2020

Martin County Unified Local Mitigation Strategy

Date: October 8, 2020

Version: 2.2

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RECORD OF CHANGES

Date	Name	Summary of Changes
10/08/2020	Sonji Hawkins	The 2015 Plan was updated to reflect any changes in the County and/or jurisdictions/district's processes and procedures.
03/04/2021	Sonji Hawkins	Added municipalities' resolutions
06/09/2021	Sonji Hawkins	Added municipalities' resolutions
10/13/2021	Sonji Hawkins	Added municipality's resolution
11/16/2021	Sonji Hawkins	Added municipality's resolution

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RESOLUTION – Martin County

BEFORE THE BOARD OF COUNTY COMMISSIONERS
MARTIN COUNTY, FLORIDA

RESOLUTION: 20-11.21

WHEREAS, in 1999, 2005, 2010, 2015 and 2020 Martin County's Unified Local Mitigation Strategy (LMS) was adopted by Resolution; and,

WHEREAS, the LMS plan requires periodic updates to comply with State and Federal policies, should Martin County apply for Hazard Mitigation Grant Program funds (HMGP); and

WHEREAS, the LMS has been updated and the State of Florida Division of Emergency Management (FDEM) has approved all modifications and updates and is now ready for approval and adoption by the Board.

NOW, THEREFORE BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MARTIN COUNTY, FLORIDA THAT:

1. The 2020 Updated Martin County Unified Local Mitigation Strategy is hereby adopted as the official document for inclusion in the State-wide Hazard Mitigation Strategy.

2. The 2020 Updated Martin County Unified Local Mitigation Strategy will be forwarded to each municipality and participating agency within Martin County for their formal approval and adoption.

DULY PASSED AND ADOPTED BY THE BOARD OF COUNTY COMMISSIONERS OF MARTIN COUNTY, this 17th day of November 2020.

ATTEST:

CAROLYN TIMMANN, CLERK OF THE CIRCUIT COURT AND COMPTROLLER

BOARD OF COUNTY COMMISSIONERS
MARTIN COUNTY, FLORIDA

STACEY HETHERINGTON, CHAIR

APPROVED AS TO FORM & LEGAL SUFFICIENCY:

SARAH W. WOODS, COUNTY ATTORNEY

RESOLUTION – City of Stuart

BEFORE THE CITY COMMISSION
CITY OF STUART, FLORIDA

RESOLUTION NUMBER 09-2021

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA AUTHORIZING THE MAYOR AND CITY CLERK TO ADOPT THE 2020 UPDATED MARTIN COUNTY UNIFIED LOCAL MITIGATION STRATEGY PLAN AS THE OFFICIAL DOCUMENT FOR INCLUSION IN THE STATE-WIDE HAZARD MITIGATION STRATEGY; PROVIDING AN EFFECTIVE DATE AND FOR OTHER PURPOSES.

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WHEREAS, in 1999, 2005 and 2010 and 2015 Martin County's Unified Local Mitigation Strategy (LMS) was adopted by Resolution; and

WHEREAS, the LMS plan requires periodic updates to comply with State and Federal policies, should the City apply for Hazard Mitigation Grant Program funds (HMGP); and

WHEREAS, the LMS has been updated and the State of Florida Division of Emergency Management (FDEM) has approved all modifications and updates and is now ready for approval and adoption.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA THAT:

SECTION 1: The City Commission of the City of Stuart hereby adopts the 2020 Updated Martin County Unified Local Mitigation Strategy as the official document for inclusion in the State-wide Hazard Mitigation Strategy, a copy of which is on file with the City Clerk.

SECTION 2: This resolution shall take effect immediately upon adoption.

Commissioner MEIER offered the foregoing resolution and moved its adoption. The motion was seconded by Commissioner MCDONALD and upon being put to a roll call vote, the vote was as follows:

	YES	NO	ABSENT	ABSTAIN
EULA R. CLARKE, MAYOR	Y			
MERRITT MATHESON, VICE MAYOR	Y			
BECKY BRUNER, COMMISSIONER	Y			
TROY MCDONALD, COMMISSIONER	Y			
MIKE MEIER, COMMISSIONER	Y			

ADOPTED this 25th day of January, 2021.

ATTEST:

MARY R. KINDEL
CITY CLERK

EULA R. CLARKE
MAYOR

APPROVED AS TO FORM
AND CORRECTNESS:

MICHAEL J. MORTELL, ESQ.
CITY ATTORNEY

RESOLUTION – Village of Indiantown

VILLAGE OF INDIANTOWN, FLORIDA

RESOLUTION NO. 008-2021

A RESOLUTION OF THE VILLAGE COUNCIL OF THE VILLAGE OF INDIANTOWN, FLORIDA, ADOPTING THE 2020 MARTIN COUNTY UNIFIED LOCAL MITIGATION STRATEGY (LMS); AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the LMS is a multi-jurisdictional hazard mitigation plan; and

WHEREAS, the Martin County LMS requires periodic updates to comply with State and Federal policies, should the jurisdictions wish to apply for Federal funds; and

WHEREAS, the Martin County LMS has been updated accordingly, and the State of Florida Division of Emergency Management (FDEM) has approved all modifications and updates; and

WHEREAS, the final, updated Martin County LMS was adopted at a public hearing of the Martin County Board of County Commissioners on November 17, 2020; and,

WHEREAS, the municipalities within the County must adopt the new Martin County LMS in order to be eligible for Federal grants.

NOW, THEREFORE BE IT RESOLVED, by the Village Council of the Village of Indiantown, Florida, as follows:

SECTION 1. LMS ADOPTION. The Village of Indiantown hereby adopts the 2020 Martin County Unified Local Mitigation Strategy (LMS).

SECTION 2. EFFECTIVE DATE. This Resolution shall take effect immediately upon adoption.

ADOPTED this 11th day of February, 2021.

ATTEST:

SUSAN A. OWENS, MPA, MMC
VILLAGE CLERK

VILLAGE OF INDIANTOWN, FLORIDA

JANET HERNÁNDEZ
MAYOR

REVIEWED FOR FORM AND CORRECTNESS:

WADE C. VOSE
VILLAGE ATTORNEY

RESOLUTION – Town of Sewall's Point

RESOLUTION NO. 899

A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF SEWALL'S POINT, FLORIDA, AUTHORIZING THE MAYOR AND CITY CLERK TO ADOPT THE 2020 UPDATED MARTIN COUNTY UNIFIED LOCAL MITIGATION STRATEGY PLAN AS THE OFFICIAL DOCUMENT FOR INCLUSION IN THE STATEWIDE HAZARD MITIGATION STRATEGY; PROVIDING FOR CONFLICTS, SEVERABILITY, AN EFFECTIVE DATE AND FOR OTHER PURPOSES.

