City of Venice

Hurricanes Helene and Milton

After Action Report (AAR)

VENICE FIRE RESCUE
EST. 1926

Venice, FL
City on the Gulf

VENICE POLICE DEPARTMENT
"Our Citizens, Our Community, Our Commitment"

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Acknowledgements

The City of Venice is committed to preserving life, property, and safety before, during, and after both natural and man-made disasters. All City employees serve as essential personnel, carrying out operational duties to ensure continuity of government in accordance with federal, state, and local standards and best practices.

During the 2024 hurricane season, the City of Venice faced the impact of two back-to-back hurricanes, with storm surge impacts reaching seven feet and winds exceeding 100 mph. These storms brought unprecedented challenges that the City had never encountered before. The response to Hurricanes Helene and Milton was complex and dynamic, leveraging resources from county, state, federal, and non-profit agencies to support City of Venice residents.

The City of Venice extends its gratitude to the countless community members, public safety professionals, emergency management personnel, City staff members, and volunteers from Florida and across the nation who contributed to these hurricane response and recovery efforts.

The City of Venice sincerely thanks all who participated in this critical review process.

Handling Instructions

The *City of Venice Hurricane Helene and Milton After-Action Report* provides a comprehensive analysis of the City's response, highlighting strengths, best practices, and opportunities for improvement based on lessons learned during the 2024 hurricane season.

Developed with detailed input from City personnel, Department Directors, municipal agencies, and community partners, the report incorporates insights that identify both successes and areas for growth. Contributions from the Police and Fire Chiefs, department leaders, and staff—who played a critical role in the storm preparation, response, and recovery efforts—ensure an accurate and thorough assessment of the City's performance.

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The information contained in this AAR is current as of the date of publication, April 8, 2025.

Hurricane Season Overview

Hurricane Helene · Hurricane Milton

Hurricane Season Overview

According to the National Hurricane Center, the 2024 Hurricane Season had above-normal activity with 18 named storms of which 11 became hurricanes (wind speeds of 74 mph or greater) and five strengthened into major hurricanes (wind speeds of 111 mph or greater).

Hurricane Helene made landfall as a Category 4 storm in the Big Bend region on Sept. 26, 2024, and Hurricane Milton made landfall as a Category 3 near Siesta Key on Oct. 9, 2024.

The combination of both storms resulted in 46 tornadoes throughout Florida and caused torrential rainfall, localized flooding and devastating storm surge exceeding seven feet along Venice's coastal and low-lying areas.

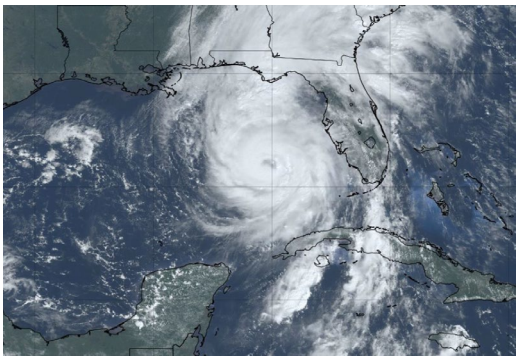
Hurricane Helene

Overview

Hurricane Helene caused catastrophic damage across the Southeast U.S. in parts of Florida, Georgia, North and South Carolina, and Tennessee. Helene was a major Category 4 hurricane with peak winds of 140 mph as it made landfall just southwest of Perry, Florida, in Taylor County on the night of Thursday, Sept. 26, 2024. The storm devastated Florida's Big Bend and Gulf Coast communities. Helene's large size and expansive wind field led to tropical storm-force winds, or even higher at times, as far as Florida's east coast, hundreds of miles away from the storm's center in the Gulf of America. As the storm moved inland, it maintained hurricane-force wind speeds into Georgia where it caused major wind damage and eventually produced torrential rainfall and flooding in western North Carolina and eastern Tennessee, devastating towns throughout the region.

Satellite imagery from the Visible Infrared Imaging Radiometer Suite (VIIRS) Day-Night band showing the impact of Hurricane Helene after landfall, revealing power outages in northern Florida, southern Georgia, and South and North Carolina. Source: NOAA Joint Polar Satellite System.

Helene's development and intensification in the Gulf of America was aided by above normal water temperatures in the Gulf, low atmospheric wind shear, and its track over the Gulf loop current, an area of very warm waters. Hurricane Helene rapidly intensified as it moved north through the Gulf. The storm intensified within a day from a Category 1 to a Category 4 hurricane on Thursday, Sept. 26 prior to making landfall that night. This was an increase in maximum sustained wind speeds of 55 mph in under 24 hours.



Helene's track and intensity from the Caribbean Sea through the Carolinas and Tennessee. Credit: North Carolina State Climate Office.

Due to the storm's fast forward motion (at 23 mph) and its distance from the coast, Helene did not produce significant heavy rainfall in central or south Florida. However, even as the storm's center was well offshore around 170 miles west-southwest of Tampa, the storm's forward momentum and outer bands produced strong onshore winds and pushed large amounts of water onshore, generating record high storm surge levels for the Venice area. Major coastal flooding occurred along Florida's west coast and roadways and homes were left covered in sand.

Helene became the third hurricane in 13 months to make landfall in the Big Bend region of Florida, following Category-3 Hurricane Idalia in August 2023 and Category 1 Debby in August 2024. It was the seventh hurricane to make landfall in the Florida Panhandle or Big Bend region in the past nine years since 2016. To date, Helene has led to more than 230 fatalities across six states, with at least 14 fatalities occurring in Florida. The City of Venice reported no fatalities from this storm impact.

Rainfall Totals

Coastal flooding from storm surge was the major impact in Florida; however, any rain that Helene delivered was over a short timeframe, on the order of a few hours, as the storm moved through the region quickly. Rainfall totals were generally six to 12 inches in the Florida Panhandle, with recordings of only one to two inches in Venice. The highest rainfall totals were found along the west side of the storm's center.

Peak Winds and Water Levels

Tropical storm-force winds were observed across a large area of Florida far from the storm's center, and peak wind gusts over 90 mph were observed in areas directly in the storm's path in Taylor, Jefferson, and Madison counties.

Table 2 provides select peak wind gusts observed during Helene, compiled from the Weather Prediction Center and National Weather Service offices serving Florida.

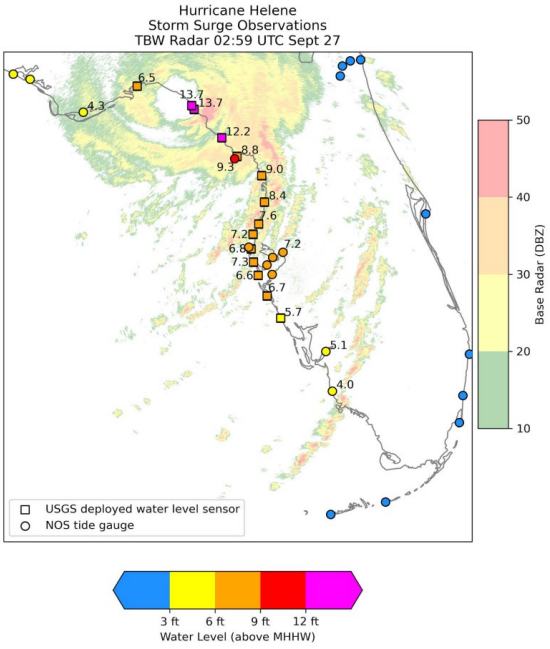
The storm's onshore winds produced record storm surge levels and coastal flooding along the western Gulf Coast of Florida. Major flooding, debris, and damage to structures were observed from the Keys north to the Big Bend region.

The entire Gulf Coast experienced major coastal flooding and damage as well, particularly across Pinellas, Hillsborough, Manatee, and Sarasota counties. Tampa saw historic damage with peak storm surge levels over six feet, which had not been experienced there in over a century since 1921.

