and public outreach materials.							
DAM-2	Structural Reinforcement & Seepage Control Projects	Dam & Levee Failure	Implement prioritized reinforcement projects (armoring, toe drains, seepage cutoff walls, and embankment stabilization) at identified high-risk canal segments adjacent to low-lying neighborhoods and critical facilities.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Public Works in each jurisdiction and SFWMD	FEMA HMGP; State resilience grants	$5M	2–5 years	High
EPI-1	Continuity of Operations & Remote Service Delivery	Epidemics & Pandemics	Expand telework, virtual permitting, and online service delivery for all essential County departments, and update COOP plans to ensure that at least 70–80% of core functions can continue during pandemics or	N/A	St. Lucie County	Emergency Management/ HR	FEMA EMPG; Local funds	$100K	1–2 years	Medium

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			widespread staff shortages, including cross-training and remote access protocols.							
EPI-2	Medical Surge & Supply Chain Resilience	Epidemics & Pandemics	Expand plans for surge staffing, temporary care sites, and stockpiling of PPE and medical supplies, and diversify suppliers to reduce shortages during pandemics or regional emergencies.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Health Department/ Hospitals in each jurisdiction	HHS grants; FEMA	$100K	1–3 years	High
EPI-3	Public Health Surveillance & Data Integration	Epidemics & Pandemics	Enhance disease surveillance and data-sharing systems across hospitals, clinics, and emergency management to support early outbreak detection and situational awareness.	N/A	St. Lucie County	Health Department	CDC grants; State funds	$100K	1–2 years	High
ERO-1	Erosion-Sensitive Land Use Controls	Erosion	Update zoning, setbacks, and development standards to limit grading, vegetation removal, and	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Planning & Zoning in each jurisdiction	Local funds	$50K	1–3 years	Medium

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			impervious surface expansion in identified erosion-prone coastal and lagoon-front areas.							
ERO-2	Post-Storm Erosion Monitoring & Repair	Erosion	Establish rapid post-storm inspection protocols and standing contracts to assess and repair erosion impacts on public beaches, shorelines, roads, and drainage infrastructure following hurricanes and major rainfall events.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Public Works in each jurisdiction	Local CIP; FEMA PA	$1M	1–2 years	Medium
ERO-3	Shoreline & Riverbank Stabilization Program	Erosion	Implement living shorelines, dune restoration, and bank stabilization projects along Hutchinson Island, the Indian River Lagoon shoreline, and canal banks, prioritizing areas with documented erosion and infrastructure exposure.	N/A	St. Lucie County	Environmental Resources/ Public Works	FDEP grants; FEMA HMGP	$2M	2–5 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
EXT-1	Cooling Center & Heat Relief Network	Extreme Temperatures	Expand the network of cooling centers at libraries, community centers, and shelters, and provide transportation support to reach vulnerable populations during extreme heat advisories and warnings.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management/ Human Services in each jurisdiction	FEMA EMPG; State health grants	$50K	1–2 years	High
EXT-2	Critical Facility HVAC & Power Resilience	Extreme Temperatures	Upgrade HVAC systems and backup power at shelters, healthcare facilities, senior centers, and congregate care facilities to maintain safe indoor temperatures during prolonged heat and power outages.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Facilities/ Utilities in each jurisdiction	Local funds	$1M	1–4 years	High
EXT-3	Urban Heat Island Reduction Program	Extreme Temperatures	Increase tree canopy, shade structures, reflective roofing, and green infrastructure in high-heat census tracts in Port St. Lucie and Fort Pierce, prioritizing low-canopy and	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Public Works/ Planning in each jurisdiction	FDEP grants; Local CIP	$1M	2–5 years	Medium

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			limited-resource neighborhoods.							
FLD-1	Dedicated Emergency Operations Center for the City of Port St. Lucie	Flooding	Develop a dedicated "warm" Emergency Operations Center (EOC) within the next five years, pending funding availability, to enhance emergency coordination, continuity of operations, and response during flood and hurricane events.	Emergency Services	Port St. Lucie	Emergency Management/City Manager's Office	FEMA HMGP; state emergency management grants; local capital funds	$8M	3–5 years	High
FLD-2	Stormwater Drainage Improvements	Flooding	Continue applying for and implementing grant-funded projects to upgrade, harden, and expand stormwater drainage infrastructure over the next five years to address rainfall-driven flooding, system capacity limitations, and future conditions.	Structural Projects	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Public Works in each jurisdiction	FEMA HMGP; Resilient Florida Program; CDBG-MIT; state stormwater grants	$10M	1–5 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
FLD-3	CRS Community Outreach – Overall	Flooding	Increase outreach on CRS and NFIP topics through integration with general emergency management outreach efforts to improve public understanding of flood risk, insurance requirements, and mitigation options available to all residents.	Public Information	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management/Communications	CRS program; local outreach budgets	$30K annually	Continuing over the next 5 years	Medium
FLD-4	CRS Community Outreach – Social Media	Flooding	Expand CRS-related outreach through social media platforms to disseminate flood risk information, insurance guidance, and mitigation messaging to residents and businesses in an accessible format.	Public Information	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Communications Dept.	CRS program; local communications budgets	$20K annually	Continuing over the next 5 years	Medium
FLD-5	Increase Building Code to BFE + 18 inches from the current BFE + 12 inches	Flooding	Evaluate and consider increasing the local freeboard requirement from BFE +12 inches to BFE +18 inches over the next five years to	Prevention	Port St. Lucie	Building Department/Floodplain Administrator	Local capital funding; building permit revenues	$50K-$100K	3–5 years	Medium

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			improve structural resilience and reduce future flood damage.							
FLD-6	Stormwater Infrastructure Projects	Flooding	Incorporate nature-based solutions, such as green infrastructure and natural drainage features, into stormwater and public works infrastructure projects as they are designed to enhance flood mitigation, water quality, and resilience benefits.	Natural Resource Protection	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Public Works	FEMA HMGP; Resilient Florida Program; state and federal infrastructure grants	$5M	Ongoing	High
FLD-7	Floodplain Management & CRS Advancement	Flooding	Strengthen floodplain regulations, improve mapping and outreach, and pursue improved Community Rating System (CRS) classification to reduce NFIP premiums for residents and businesses.	Prevention	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Planning/ Floodplain Manager/Emergency Management	Local funds	$150K-$300K annually	1–3 years	Medium

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
FLD-8	Property Mitigation & Buyout Program	Flooding	Expand elevation, acquisition, and voluntary buyout programs targeting repetitive-loss and severe repetitive-loss properties, with post-acquisition conversion to open space or flood buffers.	Property Protection	St. Lucie County, Fort Pierce, St. Lucie Village	Emergency Management/City Council/County Commission	FEMA FMA; HMGP	$1M	2–6 years	High
FLD-9	Stormwater System Capacity Enhancements	Flooding	Upgrade drainage infrastructure, pump stations, and retention systems in repetitive-flooding neighborhoods and canal-adjacent areas, incorporating future rainfall intensity and groundwater conditions.	Structural Projects	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Public Works in each jurisdiction	FEMA FMA; Local CIP	$5M	1–5 years	High
FLD-10	CRS User Group Participation	Flooding	Participate in the CRS User Group to coordinate Community Rating System (CRS) activities, share best practices, track creditable actions, and participate in training opportunities to	Prevention	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	CRS Coordinators from each jurisdiction	Local operating funds; CRS administrative support	$20K annually	Continuing over next 5 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			support CRS compliance and improved flood insurance premium reductions.							
FLD-11	Program for Public Information (PPI) Subcommittee	Flooding	Participate in the Program for Public Information (PPI) Subcommittee to coordinate floodplain management messaging, outreach materials, and public education efforts that support CRS credit, flood risk awareness, and insurance uptake. Work with each jurisdiction to review and refine the Unified PPI on a yearly basis.	Public Information	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	LMS Working Group/ all jurisdictions participate	Local operating funds; CRS program support	$15K annually	Continuing over next 5 years	High
FLD-12	Floodplain Ordinance Enforcement	Flooding	Enforce floodplain ordinance requirements in Special Flood Hazard Areas (SFHAs), including permit review, inspections, and compliance monitoring, to	Prevention	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	St. Lucie County Floodplain Management/Port St. Lucie Building Department/Fort Pierce Building Department	Local operating funds; NFIP administration	$50K-$100K annually	Continuing over next 5 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			maintain NFIP eligibility and reduce flood risk to structures.							
FLD-13	Floodplain Development Records	Flooding	Maintain accurate and up-to-date records of floodplain development activities, including permits, elevation certificates, and compliance documentation, to support NFIP administration, CRS documentation, and post-disaster verification.	Public Information	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Each jurisdiction's Building Departments	Local operating funds; NFIP administration	$25K-$75K annually	Continuing over next 5 years	High
FLD-14	Public Notification of Floodplain Changes	Flooding	Notify the public of changes to floodplain ordinances, Flood Insurance Rate Maps (FIRMs), and related regulatory requirements to ensure awareness of flood risk, insurance implications, and compliance obligations.	Public Information	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Jurisdiction's Communications/PIO	Local operating funds; CRS outreach credit	$5K-$15K annually	Continuing over next 5 years	Medium

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
FLD-15	FIRM & LOMC Repository Maintenance	Flooding	Maintain and provide public access to Flood Insurance Rate Maps (FIRMs) and Letters of Map Change (LOMCs) to support accurate flood risk determination, permitting decisions, and community awareness.	Prevention	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Floodplain Administrators/CRS Coordinators	Local operating funds; FEMA mapping resources	$5K-$15K annually	Continuing over next 5 years	Medium
FLD-16	Flood Insurance Promotion	Flooding	Promote flood insurance participation countywide through outreach, education, and coordination with CRS and emergency management programs to reduce financial risk and support post-disaster recovery.	Public Information	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Jurisdictional Communications Departments/PIOs/CRS Coordinators	CRS program; local outreach budgets	$50K annually	Continuing over next 5 years	High
FLD-17	CRS Public Outreach Programs	Flooding	Continue CRS public outreach programs, including distribution of educational materials and engagement activities, to increase	Public Information	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management/CRS Coordinators	CRS program; local outreach budgets	$50K annually	Continuing over next 5 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			awareness of flood hazards, mitigation actions, and insurance options while maintaining CRS credit.							
FLD-18	Tidal Backflow Prevention at Outfalls	Flooding	Install and maintain tide valves on primary stormwater outfalls discharging to the Indian River Lagoon to prevent tidal backflow, reduce roadway flooding, and improve drainage performance during high tide events.	Structural Projects	St. Lucie Village	Town of St. Lucie Village	Local funds; FEMA HMGP;	$250K-$750K	Completed & Ongoing	High
FLD-19	Central Water & Wastewater Service Expansion	Flooding	Pursue expansion of centralized water and wastewater utility service to reduce reliance on shallow potable wells and septic systems vulnerable to tidal flooding, saltwater intrusion, and groundwater contamination, thereby reducing public health and environmental risks.	Structural Projects	St. Lucie Village	Town of St. Lucie Village	State Revolving Funds; FDEP; FEMA HMGP;	$10M-$50M	3–10 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
FLD-20	Septic System Vulnerability Reduction	Flooding	Reduce environmental and health risks associated with widespread septic system use in tidally influenced areas through system upgrades, conversions to centralized sewer, or other mitigation measures as utility service becomes available.	Structural Projects	St. Lucie Village; City of Port St. Lucie	Public Utilities in each jurisdiction	FDEP; State grants; FEMA HMGP	$5M-$20M	3–10 years	High
FLD-21	Citywide Stormwater Drainage Improvements & System Upgrades	Flooding	Implementation of previously identified stormwater improvement projects, including drainage pipe upsizing, inlet replacement, outfall improvements, and system rehabilitation to reduce roadway and neighborhood flooding.	Structural Projects	Fort Pierce	City of Fort Pierce Public Works/ Stormwater	FEMA HMGP; FMA; State grants; Local CIP	$10M-$50M	1–5 years	High
FLD-22	Shoreline Stabilization and Seawall Rehabilitation	Flooding	Repair, replace, and elevate existing seawalls and shoreline stabilization features	Structural Projects	Fort Pierce	City of Fort Pierce Engineering	FEMA HMGP; State resilience grants; Local funds	$57.5M (estimate)	2–5 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			along vulnerable waterfront areas to reduce tidal flooding, erosion, and storm surge impacts.							
FLD-23	Stormwater Pump Station Installation & Upgrades	Flooding	Install new stormwater pump stations and upgrade existing facilities to improve drainage capacity in tidally influenced and low-lying areas.	Structural Projects	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	City of Fort Pierce Utilities/Public Works	FEMA HMGP; FMA; State grants	$1M-$5M	2–5 years	High
FLD-24	Wastewater Lift Station Floodproofing	Flooding	Elevate, floodproof, and harden wastewater lift stations to reduce service disruptions, environmental contamination, and public health impacts during flooding events.	Structural Projects	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Fort Pierce Utilities Authority	FEMA HMGP; FMA; State revolving funds	$250K-$1M	1–4 years	High
FLD-25	Stormwater and Flood Mitigation Master Planning	Flooding	Update and implement stormwater and flood mitigation master plans to guide capital improvements, prioritize projects, and integrate	Prevention	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	City of Fort Pierce Public Works/Engineering; City of Port St. Lucie Public Works	Local funds; State planning grants	$200K	1–2 years	Medium

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			mitigation into long-term infrastructure planning.							
FLD-26	Floodplain Management and CRS Program Support	Flooding	Continue floodplain management activities, CRS documentation, and public outreach to support CRS participation, improve ratings, and reduce flood insurance costs.	Public Information	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	City of Fort Pierce Building Dept./CRS Coordinator	Local funds	$75K-$150K annually	Ongoing	Medium
FLD-27	Review of Jurisdictional Plans	Flooding	Review jurisdictional comprehensive and land-use plans and document potential updates to protect from flooding.	Prevention	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Jurisdictional Planning-Zoning, Emergency Management, Environmental Resource	Local funds	$25K-$75K	1–3 years	Medium
FLD-28	Inventory and Acquisition of Natural Lands	Flooding	Take an inventory of natural lands in each jurisdiction that currently or could serve as flood protection. Develop a plan to acquire natural lands, especially around neighborhoods impacted by flooding.	Natural Resource Protection	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Floodplain Administrators/Emergency Management/CRS Coordinators	FEMA HMGP; FMA; State revolving funds	$50,000	3–5 years	Medium

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
FLD-29	Implementation of Flood Alert System	Flooding	Implement and regularly test an alert system for flash floods within each jurisdiction.	Emergency Services	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management	FEMA HMGP; Local Funds	$100,000	3–5 years	Medium
FLD-30	Flood Map Information Service	Flooding	Provide residents of each jurisdiction with digital maps that show the FEMA flood zones.	Public Information	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management/Flood plain Administrators	FEMA HMGP, Local Funds	$15K-$50K annually	1–3 years	Medium
HUR-1	Post-Storm Recovery & Debris Management Planning	Hurricane/ Tropical Storms	Update debris management and recovery staging plans to identify pre-approved debris management sites, contract capacity for vegetative and C&D debris, and clearance priorities for critical routes, shelters, and utilities to reduce post-storm recovery time.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Public Works/Solid Waste	FEMA PA; Local funds	$50K-$150K	1–2 years	Medium
HUR-2	Shelter & Evacuation Capacity Expansion	Hurricane/ Tropical Storms	Increase hardened shelter capacity and improve evacuation route resilience, including causeways and key arterial routes, to support population growth	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management/ Public Works	FEMA HMGP; State grants	$5M	2–4 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			and major hurricane evacuations.							
HUR-3	Wind Hardening of Public Facilities	Hurricane/ Tropical Storms	Retrofit priority public facilities with impact-resistant windows, reinforced doors, and roof systems to meet or exceed Florida wind standards.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Facilities/ Emergency Management	Local CIP	$2M	1–5 years	High
MIG-1	Housing, Insurance, and Fiscal Resilience Strategy for Impacts of Sea Level Rise	Mass Migration	Coordinate housing policy, insurance market monitoring, and fiscal planning to address rising premiums and inland housing demand, including incentives for resilient, higher-density development in lower-risk areas.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Housing & Human Services/ Property Appraiser/ Planning/ Neighborhood Services	HUD CDBG; FEMA HMGP; State housing programs	$100K-$250K	1–4 years	Medium
MIG-2	Regional Coordination for Displaced Populations	Mass Migration	Formalize agreements with Treasure Coast Regional Planning Council and neighboring counties for coordinated intake, sheltering, data sharing, and social services for	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management/ Regional Partners	FEMA EMPG; State grants	$50K-$150K	1–2 years	Medium

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			displaced populations during regional disasters.							
MLT-1	PPL Scoring Review Subcommittee	Multi-Hazards	Participate in the PPL Scoring Review Subcommittee to periodically review and refine the Project Priority List (PPL) scoring criteria to improve transparency, equity considerations, and alignment with LMS goals and funding eligibility requirements.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	All Jurisdictions to participate through LMS Working Group	Local operating funds	$5K-$15K annually	Continuing over next 5 years	Medium
MLT-2	Community Resilience Steering Committee Participation	Multi-Hazard	Participate in the Community Resilience Steering Committee to coordinate mitigation, resilience, and adaptation initiatives across jurisdictions and ensure alignment between the LMS, Regional Resilience Plan, and other resilience-related planning efforts.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	All Jurisdictions to participate through LMS Working Group	Local operating funds; state resilience planning grants	$10K-$25K annually	Continuing over next 5 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
MLT-3	Countywide THIRA	Multi-Hazard	Participate in a countywide Threat and Hazard Identification and Risk Assessment (THIRA), led by the City of Port St. Lucie, to support risk-informed preparedness, emergency management planning, and coordination with mitigation and resilience assessments.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	City of Port St. Lucie Emergency Management (lead), LMS Working Group, Resilience Group	Local operating funds; DHS/FEMA preparedness support	$100KN	1–2 years	Medium
MLT-4	Critical Facilities Backup Power and Hardening	Multi-hazard	Install permanent generators, electrical hardening, and flood protection measures at critical facilities to ensure continuity of operations during disasters.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	City of Fort Pierce Facilities/ Emergency Management	FEMA HMGP; BRIC; State grants	$750K	1–3 years	High
PWR-1	Critical Facility Backup Power Expansion	Power Systems Failure	Install, upgrade, and maintain permanent generators or microgrids at 100% of designated shelters, the County EOC, major water and wastewater	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Utilities/ Emergency Management	HMGP; Local funds	$2M	1–4 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			treatment plants, critical lift stations, and hospitals, sized to support 72–96 hours of continuous operation during grid outages.							
PWR-2	Distributed Energy & Solar Resilience Pilot	Power Systems Failure	Implement solar-plus-storage systems at 5–10 priority public facilities (EOCs, shelters, water facilities) to provide on-site power for critical loads during prolonged outages and reduce dependence on centralized generation.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Utilities/ Sustainability Office	DOE grants; FEMA	$20M	2–4 years	Medium
PWR-3	Grid Hardening & Vegetation Management	Power Systems Failure	Coordinate with electric utilities to harden substations, elevate or floodproof vulnerable equipment, underground lines where feasible, and expand proactive vegetation management along	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Utilities/ Public Works	Utility capital funds; State resilience grants	$20M	2–5 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			major corridors (I-95, Turnpike, US-1, and primary feeders) to reduce wind-related outages.							
RAD-1	Medical Facility Radiological Safety Upgrades	Radiological Accidents	Support hospitals, imaging centers, and clinics in upgrading radiation monitoring equipment, shielding, access controls, and emergency protocols, prioritizing facilities within or serving the 10-mile emergency planning zone.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce	Health Department/Emergency Management	State health grants; Local funds	$10M	2–4 years	Medium
RAD-2	Public Information & Protective Action Guidance	Radiological Accidents	Develop and disseminate clear, pre-scripted public messaging for sheltering, evacuation, and contamination concerns related to radiological incidents, integrated into the County's emergency notification platforms and outreach materials.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management	FEMA EMPG	$10K-$30K annually	1–2 years	Low