WHEREAS, in 1999, 2005, 2010 and 2015, Martin County's Unified Local Mitigation Strategy (LMS) was adopted by resolution; and

WHEREAS, Martin County is mandated by Chapter 252, Florida Statutes and Chapters 9G-22 and 27P-22 of the Florida Administrative Code to develop and maintain an LMS, with an update required every five years; and

WHEREAS, the LMS is required for the County's eligibility for federal mitigation grants and, although municipalities within the County are not mandated to have a local mitigation strategy, they are required to be incorporated into and to adopt the County's LMS to be eligible for Federal grants; and

WHEREAS, the 2020 Updated Martin County Unified Local Mitigation Strategy was approved by the Board of County Commissioners of Martin County on November 17, 2020 (the "Updated LMS"); and

WHEREAS, the State of Florida Division of Emergency Management formally approved the Updated LMS in December, 2020; and

WHEREAS, the Town Commission wished to approve the Updated LMS and finds that the approval is in the best interests of the Town.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COMMISSION OF THE TOWN OF SEWALL'S POINT, FLORIDA, AS FOLLOWS:

Section 1. The Town Commission hereby adopts the 2020 Updated Martin County Unified Local Mitigation Strategy as the official document for inclusion in the Statewide Hazard Mitigation Strategy and a copy shall be kept on file with the Town Clerk.

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Section 2. All Resolutions or parts of Resolutions that are in conflict with the provisions of this Resolution are hereby stayed to the extent necessary to give this Resolution full force and effect until its expiration.

Section 3. If any section, subsection, sentence, clause, phrase or portion of this Resolution is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions thereof.

Section 4. This Resolution shall take effect upon approval by the Town Commission.

Vice Mayor Campo offered the Resolution and moved its adoption. The motion was seconded by Commissioner Kurzman and upon being put to a vote, the vote was:

	AYE	NAY
KAIJA MAYFIELD, MAYOR	✓	
JAMES W. CAMPO, VICE MAYOR	✓	
FRANK FENDER, COMMISSIONER	✓	
DAVE KURZMAN, COMMISSIONER	✓	
JOHN TOMPECK, COMMISSIONER	✓	

The Town Manager thereupon declared this Resolution No. 899 approved and adopted by the Town Commission of the Town of Sewall's Point on this 12th day of February, 2021.

TOWN OF SEWALL'S POINT, FLORIDA

Kaija Mayfield
KAIJA MAYFIELD, MAYOR

ATTEST:

April C. Stoncius
April C. Stoncius, CMC, Town Clerk

(TOWN SEAL)

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

Glen J. Torcivia, Town Attorney Florida Bar No. 343374

RESOLUTION – Town of Jupiter Island

RESOLUTION NO. 862

A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF JUPITER ISLAND, FLORIDA, AUTHORIZING THE MAYOR AND TOWN CLERK TO EXECUTE ON BEHALF OF THE COMMISSION THE 2020 UPDATED MARTIN COUNTY UNIFIED LOCAL MITIGATION STRATEGY PLAN AS THE OFFICIAL DOCUMENT OF INCLUSION IN THE STATEWIDE HAZARD MITIGATION STRATEGY; PROVIDING FOR CONFLICTS, SEVERABILITY, AND EFFECTIVE DATE AND FOR OTHER PURPOSES.

WHEREAS, Martin County is mandated by Chapter 252, Florida Statues and Chapters 9G-22 and 27P-22 of the Florida Administrative Code to develop and maintain an LMS, with an update required every five years; and

WHEREAS, the LMS is required for the County's eligibility for federal mitigation grants and, although municipalities within the County are not mandated to have a local mitigation strategy, they are required to be incorporated into and to adopt the County's LMS to be eligible for Federal grants; and

WHEREAS, the 2020 Updated Martin County Unified Local Mitigation Strategy was approved by the Board of County Commissioners of Martin County on November 17, 2020 (the "updated LMS"); and

WHEREAS, the State of Florida Division of Emergency Management formally approved the Updated LMS in December, 2020; and

WHEREAS, the Town Commission wishes to approve the Updated LMS and finds that the approval is in the best interests of the Town.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COMMISSION OF THE TOWN OF JUPITER ISLAND, FLORIDA, AS FOLLOWS:

Section 1. The Town Commission hereby adopts the 2020 Updated Martin County Unified Local Mitigation Strategy as the official document of inclusion in the Statewide Hazard Mitigation Strategy and a copy shall be kept on file with the Town Clerk.

Section 2. All Resolutions or parts of Resolutions that are in conflict with the provisions of this Resolution are hereby stayed to the extent necessary to give this Resolution full force and effect until its expiration.

Section 3. If any section, subsection, sentence, clause, phrase or portion of this Resolution is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions thereof.

Section 4. This Resolution shall take effect upon approval by the Town Commission.

PASSED AND ADOPTED by the Town Commission of the Town of Jupiter Island assembled on this 15th day of April, 2021.

Mayor

Vice Mayor

Commissioner

Commissioner

Commissioner

TOWN OF JUPITER ISLAND TOWN SEAL MARTIN COUNTY FLORIDA

ATTEST:

Acting Town Clerk

RESOLUTION – Town of Ocean Breeze

BEFORE THE TOWN COUNCIL OF THE TOWN OF OCEAN BREEZE, MARTIN COUNTY, FLORIDA

RESOLUTION NUMBER 320-2021

A RESOLUTION OF THE TOWN OF OCEAN BREEZE, FLORIDA, ADOPTING THE MOST RECENT VERSION OF *THE MARTIN COUNTY UNIFIED LOCAL MITIGATION STRATEGY PLAN* DATED OCTOBER 8, 2020 AS THE OFFICIAL DOCUMENT FOR THE TOWN'S INCLUSION IN THE STATE-WIDE HAZARD MITIGATION STRATEGY; PROVIDING FOR AN EFFECTIVE DATE AND FOR OTHER PURPOSES.

WHEREAS, it is in the public's best interest that the Town of Ocean Breeze adopt and adhere to the most recent version of the *Martin County Unified Local Mitigation Strategy Plan* dated October 8, 2020.

NOW, THEREFORE, THE OCEAN BREEZE TOWN COUNCIL HEREBY RESOLVES THAT:

SECTION 1. The *Martin County Unified Local Mitigation Strategy Plan,* shown as Exhibit "A" attached, is hereby adopted.

SECTION 2. This resolution supercedes Resolution No. 232-2016 which adopted an earlier version of the *Martin County Unified Local Mitigation Strategy Plan.*

APPROVED AND ADOPTED this 11th day of October, 2021.