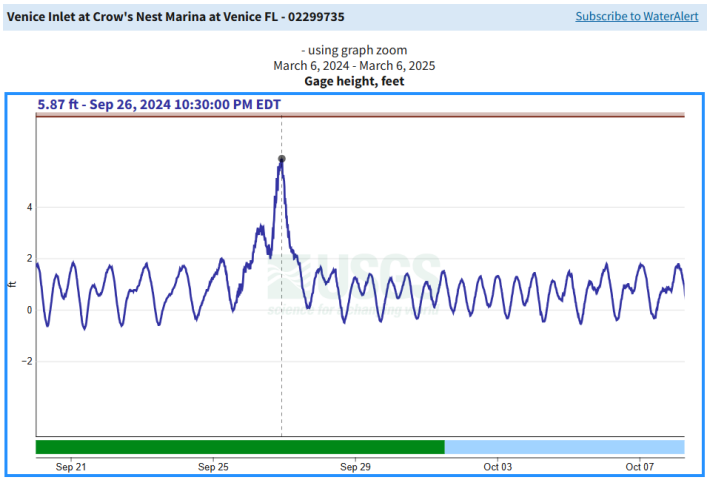
Locally, the City of Venice experienced wind gusts up to 69 mph and storm surge between five and six feet. These surge levels caused coastal flooding levels that exceeded 10 feet (NAVD 88) in elevation due to wave runup in low-lying coastal areas. The flooding occurred primarily within existing flood zone areas, adjacent to the coast.

Table 2. Select peak wind gusts, miles per hour (mph), in Florida from Hurricane Helene

Station	Peak Wind Gust (mph)
Perry	99
Lowdes City	96
Cedar Key	84
Albert Whitted Airport	82
Madison City EOC	80
Clearwater Beach	75
Sarasota/Bradenton	74
Jacksonville Intl. Airport	73
St. Petersburg/Clearwater	71
Venice	69
Dunedin Causeway	68
Tallahassee Intl. Airport	67
Punta Gorda	66
Crystal Beach	63
Fort Myers	62
Tarpon Pt.	62



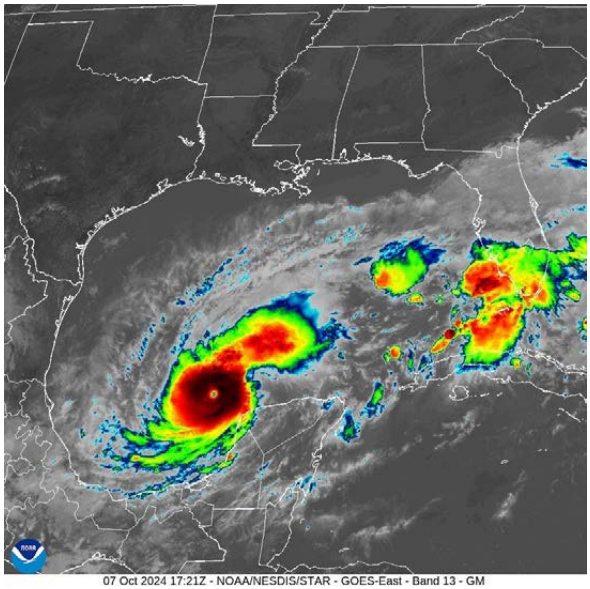
ABOVE: Maximum water levels (ft above MHHW) during Hurricane Helene measured by the NOS tide gauge network and deployed USGS water level sensors, overlaid with TBW radar reflectivity at 3 p.m. UTC Sept. 27, 2024.



LEFT: Venice Inlet at Crow's Nest Marina USCG guage showing surge heights during blue sky and hurricane conditions March 6, 204 to March 6, 2025 .

Hurricane Milton

Overview

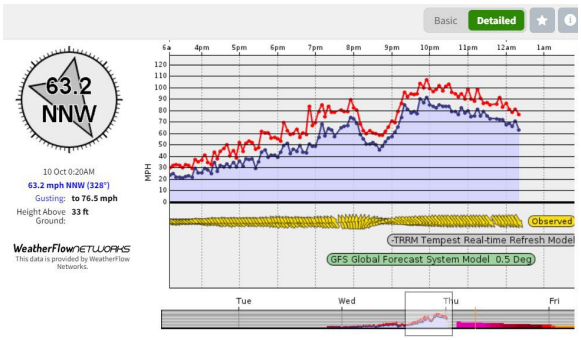


Hurricane Milton made landfall 12 miles north of Venice in Siesta Key, Florida, in Sarasota County on the evening of Oct. 9, 2024, as a major Category 3 hurricane with maximum sustained winds of 120 mph. Milton became the ninth hurricane and the second Category 5 hurricane, after Hurricane Beryl, of the 2024 Atlantic hurricane season. It was one of the most intense hurricanes on record in the Atlantic basin overall.

Milton formed as a tropical depression in the southwestern Gulf of America on Saturday, Oct. 5 , 2024 and became a tropical storm that same day. It intensified into a hurricane on Oct. 6. It reached its maximum intensity on Monday, Oct. 7, as a Category 5 hurricane with maximum sustained winds of 180 mph and a central pressure of 897 millibars, ranking the fifth most intense hurricane overall in the Atlantic basin based on pressure.

Over a 24-hour period from Sunday, Oct. 6 to Monday, Oct. 7, the storm's wind speeds increased by 95 mph. In addition, the storm intensified from a Category 1 hurricane in the early morning of Oct. 7 into a major Category 4 hurricane by noon with maximum sustained winds of 155 mph. The storm's intensity varied as the storm went through an eyewall replacement cycle in the western Gulf.

After passing by the Yucatan Peninsula, it turned northeastward toward Florida and entered more inhospitable conditions with increasing wind shear. The storm lost some strength and made landfall as a Category 3 hurricane in Sarasota County. The heaviest rainfall and highest winds occurred around and just north of the eyewall in the Tampa Bay and Sarasota areas, while the highest storm surge occurred just south of the eyewall in the Venice, Englewood, and Manasota Key areas.



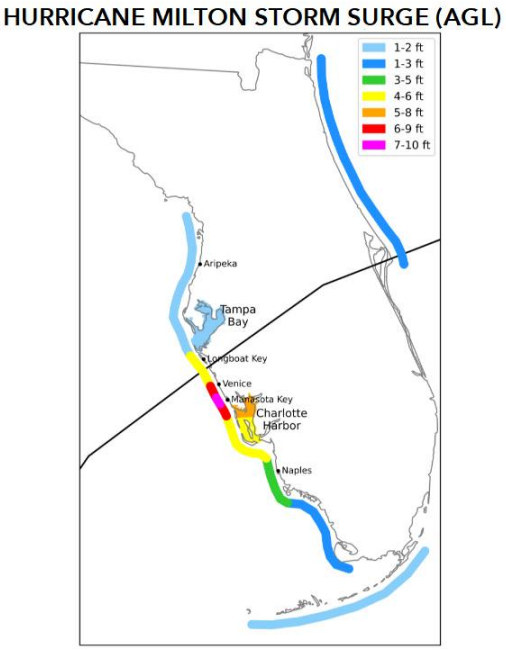
After crossing the state, Milton entered the Atlantic Ocean where it became extratropical and eventually dissipated on Oct. 12. Milton is responsible for at least 24 fatalities in Florida. The City of Venice reported no fatalities from this storm impact. Regionally, the storm caused devastating flooding, including storm surge, flash flooding, and riverine flooding following the storm.

As of midday Oct. 10, approximately 3.38 million customers were without power in the state, with the highest outages in Sarasota, Manatee, Pinellas, Hillsborough, Hardee, and Highlands counties. The Hurricane Milton landfall came just 13 days after Hurricane Helene landfall. These back-to-back major hurricanes broke the record for number of days

between two major hurricane landfalls in Florida and compounded impacts and recovery efforts.

Hurricane Milton led to a total of 47 confirmed tornadoes in Florida on Oct. 9. Milton holds the record for the most tornado warnings issued by the National Weather Service (NWS) in Florida in a single day, with 126 total tornado warnings issued on Oct. 9, 2024, as well as the strongest tornado outbreak from a tropical cyclone in Florida. (Hurricane Irma ranks second with 69 tornado warnings issued on Sept. 10, 2017.)

The City of Venice experienced wind gusts just over 100 mph and storm surge between six and seven feet. Consistent with Helene, these surge levels caused coastal flooding that exceeded 11 feet (NAVD 88) in elevation due to wave runup in low lying areas. The flooding also occurred primarily within existing flood zone areas, adjacent to the coast.



ABOVE: Hurricane Milton Storm Surge above ground level (AGL).

BELOW: Photo courtesy of John Lewis, storm surge overtops the South Jetty.

Executive Summary

Emergency Operations Overview

Successes · Observations

Emergency Operations Summary

The mission of City of Venice Emergency Management is to prepare, safeguard, and protect Venice residents and their property from disasters. During emergency events, Sarasota County Emergency Management serves as the statutory lead coordinating entity for the Sarasota County Emergency Operations Center, facilitating response efforts among partners, submitting resource requests to Florida Division of Emergency Management (FDEM), and operating the hurricane evacuation centers.