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
RAD-3	Radiological Incident Response Planning & Training	Radiological Accidents	Update the radiological response annex consistent with St. Lucie Nuclear Power Plant emergency planning zones and conduct biennial joint training and exercises with state and federal partners addressing transportation, medical, and evacuation scenarios.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management/ Fire District	FEMA EMPG; DHS grants	$25K-$75K annually	1–2 years	Medium
SEI-1	Critical Facility Seismic Safety Review	Seismic Hazards	Conduct seismic screening of critical facilities and lifelines, focusing on nonstructural vulnerabilities, such as equipment anchoring and utility connections.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Facilities Management	FEMA (planning); Local funds	$75K-$150K	1–3 years	Low
SEI-2	Earthquake Awareness & Response Training	Seismic Hazards	Integrate earthquake response procedures into emergency responder training and public education materials, emphasizing “Drop, Cover, and Hold On.”	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management	FEMA EMPG	$5K-$15K annually	1–2 years	Low

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
SEI-3	Seismic Design Standards for New Facilities	Seismic Hazards	Incorporate basic seismic resistance standards into design criteria for new critical facilities and infrastructure, consistent with low-cost best practices.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Planning/ Building Department	Local funds	$20M	5+ years	Low
SLR-1	Coastal Infrastructure Elevation & Floodproofing	Sea Level Rise	Elevate or floodproof roads, pump stations, utilities, and public facilities along Hutchinson Island, the Indian River Lagoon shoreline, and other chronically flooded areas.	Infrastructure	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Public Works/ Utilities	Local CIP	$10M	2–6 years	High
SLR-2	Sea Level Rise Vulnerability Mapping & Planning Integration	Sea Level Rise	Update sea-level rise exposure maps at regular 5-year intervals and integrate findings into the Comprehensive Plan, capital improvement programming, CRS activities, and LMS mitigation prioritization.	Prevention	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Planning & Development Services	FDEP Resilience Grants; Local funds	$50K-$150K	1–2 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
SLR-3	Voluntary Buyout & Transition Zone Program	Sea Level Rise	Implement voluntary acquisition and relocation programs for repetitive-loss and at-risk coastal properties, converting acquired parcels to open space, flood buffers, or natural shoreline systems.	Property Protection	St. Lucie County, Fort Pierce, St. Lucie Village	Emergency Management/ Housing	FEMA FMA; HMGP	$5M	3–10 years	Low
SLR-4	Sea-Level Rise Relocation & Managed Retreat Framework	Mass Migration	Develop a countywide framework identifying priority retreat zones along the Indian River Lagoon and Hutchinson Island, establishing criteria for voluntary buyouts, relocation assistance, and post-acquisition land use.	Property Protection	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Planning & Development Services/ Emergency Management	FEMA (planning); FDEP Resilience Grants	$50K	1–3 years	High
TER-1	Critical Infrastructure Security Assessments	Terrorism & Sabotage	Conduct physical and cyber vulnerability assessments for all major water, wastewater, power, communications, and transportation facilities, prioritizing	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Utilities/ Sheriff's Office	DHS SHSP; Local capital funds	$100K-$250K	1–3 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			EOCs, pump stations, substations, and causeways, and implement recommended protective measures.							
TER-2	Cybersecurity & Sabotage Prevention Program	Terrorism & Sabotage	Implement countywide cybersecurity standards, annual training for IT and utility staff, and continuous system monitoring for SCADA and communications networks supporting utilities and public safety.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	IT Department/ Utilities	DHS Cybersecurity Grants; Local operating funds	$100K	1–2 years	High
TER-3	Intelligence Sharing & Threat Preparedness	Terrorism & Sabotage	Expand participation in state and federal intelligence-sharing programs, conduct annual joint threat exercises, and integrate threat briefings into EOC operations.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Sheriff's Office/ Emergency Management	DHS SHSP; FEMA EMPG	$100K	3–5 years	Medium
THD-1	Lightning Protection for Critical Facilities	Severe Thunderstorms & Lightning	Install or upgrade lightning protection systems at EOCs, shelters, utilities, communications	N/A	St. Lucie County, Port St. Lucie, Fort	Facilities/ Utilities	Local CIP; FEMA	$5M	1–4 years	Medium

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			towers, and pump stations to reduce damage and service interruptions.		Pierce, St. Lucie Village					
THD-2	Severe Weather Warning & Public Education	Severe Thunderstorms & Lightning	Enhance early warning dissemination and conduct annual public education campaigns on lightning and severe storm safety.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management/ Communications Department	FEMA EMPG	$10K-$30K annually	1–2 years	Medium
THD-3	Tree Management & Vegetation Trimming Program	Severe Thunderstorms & Lightning	Expand proactive vegetation management near power lines, evacuation routes, and public facilities, prioritizing corridors with repeated storm-related outages.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Public Works	Local funds; Utility budgets	$1M	1–2 years	High
TOR-1	Safe Room & Shelter Enhancement Program	Tornadoes	Retrofit or construct tornado-safe rooms at schools, mobile home parks, and public facilities in vulnerable areas to meet FEMA safe room criteria.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management/ School District	HMGP	$5M	2–5 years	High
TOR-2	Tornado Warning & Response Coordination	Tornadoes	Improve coordination with NWS for rapid	N/A	St. Lucie County, Port St. Lucie, Fort	Emergency Management	FEMA EMPG	$5K-$15K annually	1–2 years	Medium

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			warning dissemination, siren testing, and mobile alerts during tornado-capable storms.		Pierce, St. Lucie Village					
TOR-3	Wind-Resistant Building Code Enforcement	Tornadoes	Strengthen enforcement of wind-resistant construction standards and promote voluntary safe room inclusion in new residential and institutional development.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Building Department	Local funds	$1M	3–5 years	Medium
TRA-1	Evacuation Route Resilience Improvements	Transportation Systems Accidents	Elevate, harden, and maintain key evacuation routes and Indian River Lagoon causeways to reduce flooding-related closures during storms, accidents, or evacuations.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Public Works/ FDOT	FHWA; FEMA	$5M	1–5 years	High
TRA-2	Hazardous Transportation Corridor Risk Reduction	Transportation Systems Accidents	Identify high-risk roadway and rail corridors (including I-95, Florida's Turnpike, US-1, FEC Railway, Port of Fort Pierce access routes)	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Public Works/ Sheriff's Office	FHWA; Local CIP	$2M	2–5 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
			and implement safety improvements, signage, and coordinated incident management plans.							
TRA-3	Multi-Agency Transportation Incident Training	Transportation Systems Accidents	Conduct annual joint drills involving law enforcement, fire rescue, EMS, FDOT, and rail operators for mass-casualty and hazardous materials transportation incidents.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management	FEMA EMPG	$15K-$50K annually	1–2 years	Medium
TSU-1	Coastal Evacuation Route Signage	Tsunami	Install and maintain tsunami evacuation signage along coastal access points and barrier island routes to support visitor awareness.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Public Works	Local CIP	$50K	1–2 years	Low
TSU-2	Tsunami Hazard Mapping & Evacuation Planning	Tsunami	Update tsunami inundation mapping and integrate evacuation routes and procedures into coastal emergency planning and outreach materials.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management/ Planning	NOAA grants; Local funds	$50K-150K	1–3 years	Low

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
TSU-3	Tsunami Public Education & Training	Tsunami	Incorporate tsunami awareness into coastal preparedness campaigns and emergency training programs, coordinated with storm surge messaging.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management	FEMA EMPG	$5K-$15K annually	1–2 years	Low
WEL-1	Emergency Water Supply & Interconnections	Wellfield Contaminations	Develop and enhance interconnections with neighboring utilities and update emergency water supply plans to ensure redundant potable water sources during contamination or infrastructure failure events.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Utilities	Local CIP	$100K-300K	2–5 years	Medium
WEL-2	Monitoring & Early Detection Expansion	Wellfield Contaminations	Expand groundwater monitoring wells and install real-time sensors near major wellfields to detect contaminants, such as fuel, nutrients, and PFAS, enabling rapid isolation and response.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Utilities	State water grants; Local funds	$2M	2–4 years	High

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
WEL-3	Wellfield Protection & Land Use Controls	Wellfield Contaminations	Strengthen wellfield protection zones through updated land-use regulations, development review standards, and stormwater controls to reduce contamination risk from industrial, commercial, and flood-related sources.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Utilities/ Planning	Local funds; FDEP grants	$75K–$200K	1–3 years	High
WLD-1	Fire-Resistant Development Standards	Wildfire	Promote fire-resistant landscaping, materials, and site design practices in wildfire-prone areas through codes and public education.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Building Department	Local funds	$25K–$75K	1–2 years	Medium
WLD-2	Wildfire Response & Evacuation Planning	Wildfire	Update wildfire response and evacuation procedures, including coordination with Florida Forest Service, to address seasonal fire risk and limited evacuation routes.	N/A	St. Lucie County, Port St. Lucie, Fort Pierce, St. Lucie Village	Emergency Management/ Fire District	FEMA EMPG	$50K–$150K	1–2 years	Medium

Action Number	Project Title	Hazard Addressed	Action Description	CRS Type of Action	Jurisdiction	Responsible Agency	Potential Funding Sources	Cost Amount ($)	Timeframe	Priority Ranking
WLD-3	Wildland–Urban Interface (WUI) Risk Reduction	Wildfire	Identify WUI areas near Savannas Preserve and western development edges, and implement fuel management, defensible space guidance, and access improvements.	N/A	St. Lucie County, Port St. Lucie	Fire District/ Planning	State forestry grants; Local funds	Staff time	1–4 years	Medium

Analysis of Patterns and Trends

The updated mitigation actions demonstrate a clear shift toward mutually reinforcing and, in several instances, multi-hazard resilience strategies. There is a strong emphasis on infrastructure hardening (e.g., power systems, communications, and stormwater improvements), adaptation measures, such as shoreline stabilization and urban heat island reduction, and social vulnerability considerations through cooling centers and public health initiatives. These patterns reflect a growing recognition of cascading risks where infrastructure failures amplify social and economic impacts. Actions also show increased reliance on nature-based solutions and redundancy in critical systems, signaling a trend toward sustainable, long-term risk reduction.

Despite the breadth of actions, several constraints remain. Limited staff capacity, funding availability, and jurisdictional authority may delay implementation or restrict scalability. Some initiatives require new policies or regulatory changes (e.g., erosion-sensitive land use controls, enhanced building codes), which can extend timelines. In addition, interagency coordination remains complex, particularly for multi-jurisdictional projects. These limitations underscore the need for phased implementation and prioritization based on feasibility and cost-effectiveness.

Future updates should integrate evolving hazard data, such as sea-level rise projections and extreme heat trends, into planning and prioritization processes. Strengthening partnerships with regional and state agencies will also accelerate implementation and leverage technical and financial resources.

Alignment with the Florida State Hazard Mitigation Plan

The County's strategy aligns closely with the Florida SHMP, which prioritizes multi-hazard resilience to a wide range of hazards and intergovernmental collaboration. Actions addressing sea-level rise, flooding, and extreme heat mirror state-level goals for reducing vulnerability to climate-driven hazards. Continued participation in NFIP, CRS, and regional resilience planning further supports consistency with state and federal mitigation frameworks, enhancing competitiveness for funding and technical assistance.

Conclusion

The mitigation strategy positions St. Lucie County to meet current and future challenges through a comprehensive, forward-looking approach. By addressing vulnerabilities across infrastructure, natural systems, and social dimensions, the plan establishes a strong foundation for resilience. Closing gaps in capacity, improving coordination, and maintaining alignment with state and federal priorities will be critical to sustaining progress. These efforts will not only reduce disaster losses but also advance long-term community safety, fiscal sustainability, and quality of life.

Plan Maintenance and Integration

The St. Lucie County Local Mitigation Strategy (LMS) Working Group emphasizes four key components to keep the LMS plan up to date (see Figure 90):

- Plan Monitoring
- Community Involvement
- Plan Evaluation
- Plan Integration

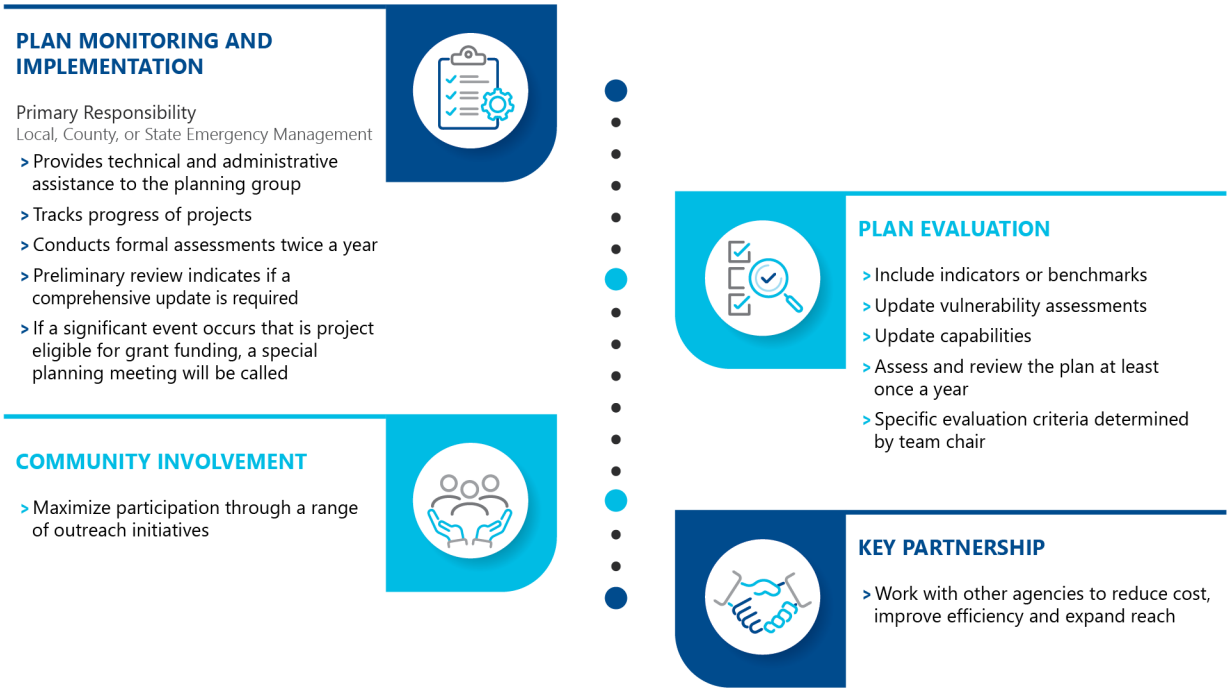


Figure 90: Plan Maintenance and Integration Process

Plan Monitoring and Implementation

The St. Lucie County Emergency Management Division holds primary responsibility for overseeing and supporting implementation of the LMS Plan. This responsibility includes providing both technical and administrative support to the LMS Working Group, coordinating interdepartmental and interjurisdictional activities, and ensuring continued compliance with Florida Division of Emergency Management (FDEM) and FEMA LMS requirements.

Throughout the year, Emergency Management staff, in coordination with the LMS Working Group Chair, review both proposed and ongoing mitigation projects included in the LMS priority list. Formal

implementation reviews are conducted at least quarterly (four times per year) in conjunction with regularly scheduled LMS Working Group meetings. These reviews document progress on mitigation actions, identify responsible parties, track project status, and confirm continued consistency with the goals, objectives, and priorities of the LMS, as required by 44 CFR §201.6(c)(4). Reviews also evaluate alignment with state and federal Hazard Mitigation Assistance (HMA) eligibility criteria, including consistency with applicable Hazard Mitigation Assistance eligibility requirements and current funding guidance and ensure responsible agencies report barriers, schedule changes, or required scope revisions. Monitoring results are documented in meeting minutes and maintained as part of the LMS administrative record.

Quarterly monitoring of the Local Mitigation Strategy is conducted by the LMS Working Group as part of its regularly scheduled meetings; the LMS Review Committee is responsible for conducting the formal annual evaluation of the LMS in accordance with Florida Division of Emergency Management and FEMA requirements. The LMS Review Committee operates as a standing review function of the LMS Working Group and does not constitute a separate governing body.

The quarterly monitoring process evaluates the effectiveness of the LMS by measuring progress toward stated mitigation goals, identifying obstacles to implementation, and determining whether revisions to mitigation actions, prioritization, or supporting data are warranted. This process also allows the LMS Working Group to identify changes in development patterns, updated hazard data, completed or delayed projects, and newly available funding opportunities that may affect the mitigation strategy. If no deficiencies or changes are identified, mitigation actions continue to advance through established implementation pathways.

Quarterly monitoring is conducted by the LMS Working Group; the LMS Review Committee conducts the formal annual evaluation In addition, when a significant hazard event or disaster declaration occurs in St. Lucie County, such as a hurricane, flooding event, or other significant event that may trigger eligibility for HMGP, FMA, or other mitigation funding, the Chair will convene a special meeting of the LMS Review Committee to evaluate project eligibility, reassess priorities, and determine whether amendments to the mitigation strategy or project list are necessary.

Community Involvement

The St. Lucie County LMS Working Group is committed to ensuring ongoing public involvement in the hazard mitigation planning, implementation, monitoring, and evaluation process. Public outreach and opportunities for feedback are essential components of this effort, providing residents, businesses, and other stakeholders with a meaningful role in shaping, reviewing, and refining local mitigation priorities. Following plan approval, the LMS Working Group will continue to solicit public participation throughout the life of the plan by providing an opportunity for public comment at all quarterly and special LMS meetings.