	YES	NO	ABSENT
KENNETH DE ANGELES, PRESIDENT	X		
RICHARD GEROLD, VICE-PRESIDENT	X		
WILLIAM ARNOLD, COUNCIL MEMBER	X		
KEVIN DOCHERTY, COUNCIL MEMBER	X		
TERRY LOCATIS, COUNCIL MEMBER	X		
DAVID WAGNER, COUNCIL MEMBER	X		

ATTEST:

PAM ORR
TOWN CLERK

KENNETH DE ANGELES
COUNCIL PRESIDENT

WILLIAM F. CRARY, II
TOWN ATTORNEY
APPROVED AS TO FORM

KAREN M. OSTRAND
MAYOR

RESOLUTION – Martin County School District

BEFORE THE SCHOOL BOARD of
MARTIN COUNTY, FLORIDA

RESOLUTION: 2021-006

WHEREAS, in 1999, 2005, 2010 and 2015, Martin County's Unified Local Mitigation Strategy (LMS) was adopted by Resolution; and,

WHEREAS, the LMS plan requires periodic updates to comply with State and Federal policies, should Martin County apply for Hazard Mitigation Grant Program funds (HMGP); and

WHEREAS, the LMS has been updated and the State of Florida Division of Emergency Management (FDEM) has approved all modifications and updates and is now ready for approval and adoption by the Board.

NOW, THEREFORE BE IT RESOLVED BY THE SCHOOL BOARD OF MARTIN COUNTY, FLORIDA THAT:

1. The 2020 Updated Martin County Unified Local Mitigation Strategy is hereby adopted as the official document for inclusion in the State-wide Hazard Mitigation Strategy.

2. The 2020 Updated Martin County Unified Local Mitigation Strategy will be forwarded to each municipality and participating agency within Martin County for their formal approval and adoption.

DULY PASSED AND ADOPTED BY THE SCHOOL BOARD OF MARTIN COUNTY,

This 19th day of October, 2021.

ATTEST:

Marsha B. Powers

Marsha Powers
School Board Chair

Dr. John D. Millay
Superintendent

EXECUTIVE SUMMARY

This is a multi-jurisdictional hazard mitigation plan, and the planning effort has been conducted through the coordinated, cooperative effort of several local governments and community partners within Martin County. These local governments and agencies include Martin County, the City of Stuart, the Town of Jupiter Island, the Town of Sewall's Point, the Town of Ocean Breeze, the Village of Indiantown, Martin County School District, and public and private partners. All agencies have provided vulnerability and mitigation strategies to culminate the publication of this 2020 update of the "Martin County Unified Local Hazard Mitigation Strategy." Our current plan was approved by the State and Federal Emergency Management Agency (FEMA) approved Local Mitigation Strategy, which expires on December 30, 2020.

For this 2020 update, a new project prioritization methodology was introduced for consideration. These projects are aimed at avoiding or minimizing vulnerabilities in the future. These proposed projects and programs are also referred to as "Mitigation Measure Projects or Initiatives" in this document.

A final draft has been presented to the Local Mitigation Strategy (LMS) Committee for review and comment. Once all concerns have been addressed, a public comment and public presentation will be held. After two weeks of public comment, all concerns will be returned to the LMS Committee to be addressed.

This update has also been submitted to the Florida Division of Emergency Management (FDEM), who has the authority to review the document on behalf of the FEMA, for review in comparison to the requirements from the Local Mitigation Plan Review Guide, (FEMA, October 2011) and the Local Mitigation Planning Handbook (FEMA, March 2013). Once notified that this draft adequately addresses all requirements of the 44 CFR §201.6 (Local Mitigation Plans), the final draft plan will be submitted to the governing bodies of the participating jurisdictions for final approval and adoption. Consistent with the normal practices of the participating jurisdictions, which conduct meetings in accordance with Florida's open meetings statutes, the public will have an opportunity to comment upon each jurisdiction's adoption of the plan during public meetings. In accordance with Federal practice, the participating local jurisdictions have one year from the date of State approval of the plan to complete the formal adoption.

Martin County has a State and FEMA approved LMS, which expires on December 9, 2020. This plan will continue to be updated in the future to ensure it addresses changing conditions in the participating jurisdictions, experiences with disasters that occur and any changes in the characteristics of the hazards that threaten the involved communities. This updating process and future editions of the local mitigation strategy will also be used to inform and involve the public, and other interested groups, to elicit their participation in making the community more resilient to the impacts of future disasters.

SECTION I: INTRODUCTION

SI.1 Purpose

In 2000, the FEMA's recognition of the growing costs of responding to and recovering from disasters materialized in the Disaster Mitigation Act of 2000 (DMA 2000). DMA 2000 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. DMA 2000 requires that all communities, tribes, and states have a FEMA-approved hazard mitigation plan consistent with the DMA 2000 requirements in place to retain eligibility for PDM project funds and post-disaster Hazard Mitigation Grant Program funds.

Florida is one of the most hazard prone states in the nation. The state is susceptible to several hazards including flooding, hurricanes, tornados, wildland fire, and severe thunderstorms, etc. In Florida, the goals of the PDM program are being achieved through the LMS process. The LMS is a pre-disaster mitigation planning initiative of the FDEM and is intended to reduce the disrupting effects of natural disasters on the economic and social fabric of the community. Pre-disaster mitigation is defined as "sustained action that reduces or eliminates long-term risk to people and property from hazards and their effects" as part of the FEMA's National Mitigation Framework (FEMA, 2013).

This definition generally distinguishes between actions that have a long-term impact from those that are more closely associated with preparedness for, immediate response to, and short-term recovery from a specific hazard event. The intent of the LMS is to focus on practices that have cumulative benefits over time and ensure that fewer of the state's residents 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.

Mitigation practices can be applied to strengthen homes so that people and their belongings are better protected from hurricanes, tropical storms, and inland floods. Pre-disaster mitigation planning can be used to identify and protect at-risk critical facilities, such as hospitals and fire stations, so they can remain operational or reopen quicker after a hazard has occurred. Mitigation planning allows communities to consider the vulnerability of land that is currently undeveloped but may be developed in the future, as well as the risk to people and property on existing developed land. The consideration of the potential for damage to properties in vulnerable areas and the implementation of actions to reduce the impact can go a long way towards eliminating the disruption a disaster occurrence creates in the community.

The purpose of the Martin County LMS is to develop a unified approach among County and municipal governments for dealing with identified hazards and hazard management problems in the Martin County area. This strategy will serve as a framework to support the County and municipal governments in their ongoing efforts to reduce their vulnerabilities to impacts produced by both natural, technological, and societal hazards to which southeast Florida is exposed. The strategy will also help establish funding priorities for currently proposed

mitigation projects and eligibility for such disaster assistance funds as may be made available for disaster mitigation activities.

The Martin County LMS hazard mitigation program has been funded through local efforts and FDEM/FEMA grant funds for the development of comprehensive mitigation planning. The ultimate objectives of the LMS process are to:

- Improve the communities' total resistance to damage from known natural, technological, and societal hazards.
- Place Martin County in a position to compete more effectively for pre- and post-disaster mitigation funding, in order to reduce the cost of disasters at all levels and speed community recovery from disasters that do occur.