When a storm approaches, the City initiates its Comprehensive Emergency Management Plan (CEMP), which provides and establishes a framework by which the City of Venice will manage an emergency or disaster. This planning document provides policy guidance and establishes employee responsibilities.

The CEMP establishes a framework for an effective system of comprehensive emergency management for the purpose of:

1. Reducing loss of life, injury, and property damage and loss resulting from natural or man-made emergencies;
2. Preparing for prompt and efficient responses and recovery activities to protect lives and property impacted by emergencies;
3. Responding to emergencies with the effective use of all relevant plans and resources deemed appropriate;
4. Recovering from emergencies by providing for the rapid and orderly implementation of restoration and rehabilitation programs for people and properties affected by emergencies; and
5. Assisting in awareness, recognition, education, prevention and mitigation of emergencies that may be caused or aggravated by inadequate planning and regulation for public and private facilities and land use.

The initiation of the CEMP also dictates the activation of the City Emergency Operation Center (EOC) and prompts department directors to follow their internal Continuity of Operations Plan (COOP).

Mitigation and planning efforts begin including constitutional calls and conversations among all surrounding municipalities including Sarasota County.

Successes Summary

Before the Storm

In accordance with the CEMP, all City staff were activated to execute pre-storm activities to prepare the City for storm impacts and response. These actions were executed expertly and were crucial in ensuring the City's emergency response was prepared for immediate deployment following the storm. These measures provide for the sustained functionality of the City's Emergency Operations Center (EOC) throughout the event, thereby maintaining consistent communication with residents and emergency management partners.

These pre-storm activities included, but were not limited to:

1. Prompt Emergency Declarations and activation of the Comprehensive Emergency Management Plan.
2. Continuous coordination and communication briefings with County, State, and Federal Emergency Management partners.
3. Monitoring storm and threat conditions and performing frequent, real-time notifications to the public for evacuations, protective measures, hazard forecasts, and public safety updates.
4. Activation and preparation of the City of Venice Emergency Operations Center.
5. Deployment of the City Liaisons to the Sarasota County EOC for City representation throughout the event.
6. Emergency procurement, mobilization, and distribution of resources throughout the City for all departmental needs.
7. Pre-staging of resources, equipment, vehicles, and personnel throughout the City to provide for rapid post-storm response.
8. Venice Police Department patrol vehicles performed Public Address (PA) announcements in evacuation zones, even going door-to-door in the most vulnerable areas.
9. Activation and preparation of the Tactical First in Teams (TFIT) for "first push" roadway clearing.
10. Activation, setup, and operation of the City's sandbag station on Seaboard Avenue, distributing over 600 cubic yards of sand and 20,000 bags across both storms.
11. Distribution and activation of FEMA ICS forms and tracking of all City staff time and expenses.
12. Conducting pre-storm damage assessments and review of all City facilities and assets.
13. Preparing the City for storm impacts included closing parks and facilities, removing vulnerable assets, securing City buildings and facilities, and the isolation of strategic utility services.
14. Initial resource requests through the Florida Department of Emergency Management for City needs pre- or post-storm.
15. Notification of City insurance representatives, contract vendors, and recovery organizations of impending impacts and community needs.

During the Storm

During the storm, the City of Venice Emergency Operations Center (EOC) coordinated a successful response effort to ensure public safety and the continuity of critical services. Emergency personnel monitored weather conditions, assessed impacts, requested resources, and communicated with surrounding municipalities. The City EOC team worked around the clock to mitigate response efforts until conditions were unsafe for first responders to respond. Public communication continued via alerts and updates throughout the storm events. The EOC also facilitated rapid damage assessments and prioritized recovery efforts as conditions allowed.

1. Key City leadership and field staff are sheltered in place within secure City facilities to provide rapid storm response immediately post-storm.

2. EOC staff utilized field reports, City cameras, and GIS technology to record and map incident reports in real-time. This allowed swift response and efficient deployment of resources post-event.

3. The City EOC coordinated constantly with City Staff Liaisons at the County EOC in order to submit State resource requests through FDEM for all response needs. As the crisis develops and the actual impacts become known, these resource requests are adjusted based on the City's needs.

After the Storm

In the post-impact phase of a hurricane, the Emergency Operations Center is tasked with managing, coordinating and directing the response recovery efforts and functions associated with the EOC. The EOC remains the Operational Command Center, requesting resources, deploying resources, directing public communication, and coordinating the response efforts citywide. The City EOC remains staffed as long as necessary based on the observed severity and impacts from the storm.

Direction, control and coordination during the immediate recovery phase focuses on the following activities:

- Clearing roadways to provide safe and accessible routes for emergency response and resource deployment.
- Search-and-rescue operations to meet immediate emergency response needs.
- Establishment of a City recovery network designed to provide support for movement of response actions, relief supplies and services into the City.
- Coordinating and supporting the distribution of emergency supplies including food, water, ice, tarps, and medications.
- Coordinating post-event sheltering operations with County.
- Initiating preliminary damage assessment, debris removal, and the restoration of utilities.

As part of the recovery function, damage assessment is one of the most important initial steps in the recovery process. This City-wide assessment serves as the basis for determining the type and amount of state and/or federal financial assistance necessary for recovery and mitigation.

Damage assessment has a two-fold mission:

- To identify the immediate needs and resources required to assist disaster victims.
- To substantiate requests for supplemental assistance.

Additional post-storm successes conducted by the City include, but are not limited to:

- Police Department - Initial emergency response, including water rescues, re-entry planning, security patrols, and resource deployment. Coordinated City EOC Operations.
- Fire Department – Initial emergency response, including water rescues, medical support, and fire control. Provided fire inspectors to assist in damage assessment. VFR cleared 11 pending/backlogged calls within two hours after sustained winds from Hurricane Milton dropped below 45 mph. There were no pending calls during Hurricane Helene.
- Public Works – Successful deployment of TFIT teams to clear roadways of sand and debris. Activation of debris hauler contracts including “first push” teams. Assisted in evaluating damage to City buildings, parks, stormwater facilities, streetlights, signs, sidewalks, and roadways.
- Building Department – Performed damage assessment of all private structures impacted throughout the City. Notified all impacted property owners of the recovery process. Maintained strict compliance with all FEMA regulations to

safeguard federal financial assistance. Regularly met with HOAs and homeowners to assist with the recovery permit process.

- Engineering Department – Damage assessment of City infrastructure including roadways, bridges, stormwater, beaches, and buildings. Performed sand management coordination due to storm surge impacts.

- Utilities Department - Evaluated damage to water and wastewater systems. Worked around the clock to restore potable water and sewer service citywide.
- Airport – Performed damage assessment of airfield and facilities. Coordinated the debris removal and repairs necessary to allow for airfield operations to commence and to establish safe re-entry to the airport.
- Public Information Officer – Post-storm reporting from impacted neighborhoods including photo sharing for displaced residents. Communicated information to the public and media regarding re-entry, damage, recovery efforts, and assistance.

- Information Technology – Worked to re-establish connectivity and network service to City facilities. Supported citizen communication and connectivity. Deployed pilots and drones for damage assessment.
- Human Resources – Ensured the health and welfare of City staff members. Coordinated City insurance adjuster review of impacted City facilities.
- Finance Department – Coordinated the completion and tracking of all FEMA forms for time and materials. Promptly reported overall damage assessment values to the state for assistance qualifications. Worked to ensure proper documentation in place for revenue recovery post-event.

Observation Summary

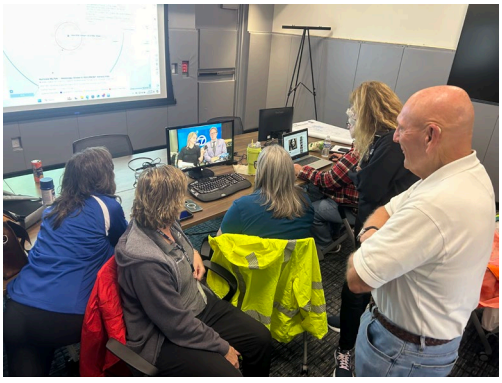
The City of Venice effectively coordinated storm response, logistics, resource management, and recovery efforts with Sarasota County and the State of Florida. Well-established emergency plans ensured public safety, rapid infrastructure restoration, and clear communication throughout the event.