To encourage public involvement, the LMS Working Group advertises all quarterly and special meetings and employs multiple outreach methods to keep the community informed. These methods include

posting meeting notices, agendas, and LMS-related documents on the St. Lucie County Emergency Management website, where the most up-to-date plan materials, meeting schedules, and contact information are made publicly available. All public comments received through meetings, written correspondence, and surveys are documented, reviewed by the LMS Working Group, and considered for incorporation into the plan text, goals, and prioritized mitigation action list, as appropriate. At a minimum, public outreach strategies and engagement effectiveness are reviewed during at least one quarterly LMS meeting each year to support continuous improvement in reaching the community.

To maximize participation, the LMS Working Group implements a range of outreach initiatives designed to reach diverse audiences across St. Lucie County. These initiatives include presentations and information-sharing at Community Emergency Response Team (CERT) trainings, public meetings, community organizations, schools, civic groups, and local events, where participants receive information on hazard risks, mitigation strategies, and progress on LMS-supported actions. Questionnaires and surveys are periodically distributed, both in-person and electronically, to assess public awareness, identify local concerns, and gather input on mitigation priorities. Survey results and outreach feedback are analyzed by St. Lucie County Emergency Management and shared with the LMS Working Group for consideration during plan monitoring and evaluation activities.

The LMS Working Group also coordinates public involvement activities with regional and County partners to enhance efficiency and consistency. A key partnership with floodplain management, CRS coordination, and stormwater program staff supports joint outreach related to flood risk awareness, Flood Insurance Rate Map updates, and mitigation education. Where feasible, mitigation education and Community Rating System (CRS) outreach activities are coordinated to reduce duplication, improve cost effectiveness, and expand public reach.

Plan Evaluation

If no modifications are identified during the monitoring phase, the LMS Review Committee will convene at least once per year to formally assess and review the LMS Plan in accordance with evaluation criteria established by the Florida Division of Emergency Management (FDEM) and the St. Lucie County LMS Working Group, consistent with 44 CFR §201.6(c)(4). This annual evaluation will occur in the first quarter of each calendar year and will be completed no later than the end of the second quarter, ensuring that the review is finalized prior to the start of the Atlantic hurricane season.

The St. Lucie County Emergency Management Division, in collaboration with the LMS Working Group and the LMS Review Committee, will apply defined evaluation criteria when reviewing the LMS Plan. These criteria include, but are not limited to, the following:

- Identifying any new or revised federal, state, or local laws, regulations, executive orders, or policies that may necessitate updates to the LMS
- Determining whether any mandates or guidance from FEMA, FDEM, or other agencies require modifications to the LMS

- Assessing whether the goals, objectives, and mitigation priorities of the LMS Working Group continue to align with current and anticipated conditions in St. Lucie County
- Evaluating whether there have been significant changes in hazard profiles, risk exposure, vulnerability, or development patterns affecting the County
- Reviewing the adequacy of financial, technical, and staffing resources available to support effective plan implementation
- Identifying any technical, political, legal, financial, or interagency coordination challenges that may hinder implementation of mitigation actions
- Determining whether anticipated outcomes and performance measures associated with mitigation actions are being achieved as intended
- Reviewing the continued participation and commitment of jurisdictions and partner agencies to ensure consistency with the adopted LMS
- Considering lessons learned, after-action findings, and recommendations resulting from hazard events, exercises, or disaster declarations occurring during the review cycle

If the evaluation identifies the need for revisions, the LMS Working Group, with support from St. Lucie County Emergency Management, will draft proposed updates to the plan narrative and mitigation action list. Proposed revisions will be reviewed by the LMS Working Group, made available for stakeholder and public input, and submitted to FDEM for acknowledgement or approval, as applicable. Upon completion of the review process, the updated LMS will be posted on the St. Lucie County website and incorporated into ongoing implementation and monitoring activities.

Key Partnership

The St. Lucie County LMS Working Group is committed to ensuring that hazard mitigation planning remains an ongoing, coordinated, and integrated process across all participating jurisdictions. As part of its regular activities, at least one quarterly LMS Working Group meeting each year is dedicated to reviewing the plan's goals, objectives, mitigation priorities, and project list to confirm continued relevance and integration into local planning and capital programming efforts. When mitigation actions or priorities are identified as outdated, infeasible, or no longer aligned, the affected jurisdiction's LMS representative is responsible for initiating corrective action through its established internal planning and approval processes.

Each participating jurisdiction, St. Lucie County, the City of Port St. Lucie, the City of Fort Pierce, and the Town of St. Lucie Village, has committed to a structured, collaborative approach for integrating LMS mitigation actions into applicable local plans, policies, and programs. The LMS Working Group serves as the coordinating body, providing technical guidance, data, and best-practice support to promote consistency across jurisdictions while allowing each participant to tailor implementation to local conditions and authorities.

Previous Plan Integration

The LMS Working Group has actively integrated mitigation strategies into existing planning mechanisms to streamline efforts, improve efficiency, and avoid duplication. A primary example is the alignment of the LMS with floodplain management and Community Rating System (CRS) activities, allowing mitigation priorities, risk data, and outreach efforts to reinforce one another rather than operate as stand-alone initiatives. Each participating jurisdiction incorporates LMS actions into its own planning documents using established internal processes, with the jurisdiction's LMS representative coordinating with relevant departments to draft and advance amendments through normal staff review and governing-body adoption procedures.

The St. Lucie County Comprehensive Emergency Management Plan (CEMP) has also been shaped by prior LMS efforts. Many LMS Working Group members participated directly in the most recent CEMP update, ensuring that hazard profiles, risk assessments, and jurisdictional descriptions were consistent with mitigation priorities. Earlier LMS risk assessment findings informed the CEMP's hazard analysis, and subsequent updates to the LMS have continued to build upon that foundation, maintaining a data-driven and internally consistent approach to risk evaluation and mitigation planning across County emergency management and land-use planning efforts.

Future Plan Integration

Responsibility for integrating LMS strategies into existing and future planning mechanisms rests with each participating jurisdiction, St. Lucie County, the City of Fort Pierce, the City of Port St. Lucie, and the Town of St. Lucie Village, through their designated LMS representatives, acting in coordination with St. Lucie County Emergency Management and the LMS Working Group. Integration begins with a periodic review by each jurisdiction of its applicable plans and programs, including comprehensive plans, land development codes, capital improvement programs, stormwater and transportation plans, floodplain management and CRS procedures, and emergency management documents, to identify upcoming update cycles and opportunities for alignment. These findings are reported during LMS quarterly meetings, allowing jurisdictions to coordinate timing, share best practices, and leverage LMS data and mitigation priorities during routine plan updates.

To support integration, each jurisdiction applies LMS risk assessment data, vulnerability findings, and prioritized mitigation actions when drafting plan amendments, capital projects, or program updates. The LMS representative works with the appropriate department within their jurisdiction to link specific LMS goals and actions to relevant plan elements or programs and to advance those actions through established staff review and governing-body approval processes. While Florida statutes and administrative rules govern amendment procedures for certain plans, the LMS Working Group facilitates coordination among jurisdictions, documents integration activities, and provides technical assistance to support implementation, evaluation, and updates consistent with 44 CFR §201.6(c)(4).

The LMS Working Group's diverse membership, including representatives from St. Lucie County, the City of Fort Pierce, the City of Port St. Lucie, and the Town of St. Lucie Village, as well as professionals in

emergency management, planning, engineering, public works, floodplain management, and CRS coordination, strengthens this integration process by ensuring mitigation strategies are embedded across relevant policies, programs, and investments. The Working Group also coordinates with regional floodplain management and CRS partners to align outreach, education, and risk-reduction initiatives, improving efficiency and expanding public reach. Through these coordinated efforts, all participating jurisdictions ensure that hazard mitigation remains a core, sustained component of local planning and decision-making.

JURISDICTION-SPECIFIC PLAN INTEGRATION

Each planning participant integrates the LMS into its respective planning mechanisms through a collaborative, jurisdiction-led process that aligns mitigation actions with local authority, responsibilities, and ongoing initiatives. Integration begins with identifying relevant actions from the LMS mitigation strategy that support departmental or jurisdictional goals and assessing how those actions can be incorporated into existing or future plans, including comprehensive plans, capital improvement programs (CIPs), emergency operations plans (EOPs), stormwater and transportation plans, floodplain management and CRS procedures, and land development regulations.

Integration is achieved through routine plan review cycles, identification of alignment opportunities, and incorporation of mitigation priorities into scheduled updates and capital programming. This approach ensures that hazard mitigation is embedded in long-term community planning, infrastructure investment, and regulatory decision-making, rather than treated as a stand-alone effort. Ongoing communication and coordination among departments and jurisdictions, facilitated through quarterly LMS Working Group meetings, support consistent implementation, documentation, and accountability. Each jurisdiction retains authority to formally adopt mitigation-related policies, programs, and plan amendments through its governing body, consistent with local charter and state requirements.

The structure of decision-making entities varies by jurisdiction/member:

- St. Lucie County operates under a Council–Administrator form of government, with legislative authority vested in the Board of County Commissioners and administrative authority delegated to the County Administrator.
- The City of Port St. Lucie operates under a Council–Manager form of government, with policy authority vested in the City Council and administrative authority in the City Manager.
- The City of Fort Pierce functions under a Commission–Manager form of government, with a five-member City Commission serving as the governing body and administrative authority vested in the City Manager.
- The Town of St. Lucie Village operates under a Council–Manager form of government, with legislative authority vested in the Town Council and administrative authority in the Town Manager.

The LMS Review Committee convenes at least once per year to assess and review the LMS Plan in accordance with evaluation criteria established by FDEM and the LMS Working Group, consistent with 44

CFR §201.6(c)(4). This annual evaluation occurs in the first quarter of each calendar year and is completed no later than the second quarter, ensuring the review is finalized prior to the start of the hurricane season.

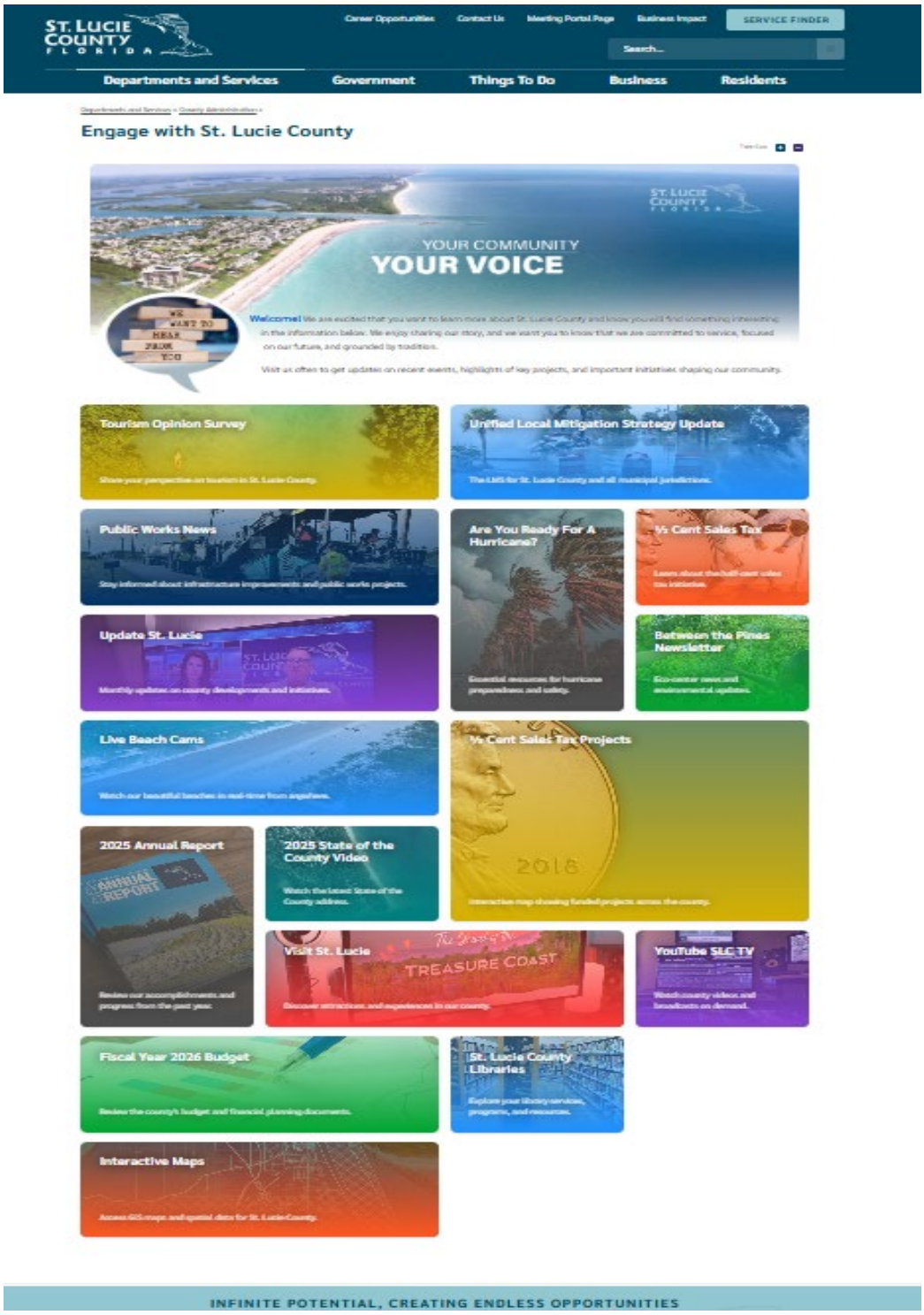
If the LMS Review Committee determines that an update or modification to the LMS Plan is necessary, the Committee drafts the proposed changes and supporting documentation and presents them to the LMS Working Group for review. Presentation of proposed updates may occur during a regularly scheduled quarterly meeting or during a special meeting convened by the Chair, as needed.

The LMS Working Group determines the appropriate course of action based on the significance of the proposed changes. If modifications are determined to be minor, as determined consistent with applicable FDEM guidance and local adoption requirements, the LMS Working Group voting members may approve and adopt the changes directly. If modifications are determined to be major, the LMS Working Group voting members may approve the updates; however, each jurisdiction must then complete its respective resolution or adoption process through its governing body to formally adopt the changes. This process ensures that LMS updates are implemented, evaluated, and adopted in accordance with local authority, while maintaining compliance with FEMA and FDEM requirements.

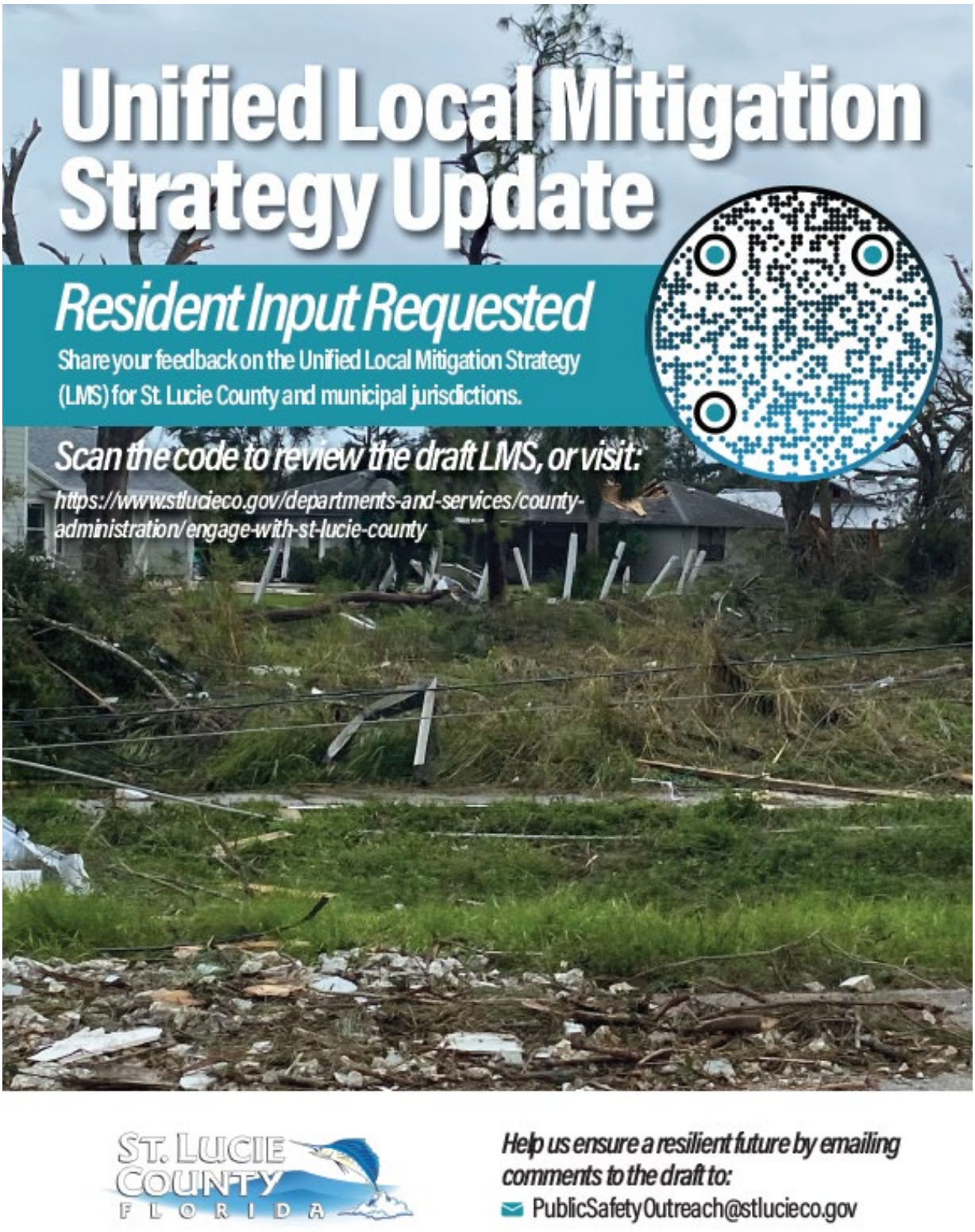
Appendix A: LMS and CRS Public Outreach Documentation

Appendix A: LMS and CRS Public Outreach Documentation

Engage St. Lucie website, LMS posted for public review (image captured March 18, 2026)