This LMS is intended to represent the following jurisdictions, district, and agencies:

- Martin County
- City of Stuart
- Town of Jupiter Island
- Town of Ocean Breeze
- Town of Sewall's Point
- Village of Indiantown
- Martin County School District
- Healthcare Agencies
- Non-Profit Agencies

This plan will be adopted by each of these jurisdictions and copies of the adopted resolutions will be a part of this plan. Adoption of this strategy will provide the following benefits to both County and municipal governmental entities:

- Compliance with Administrative Rules 27P-22, Florida Administrative Code (F.A.C.), requirements for local comprehensive emergency management plans to identify problem areas and planning deficiencies relative to severe and repetitive weather phenomenon, and to identify pre- and post-disaster strategies for rectifying identified problems.
- Compliance with the FEMA's DMA 2000 and thus, eligibility for FEMA pre- and post-disaster funding programs.
- 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, to help reduce losses from properties subject to repetitive flooding damage.

- Eligibility for local governments funds from the Emergency Management Preparedness and Assistance (EMPA) Competitive Grant Program.

SI.2 Authorities and References

- Chapter 215.559, Florida Statutes – Hurricane Loss Mitigation Program
- Chapter 252.34, Florida Statutes – Emergency Management; definitions
- Chapter 252.35(2), Florida Statutes – Emergency management powers; Division of Emergency Management
- Chapter 252.3655, Florida Statutes – Natural hazards interagency workgroup
- Chapter 27P-22.005, Florida Administrative Code – Local Mitigation Strategy
- 44 CFR §201.6 – Local Mitigation Plans
- Martin County Comprehensive Emergency Management Plan (CEMP)
- Standard Operating Guide: Plans Maintenance
- Standard Operating Guide: Mitigation Initiatives

SI.3 Emergency Management Program

The Martin County Board of County Commissioners (MCBOCC) established the Martin County Emergency Management Agency (MCEMA) in accordance with their legal responsibility. The BOCC and the County Administrator maintain general oversight of the MCEMA with operational oversight delegated to Martin County Fire Rescue (MCFR). The Director of MCEMA reports to the MCFR Chief operating under the County Administrator. In full activation of the Emergency Operations Center (EOC), the MCEMA Director reports directly to the County Administrator with the Fire Chief serving as the EOC Incident Commander.

The mission of the MCEMA is to provide for the safety of the public and emergency personnel by designing mitigations plans, ensuring compliance with regulations, and providing education and training. The vision of the agency is to prepare for, respond to, ensure recovery from, and lessen the effects of all hazards affecting Martin County. In order to accomplish this mission and uphold the vision, the goal of MCEMA is to engage the whole community and provide education in the five mission areas: preparedness, protection, response, recovery and mitigation. MCEMA has adopted the Whole Community Principles[1] by seeking to:

- Understand and meet the actual needs of the whole community
- Engage and empower all parts of the community
- Strengthen what works well in communities

The MCEMA serves as the coordinating group for County agencies, municipal governments, Emergency Support Functions (ESF) and community organizations during pre-disaster planning and programming, as well as during actual emergency response and disaster recovery operations. The FDEM may provide a liaison to MCEMA for the monitoring of potential disaster situations and coordinating implementation of state initiatives, identifying

support and assistance available to the County which the disaster and impacts are managed locally by the County.

The MCEMA supports the LMS by coordinating with internal and external partners and jurisdictions to prevent, monitor, and identify threats and hazards that would affect the county. This coordination includes:

- Participating on local LMS quarterly meetings and State conference calls
- Sharing information with partners on upcoming grant opportunities
- Participating in the ranking of projects and updating the Project Prioritization List (PPL)
- Reviewing and updating hazard information on the hazard data profiles annually
- Participating in alert networks and surveillance programs

SI.4 County Profile

Martin County is one of Florida's 67 counties with an estimated population of 160,912 (as of July 1, 2018) according to the United State Census Bureau. It encompasses a total area of 753 square miles and lies along the central eastern coast of Florida. Martin County has the following jurisdictions and school district:

- Martin County
- City of Stuart
- Town of Jupiter Island
- Town of Ocean Breeze
- Town of Sewell's Point
- Village of Indiantown
- Martin County School District

Martin County also has six communities – Hobe Sound, Hutchinson Island, Jensen Beach, Palm City, Port Salerno, Rio and Tequesta.

The barrier islands of Martin County are separated from the mainland by the Intracoastal Waterway along approximately 22 miles of shoreline. It is bounded on the north by St. Lucie County, on the east by the Atlantic Ocean, on the south by Palm Beach County, and on the west by Okeechobee County and Lake Okeechobee. The average annual rainfall is approximately 53 inches per year, and most of this is between June and October. Martin County sees an annual average of 145 days of rain per year[1].

There are three physiographic regions in Martin County:

- The Atlantic coastal ridge along the coastline.

[1] Weather Atlas, https://www.weather-us.com/en/florida-usa/stuart-climate

- Pine flatland throughout the eastern central and northwestern part of the County.
- Everglades in the southwestern part of the County.

The Martin County Atlantic coastal ridge consists of sand dunes formed when sea level was higher than it is today. The ridge consists of the Jensen Beach and Jonathan Dickinson sand hills, which are separated from each other by the St. Lucie estuary system. The Jonathan Dickinson sand hills reach an elevation of 86 feet above mean sea level, the highest elevation in Martin County. East of these sand hills, the Indian River separates the mainland from two barrier Islands, Hutchinson Island and Jupiter Island, which are separated by the St. Lucie Inlet. The soils along the Atlantic coastal ridge are generally well-drained sands. The vegetation in this area originally consisted of acid pine/scrub oak communities and coastal strand communities. The greatest urban development within the County has taken place along this coastal ridge.

Westward from the coastal ridge in the northern section of Martin County, there is a freshwater marsh system called the Savannas, and beyond this, the eastern Flatland community appears. Elevations throughout this part of the County are generally 20 to 30 feet above mean sea level. Plant communities in this area are generally referred to as "flatwoods" communities and consist of a mixture of slash pines and saw palmetto in the drier areas. In wetter areas, grass-like marshes, cypress stands, and hammocks have developed. There is a small strip of an Everglades sawgrass plant community along the shores of Lake Okeechobee in southwestern Martin County. The boundary between this Everglades plant community and the Eastern Flatland plant community is sharply defined and based on elevation. Two small ridges, the Orlando and Green Ridges, separate drainage patterns in the eastern Flatland. The Orlando Ridge, which lies farther to the west, is higher and more defined than the Green Ridge.

SI.5 Population

In the year 2019, Martin County's population was estimated to be 161,000. The County population grew by 9.6% between 2010 to 2018. The Treasure Coast has experienced tremendous growth since the 1960's, and this trend is expected to continue. Table 2.1 illustrates population growth in Florida, Martin, St. Lucie and Palm Beach Counties from 2010 to 2018.