Following low evacuation compliance during Helene, which led to over 50 high-water rescues, messaging efforts for Milton were more effective, resulting in improved compliance. Modern structures at higher elevations fared well, while older properties in the flood zone suffered the worst damage. GIS mapping and drone assessments improved response time, but vulnerabilities at Fire Station 2 and the Water Treatment Plant required evacuations and created impacts to service delivery. Staffing shortages challenged operations, yet vendor contracts greatly expedited recovery. Debris collection prioritized the hardest-hit areas and worked rapidly to remove debris once the necessary resources arrived. Nonprofits and local volunteers played a key role in relief. Despite intense public pressure, the City was required to strictly follow FEMA guidelines to remain eligible for critical financial recovery resources and to protect the City from increased financial liabilities.

While challenges remain, the City's response demonstrated resilience, adaptability, and significant improvements from previous storm events.

14 After-Action Observations were made in the following areas:

1. **Intergovernmental coordination:** Intergovernmental coordination and communication enhanced the City's preparation, response, and recovery capabilities for both events.
2. **Emergency policies and procedures**: Despite the challenges of back-to-back storm impacts, the City leveraged existing CEMP plans and City policies to implement the best preparation and response possible.
3. **Public information:** Public communication before, during, and after the storms was well-coordinated, effectively informing citizens of hazards, timelines, and safety action.
4. **Evacuations:** Many residents in evacuated zones chose to shelter-in-place, and this resulted in dangerous emergency response during Hurricane Helene.
5. **Damage assessments:** Hurricane damage assessments were conducted, and damage was focused on the most vulnerable areas including coastal flood zones and manufactured homes.
6. **Permitting and protection:** Building Department staff resources were strained as they performed all damage assessment activities and transitioned into recovery permitting.
7. **New technologies:** New technology resources assisted in providing real-time updates for emergency responders and damage assessment.
8. **Facilities and infrastructure:** City facilities that have been hardened to current standards operated very well. Older



facilities in vulnerable areas created operational issues, reduced response capabilities, and sustained damage.

9. **Staffing and support:** With back-to-back storm events, City staff and resources were stretched beyond their capacity. While staff performed exceptionally, there were challenges due to the high service demands.

10. **Contractor and vendor services:** Utilization of contractor and vendor services was critical to providing expedited response and recovery.

11. **Utility restoration:** Both hurricanes resulted in compromised power, communication, traffic lights, streetlights, and water/sewer utilities services.

12. **Debris management:** Debris management plans were implemented and effective in cleaning up the storm debris, however, resource limitations created challenges.

13. **Nonprofits and volunteers:** The City coordinated well with nonprofits and volunteer groups before and after storm impacts.

14. **Federal revenue requirements**: The City remained focused on FEMA tracking and reporting requirements to ensure proper revenue recovery could occur post-event.

Observations & Recommendations

Government Coordination · Emergency Polices · Public Information · Evacuations

Damage Assessments · Permitting · Technology · Facilities and Infrastructure

Staffing · Contractors · Utility Restoration · Debris Management · Volunteers · Revenue

1 Intergovernmental Coordination

Emergency Management authority, mutual aid, and collaboration

Observation: Intergovernmental coordination and communication enhanced the City's preparation, response, and recovery capabilities for both events.

ASSESSMENT

The City of Venice sent designated executive level staff liaisons to the Sarasota County EOC prior to both Hurricanes Helene and Milton. These staff liaisons fulfill the critical role of emergency coordination and collaboration with Sarasota County EOC staff and all other intergovernmental stakeholders. City liaisons remained in place at the EOC throughout the duration of the storm impacts and into the recovery period.

Additionally, there was a single point of contact (POC) established at the City EOC for purposes of communication and resource requests. This staff connection provided significant logistical improvement over Hurricane Ian.

Having a single POC at City EOC resulted in virtually no duplication of resource requests, vetting all requests by Logistics prior to submission, and reviewed the ability to source locally if possible. Logistics aided with organizing and ensuring the resource list was accurate and complete at all times. Logistics also helped greatly with resource delivery and tracking as resources arrived onsite.

Support from Sarasota County and the State of Florida Department of Emergency Management was excellent. Resource requests were filled and delivered quickly by the State, and the County shared any locally available resources for the mutual benefit of the public. Sarasota County took the lead in establishing Points of Distribution (PODs), Comfort Stations, Central Fueling Depot for equipment and staff, and National Guard support. This resulted in smoother logistics and execution compared to Ian, where the City was more directly involved in these deployments.

RECOMMENDATIONS

1. **Develop** resource request templates and assign points of contact for each
2. **Develop** list of fuel tank locations and specifications and standard operating procedure (SOP) for verifying fuel levels and run times and identify single source to manage fuel deliveries
3. **Identify** procedures or training opportunities on tracking and returning state assets during and after events
4. **Further** develop and grow these intergovernmental relationships during blue-sky conditions

SUCCESSES

Rally point established at the Venice Community Center to provide transportation to evacuation centers

A Point of Distribution (POD) was promptly set up at the Venice Community Center after Milton

A Comfort Station was provided at the Venice VFW Post after Milton

The County provided direct fueling assistance for critical City needs and a central fueling station was set up to include City vehicles

39 resource requests were submitted through County EOC and FDEM process

2 Emergency Policies and Procedures

Guiding operating documents before, during and after the storm

Observation: Despite the challenges of back-to-back storm impacts, the City leveraged existing CEMP plans and city policies to implement the best preparation and response possible.

ASSESSMENT

The City has established a comprehensive set of emergency policies and procedures that are implemented during emergency activations. These policies and procedures are updated after each event and have evolved significantly over the past decade.

The operations, preparation, response, and recovery efforts of the City EOC in 2024 demonstrated increased effectiveness and timeliness compared to those during Hurricane Ian. Despite facing consecutive major hurricanes, the City prepared, responded, and supported recovery more effectively than during previous storm events.

Although these storms had a significant impact on Venice, the City's procedures ensured uninterrupted public safety, quick reopening of roadways, faster infrastructure restoration, and regular public communication.

SUCCESSES

Existing policies and procedures were communicated and adhered to very well by departments

Several areas of policy improvement have been identified during the 2024 storm season

City of Venice response and recovery was markedly improved from previous events

RECOMMENDATIONS

1. **Develop** templates for required Executive Orders such as curfews, closures, regulation waivers
2. **Develop** SOP for sand management
3. **Update** sandbag station SOP for enhanced traffic flow and operation
4. **Develop** updated forms, letters, templates and training for quicker Building Department response
5. **Update** water and sewer SOP to ensure continued utility service for critical facilities during a storm
6. **Update** wastewater SOP to minimize stormwater inundation into the wastewater system
7. **Develop** utility generator deployment SOP with specific locations, needs and tracking for state resource assistance
8. **Update** polices for City staff emergency pay, sheltering during and post-storm, and pre-approved autoreplies for emails

3 Public Information

Critical information before, during and after the storm

Observation: Public communication before, during, and after the storms was well-coordinated, effectively informing citizens of hazards, timelines, and safety actions.

ASSESSMENT

City communications during these events were effective in producing messaging that was timely, relevant, clear, and concise. The messaging was engaging, helpful and supported sound decision-making for citizen safety. Content included photos and videos across multiple platforms including website, social media, email releases, Alert Sarasota/Everbridge, radio/TV/newspapers, and hard-copy publications. It also worked to highlight the efforts of staff and dispel misinformation.

Broad messaging was done in tandem with the County's as much as possible for consistency. This expansive public messaging was supported by frequent content contributions from all City departments and resident submissions.

The City sent numerous proactive messages directly to the Golden Beach and Tarpon Center neighborhoods prior to the storm events, in anticipation of the storm surge flooding for both Helene and Milton.

City PIO staff went in the field immediately following Helene and Milton impacts to get real-time damage assessment photos and post publicly. The public appreciated seeing these updates and the real-time impacts on specific neighborhoods.

RECOMMENDATIONS

1. **Continuing** to increase the public education regarding storm preparation, evacuation compliance and operations after a storm (power, debris, communications, water service, debris management, traffic signs, building permits, etc.)