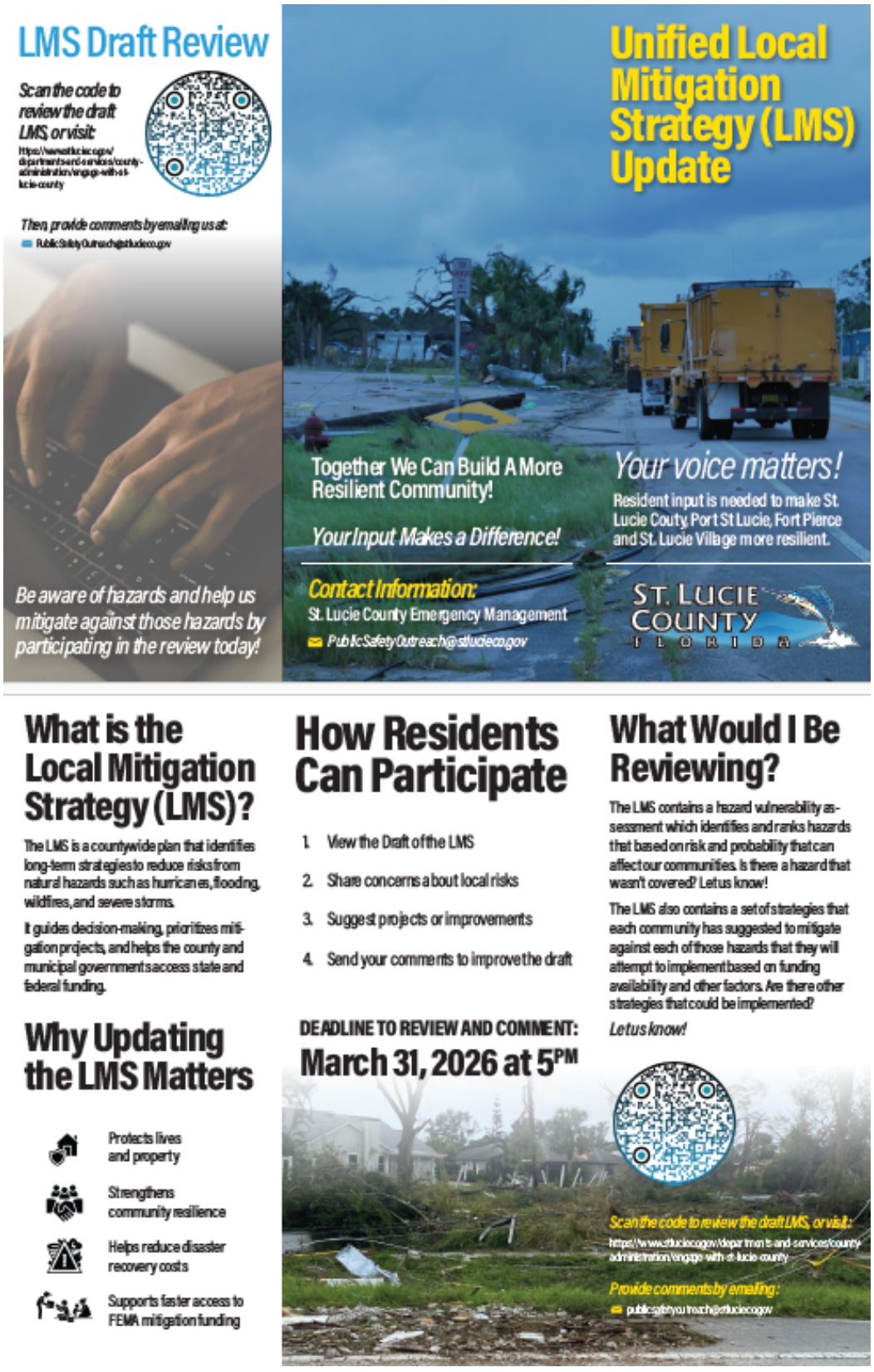


St. Lucie Unified LMS public outreach flyer



St. Lucie Unified LMS public outreach postcard

St. Lucie Unified LMS public outreach brochure

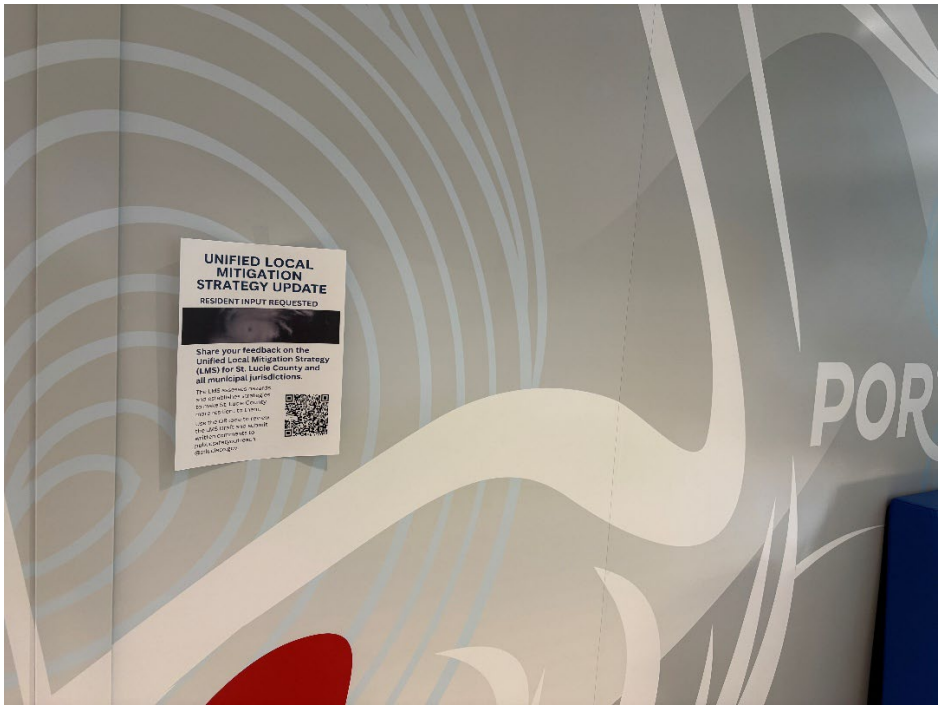


St. Lucie Unified LMS Public Input Flyers/Postcards/Brochures in various City Buildings

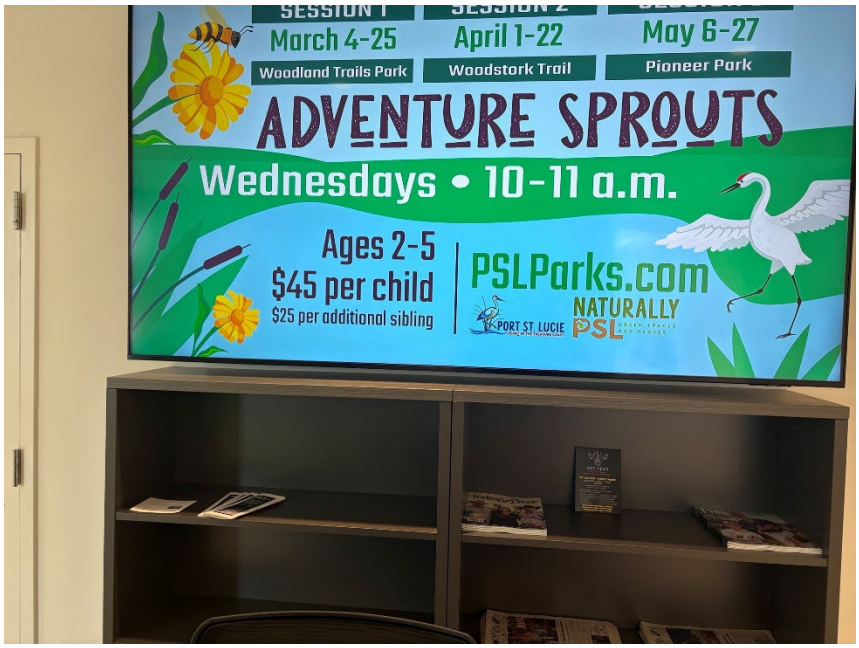
Building A (City Hall):

Lobby wall near guest seating

Lobby wall close-up to see the flyer



City hall pick-up rack far back

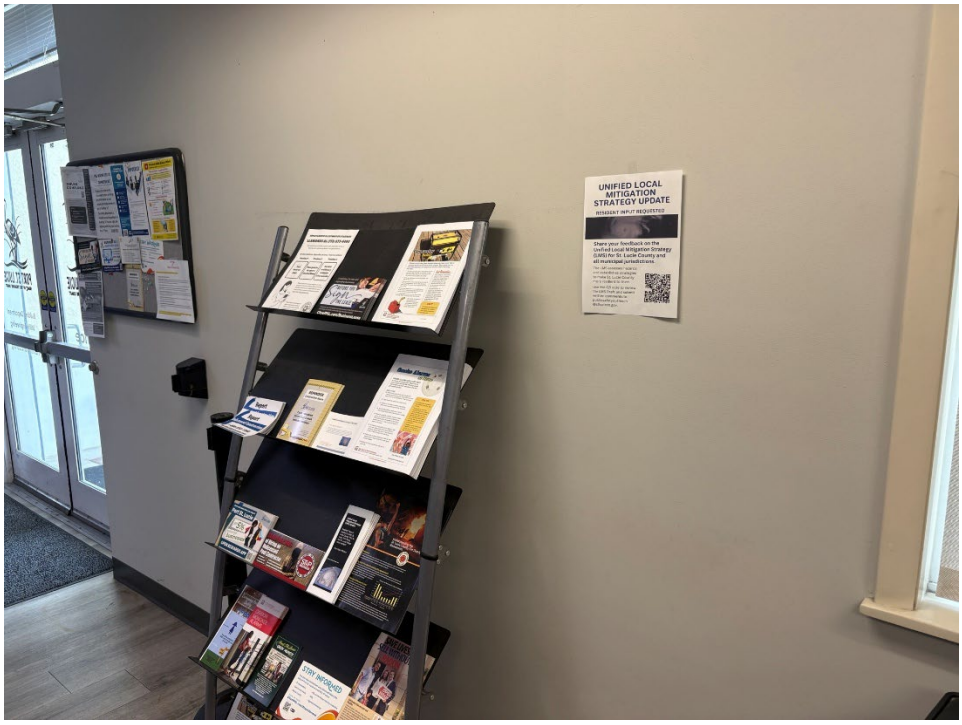


City hall rack close-up to see brochures/cards

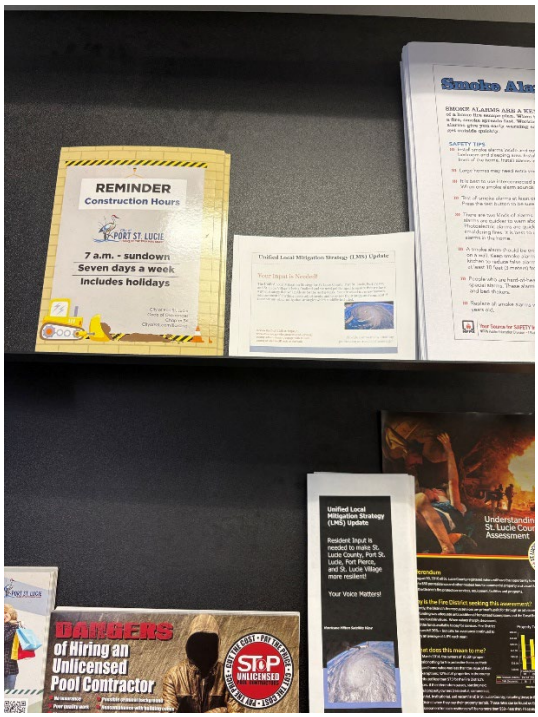
Building B – Building Department Lobby:

Building department sign-in lobby

Building department wall and brochure rack

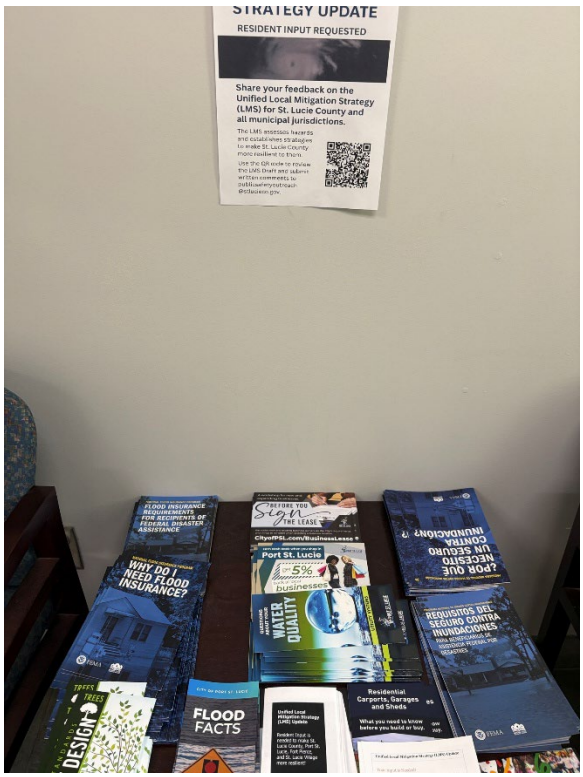


Building department rack close-up

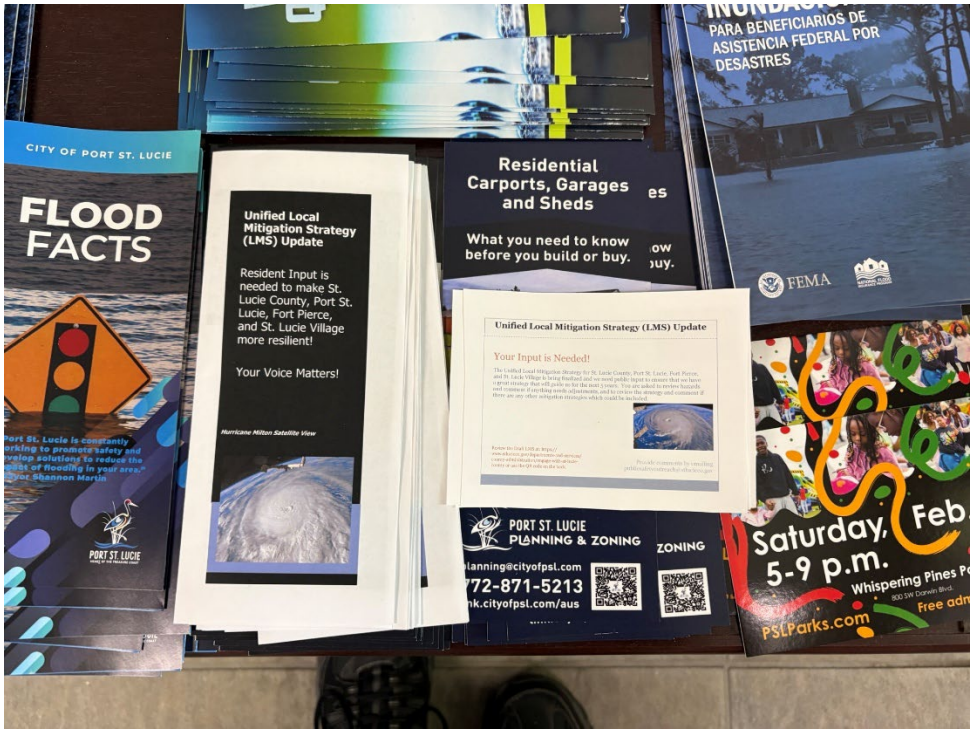


Building B – Public Works Department Lobby

Public works lobby



Public works table close-up



Public works door with flyer on wall above table

Other Efforts to Get Public Input by the City of Port St. Lucie

Post on X seeking public review and comments

Post on Facebook seeking public review and comments

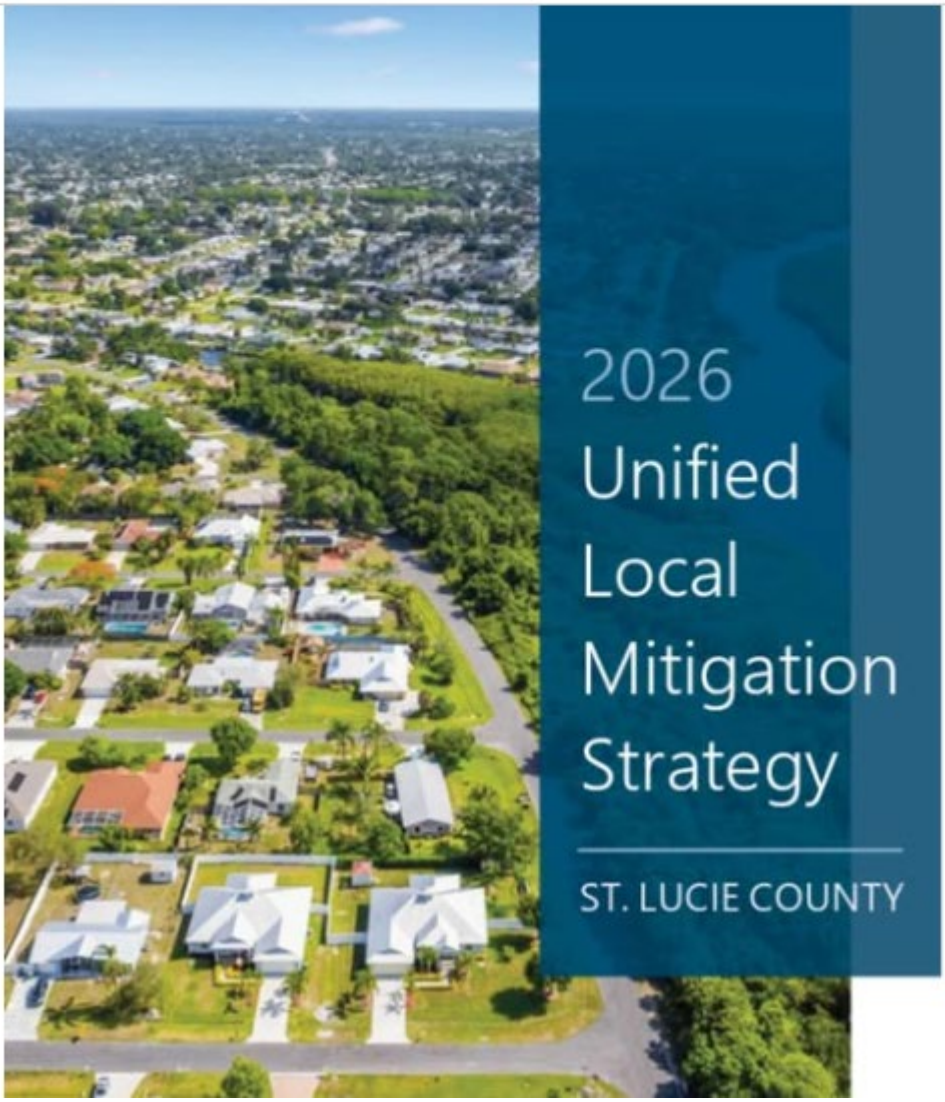
City of Port St. Lucie - City Hall
Published by Lynn Kenyon · Just now ·

The updated St. Lucie County Local Mitigation Strategy (LMS) is available for public review and comment.