All Topics

	Martin County, Florida
Population estimates, July 1, 2019, (V2019)	**161,000**
PEOPLE	
Population	
Population estimates, July 1, 2019, (V2019)	**161,000**
Population estimates base, April 1, 2010, (V2019)	146,852
Population, percent change - April 1, 2010 (estimates base) to July 1, 2019, (V2019)	9.6%
Population, Census, April 1, 2010	146,318
Age and Sex	
Persons under 5 years, percent	▲ 4.1%
Persons under 18 years, percent	▲ 16.2%
Persons 65 years and over, percent	▲ 31.5%
Female persons, percent	▲ 50.6%
Race and Hispanic Origin	
White alone, percent	▲ 90.1%
Black or African American alone, percent (a)	▲ 5.7%
American Indian and Alaska Native alone, percent (a)	▲ 1.0%
Asian alone, percent (a)	▲ 1.5%
Native Hawaiian and Other Pacific Islander alone, percent (a)	▲ 0.2%
Two or More Races, percent	▲ 1.6%
Hispanic or Latino, percent (b)	▲ 14.2%
White alone, not Hispanic or Latino, percent	▲ 77.7%
Population Characteristics	
Veterans, 2014-2018	14,743
Foreign born persons, percent, 2014-2018	10.1%
Housing	
Housing units, July 1, 2019, (V2019)	80,784
Owner-occupied housing unit rate, 2014-2018	78.1%
Median value of owner-occupied housing units, 2014-2018	$255,000
Median selected monthly owner costs -with a mortgage, 2014-2018	$1,690
Median selected monthly owner costs -without a mortgage, 2014-2018	$594
Median gross rent, 2014-2018	$1,107
Building permits, 2019	723
Families & Living Arrangements	
Households, 2014-2018	63,865
Persons per household, 2014-2018	2.41
Living in same house 1 year ago, percent of persons age 1 year+, 2014-2018	85.6%
Language other than English spoken at home, percent of persons age 5 years+, 2014-2018	13.2%
Computer and Internet Use	
Households with a computer, percent, 2014-2018	90.9%
Households with a broadband Internet subscription, percent, 2014-2018	83.6%

Education	
High school graduate or higher, percent of persons age 25 years+, 2014-2018	90.5%
Bachelor's degree or higher, percent of persons age 25 years+, 2014-2018	33.0%
Health	
With a disability, under age 65 years, percent, 2014-2018	8.9%
Persons without health insurance, under age 65 years, percent	▲ 16.0%
Economy	
In civilian labor force, total, percent of population age 16 years+, 2014-2018	51.5%
In civilian labor force, female, percent of population age 16 years+, 2014-2018	47.7%
Total accommodation and food services sales, 2012 ($1,000) (c)	312,689
Total health care and social assistance receipts/revenue, 2012 ($1,000) (c)	946,314
	1,103,288

Total manufacturers shipments, 2012 ($1,000) (c)	
Total merchant wholesaler sales, 2012 ($1,000) (c)	D
Total retail sales, 2012 ($1,000) (c)	2,553,285
Total retail sales per capita, 2012 (c)	$17,157
Transportation	
Mean travel time to work (minutes), workers age 16 years+, 2014-2018	25.5
Income & Poverty	
Median household income (in 2018 dollars), 2014-2018	$57,959
Per capita income in past 12 months (in 2018 dollars), 2014-2018	$40,389
Persons in poverty, percent	▲ 10.7%

BUSINESSES

Businesses	
Total employer establishments, 2018	5,657
Total employment, 2018	58,917
Total annual payroll, 2018 ($1,000)	2,360,792
Total employment, percent change, 2017-2018	4.0%
Total nonemployer establishments, 2018	17,112
All firms, 2012	17,326
Men-owned firms, 2012	9,157
Women-owned firms, 2012	5,824
Minority-owned firms, 2012	2,215
Nonminority-owned firms, 2012	14,501
Veteran-owned firms, 2012	1,927
Nonveteran-owned firms, 2012	14,457

Table 2.1 (https://www.census.gov/quickfacts/martincountyflorida)

A study conducted by the Martin County Metropolitan Planning Organization (Community Characteristics Report) in 2017 shows the population breakdown of each identified community within the county. Tables 2.2 and 2.3 illustrates the breakdown of the population.

Area	Population	Households	Minorities	Persons 65+*	HHs Below Poverty**	HHs w/o Vehicle	Persons w/ LEP
Florida	19,645,77	7,300,494	9,371,80	3,650,991	1,100,55	516,29	498,783
Martin County	151,586	61,592	31,283	43,657	6,221	2,860	5,105
Hobe Sound	14,914	6,529	2,728	4,549	699	305	422
Hutchinson Island	2,350	1,322	79	1,598	69	8	10
Indiantown	7,183	1,750	5,684	891	438	126	1,500
Mid-County	9,640	3,866	1,177	2,661	255	47	168
North County	17,484	7,417	1,307	4,651	890	397	186
North River Shores	5,794	2,417	1,073	1,570	263	187	100
Palm City	23,416	9,559	2,214	6,697	497	248	87
Port Salerno/ 76	35,201	13,745	8,434	9,363	1,416	484	1,658
South County	13,570	6,171	1,305	5,618	241	231	71
Stuart Urban	17,932	8,382	4,871	5,595	1,324	759	525
West County	3,647	589	2,345	346	179	48	366

Table 2.2
2015 ACS 5-Year Estimates for Florida, Martin County and Martin County Planning Areas
* (Population x Percentage)
**(Households x Percentage)