2. **Incorporate** "lessons learned" for the public into the City's 2025 Hurricane Guide and City Hurricane Expo

BY THE NUMBERS

720 Facebook posts created/shared with 700,000 average views 3 million at height

9,000 new FB followers
3,000 new IG followers
1,000 new X followers

14 emergency call, text, and email notifications plus 10 HOA updates

50 TV, print and radio interviews with local and national media

10 press releases; 200 updates on City website with dept. specific information

Responded to hundreds of calls and messages

4 Evacuations

Warnings heeded, high-water rescues, knowledge, and survival rate

Observation: Many residents in evacuated zones chose to shelter-in-place, and this resulted in dangerous emergency response during Hurricane Helene.

ASSESSMENT

In coordination with Sarasota County Emergency Management, the City of Venice issued evacuation orders for Hurricane Helene and Milton, beginning with Level A and extending to Level C for Hurricane Milton. These evacuation orders were issued with sufficient time for proper evacuation to occur and were issued through multiple communication sources, including Everbridge, direct phone alerts, PA announcements from patrol vehicles, and door-to-door warnings were delivered in the most vulnerable areas and critical facilities.

Despite these comprehensive announcements and notices, the evacuation compliance during Hurricane Helene was very poor. This led to City Police and Fire staff performing over 50 high-water rescues for individuals who did not heed these evacuation orders and then requested emergency rescue from flood waters. The swift initiation of high-water rescues was pivotal in mitigating the storm's effects on residents. These calls placed public safety personnel in unnecessarily hazardous situations and exhausted many staff resources.

Despite the challenges, including resource limitations, communication adjustments, and earlier-than-anticipated flooding, City public safety personnel demonstrated resilience and adaptability. Evacuation compliance during Hurricane Milton was much improved and most residents did proceed to properly evacuate from Levels A, B, and C.

RECOMMENDATIONS

1. **Increase** public education regarding the importance of evacuation compliance and process
2. **Ensure** Venice Fire Rescue and Venice Police have sufficient high-water rescue resources available for future events
3. **Establish** a reunification rally point for future events to connect rescued individuals with their families

BY THE NUMBERS

Venice Fire Rescue and Venice Police Department with the assistance of neighboring departments:

- 50 high-water rescues conducted
- 2 structure fires extinguished

Venice Police Department conducted loudspeaker PSA evacuation notices in Evacuation levels A and B

There were 0 hurricane-related deaths and no City staff injuries

5 Damage Assessments

Vulnerable areas including coastal flood zones and manufactured homes

Observation: Hurricane damage assessments were conducted, and damage was focused on the most vulnerable areas including coastal flood zones and manufactured homes.

ASSESSMENTS

The City Building Department promptly deployed damage assessment personnel to inspect all private and commercial properties affected by the impacts of Helene and Milton throughout the City. The purpose of the damage assessment teams was to review damaged structures, record photos of flood water levels, and catalog damage.

The City of Venice damage assessment teams conducted windshield inspections of storm surge damage, delivered compliance letters, and offered to make site inspections on any property impacted to assist with recovery. These teams worked to inform the public about recovery permitting requirements to aid the recovery process. This process was challenging considering the back-to-back storms that forced staff to start the process over immediately following Hurricane Milton and severely limited staff resources.

The conclusions of the damage assessment indicated that private and public structures that were built to current building codes and flood zone elevations suffered very little damage.

RECOMMENDATIONS

1. **Increase** public education and engagement regarding regulatory rules for floodplain management and recovery building permitting
2. **Continue** training opportunities for City damage assessment teams in coordination with Sarasota County
3. **Develop** and update permitting forms to improve user experience

Coastal areas within the special flood hazard area sustained the most significant damage from storm surge inundation. Manufactured home communities and older structures sustained the most significant wind damage. This is confirmation that the implementation and enforcement of the building code, City codes, and floodplain management plan are effective in creating a more resilient community.

BY THE NUMBERS

14,500 properties inspected during damage assessments; 15 deemed substantially damaged

1,563 letters delivered to residential and commercial property owners with impacted or damaged properties

$100 million total estimated valuation of damage citywide

6 Permitting and Protection

Recovery process, federal and regulatory compliance

Observation: Building Department staff resources were strained as they performed all damage assessment activities and transitioned into recovery permitting.

ASSESSMENT

To ensure that all City floodplain properties remain eligible for affordable flood insurance, the City must comply with National Flood Insurance Program (NFIP) requirements, including adopting and enforcing floodplain ordinances in accordance with FEMA standards. The City Building Department worked to notify every affected property owner of the required building permit and floodplain regulations, ensuring a safe and lawful recovery process. Many residents were concerned about these regulatory floodplain requirements and the time needed to obtain building permits due to their complexity. To address these concerns and ensure compliance, staff met with FEMA regulatory officials four times.

With the additional responsibilities of conducting damage assessments, ensuring floodplain compliance, and issuing recovery permits, City Building Department staff experienced a significant increase in workload after the storms. To help meet this demand, the department brought in extra contract staff and worked additional hours. Despite these efforts, permitting and inspection delays occurred due to the high volume of requests.

The most effective approach was to provide one-on-one meetings with impacted homeowners, community associations, condominium boards, and contractors. While this approach was time-consuming, these meetings were critical in ensuring that each property owner received the appropriate permitting process details. HOA challenges and insurance claim timelines also contributed to a slower-than-desired recovery process.

Throughout this demanding period, the Building Department remained committed to providing excellent customer service, though permitting delays were still experienced.

RECOMMENDATIONS

1. **Increase** public education on the importance of regulatory standards and the recovery process timeline
2. **Allow** increased housing type options for replacement in mobile home zoning districts
3. **Continue** to uphold and enforce the City's floodplain management codes, building codes, and development standards to require resiliency improvements and ensure compliance with the NFIP
4. **Secure** pre-storm contractual services to expedite vendor staffing support during emergencies

BY THE NUMBERS

Fee waiver for certain Building Permit fees adopted Nov. 19, 2024, to assist with hurricane recovery

47 HOA presentations and meetings with the public

2,800 recovery permit applications processed, with 312 eligible for permit fee reduction

7 New Technologies

Facilitating preparedness, response and recovery

Observation: New technology resources assisted in providing real-time updates for emergency responders and damage assessment.

ASSESSMENT

These two significant storm events offered an opportunity to utilize new technological resources for emergency management. These technologies provided enhanced emergency preparation, response, and recovery.

The City Information Technology Department effectively coordinated the activities and achieved the following objectives:

- Ensured Citywide and EOC network connectivity for storm monitoring and communications with Sarasota County EOC
- Activated Emergency Operation Center (EOC) technology
- Created and managed real-time GIS maps related to critical life safety tracking and emergency response
- Provided post-storm connectivity for City locations that lost connectivity with Starlink at the Venice Community Center near the Point of Distribution (POD) from Oct. 13 to Oct. 25, 2024
- Provided mobile connectivity where possible
- Provided drone assessments for damaged public and private infrastructure

BY THE NUMBERS

41 drone hours (2,460 minutes) flown before and after the storms

Verizon Communications on Wheels (COW) provided for enhanced public cellular services

50+ Starlink connections

RECOMMENDATIONS

1. **Explore** technological advancements in emergency management preparation, response and recovery including Emergency Management operations software
2. **Convert** remaining City phones to FirstNet service provider, implement One-Call-Now for direct internal communications and purchase additional hand-held radio and Star-Link units for continued communications and network restoration
3. **Harden** City's electrical and communication networks throughout
4. **Train** additional drone pilots and consider additional drone units

8 City Facilities and Infrastructure

Vulnerable areas including coastal flood zones and manufactured homes

Observation: City facilities that have been hardened to current standards operated very well. Older facilities in vulnerable areas created operational issues, reduced response capabilities, and sustained damage.

ASSESSMENT

Staff worked pre-storm to verify that all appropriate insurance coverage was in place and the list of property and vehicle assets were properly documented. Staff also verified that a two-person "ride-out team" was in place from the insurance carrier to respond directly post-storm to assess damage. Immediately following both Hurricanes Helene and Milton, Risk Management and Public Works staff were deployed to perform assessment of City facilities in coordination with property insurance adjusters.

Due to previous hurricane impacts from Irma and Ian, many City facilities have been properly hardened and therefore sustained minimal damage. Damage was most significant within the City's coastal beach parks including damage to the Venice Fishing Pier and the complete destruction of Humphris Park (South Jetty). City athletic park facilities also sustained significant damage to fencing, lights, sports netting, and older buildings. There was also widespread damage to City-owned trees, landscaping, streetlights, and signage.