The LMS is developed through a collaborative process involving a working group comprised of county, municipal and community partners who prepare and implement mitigation strategies and projects designed to reduce the impacts of natural and human-caused hazards within St. Lucie County.

Residents are encouraged to review the updated LMS and provide comments. Comments should be directed to: publicsafetyoutreach@stlucieco.gov

More details below



Brochure to solicit public input on the draft

LMS Draft Review

Read the LMS Draft: https://www.stlucieco.gov/departments-and-services/county-administration/engage-with-st-lucie-county

Then, send your comments to publicsafetyoutreach@stlucieco.gov

Be aware of hazards and help us mitigate against those hazards by participating in the review today!

Contact Information:

City of Port St. Lucie
Office of Emergency Management

PSLEM@cityofpsl.com

Together, We Can Build a More Resilient Port St. Lucie and St. Lucie County

Your input makes a difference.

Unified Local Mitigation Strategy (LMS) Update

Resident Input is needed to make St. Lucie County, Port St. Lucie, Fort Pierce, and St. Lucie Village more resilient!

Your Voice Matters!

Hurricane Milton Satellite View

What is the Local Mitigation Strategy (LMS)?

The LMS is a countywide plan that identifies long-term strategies to reduce risks from natural hazards such as hurricanes, flooding, wildfires, and severe storms.

It guides decision-making, prioritizes mitigation projects, and helps the county and municipal governments access state and federal funding.

Why Updating the LMS Matters

- Protects lives and property
- Strengthens community resilience
- Helps reduce disaster recovery costs
- Supports faster access to FEMA mitigation funding

How Residents Can Participate

- View the Draft of the LMS
- Share concerns about local risks
- Suggest projects or improvements
- Send your comments to improve the draft

What Would I Be Reviewing

The LMS contains a hazard vulnerability assessment which identifies and ranks hazards that based on risk and probability that can affect our communities. Is there a hazard that wasn't covered? Let us know!

The LMS also contains a set of strategies that each community has suggested to mitigate against each of those hazards that they will attempt to implement based on funding availability and other factors. Are there other strategies that could be implemented? Let us know!

DEADLINE TO REVIEW AND COMMENT:
March 31, 2026 at 5pm
publicsafetyoutreach@stlucieco.gov

Flyer to solicit public input on the draft

Unified Local Mitigation Strategy (LMS) Update

Your Input is Needed!

The Unified Local Mitigation Strategy for St. Lucie County, Port St. Lucie, Fort Pierce, and St. Lucie Village is being finalized and we need public input to ensure that we have a great strategy that will guide us for the next 5 years. You are asked to review hazards and comment if anything needs adjustments, and to review the strategy and comment if there are any other mitigation strategies which could be included.

Review the Draft LMS at: https://www.stlucieco.gov/departments-and-services/county-administration/engage-with-st-lucie-county or use the QR code on the back

Provide comments by emailing publicsafetyoutreach@stlucieco.gov

Review the LMS Draft by scanning the QR code below, or you can go to https://www.stlucieco.gov/departments-and-services/county-administration/engage-with-st-lucie-county

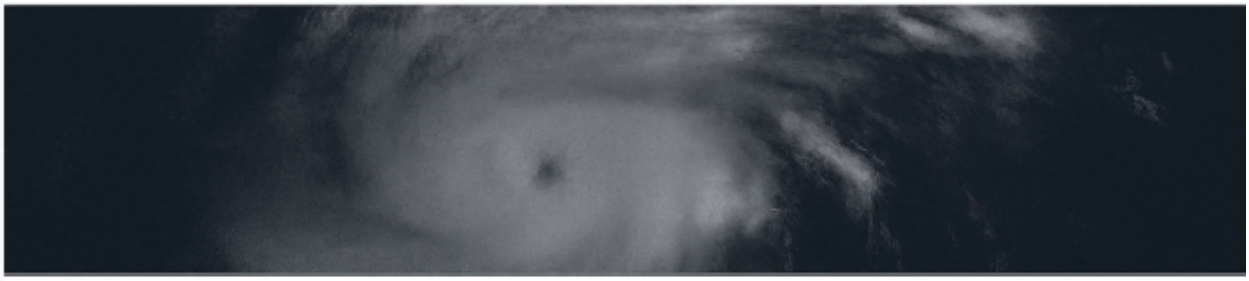
Help us ensure a resilient future by providing comments to the draft by emailing publicsafetyoutreach@stlucieco.gov

CITY OF PORT ST LUCIE
OFFICE OF EMERGENCY MANAGEMENT

Poster to solicit public input on the draft

UNIFIED LOCAL MITIGATION STRATEGY UPDATE

RESIDENT INPUT REQUESTED



Share your feedback on the Unified Local Mitigation Strategy (LMS) for St. Lucie County and all municipal jurisdictions.

The LMS assesses hazards and establishes strategies to make St. Lucie County more resilient to them.

Use the QR code to review the LMS Draft and submit written comments to publicsafetyoutreach @stlucieco.gov.

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Appendix B: 510 Floodplain Management Planning Checklist

Appendix B: 510 Floodplain Management Planning Checklist

510 FLOODPLAIN MANAGEMENT PLANNING CHECKLIST

Community: **St. Lucie County**

Name of Plan: *St. Lucie Unified Local Mitigation Plan*

511.a Floodplain Management Planning (FMP)

Credit Points: *Enter the section or page number of the plan where each credited item can be found.*

CRS Step	Section/Page		
1. Organize to prepare the plan. (max:15)			
a. Involvement of Office Responsible for Community Planning (4)	Section 3: First Section		**0**
b. Planning committee of department staff (9)	Section 3: Overview of the LMS Working Group		
c. Process formally created by the community's governing board (2)	Section 3: First Section		
2. Involve the public. (max: 120)			
a. Planning process conducted through a planning committee (60)	Section 3: LMS Composition		**0**
b. Public meetings held at the beginning of the planning process (15)	Section 3: Public Participation Process		
c. Public meeting held on draft plan (15)	Section 3: Public Participation Process		
d. Other public information activities to encourage input (Up to 30)	Section 3: Public Participation Process		
3. Coordinate with other agencies. (max: 35)			
a. Review of existing studies and plans [REQUIRED] (5)	Section 3: Coordinate		**0**
b. Coordinating with communities and other agencies (Up to 30)	Section 3: LMS Stakeholder Strategy		
4. Assess the hazard. (max: 35)			
a. Plan includes an assessment of the flood hazard [REQUIRED] with:			**0**
(1) A map of known flood hazards (5)	Section 5.1.4: Extent		

(2) A description of known flood hazard (5)	Section 5.1.4: Extent		
(3) A discussion of past floods (5)	Section 5.1.4: Historic Events		
b. Plan includes assessment of less frequent floods (10)	Section 5.1.4: Historic Events		
c. Plan includes assessment of areas likely to flood (5)	Sections 5.1.4: Magnitude and Severity		
d. The plan describes other natural hazards [REQUIRED FOR DMA] (5)	Sections 5.1 through Sections 5.3.3		

5. Assess the problem. (max: 52)

a. Summary of each hazard identified in the hazard assessment and their community impact [REQUIRED] (2)	Sections 5.1 through Sections 5.3.3: Jurisdictional Impacts		**0**

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Appendix C: St. Lucie Local Mitigation Strategy Update – Capability Assessment

Appendix C: St. Lucie Local Mitigation Strategy Update – Capability Assessment

Who filled out this form? List anyone who contributed.

Table 137: Capability Assessment Contributors

Name	Title	Jurisdiction/Agency	Contact Info (Email/Phone)

Contact Patrick Marchman (patrick.marchman@iem.com) with any questions.

Local mitigation capabilities are existing authorities, policies, programs, and resources that reduce hazard impacts or can help carry out hazard mitigation activities. You are encouraged to work with your partners, both internal and external, to identify the capabilities of your community. No community will have all of these capabilities. Identifying the ones you do have, or those that could be improved or expanded upon, can help determine feasible mitigation actions.

Complete the following capability assessment tables to the best of your ability. If unknown, state "Unknown."

Planning and Regulatory

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

Table 138: Plans

Plans	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
Comprehensive Plan			
Capital Improvement Plan			
Climate Action/ Adaptation Plan			

Plans	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
Economic Development Plan			
Land Use Plan			
Local Emergency Operations Plan			
Stormwater Management Plan			
Transportation Plan			
Substantial Damage Plan			
Other? (Describe)			

Table 139: Regulations and Ordinances

Plans	Does this regulation/ ordinance effectively reduce hazard impacts?	Is it adequately administered and enforced?	When was it last updated? When will it next be updated?
Building Code			
Flood Insurance Rate Maps			
Floodplain Ordinance			
Subdivision Ordinance			
Zoning Ordinance			
Natural Hazard Specific Ordinance (Stormwater, Steep Slope, Wildfire)			
Acquisition of Land for Open Space and Public Recreation Use			
Prohibition of Building in At-Risk Areas			
Other? (Describe)			

Administrative and Technical

Administrative and technical capabilities include staff and their skills. They also include tools that can help you to carry out mitigation actions. If you do not have local staff, consider how state and regional partners can help.

Table 140: Administrative Capabilities

Administrative Capability	In place? (Y/N)	Is staffing adequate?	Is staff trained on hazards and mitigation?	Is coordination between agencies and staff effective?
Chief Building Official				
Civil Engineer				
Community Planner				
Emergency Manager				
Floodplain Administrator				
Geographic Information System (GIS) Coordinator				
Planning Commission				
Fire Safe Council				
CERT (Community Emergency Response Team)				
Active VOAD (Voluntary Agencies Active in Disasters)				
Other? (Please describe)				

Table 141: Technical Capabilities

Technical Capability	In place? (Y/N)	How has the capability been used to assess/mitigate risk in the past? (Answer or N/A)	How can the capability be used to assess/mitigate risk in the future?
Mitigation Grant Writing			
Hazard Data and Information			
GIS			
Mutual Aid Agreements			
Other? (Please describe)			

Financial

Financial capabilities are the resources available to fund mitigation actions. Talking about funding and financial capabilities is important to determine what kind of projects are feasible given their cost. Mitigation actions like outreach programs are lower-cost and often use staff time and existing budgets. Other actions, like earthquake retrofits, may require substantial funding from local, state, and federal partners. Partnerships, including partners willing to donate land, supplies, or an in-kind match, as well as cash, can be included.

Table 142: Financial Capabilities

Funding Resource	In place? (Y/N)	Has this funding resource been used in the past and for what types of activities?	Could this resource be used to fund future mitigation actions?	Can this be used as the local cost match for a federal grant?
Capital Improvement Project Funding				
General Funds				
Hazard Mitigation Grant Program (HMGP/404)				
Flood Mitigation Assistance (FMA)				
Public Assistance Mitigation (PA Mitigation/406)				
Community Development Block Grant (CDBG)				
Natural Resources Conservation Services (NRCS) Programs				
U.S. Army Corps (USACE) Programs				
Property, Sales, Income, or Special Purpose Taxes				
Stormwater Utility Fee				

Funding Resource	In place? (Y/N)	Has this funding resource been used in the past and for what types of activities?	Could this resource be used to fund future mitigation actions?	Can this be used as the local cost match for a federal grant?
Fees for Water, Sewer, Gas, or Electric Services				
Impact Fees from New Development and Redevelopment				
General Obligation or Special Purpose Bonds				
Federal-funded Programs (Please describe)				
State-funded Programs (Please describe)				
Private Sector or Nonprofit Programs				
Other?				

Education and Outreach

Education and outreach capabilities are programs and methods that can communicate about and encourage risk reduction. These programs may be run by a participant or a community-based partner. Partners, especially those who work with underserved communities, can help identify additional education and outreach capabilities.

Table 143: Education and Outreach

Education and Outreach Capability	In place? (Y/N)	Does this resource currently incorporate hazard mitigation?	Notes
Community Newsletter(s)			
Hazard Awareness Campaigns (such as Firewise, Storm Ready, Severe Weather			

Education and Outreach Capability	In place? (Y/N)	Does this resource currently incorporate hazard mitigation?	Notes
Awareness Week, School Programs)			
Public Meetings/Events (Please Describe)			
Emergency Management Listserv			
Local News			
Distributing Hard Copies of Notices (e.g., public libraries, door-to-door outreach)			
Insurance Disclosures/ Outreach			
Organizations that Represent, Advocate for, or Interact with Underserved and Vulnerable Communities (Please Describe)			
Social Media (Please Describe)			
Other? (Please Describe)			

Opportunities to Expand and/or Improve Capabilities

How can the capabilities you have shared so far be expanded and improved to reduce risk? The plan must describe the ability of each participant to expand and improve the capabilities described in the plan. This is the opportunity to evaluate whether these capabilities have been effectively used to reduce risk. If your jurisdiction does not have the ability or authority to expand or improve these capabilities, that must be described. For example, the community may wish to adopt more restrictive building codes but is prevented from doing so by law. The gaps or limitations you identify here may also be later addressed as actions in the mitigation strategy, as well.

Table 144: Opportunities to Expand and/or Improve Capabilities

Capability Type	Opportunity to Expand and/or Improve
Planning and Regulations *Example: The community would like to develop a new Community Wildfire Protection Plan, as the prior plan is outdated. The Economic Development Plan currently lists River St. as an area to promote growth; however, River St. has flooded repeatedly in recent years, resulting in significant losses to assets already there. The community wants to reconsider the zoning and planned uses for River St.*	
Administrative and Technical *Example: The Building Official is overwhelmed and needs additional staff. These staff could be trained in floodplain management as well. Additional training in floodplain management, particularly substantial damage determinations, would benefit the floodplain manager. The GIS data used by the community is outdated, and new data is needed to improve the system.*	
Financial *Example: The community has never utilized the Building Resilient Infrastructure and Communities (BRIC) grant program. New grant-writing staff could support the Emergency Manager in applying for this program. A local nonprofit provided support after the last disaster and may be interested in partnering on a larger project, including providing volunteers to implement a mitigation project as part of the local cost match.*	
Education and Outreach *Example: The public does not seem aware that they can get flood insurance even when they don't live in the Special Flood Hazard Area. The floodplain manager can connect with local real estate and insurance agents at an upcoming event to discuss spreading this information. Additionally, the community's Severe Weather Awareness week is very successful but does not currently include mitigation currently. The community's Public Information Officer is willing to incorporate mitigation information next time.*	

Now that you've considered planning-related considerations, it's time to note below how you have integrated or could integrate the hazard mitigation plan into your other plans, budgets, or strategic decision-making documents.

Plan Integration

An updated plan must explain how the plan participants incorporated the previous mitigation plan, when appropriate, into other planning mechanisms over the last 5 years. This demonstrates progress in local mitigation efforts. Planning mechanisms refer to the governance structures used to manage local land use development and community decision making, such as budgets, comprehensive plans, capital improvement plans, or other long-range plans, codes, and ordinances. If the plan was integrated into another planning mechanism, list those mechanisms and note how hazard mitigation was integrated. This discussion could include the following:

- The integration of the hazards the community is vulnerable to
- The data and analysis presented in the risk assessment
- The goals of the mitigation plan
- Potential projects or actions to carry out in the future

If the previous plan was not integrated into any of the participants' planning mechanisms, the update must state this and explain why. An example could be that no planning mechanisms were developed or updated after the development of the last plan.

Table 145: Previous Plan Integration

Plan Name (or "none," if applicable)	How the Prior Plan Was Integrated

Example: The city recently updated the Comprehensive Plan. This plan directly referenced the last mitigation plan's summary of the hazards the city faced and incorporated mitigation actions from the last hazard mitigation plan, including all high-priority actions.

The plan must also identify the local planning mechanisms where the updated hazard mitigation information/actions *may* be integrated. The plan must describe each participant's individual process for integrating information from the mitigation strategy into their identified planning mechanisms. Listing specifics, such as who will be responsible, the timeframe for the update, and ongoing work, such as hiring a contractor or gathering data, can help meet this requirement.

Table 146: Future Plan Integration Opportunities

Plan Name	Description	Process for Integration (who, what, when how)

Example: The County's Community Wildfire Protection Plan (CWPP) will be updated within the next two years. The County is currently applying for funding and intends to hire a contractor to help support this update. The County's Emergency Manager will be the main point of contact for the CWPP update and intends to provide the contractor with the updated hazard mitigation plan. Information that could be integrated from the hazard mitigation plan includes the wildfire hazard profile, GIS data, and wildfire-related mitigation actions.

Mitigation Strategy

The heart of the mitigation plan is the mitigation strategy, which is the long-term blueprint for reducing the potential losses identified in the risk assessment. It describes how the community will accomplish the overall purpose or mission of the planning process.

Who filled out this form? List anyone who contributed.

Table 147: Contributors to the Mitigation Strategy

Name	Title	Jurisdiction/Agency	Contact Info (Email/Phone)

What has been accomplished since the last plan update? Update the status of your prior mitigation actions in the table below.

The plan must describe the status of all mitigation actions identified in the previous plan and indicate whether the action has been completed. If the action has not been completed, the plan must either explain why it is no longer relevant or indicate that it is included in the updated action plan.

Some questions to consider include the following: If the action was completed, did it have the intended results? What factors led to success? If the action was not completed, what were the barriers? Was there a lack of political support, funding, staff availability, or another obstacle? If you want to include it in the updated mitigation strategy, what is needed to ensure this project succeeds moving forward?

Information about the status of past mitigation actions is a *requirement* of the FEMA process. Note: Using "Ongoing" to describe the status of an action is not acceptable to FEMA reviewers.

Table 148: Previous St. Lucie County Mitigation Actions

Hazard	Mitigation Action (from previous plan)	Lead Agency	Status	Notes/Next Steps (if any)

Brainstorming time! What actions could you take to reduce risk? Consider a few alternatives you may select to pursue later (see https://www.fema.gov/).

Considered Mitigation Actions

Use this space to brainstorm potential mitigation actions. Documenting all ideas provides a record of what actions were considered and why. Additionally, this creates a list of actions that can be reconsidered as conditions change.

There are four types of mitigation actions:

- Local Plans and Regulations
  - These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.

    Examples: *Comprehensive plans, land-use ordinances, subdivision regulations, building codes and enforcement, stormwater management plans, community wildfire protection plans, etc.*
- Structure and Infrastructure Projects
  - These actions involve modifying existing structures and infrastructure to protect them from hazards or remove them from hazardous areas. This could apply to public or private structures, as well as critical facilities and infrastructure.

    Examples: *Acquisitions and elevations of structures in flood-prone areas, utility undergrounding, structural retrofits, floodwalls, detention and retention structures, culverts, safe rooms, etc.*
- Natural Systems Protection
  - This type of action can include green infrastructure and low-impact development, nature-based solutions, engineering with nature, and bioengineering to incorporate natural features or processes into the built environment. Additional funding opportunities are available for projects that include this kind of action.