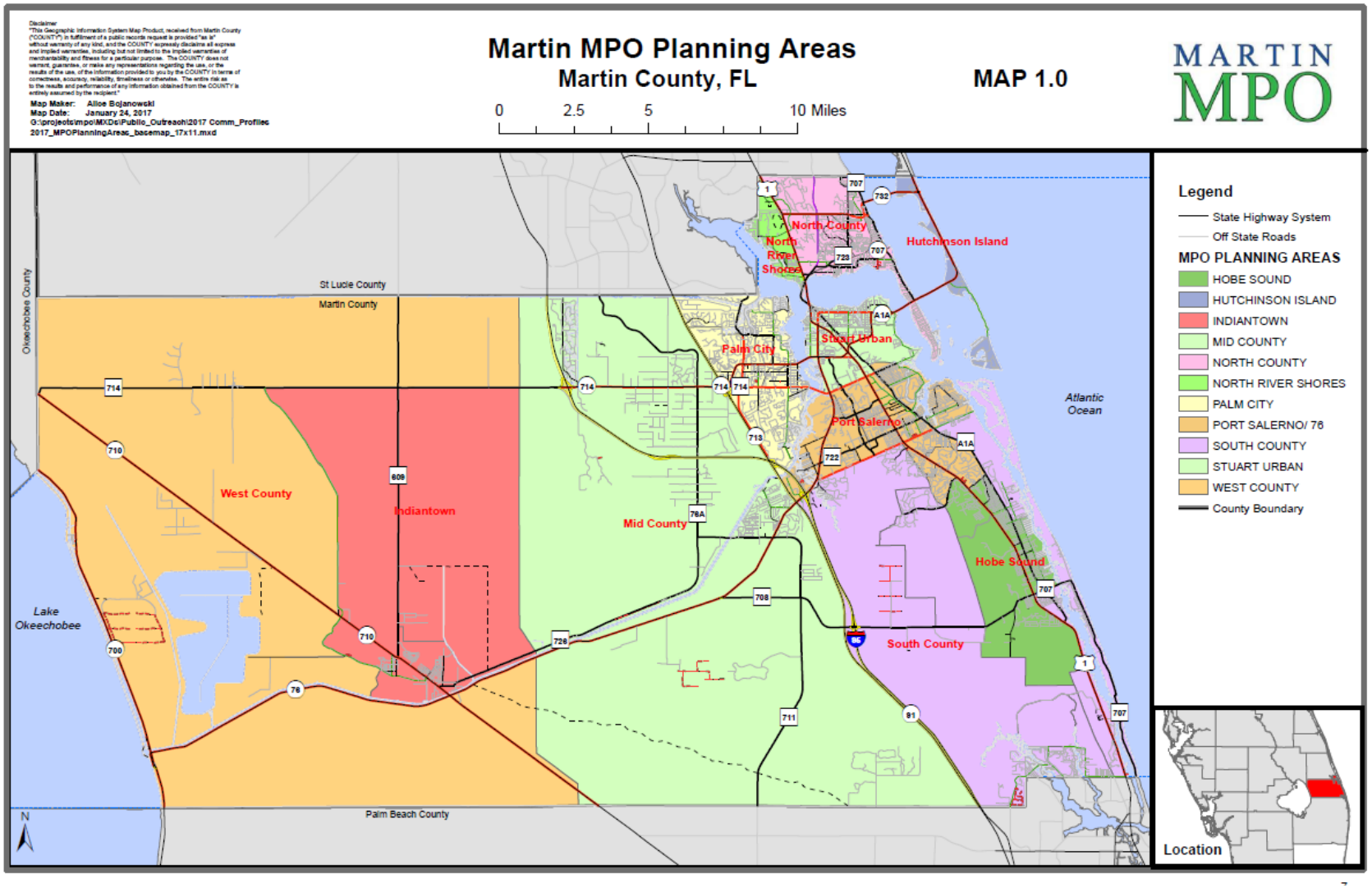

Martin MPO Planning Areas
Martin County, FL
MAP 1.0
0 2.5 5 10 Miles
MARTIN MPO
Map Maker: Alice Bojanowski
Map Date: January 24, 2017
G:\projects\mpo\MXDs\Public_Outreach\2017 Comm_Profiles 2017_MPO\PlanningAreas_basemap_17x11.mxd
Legend
State Highway System
Off State Roads
MPO PLANNING AREAS
HOBE SOUND
HUTCHINSON ISLAND
INDIANTOWN
MID COUNTY
NORTH COUNTY
NORTH RIVER SHORES
PALM CITY
PORT SALERNO/ 76
SOUTH COUNTY
STUART URBAN
WEST COUNTY
County Boundary
Location
St Lucie County
Martin County
Okeechobee County
Palm Beach County
Lake Okeechobee
Atlantic Ocean
North County
North River Shores
Hutchinson Island
Palm City
Stuart Urban
Port Salerno
West County
Indiantown
Mid County
Hobe Sound
South County
N

Table 2.3

Jurisdictional/District Profiles

City of Stuart[2]

The City of Stuart is the county's seat, was chartered in 1925 and is 6.25 square miles. The City has a population of 17,285 and increases with winter visitors each year. The City is comprised of a Mayor, Vice Mayor and three Commissioners. The major employers are the municipal government, Martin Health Systems and the airport. The authorities that governs the City are:

- Charter and Code of Ordinances
- Chapter 16 – Emergency Management
- Florida Statutes
- Comprehensive Plan City of Stuart
- Land Development Code City of Stuart

Town of Jupiter Island[3]

The Town was established in 1953 and is situated on a barrier island on the south end of Martin County. The Town consists of approximately 1,643 acres with nine miles of ocean frontage. The Town has a permanent population of 820 with a seasonal population of about 2,000. The Town's governmental body consist of a Town Commission/Manger, five elected Commissioners, Mayor and Vice Mayor. Their government functions are Public Safety, Public Works, Building and Zoning, Finance and Administration and the South Martin Regional Utility. The authorities that governs the town are:

- Town Charter
- Florida Statutes, Chapters 166 and 200
- Code of Ordinances for Town of Jupiter Island
- Construction General Conditions
- Town Land Development Regulations

Town of Ocean Breeze[4]

The Town formed its government in 1960 after being established in 1938 as a trailer park. The Town is situated along the Indian River with a population of 171 on 0.2 square miles. The Town's council and boards consist of a Mayor, President, Vice President and four Council Members. The government functions are Building and Permitting, Planning and Zoning and Finance. The authorities that governs the town are:

- Town Charter
- Code of Ordinances for the Town of Ocean Breeze

[2] https://cityofstuart.us/276/City-of-Stuart-Details-History
[3] http://townofjupiterisland.com/community-profile/
[4] https://townofoceanbreeze.com/history/

Town of Sewall's Point[5]

The Town received its charter in 1957 and the first Town Hall was built in 1960. The town is situated between Indian River Lagoon and the St. Lucie River. Sewall's Point has a population of 2,102, sits on 1.2 square miles which is on a peninsula bearing the same name. The Town's government body is composed of a Mayor, Vice Mayor, three Commissioners, Town Manager and Town Clerk. Their governmental functions are Building, Public Works and Police departments. The authorities that governs the town are:

- Town Charter
- Sewall's Point Comprehensive Plan
- Code of Ordinances for Town of Sewall's Point

Village of Indiantown[6]

The Village was incorporated December 2017, being the first municipality incorporated in over 40 years in Martin County. The Village is situated on 14 square miles in the western section of Martin County with a population of 6,938. The Village's government body consist of a Mayor, Vice Mayor, three council members, Village Manager, Village Clerk and Village Attorney. Their governmental functions are Building, Planning and Development, Code Compliance and Parks and Recreation departments. The authorities that governs the town are:

- Village Charter
- Code of Ordinances for the Village of Indiantown
- Land Development Regulations
- Indiantown Design Regulations
- Comprehensive Plan
- Village of Indiantown Strategic Plan
- Village of Indiantown Continuity of Operations Plan