Fire Station 2 is located within the Special Flood Hazard Area and had to be evacuated during both Helene and Milton. The City Water Treatment Plant is also located within the Special Flood Hazard Area and had to be evacuated during Milton due to the projected storm surge levels. These two facilities have high vulnerability and created negative operational impacts during these emergency events. The police station Emergency Operations Center functioned effectively, though it remains overcrowded and needs more storage capacity for staff and emergency supplies. The Fleet Maintenance facility was not accessible or operable after the storm, resulting in delayed fleet services post-storm. Venice Airport sustained significant wind damage to hangar doors and older hangar facilities.

RECOMMENDATIONS

1. **Complete** Water Treatment Plant (WTP) Master Plan and feasibility study to evaluate options for hardening or relocating WTP
2. **Complete** construction of Fire Station 2 with EOC storage building to provide Police Station EOC support
3. **Complete** design and construction of new Fleet Maintenance Services facility with mobile fleet services essential for post-storm needs
4. **Develop** engineered solutions to harden existing T-hangar doors at Venice Airport
5. **Enhance** the City's floodplain management and enhance stormwater infrastructure and resiliency

BY THE NUMBERS

29 instances of damage to City facilities and 8 turn-key repair projects identified

$2.8 million in City facility damage from both storms

15 staff evacuated from Fire Station 2 for Helene and Milton

Potable Water Plant shut down for 14 hours during Milton impact

9 Staffing and Support

Continuity of operations, public services, and public expectations

Observation: With back-to-back storm events, City staff and resources were stretched beyond their capacity. While staff performed exceptionally, there were challenges due to the high service demands

ASSESSMENT

This unprecedented back-to-back, dual hurricane impact created challenging conditions for City staff. All field departments including Police, Fire, Public Works, Utilities, IT, Building, Airport, Stormwater Engineering, and City Manager's Office worked continually during this state of emergency to provide the best possible level of response for the Venice community.

This situation resulted in significant staffing challenges including sheltering and housing needs, fatigue, mental health concerns, and pay policy questions. City staff demonstrated unwavering dedication and professionalism in carrying out their duties to ensure the safety and well-being of the community.

VFR staff from Station 52 sheltered in place at Public Works, suspending responses on Oct. 9, 2024, once sustained wind speeds exceeded 45 mph.

City staff not only protect the public, mitigate risks, and uphold the City's commitment to public safety but also must restore essential infrastructure to provide vital services for residents and businesses for recovery. The City expresses deep gratitude to all staff for their hard work, resilience, and commitment to maintaining a high level of service during critical times.

RECOMMENDATIONS

1. **Continue** City staff training in their specific EOC role pre-storm (TFIT, damage assessment, debris, etc.)
2. **Communicate** to all City staff on the daily status of City facilities (closed, open, hybrid situation)
3. **Consider** additional Emergency Management (EM) and Public Information Officer (PIO) staff support

The City would benefit greatly from additional staff support related to emergency management, including Police, Fire, and PIO support.

BY THE NUMBERS

43 days under Emergency Declaration for Hurricane Milton and 57 days under Emergency Declaration for Hurricane Helene. Essential City staff reported to the EOC Oct. 7, 2024, through Oct. 14, 2024, during Hurricane Milton and Sept. 25 through Sept. 27, 2024, for Hurricane Helene

VFR responded to a total of 61 emergency calls during Hurricanes Helene and Milton. During Hurricane Milton, 22 calls were backlogged, of which 11 were downed wires, and the remainder cleared within two hours after sustained winds dropped below 45 mph on Oct. 10, 2024. Responses were not suspended during Hurricane Helene.

10 Contractor and Vendor Services

Recovery, staff support, and specialized assistance

Observation: Utilization of contractor and vendor services was critical to providing expedited response and recovery.

ASSESSMENT

Given the significant demands of emergency events, contractor and vendor services are an essential element of the City's emergency preparedness and response efforts. Contractors can rapidly provide significant resources, staffing, and equipment. Many of these services are specialized in nature and only necessary during emergency situations.

These services can include logistical support, financial reporting, equipment and supplies, first-push road clearing, debris collection services, infrastructure repairs, damage assessment, and direct staffing support.

To ensure continued emergency preparedness, the City must continue to develop and maintain these pre-authorized contractual relationships.

RECOMMENDATIONS

1. **Maintain** active and current pre-authorized contracts for emergency services
2. **Develop** additional pre-authorized contractual support to improve emergency preparation and response

SUCCESSES

Contracted debris haulers and monitors from Florida, North Carolina, Arkansas, New York, and Missouri

Push-and-cut teams deployed immediately to clear downed tree limbs and reopen roadways

Beach outfalls were dug out by stormwater contractors as soon as storm surge subsided

11 Utility Restoration

Power loss, communications, and water and wastewater service

Observation: Both hurricanes resulted in compromised power, communication, traffic lights, streetlights, and water/sewer utilities services.

ASSESSMENT

Consistent with previous events, these hurricanes resulted in major outages of most utility and communication services throughout the City.

The City worked diligently to get water and sewer services restored as quickly as possible. The Water Treatment Plant was shut down just before Hurricane Milton landfall, and potable water was restored immediately following the storm impacts. Sewer services were provided using generator power to maintain lift station function following Hurricanes Helene and Milton.

Power restoration remains one of the most concerning issues to the public. Florida Power and Light (FPL) has a careful and methodical process to restore power, focusing on critical infrastructure first, then working to restore power to the most customers possible. The timing of utility restoration has shown significant improvement compared to the response following Hurricane Irma and Hurricane Ian.

Nevertheless, there remains a very high level of public expectation regarding the speed and efficiency of utility restoration.

RECOMMENDATIONS

1. **Support** reinforcing electrical and communication networks
2. **Improve** public outreach on the realities of storm impacts to public utilities
3. **Strengthen** relationships with FPL and improve process for determining power priorities and repair needs for critical infrastructure

BY THE NUMBERS

0 Sanitary Sewer Overflows (SSO) during Helene; 1 SSO during Milton caused by a tree falling on an air release valve (ARV)

Utilities and lift stations were shut off to Venice Island at approximately 2 p.m. Oct. 9, 2024, to isolate and protect the distribution and collection systems, and restored with limited use by 9 a.m. Oct 10, 2024

Water service to Sarasota Memorial Hospital-Venice, a critical facility, was not disrupted

Interruptions to services were communicated through emergency notifications, Alert Sarasota, social media, media partners, and VPD PSA notification before services were shut off

60 wastewater pumps stations were without power, of which 28 switched to automated generator power and 15 were manually connected to trailer generators by staff for service restoration within several hours once TFIT teams cleared roadways and staff were able to access these areas

12 Debris Management

Specialized contract service, high financial liability, and public expectations

Observation: Debris management plans were implemented and effective in cleaning up the storm debris, however resource limitations created challenges.

ASSESSMENT

The City depends on pre-established storm recovery contracts with private debris haulers and debris monitors. These contracts are critical to providing the necessary staffing and specialized equipment to perform hurricane debris collection. All debris collection activity must be performed under the close observation of the monitoring company, otherwise it will not be eligible for reimbursement through the FEMA Public Assistance program. Debris collection typically represents the largest financial liability to the City after a storm event, therefore great care is taken to ensure adherence to all FEMA debris guidelines.

Through a pre-storm procurement process, the City secures contracts with three distinct debris management companies for post-storm cleanup efforts and engages a debris monitoring firm to ensure compliance with FEMA regulations. After a storm impact occurs, the initial step is to activate these contracts with a notice to proceed, mobilize contractor resources, and perform an initial inspection of the debris quantities to be collected. These debris management resources are deployed from across the country and typically take over a week to mobilize locally. Additionally, a debris management site must be established and approved by state and federal agencies to allow the storage, sorting, and consolidation of debris. Prior to the start of collection, all debris trucks must be certified and cataloged by the monitor company to ensure FEMA reimbursement eligibility. Once debris collection activities begin, the collection will typically take a minimum of 90 days depending on resource availability and the estimated quantity of debris. The collection process occurs in multiple passes, starting work on public-owned streets first and then working into private communities as FEMA authorizations allow.

In the aftermath of Hurricane Helene, there was minimal vegetative debris observed. It took more than four days post-impact for construction debris to be placed in the City right-of-way (ROW) for collection. Once activation of the debris contractor does occur, the contractor may require up to two weeks to conduct the initial inspection and mobilize the necessary resources for debris collection. The allocation of resources can also be delayed due to regional competition. This occurred after Hurricane Helene, when the entire southeastern region of the country experienced significant devastation and were competing for the same limited debris collection resources.