    Examples: *Forest management, land conservation, wetland restoration and preservation, sediment and erosion control, stream corridor restoration, rain gardens, greenways, land conservation, living shorelines, etc.*
- Education and Awareness Programs
  - These actions keep residents informed about potential natural disasters. Many of them are eligible for funding through the FEMA Hazard Mitigation Assistance (HMA) program.

    Examples: *Social media outreach, websites with maps and information, presentations to school groups of neighborhood organizations, radio or television spots, mailings to residents in hazard-prone areas, targeted outreach to underserved communities and socially vulnerable populations, outreach materials in languages other than English, etc.*

Table 149: Considered Mitigation Actions

Mitigation Action	Type of Action	Selected? (Y/N)	If not selected, why not?

***Example**: Structural retrofitting of the Emergency Operations Center (EOC) – Structure and Infrastructure Project – Not Selected – Limited political support; unlikely to get funded within the next five years.*

Now that you've thought about what actions might work, decide which ones you want to pursue. Keep in mind these can be both pre- and post-disaster, long-term or short-term, something you directly control or a partnership. The key is to include a comprehensive range that covers at least one action per hazard profiled in the risk assessment.

Updated Mitigation Action Plan

The mitigation strategy must include analyzing a comprehensive range of actions or projects the participants considered to address vulnerabilities identified in the risk assessment. The actions considered must emphasize reducing risk to existing buildings, structures, and infrastructure and limiting risk to new development and redevelopment. The range of actions considered should include mitigation actions that benefit underserved communities and socially vulnerable populations.

Actions can be retained from the last plan. Consider which mitigation actions should be carried over from the previous plan. Actions listed as "ongoing" may be better categorized as a capability in the Capability Assessment section. Actions that are in the planning process, seeking to be funded, or still under consideration can be retained in the new update. Ultimately, it is up to the jurisdiction or special district to decide what actions to include. Non-mitigation actions can be included, but each participant must have at least one mitigation action for each hazard profiled in the plan.

It is important for all actions considered to be documented, as specific as possible, and clearly linked to the vulnerabilities and impacts identified in the risk assessment. This includes actions to alleviate data deficiencies or build up capabilities related to mitigation implementation. Fill out as much information as possible and let us know if you have any questions or need additional support.

The following provides definitions regarding the information in the new Mitigation Actions table to help you quickly identify what is required.

HAZARDS ADDRESSED

Specifically list the following; do not say "all" or "multi-hazard."

- Natural Hazards
  - Erosion
  - Extreme Temperatures
  - Flooding
  - Hurricanes/Tropical Storms
  - Pests and Disease (Including Agricultural)
  - Sea Level Rise

- Seismic Hazards
- Severe Thunderstorms and Lightning
- Tornadoes
- Tsunami
- Wildfire

- Technological Hazards
  - Communication System Failures
  - Epidemics/Pandemics
  - Power Systems Failure
  - Radiological Accidents
  - Transportation Systems Accidents
  - Wellfield Contaminations

- Human Caused Hazards
  - Civil Disturbances
  - Mass Migration
  - Terrorism and Sabotage

COST ESTIMATE

- A rough estimate of the project's cost may help determine which projects to pursue and when.

Timeframes are defined as follows:

- Short-term: 1–2 years
- Medium-term: 2–5 years
- Long-term: 5+ years

Community Lifelines**:** The link below will provide more information on community lifelines.[356] Community Lifelines are essential for the continuous operation of critical government and business functions and are vital for human health, safety, and economic security. They represent the most fundamental services in the community, and when they are stabilized, they enable all other aspects of society to function. The FEMA Community Lifelines are as follows:

- **Safety and Security**: Law Enforcement/Security, Fire Service, Search and Rescue, Government Service, Community Safety
- **Food, Hydration, Shelter**: Food, Hydration, Shelter, Agriculture
- **Health and Medical**: Medical Care, Public Health, Patient Movement, Medical Supply Chain, Fatality Management

[356] FEMA, "Community Lifelines Implementation Toolkit." https://www.fema.gov/emergency-managers/practitioners/lifelines-toolkit

- **Energy**: Power Grid, Fuel
- **Communications**: Infrastructure, Responder Communications, Alerts, Warnings and Messages, Finance, 911, and Dispatch
- **Transportation**: Highway/Roadway/Motor Vehicle, Mass Transit, Railway, Aviation, Maritime
- **Hazardous Materials**: Facilities, Hazmat, Pollutants, Contaminants
- **Water Systems**: Potable Water Infrastructure, Wastewater Management

Priorities are defined by the community. After considering the evaluation criteria and the definitions below, assign a prioritization category of low, medium, or high to each natural hazard action item being retained or created. The table to calculate the following priority categories is included below (see STAPLEE criteria below the table):

- **Low:** Based on one to two STAPLEE criteria, the action is feasible and important for the jurisdiction but has multiple potential challenges. The action should be implemented as funding becomes available.
- **Medium:** Based on three to four STAPLEE criteria, the action is feasible and important for the jurisdiction, with some potential challenges. Its implementation is less urgent than a high-priority action item and can be implemented over time.
- **High:** Based on five or more STAPLEE criteria, the action is feasible and important for the jurisdiction, with minimal to no concerns. It is essential for the jurisdiction to implement and may be prioritized in the short term.

Based on the above-considered actions and areas of concern in the planning jurisdiction, which new or retained mitigation actions would you like in the plan update? Please list them in the table below.

Table 150: 2026 Mitigation Actions

#	Project Title	Hazard Addressed	Description	Responsible Agency	Potential Funding	Cost Estimate	Timeframe	Priority
1								
2								
3								
4								
5								

Stop! *Do you have one action per hazard you are profiling in the risk assessment? Double check the "Hazard Addressed" column above specifically says all hazards you are profiling.*

Now it's time to prioritize your actions. FEMA recommends using the STAPLEE criteria below. Fill out the table to get a priority of high, medium, or low on average.

Mitigation Action Prioritization

The plan must describe the criteria for prioritizing the implementation of the actions. The requirements must include an emphasis on the extent to which benefits are maximized in relation to the associated costs of the action. Consider the "STAPLEE" criteria to help communities prioritize the actions:

- **S – Social:** The public must support the overall mitigation implementation strategy and specific mitigation actions. Consider whether the action will disrupt housing or cause the relocation of people. Will the proposed action adversely affect one segment of the population? Is the action compatible with present and future community/agency values?
- **T – Technical:** It is important to determine if the proposed action is technically feasible, will help to reduce losses in the long term, and has minimal secondary impacts. How effective is the action in avoiding or reducing future losses? Does the action solve the problem or only a symptom? Will the action create more problems than it solves? Consider the root cause of the issue at hand to determine whether the action is a whole or partial solution, or not a solution at all.
- **A – Administrative:** This category examines the anticipated staffing, funding, time, and maintenance requirements for the mitigation action to determine if the jurisdiction/special district has the personnel and administrative capabilities to implement the action or whether outside help will be necessary. Consider (a) Staffing (enough staff and training): Does the jurisdiction/special district have the capability (staff, technical experts) to implement the action? (b) Funding allocated: Does the jurisdiction/special district have the funding to implement the action, or can it be readily obtained? (c) Time: Can it be accomplished in a timely manner? (d) Maintenance/Operations: Can the jurisdiction/special district provide the necessary maintenance? It is important to remember that most federal grants will not provide maintenance funding.
- **P – Political:** This considers the level of political support for the mitigation action. Is there political support for implementing and maintaining this action? Have political leaders participated in the planning process so far? Is there a local champion willing to help see the action to completion? Is there enough public support to ensure the success of the action? Have all stakeholders been offered an opportunity to participate in the planning process?
- **L – Legal:** The jurisdiction/special district must have the legal authority to implement the action or consider what new laws or regulations would be needed to carry out the mitigation action. Evaluate whether the proper laws, ordinances, and resolutions are in place to implement the action. Are there any potential legal consequences? Is the action likely to be challenged by stakeholders who may be negatively affected?
- **E – Economic:** Economic considerations must include an evaluation of the present economic base and projected growth. Cost-effective mitigation actions that can be funded in current or upcoming budget cycles are more likely to be implemented than actions requiring general obligation bonds or other instruments that would incur long-term debt in a jurisdiction/special district. Consider benefits and costs at a planning level. A detailed benefit-cost analysis will be performed as project-specific funding becomes available. What financial benefits will the action provide? Does the cost seem reasonable for the size of the problem and the likely benefits? What burden will be placed on the tax base or local

economy to implement this action? Does the action contribute to community economic goals, such as capital improvements or economic development? Are there current sources of funding that can be used to implement the action?

- **E – Environmental:** The impact on the environment is an important consideration because of the public desire for sustainable and environmentally healthy communities. Also, statutory considerations, such as the National Environmental Policy Act (NEPA), must be considered when using federal funds. How will this action impact land/water? Impact on endangered species: How will this action impact endangered species? How will this action impact hazardous materials and waste sites? Is this action consistent with community environmental goals? Is the action consistent with federal laws, such as the National Environmental Policy Act (NEPA)?

For each priority category, you *may* add the following descriptors or add additional information that you want to record in the plan:

1. Many questions or concerns. Further research, outreach, or engagement is needed to determine if this action would be acceptable.
2. Some questions or concerns. This action sounds good, but more information or support is still needed.
3. Neutral. There may be questions or concerns, but they are unknown at this time.
4. There are no questions or concerns. The STAPLEE criteria have been considered, and this action effectively addresses them.

Using the actions you have identified above for the new update, how will you prioritize them? Please complete the STAPLEE form below for each action.

Table 151: STAPLEE Prioritization

Action #	Social	Technical	Administrative	Political	Legal	Economic	Environmental	Priority (High, Medium, Low)
1								
2								
3								
4								
5								
6								
7								
8								

Action #	Social	Technical	Administrative	Political	Legal	Economic	Environmental	Priority (High, Medium, Low)
9								
10								

Celebrate success! Is there an action that you have taken you are proud to share? These local case studies help highlight the benefits of mitigation and how it can be accomplished locally. Add any details you want here or skip this section.

Mitigation Success Stories (Optional)

Mitigation success stories are pictures, narratives, or case studies about individuals, businesses, or communities that undertook successful efforts to reduce or eliminate disaster risks. They demonstrate that mitigation measures decrease repetitive losses, financial hardship, and loss of life. These stories are intended to help inspire future action and celebrate the success the community or special district has achieved already. Types of stories to consider include plan implementation (such as the start or completion of a project), plan integration, outreach and engagement, and equity in mitigation. This is not a requirement of the hazard mitigation planning process, but an optional best practice.

Please share any mitigation successes your community has achieved in the table below.

Table 152: Success Stories

Title	Description	Link or Photos in SharePoint?

Appendix D: Prioritized Project List

Appendix D: Prioritized Project List

The following dataset represents a thorough collection of 138 mitigation projects across St. Lucie County and its jurisdictions. These projects address a wide range of hazards, including flooding, wind events, hazardous materials accidents, water contamination, and power/communication failures. Each entry includes details such as project rank, project title, estimated cost, potential funding source, and status as of October 3, 2025.

Key observations show that most projects are heavily weighted toward the early-planning stage, with 127 projects (≈92%) not started and 11 (≈8%) in progress. St. Lucie County Utilities accounts for 8 of the 11 in-progress items (≈72.7% of all in-progress projects). The remaining three are split among St. Lucie County Environmental Resources Department, St. Lucie County Public Works, and the City of Port St. Lucie Emergency Management.

The estimated cost for all projects totals$1,599,852,421.10, with the “In Progress” subset totaling $,199,889,315.83. Expansion horizons remain focused on major water and wastewater treatment improvements.

Table 153: Prioritized Project List Status as of 10/3/2025

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
1	112.31	SLCSB2020-1	School Board	**St. Lucie County Shelter Air-Conditioning and Emergency Circuits**	Flooding, Wind Event, Wildfire, Radiological Incident, Transportation System Accident	All	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$4,250,000.00	$3,187,500.00	Not Started	None
2	110.15	FPE2020-1	City of Ft. Pierce Engineering	**Virginia Avenue Canal Bank Stabilization**	Flooding	All	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$5,200,000.00	$3,900,000.00	Not Started	T. Telle updated the estimated cost on 9/21/2023
3	107.69	SLCPW2020-16	St. Lucie County Public Works	**Fiber Optic Cable Countywide Infrastructure – City of Fort Pierce Police Department, SLC FENN Center, and SLC Administrative Offices**	Wind Event, Hazardous Materials Accident or Wellfield/Surface, Radiological Incident, Power/Communication Failure, Transportation System Accident	All	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$1,167,383.56	$875,537.67	Not Started	None
4	107.38	SLCPW2020-15	St. Lucie County Public Works	**Fiber Optic Cable Countywide Infrastructure – SLC Fairgrounds, SLC Emergency Operations Center, and SLC Administrative Offices**	Wind Event, Hazardous Materials Accident, Wellfield/Surface Radiological Incident, Power/Communication Failure, Transportation System Accident	All	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$4,607,796.70	$3,455,847.53	Not Started	None
5	106.92	SLCPW2020-17	St. Lucie County Public Works	**Fiber Optic Cable Countywide Infrastructure – St. Lucie County Courthouse, City of Fort Pierce Administrative Offices**	Wind Event, Hazardous Materials Accident, Wellfield/Surface, Radiological Incident, Power/Communication	All	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$1,573,507.04	$1,180,130.28	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
					Failure, Transportation System Accident							
6	104.77	SLCPW2020-13	St. Lucie County Public Works	**Fiber Optic Cable Countywide Infrastructure – County Information Technology and Bunker (SLC Backup EOC Location) on Rock Road to SLC Administration**	Wind Event, Hazardous Materials Accident, Wellfield/Surface, Radiological Incident, Power/Communication Failure, Transportation System Accident	All	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$2,165,048.48	$1,623,786.36	Not Started	None
7	103.6	FPUA2024-1	Fort Pierce Utilities Authority	**Generator for FPUA Command Center**	Flooding, Wind Event, Terrorism/Sabotage, Power/Communication Failure	Fort Pierce, St. Lucie Village, Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$750,000.00	$562,500.00	Not Started	None
8	102.62	SLCPW2020-11	St. Lucie County Public Works	**Fiber Optic Cable Countywide Infrastructure – TCIA, Customs, SLCSO Williams Substation, SLC Administrative Offices**	Wind Event, Hazardous Materials Accident, Wellfield/Surface, Radiological Incident, Power/Communication Failure, Transportation System Accident	Fort Pierce, St. Lucie Village, Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$2,832,070.80	$2,124,053.10	Not Started	None
9	102.15	SLCPW2020-12	St. Lucie County Public Works	**Fiber Optic Cable Countywide Infrastructure – SLC Sheriff's Office and SLC Administrative Offices**	Wind Event, Hazardous Materials Accident, Wellfield/Surface, Radiological Incident, Power/Communication Failure, Transportation System Accident	Fort Pierce, St. Lucie Village, Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$2,431,899.68	$1,823,924.76	Not Started	None
10	101.2	PSLUT2024-1	City of Port St. Lucie Utility	**Portable Generators for RO Wells**	Flooding, Wind Event, Wildfire, Water Contamination, Drought,	Port St. Lucie, Unincorporated	< 2 Years	HMGP, BRIC	$950,000.00	$712,500.00	Not Started	Cost Updated 4/18/25