Martin County School District[7]

Martin County School District is the second largest employer in Martin County with more than 3,200 district professionals that work together to provide a safe learning environment to more than 19,000 students from Pre-Kindergarten through Adult Education in 26 schools. The District's administration includes a Superintendent, Deputy Superintendent and five Board Members. Each school has a principal or director with administrative support staff. The authorities that governs the District are:

- Martin County School District Policies and Procedures

[5] https://www.sewallspoint.org/
[6] https://www.indiantownfl.gov/community
[7] https://www.martinschools.org/Page/3876

- Martin County School District By-Laws
- Martin County School Board Rules and Regulations
- Title XLVIII K-20 Education Code, F.S.
- 6A: State Board of Education, F.A.C

The before mentioned jurisdictions/district works with MCEMA and LMS Committee to expand and improve their existing plans and/or resources by participating in:

- Workshops that includes reviews of plans, policies and procedures that can support the county's continuous operations during an incident and/or event.
- Meetings that includes representatives from above jurisdictions to determine what trainings and exercises will be placed on the County's Multi-Year Trainings and Exercise Plan (MYTEP).
- Information sharing that includes publications and other resources that are shared with residents and businesses in person or on the jurisdictions/district websites.

SECTION II: LOCAL MITIGATION STATEGY PROGRAM

SII.1 Planning Process

The LMS Committee has continued the planning process that was established in 1998. The Committee has representatives from the following jurisdictions and agencies:

Jurisdiction	Representative Agency / Title
City of Stuart	Police Department / Captain
Martin County	Public Works / Capital Project Manager
Martin County	School District / Facilities Manager
Martin County	Cleveland Clinic / Emergency Manager
Martin County	Member of Public
Martin County	Fairgrounds / Director
Town of Jupiter Island	Public Works / Director
Town of Ocean Breeze	Town Council / Town Clerk
Town of Sewall's Point	Town of Sewall's Point / Consultant
Village of Indiantown	Village of Indiantown / Village Manager

The Committee along with all participating municipalities and school district continue to seek guidance from the DMA 2000 as well as the Pre-Disaster Mitigation Program. This plan was developed following the below guidelines of the DMA 2000:

- Describing current community conditions.
- Identifying the potential hazards.

- Assessing each community's vulnerabilities to those specific hazards.
- Propose initiatives to reduce these vulnerabilities.
- Developing evaluation criteria to rank mitigation projects regardless of jurisdiction.
- Establish procedures that will be needed if the LMS Program is to retain long-term viability.

All of these aspects are integrated into this unified LMS document, which has been provided to MCEMA.

The LMS Committee meets on annual basis to review memberships, rule changes, current and proposed projects, funding opportunities and other topics. The Committee recognizes the importance of public involvement in the LMS planning process and provide opportunities for the public to become and remine engaged in the process. The meetings are advertised on the county's website for the public and local agencies and emails are sent to regional coordinators (Appendix C).

LMS Meetings (Appendix D):

Year	Meeting Dates
2016	March 4, 2016 December 15, 2016
2017	March 22, 2017
2018	January 18, 2018 May 3, 2018
2019	June 21, 2019 August 13, 2019 October 9, 2019
2020	January 22, 2020 July 22, 2020

SII.2 Plan Evaluation and Maintenance

All County jurisdictions, community partners and agencies provide input and support in the development and maintenance of the Local Mitigation Strategy which is comprehensively updated every five years but maintained and updated as needed. The Emergency Management Coordinator will follow the guidance of the Plans Maintenance Standard Operating Guide (SOG) (Appendix B) for this plan, and all other plans and procedures developed by MCEMA to monitor and evaluate as outlined in the SOG on an annual basis. Changes are incorporated into the plan when needed at the approval of the Emergency Management Director.

The revision of the plan is based on information from the previous plan (including goals and objectives), disasters that affected the County, and jurisdictional changes that cause for re-evaluation of mitigation efforts. Projects identified on the current list are reviewed and updated to reflect any changes (i.e., funding opportunities, completed, etc.). Also, after an event/incident, projects maybe re-prioritized to reflect changes due to damage, increased flooding, or other occurrences. The County as a whole (including all jurisdictions and district) reviewed plans, policies, procedures and other authorities after Hurricanes Irma, Matthew and Dorian and flooding events to determine if changes were needed. The goals and objectives did not change, but the following suggestions were made:

- Martin County – review and/or update all plans, standard operating procedures/guidance, website, and training resources annually
- City of Stuart – share updated information (local plans/ordinances) with the County annually
- Town of Jupiter Island – share updated information (leadership changes and local plans/ordinances) with the County annually
- Town of Ocean Breeze – share updated information (leadership changes and local plans/ordinances) with the County annually
- Town of Sewall's Point – share updated information (leadership changes and local plans/ordinances) with the County annually
- Village of Indiantown – share updated information (leadership changes and local plans/ordinances) with the County annually
- Martin County School District – share updated information (leadership changes and local plans/ordinances) with the County annually

Countywide Development Changes

The review and approval of potential development projects are the responsibilities of several agencies that represent Martin County. The below chart details the jurisdictions and/district as well as their proposed/approved projects that supports the goals and objectives of the LMS:

Jurisdiction/District	Year	Summary of Development
City of Stuart[8]	2016 - 2020	• Micro Transit Tram System reduced vehicular traffic by providing an alternative mode of transportation. • Frasier Crescent Sewer Improvement project provided service to approximately 15 parcels in the subdivision. • The Riverside Park Neighborhood Improvement will encompass construction of concrete sidewalks, on street parking, high visibility decorative crosswalks, bike racks, streetlights and landscaping. • Downtown Underground Utilities Project includes a conversion of aerial utilities to underground utilities.
Martin County[9]	2016 - 2020	• The Ripple project will construct new stormwater treatment areas with improved water quality. • The Jensen Beach infill sewer project accomplished the goal of providing sewer infrastructure throughout Jensen Beach CRA area. • The Rio water extension project was completed with the construction of 1300 linear feet of water pipe, delivering potable water to 32 properties. • Properties on bridge road between Dixie Hwy. and Hercules Ave. in Hobe Sound will receive new water mains and electric utility undergrounding. • Underground utilities were completed in Hobe Sound on Bridge Road. • Mapp Road will feature ¾ of a mile of new drainage structures, medians, on street parking, generous sidewalks, enhanced lighting and pedestrian crosswalks that will increase safety, walkability and community connection. • Dixie Hwy will undergo improvements such as construction of bike lanes, traffic calming, median sanctuaries and enhanced lighting that will increase the safety and walkability for residents.
Town of Jupiter Island	2016 - 2020	• North Beach Road roadway and drainage improvements have been completed

[8] https://cityofstuart.us/500/Community-Redevelopment-Agency-Annual-Re
[9] https://www.martin.fl.us/about-community-redevelopment-agency