RECOMMENDATIONS

1. **Coordinate** with the state to develop consistent rates schedules for debris collection that are not competitive among neighboring communities and state

2. **Update** SOP for Debris management plan, including relocation of DMS and any future operational changes

3. **Increase** public education about FEMA regulations and debris management procedures. Residents should be aware that debris collection will take several months to complete and the collection process must adhere to all FEMA requirements

4. **Encourage** HOAs and condominium boards to carry appropriate insurance coverage and establish debris management plans. Many private associations with debris

During the 12-day period between the storm impacts of Hurricanes Helene and Milton, the City was able to activate a contract debris hauler, complete the debris inspection process, and mobilize two collection trucks from the contract hauler. With Hurricane Milton approaching, the City added two claw trucks to assist the contractor in collection. Unfortunately, widespread community panic resulted in significant delays at the Sarasota County landfill, causing the disposal process to become extremely slow. The bottleneck in disposal was a primary factor causing delays, therefore additional trucks would not have significantly affected the collection times. All communities along the Gulf Coast faced a similar challenge: insufficient time and resources to clear all debris before Hurricane Milton struck.

management plans were able to collect debris more efficiently and provide enhanced service to their residents

Following Hurricane Milton, the City implemented several measures to expedite debris collection. These steps included selecting a new and more responsive debris contractor and adjusting the emergency contract hauling rate to address resource competition. With exceptional dedication and teamwork, City staff were able to coordinate a very effective debris collection process after Hurricane Milton. Collection focused on the hardest-hit areas first, including Golden Beach and the manufactured home communities. The debris haulers used a careful and methodical process to assess the damage and implement efficient collections. Debris collection for the City of Venice was fully completed in 52 days post-impact from Milton, significantly faster than neighboring communities.

BY THE NUMBERS

1,997 loads / 106,930 cubic yards of total vegetative and construction and demolition debris removed

237 loads / 24,280 Cubic Yards of total haul-out operations of condensed/processed debris

1,390 hazardous limbs and 44 hazards trees removed by City from right-of-way and City property

52 days of ROW debris removal, completed Dec. 19, 2024

13 Nonprofits and Volunteers

Donation management, recovery assistance, and community support

Observation: The City coordinated well with nonprofits and volunteer groups before and after storm impacts.

ASSESSMENT

Volunteer services and community needs throughout the County are typically coordinated through the Sarasota County EOC. The City was able to utilize existing partnerships with organizations including Venice-Nokomis Rotary, Venice Area Beautification Inc. (VABI), Chamber of Commerce, and other nonprofits to provide enhanced volunteer support for the Venice community. City staff worked to create maps of the hardest-hit neighborhoods post-Milton. These maps were distributed to the County Volunteer Coordinator and they immediately helped to guide additional workers and resources to these hardest-hit areas. The Keeping Venice Beautiful (KVB) team from VABI provided excellent support for the City's sandbag operation, which was critical to allowing City staff to continue storm preparation work. This service allowed Public Works staff to focus on the critical functions of preparing City facilities and parks for the impending storm. Rotary provided their disaster response trailer for 10 days and established an ongoing volunteer hub at the Venice Art Center that served the Venice area continuously for many weeks post-impact.

RECOMMENDATIONS

1. **Designate** a City volunteer coordinator to manage a pre-storm database of volunteer partners, including their contact information, resource availability, and assistance capacity, ensuring efficient coordination for post-storm operations

BY THE NUMBERS

Over 1,400 volunteer hours led by Venice-Nokomis Rotary

Major volunteer clean-up efforts at more than 25 local homes including mucking, gutting, and debris preparation and hauling

Over 500 meals provided by Livingston Parish Fire Chiefs Association and Southern Boyz Outdoors from Baton Rouge, La.

2 days of sandbag operations supported by Keeping Venice Beautiful (KVB) volunteers

14 Federal Revenue Requirements

Regulatory compliance, documentation, and financial recovery

Observation: The City remained focused on FEMA compliance, tracking, and reporting requirements to ensure proper revenue recovery could occur post-event.

OBSERVATIONS

Financial management and regulatory compliance is a critical function of emergency management to maximize revenue recovery post-event. Revenue recovery applies to all preparatory activities, EOC staffing and operations, storm response activities, debris collection, and facility damage. It also includes the analysis, application, and monitoring grant funding opportunities post-storm.

It is important to acknowledge that regulatory requirements designed to ensure financial reimbursement may seem burdensome and excessively bureaucratic to the public. Precise documentation and strict regulatory compliance during recovery are essential to ensure the City can fully benefit from federal reimbursement and disaster assistance afterward.

BY THE NUMBERS*

$14 million in total damage/cost to the City for both storms
$5.3 million cost for debris removal services in both storm events

*Costs are estimates and are subject to change as the City works through the federal funding process, which can take up to or over two years

RECOMMENDATIONS

1. **Consider** improvements to the FEMA 214 Forms. Form a staff committee to review FEMA form processes and make recommendations on improvements to process and training
2. **Enhance** blue-sky training for FEMA form completion and tracking
3. **Designate** department representatives to provide cost estimates to Finance immediately following a storm
4. **Additional** staff support for grant tracking, application, and monitoring to ensure City takes full advantage of all funding opportunities

Recommendations

By City Department Responsibility

Recommendation Assignments

The After-Action Review identified 43 recommendations focused on pre-storm planning, resource management, technology, infrastructure resilience, interagency coordination, and staffing. Key areas include improved SOPs, fuel and supply logistics, enhanced public education, expanded use of GIS and drones, facility hardening, and better FEMA compliance. Strengthening emergency staffing, training, and volunteer coordination will also improve response and recovery.

The following recommendations provide a roadmap for increased preparedness and resilience:

Emergency Management

1. Further develop and grow the City's County, State, and Federal intergovernmental relationships during blue-sky conditions
2. Develop pre-loaded resource request templates for different storm scenarios, with pre-assigned points of contact
3. Establish a reunification rally point for coordinating rescued individuals
4. Develop Executive Order templates for curfews, closures, and regulatory waivers
5. Improve public outreach on storm impacts, evacuation compliance, and post-storm operations
6. Strengthen asset return procedures for state-deployed logistical resources
7. Train more drone pilots and expand drone use for situational awareness
8. Ensure all staff are trained in their specific EOC roles (TFIT, damage assessment, debris, etc.)
9. Assess need for additional Emergency Management (EM) and Public Information Officer (PIO) staff support
10. Designate a City volunteer coordinator to manage a pre-storm database of volunteer partners, including their contact information, resource availability, and assistance capacity, ensuring efficient coordination for post-storm operations
11. Finish Fire Station 2 construction, including EOC storage and support for Police Station EOC
12. Incorporate "lessons learned" for the public into the City's 2025 Hurricane Guide and City Hurricane Expo
13. Ensure Venice Fire Rescue and Venice Police have sufficient high-water rescue resources available for future events

14. Work with FPL to streamline power restoration for critical infrastructure

15. Maintain active/current contractor and vendors services, and secure and pre-authorize additional contractual services to expedite vendor staffing support City departments during emergencies

Airport

16. Develop engineered solutions to strengthen T-hangar doors at Venice Airport

Building

17. Enhance blue-sky FEMA training for damage assessment, permitting, tracking, and creating template forms and letters for Building Department response

18. Increase public education and engagement regarding regulatory rules for floodplain management and recovery building permitting

19. Continued training opportunities for City damage assessment teams in coordination with Sarasota County

20. Continue to uphold and enforce the City's building codes, and development standards to require resiliency improvements and ensure compliance with the NFIP

21. Secure pre-storm contractual services to expedite vendor staffing support during emergencies

Engineering

22. Create standard operating procedure for sand management to include securing an outside emergency contractor before the storm

23. Continue to uphold and enforce the City's floodplain management and enhance stormwater infrastructure and resiliency

Finance

24. Designate department contacts to provide Finance with immediate cost estimates post-storm

25. Consider improvements to the FEMA 214 Forms. Form a staff committee to review FEMA form processes and make recommendations on improvements to process and training

26. Enhance blue-sky training for FEMA form completion and tracking to strengthen FEMA compliance procedures and maximize financial recovery

27. Additional staff support for grant tracking, application, and monitoring to ensure the City takes full advantage of all funding opportunities

Human Resources (HR)