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
			Systems Department		Power/Communication Failure	St. Lucie County						
11	99.6	PSLUT2024-2	City of Port St. Lucie Utility Systems Department	**Portable Generators for Lift Stations – Southport**	Flooding, Wind Event, Water Contamination, Power/Communication Failure	Port St. Lucie, Unincorporated St. Lucie County	< 2 Years	HMGP, BRIC	$750,000.00	$562,500.00	Not Started	None
11	99.6	PSLUT2024-3	City of Port St. Lucie Utility Systems Department	**Portable Generators for Lift Stations – Northport**	Flooding, Wind Event, Water Contamination, Power/Communication Failure	Port St. Lucie, Unincorporated St. Lucie County	< 2 Years	HMGP, BRIC	$750,000.00	$562,500.00	Not Started	None
13	99.54	SLCPW2020-8	St. Lucie County Public Works	**Upgrading Traffic Signal Systems – Prima Vista Corridor – Riomar Drive, Naranja Avenue, Floresta Drive, Airoso Boulevard**	Wind Event, Hazardous Materials Accident, Wellfield/Surface, Transportation System Accident	Fort Pierce, Port St. Lucie, Unincorporated St. Lucie County	2–3 Years	CDBG-MIT; State mitigation grants	$3,319,788.00	$2,489,841.00	Not Started	None
14	99.33	PSLUT2025-2	City of Port St. Lucie Utilities	**Pumps**	Flooding, Wind Event – Severe Storm, Water Contamination	Port St. Lucie, Unincorporated St. Lucie County	< 2 Years	HMGP, CDBG-DR, CDBG-MIT	$225,000.00	$168,750.00	Not Started	None
15	98.8	SLCFA2022-1	St. Lucie County	**Havert L. Fenn Center Special Needs Shelter Expansion**	Flooding, Epidemic (Pandemic), Wind Event	All	2–3 Years		$23,831,500.00	$17,873,625.00	Not Started	None
15	98.8	PSLUT2024-4	City of Port St. Lucie Utility Systems Department	**Portable Generators for Lift Stations – Westport**	Flooding, Wind Event, Water Contamination, Power/Communication Failure	Port St. Lucie, Unincorporated St. Lucie County	< 2 Years	HMGP, BRIC	$750,000.00	$562,500.00	Not Started	None
17	98.62	SLCPW2020-9	St. Lucie County Public Works	**Upgrading Traffic Signal Systems – Midway Road Corridor – Glades Cut Off Road**	Wind Event, Hazardous Materials Accident, Wellfield/Surface,	Fort Pierce, Unincorporated St. Lucie County	2–3 Years	CDBG-MIT; State mitigation grants	$847,947.00	$635,960.25	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
					Transportation System Accident							
19	98	FPUA2024-2	Fort Pierce Utilities Authority	**Redundant Fiber Feed to Electric Substations**	Wind Event, Terrorism/ Sabotage, Power/ Communication Failure	Fort Pierce, St. Lucie Village	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$69,000.00	$51,750.00	Not Started	None
19	97.85	SLCPW2020-3	St. Lucie County Public Works	**Midway Road Turnpike Interchange**	Wind Event, Hazardous Materials Accident, Wellfield/Surface, Transportation System Accident	All	3–4 Years	CDBG-MIT; State mitigation grants	$41,955,726.00	$31,466,794.50	Not Started	None
20	97.69	SLCPW2020-10	St. Lucie County Public Works	**Upgrading Traffic Signal Systems – Edwards Road Corridor (Sunrise Boulevard and Selvitz Road)**	Wind Event, Hazardous Materials Accident, Wellfield/Surface, Transportation System Accident	Fort Pierce and Unincorporated St. Lucie County	2–3 Years	CDBG-MIT; State mitigation grants	$1,671,894.00	$1,253,920.50	Not Started	None
21	97.6	PSLEM-2022-1	City of Port St Lucie Emergency Management	**Installation of Not Started 1000-kW Parallel Diesel Generators at MIDFLORIDA Event Center**	Flooding, Epidemic, Wind Event, Hazardous Materials Accident, Terrorism/Sabotage, Wildfire, Water Contamination, Drought, Radiological Incident, Power/ Communication Failure, Transportation System Accident	Port St. Lucie	< 2 Years	CDBG-MIT; State mitigation grants	$2,000,000.00	$1,500,000.00	Not Started	None
22	97.2	FPUA2024-5	Fort Pierce Utilities Authority	**Emergency Services Center – Storm Hardening**	Flooding, Wind Event, Terrorism/Sabotage, Power/Communication Failure	Fort Pierce, St. Lucie Village, Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$8,250,000.00	$6,187,500.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
23	96.92	SLCPW2020-14	St. Lucie County Public Works	**Fiber Optic Cable Countywide Infrastructure – Kings Highway – SR 70 to Indrio Road**	Wind Event, Hazardous Materials Accident, Wellfield/Surface, Radiological Incident, Power/Communication Failure, Transportation System Accident	Fort Pierce and Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$2,159,664.64	$1,619,748.48	Not Started	None
24	96.2	SLCERD2022-1	St. Lucie County Environmental Resources Department	**Countywide Flood Hazard Mitigation Acquisition Priorities**	Flooding, Water Contamination, Erosion	Fort Pierce, Port St. Lucie, Unincorporated St. Lucie County	2–3 Years	CDBG-MIT; HMGP; State mitigation grants	$4,000,000.00	$3,000,000.00	Not Started	None
25	95.8	TCFB2020-1	Treasure Coast Food Bank	**Treasure Coast Food Bank Distribution Center Improvements**	Flooding, Epidemic, Wind Event, Hazardous Materials Accident, Wellfield/Surface, Wildfire, Water Contamination, Drought, Radiological Incident	All	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$2,184,000.00	$1,638,000.00	Not Started	None
26	95.54	SLCPW2020-5	St. Lucie County Public Works	**Upgrading Traffic Signal Systems – South 25th Street Corridor – Cortez Boulevard, Edwards Road, Forest Grove School, Cobra Pride Way, Bell Avenue**	Wind Event, Hazardous Materials Accident, Wellfield/Surface, Transportation System Accident	Fort Pierce and Unincorporated St. Lucie County	2–3 Years	CDBG-MIT; State mitigation grants	$4,143,735.00	$3,107,801.25	Not Started	None
27	95.38	SLCPW2020-6	St. Lucie County Public Works	**Upgrading Traffic Signal Systems – North 25th Street Corridor – St. Lucie Boulevard, Juanita Avenue**	Wind Event, Hazardous Materials Accident, Wellfield/Surface, Transportation System Accident	Fort Pierce, St. Lucie Village, Unincorporated St. Lucie County	2–3 Years	CDBG-MIT; State mitigation grants	$1,671,894.00	$1,253,920.50	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
27	95.38	SLCPW2020-2	St. Lucie County Public Works	**Midway Road Widening – Glades Cut Off Road to Jenkins Road**	Wind Event, Hazardous Materials Accident, Wellfield/Surface, Transportation System Accident	Fort Pierce, Port St. Lucie, Unincorporated St. Lucie County	3–4 Years	HMGP; PDM; FMA; State mitigation grants	$43,809,986.00	$32,857,489.50	Not Started	None
29	94.83	PSLEM2025-3	City of Port St. Lucie Emergency Management	**Saferoom – Building C**	Wind Event	Port St. Lucie	< 2 Years	HMGP	$809,760.00	$607,320.00	Not Started	Does not qualify for CDBG-DR
30	94.5	PSLEM2019-1	City of Port St. Lucie Emergency Management	**Installation of an Industrial Diesel 1600-kW Generator to Support City Hall Municipal Complex "Building B" (and all EOC Operations)**	Flooding, Epidemic, Wind Event, Hazardous Materials Accident, Wellfield/Surface Terrorism/Sabotage, Wildfire, Water Contamination, Drought, Radiological Incident, Power/ Communication Failure, Transportation System Accident	Port St. Lucie	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$1,281,945.00	$961,458.75	In Progress	None
31	94.4	PSLFM2024-1	City of Port St. Lucie Facility Maintenance Department	**Police Department Impact Windows and Rear Door**	Flooding, Wind Event, Terrorism, Wildfire, Water Contamination, Radiological Incident, Power/Communication Failure	Port St. Lucie	< 2 Years	HMGP	$3,000,000.00	$2,250,000.00	Not Started	Cost Updated 4/18/25
32	93.67	PSLUT2025-3	City of Port St. Lucie Utilities	**Prineville WTF Generator**	Flooding, Wind Event, Water Contamination, Power/Communication Failure	Port St. Lucie, Unincorporated St. Lucie County	< 2 Years	HMGP, CDBG-DR, CDBG-MIT	$3,500,000.00	$2,625,000.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
33	93.5	FP2019-1	City of Fort Pierce Stormwater Division	**Edwards Road Canal Bank Stabilization**	Flooding, Wind Event, Erosion, Transportation System Accident	Fort Pierce and Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$2,600,000.00	$1,950,000.00	Not Started	T. Telle updated the estimated cost on 9/21/2023
34	93.33	PSLEM2025-6	City of Port St. Lucie Emergency Management	**Saferoom – Utilities Facilities**	Wind Event	Port St. Lucie	< 2 Years	HMGP	$846,843.00	$635,132.25	Not Started	Does not qualify for CDBG-DR
35	92.91	PSLPW2021-3	City of Port St. Lucie Public Works	**Elkcam Waterway Detritus Excavation**	Flooding, Water Contamination, Erosion	Port St. Lucie	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$4,531,539.00	$3,398,654.25	Not Started	None
36	92.4	TCFB2020-2	Treasure Coast Food Bank	**Treasure Coast Food Bank Food Distribution Center**	Flooding, Epidemic, Wind Event, Hazardous Materials Accident, Wellfield/Surface, Wildfire, Water Contamination, Drought, Radiological Incident	All	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$14,759,000.00	$11,069,250.00	Not Started	None
37	92	PSLPW2020-1	City of Port St. Lucie Public Works	**Tiffany Pump Station Outfall Channel Retrofit**	Flooding, Water Contamination, Erosion	Port St. Lucie	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$1,509,690.00	$1,132,267.50	Not Started	None
37	92	PSLPW2021-1	City of Port St. Lucie Public Works	**Paar Drive Bridge – E-12 Canal**	Flooding, Water Contamination, Erosion	Port St. Lucie	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$4,130,072.00	$3,097,554.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
39	91.67	PSLEM2025-5	City of Port St. Lucie Emergency Management	**Saferoom – MIDFLORIDA Event Center**	Wind Event	Port St. Lucie	< 2 Years	HMGP	$181,927.20	$136,445.40	Not Started	Does not qualify for CDBG-DR
40	91.54	SLCPW2020-7	St. Lucie County Public Works	**Upgrading Traffic Signal Systems – Orange Avenue Corridor – Hartman Road, I-95 NB Ramp, I-95 SB Ramp**	Wind Event, Hazardous Materials Accident, Wellfield/Surface, Transportation System Accident	Fort Pierce, St. Lucie Village, Unincorporated St. Lucie County	2–3 Years	CDBG-MIT; State mitigation grants	$2,495,841.00	$1,871,880.75	Not Started	None
40	91.54	SLCPW2020-1	St. Lucie County Public Works	**Jenkins Road Extension Midway Road to Orange Avenue**	Wind Event, Hazardous Materials Accident, Wellfield/Surface, Transportation System Accident	All	4+ Years	HMGP; PDM; FMA; State mitigation grants	$106,239,832.00	$79,679,874.00	Not Started	None
42	91.33	PSLUT2025-1	City of Port St. Lucie Utilities	**Glades WWTF – Generator**	Flooding, Wind Event, Water Contamination, Power/Communication Failure	Port St. Lucie, Unincorporated St. Lucie County	< 2 Years	HMGP, CDBG-DR, CDBG-MIT	$500,000.00	$375,000.00	Not Started	None
43	90.33	PSLEM2025-2	City of Port St. Lucie Emergency Management	**Saferoom – Building B**	Wind Event	Port St. Lucie	< 2 Years	HMGP	$1,780,800.00	$1,335,600.00	Not Started	Does not qualify for CDBG-DR
44	89.75	PSLPW2019-4	City of Port St. Lucie Public Works	**E-8 Canal Retrofit Improvements**	Flooding, Water Contamination, Erosion	Port St. Lucie, Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$2,000,000.00	$1,500,000.00	Not Started	None
45	89.54	PSLPW2020-2	City of Port St. Lucie Public Works	**Airoso Boulevard Drainage Improvements**	Flooding, Water Contamination, Erosion	Port St. Lucie	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$1,146,000.00	$859,500.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
46	89.25	PSLPW2019-7	City of Port St. Lucie Public Works	**Elkcam Basin Improvements**	Flooding, Water Contamination, Erosion	Port St. Lucie and Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$7,669,000.00	$5,751,750.00	Not Started	None
47	88.4	SLCUT2023-11	St. Lucie County Utilities	**Central County Water Main/Force Main Expansion – Phased Plan**	Wind Event, Wildfire, Water Contamination, Power/Communication Failure	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$27,000,000.00	$20,250,000.00	Not Started	None
48	88	PSLEM2025-4	City of Port St. Lucie Emergency Management	**Saferoom – Community Center**	Wind Event	Port St. Lucie	< 2 Years	HMGP	$1,241,765.00	$931,323.75	Not Started	Does not qualify for CDBG-DR
49	87.8	PSLPW2019-3	City of Port St. Lucie Public Works	**D-11 Canal Retrofit Improvements**	Flooding, Wind Event, Water Contamination, Erosion	Port St. Lucie and Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$3,422,000.00	$2,566,500.00	Not Started	None
50	87.69	SLCPW2020-4	St. Lucie County Public Works	**St. Lucie Boulevard Extension Kings Highway to I-95**	Wind Event, Hazardous Materials Accident, Wellfield/Surface, Radiological Incident, Transportation System Accident	Fort Pierce, St. Lucie Village, Unincorporated St. Lucie County	4+ Years	HMGP; PDM; FMA; State mitigation grants	$50,126,200.00	$37,594,650.00	Not Started	None
51	86.31	PSLEM2020-5	City of Port St Lucie Emergency Management	**Utilities Storage Building Hardening (Walton Road)**	Flooding, Wind Event, Water Contamination, Power/Communication Failure	Port St. Lucie	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$445,600.00	$334,200.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
52	86	PSLPW2025-1	City of Port St. Lucie Public Works	**Oak Hammock Watershed Improvement Project**	Flooding, Water Contamination	Port St. Lucie	2–3 Years	HMGP, FMA, State Water Quality Improvement Grant, Resilient Florida Implementation Grant	$32,000,000.00	$24,000,000.00	Not Started	None
53	84.62	SLCWQ2020-1	St. Lucie County Water Quality	**Stormwater Management Master Plan**	Flooding, Wind Event, Hazardous Materials Accident, Wellfield/ Surface, Wildfire, Water Contamination, Erosion, Drought	All	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$2,500,000.00	$1,875,000.00	Not Started	None
54	83.6	SLCUT2016-2	St. Lucie County Utilities	**Backup Generator at Main Lift Station 1, SHI-MPS 1**	Wind Event, Flooding, Terrorism/Sabotage, Hazardous Materials Accident or Wellfield/ Surface, Power/ Communication Failure, Transportation System Accident, Civil Disturbance, Thunderstorm/Lightning	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$143,038.00	$107,278.50	In Progress	HMGP awarded
55	82.7	SLCUT2016-9	St. Lucie County Utilities	**Backup Generator and Well at Lakewood Park WTP, HEW-LS 15**	Wind Event, Flooding, Terrorism/Sabotage, Hazardous Materials Accident or Wellfield/ Surface Water Contamination, Power/ Communication Failure, Thunderstorm/ Lightning	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$82,634.00	$61,975.50	In Progress	HMGP award for generator only