28. Review and update polices for City staff emergency pay, sheltering during and post-storm, and pre-approved autoreplies for emails

29. Clearly communicate daily City facility status pre/post-storm

Information Technology (IT)

30. Improve emergency communication through One-Call-Now, additional hand-held radios, and FirstNet conversion, and purchase additional Star-Link units for network recovery

31. Continue reinforcing electrical and communication networks

32. Encourage continued investment in emergency management technology

Planning & Zoning

33. Allow increased housing type options for replacement in mobile home zoning districts

Public Works

34. Secure pre-storm contracts for vendor staffing support and debris management
35. Expand public education on debris collection timelines and FEMA regulations
36. Encourage HOAs and condominium boards to carry appropriate insurance coverage and establish debris management plans
37. Update and improve SOPs for debris management
38. Advocate for standard statewide debris collection rates to avoid competition among communities
39. Prioritize and catalog fuel tank locations with verified sizes, fuel types, and logistics. Assign single source to track deliveries, fuel levels, generator run times, and post-storm resupply
40. Complete Fleet Maintenance facility and explore a mobile fleet service embedded at the EOC
41. Update sandbag station SOP for enhanced traffic flow and operation

Utilities

42. Create SOPs for minimizing stormwater inundation, utility generator prioritization, and potable water service continuity for Sarasota Memorial Hospital-Venice and other critical facilities
43. Complete Water Treatment Plant (WTP) Master Plan and feasibility study to evaluate options for hardening or relocating the WTP

These recommendations provide a clear path to strengthening storm preparedness, response, and recovery. Prioritizing and implementing these changes will enhance emergency and disaster operations, ensuring a more efficient and coordinated response. By refining policies, improving resource management, enhancing communication, and reinforcing infrastructure, the City can increase resilience and operational efficiency.

Continued coordination, training, and technological advancements will be key to addressing future challenges and improving overall disaster readiness.

Appendix

Methodology · Financial Impacts

Glossary

Methodology

City of Venice Hurricane Helene and Milton After-Action Report was compiled in three phases with input from City officials, department directors, staff and partner agencies. The first phase involved data collection from each department to establish a factual account of the department's performance before, during, and after the storm impacts. The second phase was to organize this data into specific observations and create recommendations to improve the City's emergency response in the future. The final phase was the compilation of these observations and recommendations into a final report document.

Each City department submitted individual after-action reports, storm response summaries, and additional data to support the after-action record. The City Clerk's Office recorded minutes for each event to document the activities at the City EOC throughout the activations.

Two citywide After-Action Review meetings were held at the Venice Police Station and were attended by multiple representatives from every City department. The first meeting was held on Nov. 1, 2024, with the goal to assemble all post-storm data and after-action summaries, and begin discussing improvement opportunities. The second meeting was held on Jan. 10, 2025, with the goal of reviewing the observations and discussing recommendations for improvement.

Finally, a committee with representatives from the City Manager's Office, Fire Department (Emergency Manager), and PIO worked to assemble this information into the attached report.

Financial Impacts

Financial cost impacts are estimates and are subject to change as the City works through the federal funding process, which can take up to or over two years.

The estimated insured losses amount for damage caused by both hurricanes is:

- Hurricane Helene around $335,000
- Hurricane Milton around $1.2 million

The figures represent the expected financial coverage for repair and recovery costs from each storm and are subject to change.

		HELENE	MILTON
COST ESTIMATES 3/3/2025 (Damage Inv Prelim numbers)			
CAT -A	DEBRIS	$60,000	$5,240,125
CAT -B	EMERGENCY PROTECTIVE MEASURES	$300,000	$600,000
CAT -C	ROADS AND BRIDGES	$ -	$358,500
CAT -D	WATER CONTROL FACILITIES (STORMWATER)	$100,000	$ -
CAT -E	BUILDINGS AND EQUIPMENT	$ -	$2,836,000
CAT -F	UTILITIES SYSTEMS	$168,000	$62,590
CAT -G	RECREATIONAL (PARKS) & OTHER	$1,899,500	$2,449,525
TOTAL		**$ 2,527,500**	**$ 11,546,740**

BY CATEGORY (Helene & Milton)		**BY DEPARTMENT (Helene & Milton)**	
CAT A	$ 5,500,125	Airport	$4,245,500
CAT B	700,000	Public Works	8,625,400
CAT C	358,500	Utilities	403,340
CAT D	100,000	Engineering	100,000
CAT E	2,836,000	ALL CAT B	700,000
CAT F	230,590	**Total**	**$ 14,074,240**
CAT G	4,349,025		
Total	**$ 14,074,240**		

Glossary

Air Release Valve (ARV) - a pipeline component that automatically expels trapped gases to prevent flow restrictions, pressure surges, and system inefficiencies

Continuity of Operations Plan (COOP) - a framework that ensures essential functions continue during and after emergencies by outlining procedures for maintaining government operations, delegating authority, and restoring critical services

Damage Assessment - the process of evaluating the impact of a disaster on infrastructure, homes, and communities to determine the extent of destruction, estimate recovery needs, and support emergency response efforts

Disaster Declaration – issued by the City Manager, governing authority, during a disaster to allow access to emergency County, state and federal resources, funding, and assistance for response and recovery efforts

Emergency Operations Center (EOC) - centralized facility where government agencies and emergency responders coordinate disaster response, resource allocation, and decision-making during emergencies

Emergency Declaration – issued by the City Manager to allow the City to make state and federal resource and funding requests

Evacuation Level - designated zones or areas that determine when residents should evacuate based on the severity of a storm, storm surge risk, and emergency management plans

Evacuation Notice – sent by text, phone call or email through Alert Sarasota County in addition to VPD PSAs via loudspeaker in neighborhoods within Levels A, B, C

FEMA Public Assistance Program and Policy Guide (PAPPG) Categories – PAPPG provides assistance to state, local, Tribal Nation, and territorial (SLTT) governments and certain types of private non-profit (PNP) organizations so that communities can quickly respond to and recover from major disasters or emergencies under federal law, the Robert T. Stafford Disaster Relief and Emergency Assistance Act Title 42, allows FEMA to provide assistance for the following categories pending all federal regulation are met:

Category A – Debris removal, clearing of debris from public and private property

Category B – Emergency protective measures, search and rescue, protection from damage and EOC operations

Category C – Roads and bridges, restoration of damage road systems and bridges

Category D – Water control facilities, restoration of dams and similar stormwater management systems

Category E – Building and equipment, restoration of buildings, contents and equipment

Category F – Utilities systems, restoration of utility plants, water and wastewater distribution systems

Category G – Recreational and other park related work not otherwise specified

Flood Zone - a geographic area defined by FEMA based on its risk of flooding, used for insurance requirements and land-use planning

Geographic Information System (GIS) - technology that captures, analyzes, and visualizes spatial data to support decision-making in areas like emergency management, urban planning, and environmental monitoring

Hurricane Category 1 (74-95 mph) – causes minor damage to roofs, siding, and trees, with possible power outages

Hurricane Category 2 (96-110 mph) – leads to more significant roof and siding damage, fallen trees, and extended power outages

Hurricane Category 3 (111-129 mph) – results in major structural damage, uprooted trees, and widespread power loss lasting days to weeks

Hurricane Category 4 (130-156 mph) – causes severe destruction, with most trees and power poles down and catastrophic home damage

Hurricane Category 5 (157+ mph) – leads to total roof and building failures, widespread devastation, and long-term infrastructure collapse

Mitigation - process of reducing or preventing the long-term risks and impacts of disasters

Point of Distribution (POD) - Established by the County and City with state and federal resources and essential supplies including meals ready to eat, water, ice and tarps

Preparedness - planning, training, and equipping individuals, communities, and organizations to effectively respond to and recover from disasters

Saffir Simpson Scale - a five-category system used to classify hurricanes based on their sustained wind speeds and potential damage

Storm surge - abnormal rise of seawater above the normal tide level caused by a storm's winds pushing water onshore, often leading to coastal flooding

Special Hazard Flood Zone - FEMA-designated high-risk flood zone where there is at least a 1% annual chance of flooding (also known as the 100-year flood), requiring mandatory flood insurance for properties with federally backed mortgages

Tactical First In Teams (TFIT) - specialized response units deployed in the initial phase of an emergency to assess conditions and clear critical roadways for emergency services to resume response

100-Year Flood - a flood event that has a 1% chance of occurring in any given year based on historical data and statistical analysis