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
56	82.6	COFP2018-1	City of Ft. Pierce Stormwater Division	**Storm Drain Replacement on Avenue Q between 14th–17th Streets**	Flooding	Fort Pierce	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$700,269.00	$525,201.75	Not Started	None
57	81.64	PSLPW2021-4	City of Port St. Lucie Public Works	**E-5 Canal Retrofit**	Flooding, Water Contamination, Erosion	Port St. Lucie	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$5,723,176.00	$4,292,382.00	Not Started	None
58	81	SLCERD2022-2	St. Lucie County Environmental Resources Department	**North County Wildfire Mitigation (Phase I)**	Wildfire	Fort Pierce, St. Lucie Village, Unincorporated St. Lucie County	2–3 Years	CDBG-MIT; HMGP; State mitigation grants	$1,500,000.00	$1,125,000.00	In Progress	Can be removed; almost complete
59	80.9	SLCUT2016-8	St. Lucie County Utilities	**Bryn Mawr Master Lift Station Upgrade – Companion Wet Well**	Wind Event, Flooding, Terrorism/Sabotage, Hazardous Materials Accident or Wellfield Surface/Water Contamination, Power/ Communication Failure, Transportation System Accident, Civil Disturbance, Thunderstorm/Lightning	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$230,000.00	$172,500.00	Not Started	None
59	80.9	SLCUT2016-8	St. Lucie County Utilities	**Bryn Mawr Master Lift Station Upgrade – Emergency Backup Generator**	Wind Event, Flooding, Terrorism/Sabotage, Hazardous Materials Accident or Wellfield Surface/Water Contamination, Power/ Communication Failure, Transportation System	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$123,000.00	$92,250.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
					Accident, Civil Disturbance, Thunderstorm/Lightning							
61	80.4	SLCUT2023-10	St. Lucie County Utilities	**Central County 2-MGD Reverse Osmosis Water Treatment Plant**	Flooding, Wind Event, Hazardous Materials Accident, Wildfire, Water Contamination	Fort Pierce, Port St. Lucie, Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$38,000,000.00	$28,500,000.00	In Progress	Per Rebecca Olson status is marked as In Progress
61	80.4	SLCUT2023-10	St. Lucie County Utilities	**(3) UFA Wells for Central County 2-MGD WTP**	Flooding, Wind Event, Hazardous Materials Accident, Wildfire, Water Contamination	Fort Pierce, Port St. Lucie, Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$7,500,000.00	$5,625,000.00	Not Started	None
61	80.4	SLCUT2023-10	St. Lucie County Utilities	**Central County Deep Injection Well**	Flooding, Wind Event, Hazardous Materials Accident, Wildfire, Water Contamination	Fort Pierce, Port St. Lucie, Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$17,000,000.00	$12,750,000.00	Not Started	None
61	80.4	SLCUT2023-10	St. Lucie County Utilities	**Central County Wastewater Treatment Plant**	Flooding, Wind Event, Hazardous Materials Accident, Wildfire, Water Contamination	Fort Pierce, Port St. Lucie, Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$20,000,000.00	$15,000,000.00	In Progress	Per Rebecca Olson status is marked as In Progress
61	80.4	SLCUT2023-10	St. Lucie County Utilities	**Reclaimed Storage Tank, Master Pump Station, Emergency Outfall for Central County Wastewater Treatment Plant**	Flooding, Wind Event, Hazardous Materials Accident, Wildfire, Water Contamination	Fort Pierce, Port St. Lucie, Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$6,000,000.00	$4,500,000.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
66	80	SLCUT2023-17	St. Lucie County Utilities	**N. County Regional (Taylor Dairy) 2.0 MGD Reverse Osmosis Water Treatment Plant**	Flooding, Wind Event, Hazardous Materials Accident, Wildfire, Water Contamination	Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$31,500,000.00	$23,625,000.00	In Progress	Per Rebecca Olson, status is marked as In Progress
66	80	SLCUT2023-17	St. Lucie County Utilities	**High Service Pump Station, (2) Storage Tanks for N. County Regional (Taylor Dairy) WTP**	Flooding, Wind Event, Hazardous Materials Accident, Wildfire, Water Contamination	Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$10,000,000.00	$7,500,000.00	Not Started	None
66	80	SLCUT2023-17	St. Lucie County Utilities	**UFA Wells PW-2 and PW-3 for N. County Regional (Taylor Dairy) WTP**	Flooding, Wind Event, Hazardous Materials Accident, Wildfire, Water Contamination	Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$7,500,000.00	$5,625,000.00	In Progress	Per Rebecca Olson, status is marked as In Progress
66	80	SLCUT2023-17	St. Lucie County Utilities	**Taylor Dairy Deep Injection Well**	Flooding, Wind Event, Hazardous Materials Accident, Wildfire, Water Contamination	Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$17,000,000.00	$12,750,000.00	In Progress	Per Rebecca Olson, status is marked as In Progress
66	80	PSLEM2025-1	City of Port St. Lucie Emergency Management	**Saferoom – Building A**	Wind Event	Port St. Lucie	< 2 Years	HMGP	$3,692,150.00	$2,769,112.50	Not Started	Does not qualify for CDBG-DR
71	79.1	SLCUT2016-6	St. Lucie County Utilities	**Emergency Generator at Master Pump Station #5, SHI-MPS 5**	Wind Event, Flooding, Terrorism/Sabotage, Hazardous Materials Accident or Wellfield Surface/Water	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$180,000.00	$135,000.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
					Contamination, Power/ Communication Failure, Transportation System Accident, Civil Disturbance, Thunderstorm/Lightning							
71	79.1	SLCUT2016-7	St. Lucie County Utilities	**Emergency Generator at Master Pump Station #6, SHI-MPS 6**	Wind Event, Flooding, Terrorism/Sabotage, Hazardous Materials Accident or Wellfield Surface/Water Contamination, Power/ Communication Failure, Transportation System Accident, Civil Disturbance, Thunderstorm/Lightning	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$180,000.00	$135,000.00	Not Started	None
73	78.8	SLCUT2023-14	St. Lucie County Utilities	**Lakewood Park Potable Water Distribution and Fire Flow Protection Phase 1**	Flooding, Wind Event, Hazardous Materials Accident, Wildfire, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$12,000,000.00	$9,000,000.00	Not Started	None
73	78.8	SLCUT2023-14	St. Lucie County Utilities	**Lakewood Park Potable Water Distribution and Fire Flow Protection Phase 2**	Flooding, Wind Event, Hazardous Materials Accident, Wildfire, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$12,000,000.00	$9,000,000.00	Not Started	None
73	78.8	SLCUT2023-14	St. Lucie County Utilities	**Lakewood Park Potable Water Distribution and Fire Flow Protection Phase 3**	Flooding, Wind Event, Hazardous Materials Accident, Wildfire, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$12,000,000.00	$9,000,000.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
73	78.8	SLCUT2023-14	St. Lucie County Utilities	**Lakewood Park Potable Water Distribution and Fire Flow Protection Phase 4**	Flooding, Wind Event, Hazardous Materials Accident, Wildfire, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$12,000,000.00	$9,000,000.00	Not Started	None
73	78.8	SLCUT2023-14	St. Lucie County Utilities	**Lakewood Park Potable Water Distribution and Fire Flow Protection Phase 5**	Flooding, Wind Event, Hazardous Materials Accident, Wildfire, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$12,000,000.00	$9,000,000.00	Not Started	None
78	78.4	FPUA2024-4	Fort Pierce Utilities Authority	**FPUA Water System Retrofit for PFAS Elimination**	Hazardous Materials Accident, Water Contamination	Fort Pierce, Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$10,000,000.00	$7,500,000.00	Not Started	None
79	78	FPUA2024-6	Fort Pierce Utilities Authority	**Undergrounding Electric Services**	Wind Event, Water Contamination, Power/ Communication Failure	St. Lucie Village, Unincorporated St. Lucie County	< 2 Years	State mitigation grants	$500,000.00	$375,000.00	Not Started	None
80	77.45	COASL2021-1	Council on Aging of St. Lucie (COASL)	**COASL Generator Replacements**	Flooding, Water Contamination, Erosion	Port St. Lucie	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$90,000.00	$67,500.00	Not Started	None
81	76.7	NSLRWCD2016-6	North St. Lucie Water Control District	**Gordy Structure Shaft and Telemetry**	Wind Event, Flooding, Erosion, Thunderstorm/ Lightning	Fort Pierce and Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$250,000.00	$187,500.00	Not Started	None
82	76	PSL2016-13	City of Port St. Lucie Public Works	**Kingsway Basin Improvements**	Hurricane, Transportation, Flooding, Thunderstorm, Erosion	Port St. Lucie	< 2 Years	HMGP; PDM; FMA; State	$1,020,000.00	$765,000.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
								mitigation grants				
83	75.8	PSL2016-26	City of Port St. Lucie Public Works	**Thanksgiving/Academy Basin Improvements**	Hurricane, Transportation, Flooding, Thunderstorm, Erosion	Port St. Lucie	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$1,570,487.00	$1,177,865.25	Not Started	None
84	75.6	SLCUT2023-12	St. Lucie County Utilities	**North County (Holiday Pines) Water Reclamation Facility Expansion**	Hazardous Materials Accident, Water Contamination	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$6,500,000.00	$4,875,000.00	In Progress	Will be completed in October 2024 – Rebecca Olson
85	75.3	NSLRWCD2016-5	North St. Lucie Water Control District	**Ten Mile Creek Fitting Structure**	Wind Event, Flooding, Erosion, Thunderstorm/ Lightning	Fort Pierce and Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$187,500.00	$140,625.00	Not Started	None
86	74.6	PSLPW2019-11	City of Port St. Lucie Public Works	**Monterrey/Cameo Basin Improvements**	Flooding, Water Contamination, Erosion	Port St. Lucie and Unincorporated St. Lucie County	3–4 Years	HMGP; PDM; FMA; State mitigation grants	$1,131,496.00	$848,622.00	Not Started	None
87	74	SLCUT2023-1	St. Lucie County Utilities	**Emergency Generator at Deer Run Lift Station, NC-LS 2**	Flooding, Wind Event, Hazardous Materials Accident, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$180,000.00	$135,000.00	Not Started	None
87	74	SLCUT2023-2	St. Lucie County Utilities	**Emergency Generator at Feather Creek/Paleo Pines Lift Station, NC-LS 3**	Flooding, Wind Event, Water Contamination, Power/Communication Failure	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$180,000.00	$135,000.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
87	74	SLCUT2023-5	St. Lucie County Utilities	**Emergency Generator at Portofino Shores II Lift Station, NC-LS 13**	Flooding, Wind Event, Hazardous Materials Accident, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$180,000.00	$135,000.00	Not Started	None
87	74	SLCUT2023-6	St. Lucie County Utilities	**Emergency Generator at Sands – Lakeview Lift Station, NHI-LS 2W**	Flooding, Wind Event, Hazardous Materials Accident, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$180,000.00	$135,000.00	Not Started	None
87	74	SLCUT2023-7	St. Lucie County Utilities	**Emergency Generator at Sands – Oceanside Lift Station, NHI-LS 4E**	Flooding, Wind Event, Hazardous Materials Accident, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$180,000.00	$135,000.00	Not Started	None
87	74	SLCUT2023-8	St. Lucie County Utilities	**Emergency Generator at Waterstone II – East Lift Station, NC-LS 9**	Flooding, Wind Event, Hazardous Materials Accident, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$180,000.00	$135,000.00	Not Started	None
87	74	SLCUT2023-9	St. Lucie County Utilities	**Emergency Generator at Waterstone I – West Lift Station, NC-LS 8**	Flooding, Wind Event, Hazardous Materials Accident, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$180,000.00	$135,000.00	Not Started	Denial Letter Received 2/5/2025
87	74	SLCUT2023-15	St. Lucie County Utilities	**North Hutchinson Island Septic-to-Sewer Project – Queens Cove**	Flooding, Wind Event, Hazardous Materials Accident, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$7,000,000.00	$5,250,000.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
87	74	SLCUT2023-15	St. Lucie County Utilities	**North Hutchinson Island Septic to Sewer Project – Jackson Way**	Flooding, Wind Event, Hazardous Materials Accident, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$1,575,000.00	$1,181,250.00	Not Started	None
87	74	SLCUT2023-15	St. Lucie County Utilities	**North Hutchinson Island Septic-to-Sewer Project – Coral Cove**	Flooding, Wind Event, Hazardous Materials Accident, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$5,000,000.00	$3,750,000.00	Not Started	None
87	74	SLCUT2023-15	St. Lucie County Utilities	**North Hutchinson Island Septic-to-Sewer Project – Fort Pierce Shores**	Flooding, Wind Event, Hazardous Materials Accident, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$6,000,000.00	$4,500,000.00	Not Started	None
98	73.8	NSLRWCD2016-2	North St. Lucie Water Control District	**C-71/Ten Mile Creek General Clearing and Grading**	Wind Event, Flooding, Erosion, Thunderstorm/ Lightning	Fort Pierce and Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$70,000.00	$52,500.00	Not Started	None
99	73.3	PSL2016-3	City of Port St. Lucie Public Works	**E-14 Canal Retrofit Improvements**	Hurricane, Transportation, Flooding, Thunderstorm, Erosion	Port St. Lucie	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$8,760,816.00	$6,570,612.00	Not Started	None
100	73.2	SLCUT2023-3	St. Lucie County Utilities	**Emergency Generator at Hibiscus Lift Station, NHI-LS 11W**	Flooding, Wind Event, Hazardous Material Accident, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$180,000.00	$135,000.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
100	73.2	SLCUT2023-4	St. Lucie County Utilities	**Emergency Generator at Portofino Shores I, NC-LS 12**	Flooding, Wind Event, Hazardous Material Accident, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$180,000.00	$135,000.00	Not Started	None
102	73.1	FPUA2016-4	Fort Pierce Utilities Authority	**Water Plant Electrical Feed**	Wind Event, Power/ Communication Failure	Fort Pierce	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$69,000.00	$51,750.00	Not Started	None
103	72.6	SLC2018-1	St. Lucie County Public Works	**Lakewood Park Canal Outfall Capacity Increase**	Flooding	Unincorporated St. Lucie County	2–3 Years	HMGP; PDM; FMA; State mitigation grants	$2,000,000.00	$1,500,000.00	In Progress	None
104	71.6	SLCUT2023-16	St. Lucie County Utilities	**North US 1 Water Main and Force Main Extensions to Indian River County Line**	Wind Event, Water Contamination, Power/ Communication Failure	Unincorporated St. Lucie County	Unknown	HMGP; PDM; FMA; State mitigation grants	$1,618,000.00	$1,213,500.00	Not Started	None
105	71.4	ITP2020-1	The Inner Truth Project	**Mobile Crisis Unit**	All Hazards	All	4+ Years	CDBG-MIT; State mitigation grants	$35,000.00	$26,250.00	Not Started	None
106	71.33	SLCUT2025-1	St. Lucie County Utilities	**Fairwinds WWTP Decommission**	Flooding, Hazardous Material Accident, Wellfield/Surface, Water Contamination	Unincorporated St. Lucie County	< 2 Years	HMGP. HLMP	$1,500,000.00	$1,125,000.00	Not Started	None
107	71.23	SLCER2020-1	St. Lucie County Environmental Resources Department	**St. Lucie Resiliency Planning**	Flooding, Wildfire, Water Contamination, Erosion, Drought	All	4+ Years	HMGP; PDM; FMA; State mitigation grants	$1,500,000.00	$1,125,000.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
108	71.2	FPUA2024-3	Fort Pierce Utilities Authority	**FPUA Water Lead and Galvanized Pipe Remediation Project**	Hazardous Materials Accident, Water Contamination	Fort Pierce, Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$50,000,000.00	$37,500,000.00	Not Started	None
109	71	PSL2016-27	City of Port St. Lucie Public Works	**Wildfire Mitigation**	Drought, Extreme Temperature, Transportation, Thunderstorm, Lightning, Wildland Fire	Port St. Lucie	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$300,000.00	$225,000.00	Not Started	None
110	70.9	SLCPW2016-7	St. Lucie County Public Works	**San Lucie Plaza Project**	Flooding, Erosion	Fort Pierce and Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$12,500,000.00	$9,375,000.00	Not Started	None
111	70.67	SLCUT2025-6	St. Lucie County Utilities	**Emergency Generator at Atlantic View Condominium Lift Station**	Flooding, Hazardous Material Accident, Wellfield/Surface, Water Contamination	Unincorporated St. Lucie County	< 2 Years	HMGP; Resilient Florida	$200,000.00	$150,000.00	Not Started	None
112	70.4	SLCPW2016-9	St. Lucie County Public Works	**Sunland Gardens Stormwater Scope Project**	Flooding, Hazardous Materials, or Wellfield/ Surface Water Contamination, Erosion	Fort Pierce and Unincorporated St. Lucie County	4+ Years	HMGP; PDM; FMA; State mitigation grants	$25,000.00	$18,750.00	Not Started	None
113	70.2	FPUA2016-1	Fort Pierce Utilities Authority	**Force Main Protection – Indian River Lagoon**	Wind Event, Epidemic, Hazardous Materials, or Wellfield/Surface Water Contamination	Fort Pierce and Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$250,000.00	$187,500.00	Not Started	None
114	70	NSLRWCD2016-3	North St. Lucie Water Control District	**C-53 Enhanced Flood Protection**	Wind Event, Flooding, Erosion, Thunderstorm/ Lightning	Fort Pierce and Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$150,000.00	$112,500.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
114	70	NSLRWCD2016-4	North St. Lucie Water Control District	**C-33 Enhanced Flood Protection**	Wind Event, Flooding, Erosion, Thunderstorm/ Lightning	Fort Pierce and Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$85,000.00	$63,750.00	Not Started	None
116	69.67	SLCUT2025-2	St. Lucie County Utilities	**North County (Holiday Pines) WRF Expansion to 1.62-MGD**	Flooding, Hazardous Material Accident, Wellfield/Surface, Water Contamination	Unincorporated St. Lucie County	< 2 Years	HMGP	$20,000,000.00	$15,000,000.00	Not Started	None
117	69.1	FPFWCD2016-1	Ft. Pierce Farms Water Control District	**Canal 1/Taylor Creek**	Wind Event, Flooding, Erosion, Thunderstorm/ Lightning	Fort Pierce and Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$250,000.00	$187,500.00	Not Started	None
118	69	SLCUT2025-4	St. Lucie County Utilities	**North Hutchinson Island Water Main Replacement**	Flooding, Hazardous Material Accident, Wellfield/Surface, Water Contamination	Unincorporated St. Lucie County	2–3 Years	HMGP; SFWMD Resilient Florida Grant	$7,000,000.00	$5,250,000.00	Not Started	None
119	68.9	NSLRWCD2016-1	North St. Lucie Water Control District	**C-22 Drainage and Flood Protection**	Wind Event, Flooding, Erosion, Thunderstorm/ Lightning	Fort Pierce and Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$1,000,000.00	$750,000.00	Not Started	None
120	67.6	PSLEM2024-1	City of Port St Lucie Event Center	**MIDFLORIDA Event Center – Exterior Storage Roof**	Wind Event, Water Contamination, Power/ Communication Failure	Port St. Lucie	< 2 Years	HMGP; CDBG	$60,500.00	$45,375.00	Not Started	None
121	66.2	SLCPW2016-1	St. Lucie County Public Works	**Stormwater Master Plan for Carlton Road**	Flooding and Drought	Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$500,000.00	$375,000.00	Not Started	None
122	64.2	FPUA2016-3	Fort Pierce Utilities Authority	**Wastewater Plant Diffuser Pipe**	Wind Event, Epidemic	Fort Pierce and Unincorporated	< 2 Years	HMGP; PDM; FMA; State	$250,000.00	$187,500.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
						St. Lucie County		mitigation grants				
123	63.8	PSLUT2016-1	City of Port St. Lucie Utility Systems Department	**Storm Shutters on Prineville Water Treatment Plant**	Wind Event	Port St. Lucie	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$350,000.00	$262,500.00	Not Started	None
124	63.6	COFP2016-4	City of Fort Pierce Engineering	**Moores Creek Linear Park Phase II**	Flooding	Fort Pierce	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$11,500,000.00	$8,625,000.00	Not Started	T. Telle updated the estimated cost on 9/21/2023
125	63.1	NSLRWCD2018-2	North St. Lucie Water Control District	**Canal 29 Control Structure Replacement**	Wind Event, Flooding, Erosion, Thunderstorm/ Lightning	Fort Pierce and Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$339,500.00	$254,625.00	Not Started	None
126	62.2	SLCPW2016-10	St. Lucie County Public Works	**7th Street Canal Basin**	Flooding, Hazardous Materials Accident, or Wellfield/Surface Water Contamination, Transportation System Accident	Fort Pierce and Unincorporated St. Lucie County	3–4 Years	HMGP; PDM; FMA; State mitigation grants	$2,000,000.00	$1,500,000.00	Not Started	None
127	61.6	COFP2016-1	City of Fort Pierce Engineering	**Stormwater Master Plan**	Flooding	Fort Pierce	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$650,000,000.00	$487,500,000.00	Not Started	T. Telle updated the estimated cost on 9/21/2023
128	61.1	SLCPW2016-6	St. Lucie County Public Works	**Flood Attenuation and Water Quality Improvement**	Flooding, Hazardous Materials Accident, or Wellfield/Surface Water	Unincorporated St. Lucie County	3–4 Years	HMGP; PDM; FMA; State	$6,250,000.00	$4,687,500.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
					Contamination, Transportation System Accident			mitigation grants				
129	61	SLCUT2025-5	St. Lucie County Utilities	**Queens Cove Water Main Replacement**	Flooding, Hazardous Material Accident, Wellfield/Surface, Water Contamination	Unincorporated St. Lucie County	3–4 Years	HMGP; SFWMD Resilient Florida Grant	$5,000,000.00	$3,750,000.00	Not Started	None
130	60.7	SLCPW2016-2	St. Lucie County Public Works	**Final Phase of Paradise Park**	Flooding, Hazardous Materials Accident, or Wellfield/Surface Water Contamination	Unincorporated St. Lucie County	3–4 Years	HMGP; PDM; FMA; State mitigation grants	$2,500,000.00	$1,875,000.00	Not Started	None
130	60.7	SLCPW2016-5	St. Lucie County Public Works	**Canal No. 54 at Orange Avenue West of Pulitzer**	Flooding, Transportation System Accident	Unincorporated St. Lucie County	3–4 Years	HMGP; PDM; FMA; State mitigation grants	$1,000,000.00	$750,000.00	Not Started	None
132	58.9	NSLRWCD2018-1	North St. Lucie Water Control District	**Australian Pine Removal on Canal 57**	Wind Event, Flooding, Erosion, Thunderstorm/ Lightning	Fort Pierce and Unincorporated St. Lucie County	< 2 Years	HMGP; PDM; FMA; State mitigation grants	$55,200.00	$41,400.00	Not Started	None
132	58.9	FPUA2016-2	Fort Pierce Utilities Authority	**S. Hutchinson Island Wastewater Plant**	Wind Event, Epidemic, Hazardous Materials, or Wellfield/Surface Water Contamination	Fort Pierce	3–4 Years	HMGP; PDM; FMA; State mitigation grants	$81,000,000.00	$60,750,000.00	Not Started	None
134	58.7	SLCPW2016-3	St. Lucie County Public Works	**Phase 3 – East Street – Indian River Estates Drainage**	Flooding, Hazardous Materials Accident, or Wellfield/Surface Water Contamination, Transportation System Accident	Unincorporated St. Lucie County	3–4 Years	HMGP; PDM; FMA; State mitigation grants	$250,000.00	$187,500.00	Not Started	None

Rank	Score	Project #	Applicant	Project Title	Hazard Mitigated	Jurisdictions Benefited	Completion Timeline	Potential Funding Source	Estimated Cost	Estimated Federal Share ($)	Status	Comment
135	57.8	SLCPW2016-4	St. Lucie County Public Works	**Merritt Ditch Improvement**	Flooding, Transportation System Accident, Erosion	Unincorporated St. Lucie County	3–4 Years	HMGP; PDM; FMA; State mitigation grants	$250,000.00	$187,500.00	Not Started	None
136	54.7	SLCPW2016-8	St. Lucie County Public Works	**Harmony Heights Stormwater Quality**	Flooding, Hazardous Materials Accident or Wellfield/Surface Water Contamination, Erosion	Fort Pierce and Unincorporated St. Lucie County	4+ Years	HMGP; PDM; FMA; State mitigation grants	$15,000,000.00	$11,250,000.00	Not Started	None
137	54.33	SLCUT2025-3	St. Lucie County Utilities	**Lakewood WWTP Decommission**	Flooding, Hazardous Material Accident, Wellfield/Surface, Water Contamination	Unincorporated St. Lucie County	3–4 Years	HMGP; HLMP	$2,500,000.00	$1,875,000.00	Not Started	None
138	Not Avail-able	SLCUT2025-7	St. Lucie County Utilities	**Indian Bend Lift Station Generator**	Flooding, Hazardous Material Accident, Wellfield/Surface, Water Contamination	Unincorporated St. Lucie County	< 2 Years	HMGP; FDEP Resilient Florida	$200,000.00	$150,000.00	Not Started	None