Town of Ocean Breeze	2016-2020	• No development changes
Town of Sewall's Point[10]	2016-2020	• The Town has a 5-year Capital Improvement Plan that includes: o Streets and Bridges (paving, bridges & seawalls and sidewalks) o Storm Water Systems (CAP/CMP pipe replacement, stormwater lake maintenance and swales maintenance) o Building maintenance and repair
Village of Indiantown[11]	2016 - 2020	• The Booker Park Subdivision and New Hope Subdivision projects includes a compete restoration of roadways, drainage and utilities infrastructure. • Indiantown Subdivisions North of SR 710 and Indiantown Park Subdivision projects includes the replacement of drainage structures, regrading of drainage swales, replacement of again utilities, pavement milling and resurfacing, and replacement of sidewalk • Outfall Culvert Replacement project includes the replacement of an existing failing 96" corrugated metal pipe culvert and baffle with a concrete box culvert and sheet pile weir. • Major roof replacement project includes reroofing of all County buildings in Indiantown.
Martin County School District	2016 - 2020	• No development changes

[10] https://www.sewallspoint.org/open-government/finances/5-year-capital-improvement-plan
[11] https://www.indiantownfl.gov/planning-development/page/chapter-8-capital-improvements-element

The cycle for reviewing and updating the plan will begin one year prior to expiration and will be the responsibility of the Emergency Management Coordinator with guidance from the Emergency Management Director. The LMS will engage public input from jurisdictions, stakeholders and the community by various methods:

- Community Presentations
- Public Meetings
- Annual surveys/questionnaires
- County Website and Media Outlets
- Newsletters

SII.3 Incorporation of LMS into Existing Planning Mechanisms

Mitigation has the potential to easily be incorporated into many day-to-day functions and existing plans throughout the county, such as the Comprehensive Emergency Management Plan (CEMP), Recovery Plan, Mass Care Plan and other plans, policies and procedures that supports the operations of the County, jurisdictions and school district. Another process for incorporating mitigation efforts would be to provide information to support a business or homeowner's associations to incorporate mitigation activities into their bi-laws, policies or procedures.

The updating of a County's CEMP has strong ties to the mitigation-related planning mechanisms. The CEMP must be updated every four years and relies heavily on the LMS—the county's all-hazards risk assessment and goals – reducing the loss of life and property; achieving sustainable communities; facilitating an orderly recovery processes and optimizing available resources. As the LMS's risk assessment is updated, it is integrated into the CEMP. On years when the CEMP must be updated prior to the 5-year update of the LMS, the risk assessment section will be reviewed and updated as necessary to meet the needs of the CEMP. The CEMP is adopted by resolution at the county while the other participating municipalities adopt it by promulgation; therefore, all municipalities provide their consent on this integration.

The process that will be followed to ensure widespread integration of hazard mitigation into local planning mechanisms in Martin County includes having a representative from each jurisdiction/district to work with their planning staff to develop a strategy to integrate hazard mitigation into their planning programs and to evaluate whether their regulations address hazard mitigation and identifying changes made through the plan amendment process..

Jurisdictions and partnering agencies have incorporated the LMS planning mechanisms in reviewing and updating their plans through information sharing and collaboration. The following process are used:

- As permitted under Section 163.3177(7)(h) & (I), Florida Statutes, local governments could incorporate an optional comprehensive plan element for public safety, or a hazard mitigation/post-disaster redevelopment plan.

- Integrating the LMS into local CEMPs.
- Making all communities CRS eligible (Stuart and Ocean Breeze are in the NFIP program, but not in the CRS Program).
- Assessing existing CRS programs to determine ways to strengthen and improve the local jurisdiction's CRS rating.
- Designing and implementing hazard mitigation programs.
- Monitor the existing building code, identify deficiencies, and recommend desired changes to strengthen the existing building code.
- The designing and bidding of all public building construction, whether it be new construction or renovation of older public structures, should be taken into consideration, incorporating hazard mitigation building practices, whenever financially feasible.
- Providing public education and training on hazard mitigation and how it saves dollars.
- Incorporate the private sector in mock drills and exercises to test the procedures developed to coordinate support between the County and business community before, during, and after a disaster.
- Assisting the private sector, prepare a business contingency handbook, and provide support in holding a training workshop for local business owners.
- Enhance communication and coordination among the County agencies and municipalities to increase capacity to implement mitigation activities.
- Complete and present annual reports on the status of the LMS program to all local elected bodies.
- Evaluate the vulnerability of all critical facilities in the County and jurisdictions.

In reviewing and updating the LMS, there were other plans, studies, reports and resources incorporated into the plan:

- Martin County's Comprehensive Emergency Management Plan
- Martin County's Local Mitigation Plan 2015
- Martin County's FY 2020 Capital Improvement Plan of the Capital Improvements Elements
- Martin County's Know Your Zone – Storm Surge Evacuation Zones
- Martin Metropolitan Planning Organization's Community Characteristics Report 2017
- Martin County's FY 2020 Capital Improvement Plan
- Local Mitigation Plans from other Florida Counties
- Centers for Disease Control and Prevention: Climate and Health
- Census Reporter.org
- FDEM's Local Mitigation Strategy (LMS) Updated Manual Workshop FL-391
- Florida Department of Health/Bureau of Community Health Assessment
- FEMA's A Whole Community Approach to Emergency Management: Principles, Themes, and Pathways for Action, December 2011
- FEMA's FY 2019 Flood Mitigation Assistance Grant program Fact Sheet

- FEMA’s Local Mitigation Planning Handbook
- FEMA’s Using the Hazard Mitigation Plan to Prepare Successful Mitigation Projects
- Florida Top 50 National Flood Insurance Program (NFIP) Policy Communities & Community Rating System (CRS) Participation
- National Weather Service in Melbourne’s Storm Data and Unusual Weather Phenomena – May 2018
- South Florida Regional Council’s Sea Level Rise Case Study for Evacuation Routes in Martin and St. Lucie Counties
- United Stated Census Bureau QuickFacts – Martin County, Florida

SECTION III: HAZARD RISK AND VULNERABILITY ASSESSMENT

SIII.1 Hazard Identification

Martin County is vulnerable to a wide range of natural, technological and societal-caused hazards that threaten life and property. FEMA's current regulations and guidance under the DMA 2000 requires, at a minimum, an evaluation of a full range of natural hazards. The initial identification of hazards for inclusion in the risk assessment was based on earlier versions of the Martin County LMS, as well as a review of the State of Florida Hazard Mitigation Plan and FEMA mitigation planning guidelines.

Each of the initially identified hazards were studied for their potential impact on Martin County as well as in terms of the availability of hazard mitigation strategies to reduce that impact. Best available data on historical occurrences, the geographical location and extent as well as the probability of future occurrences have been collected and reviewed as part of the hazard identification process.

During this review, it was determined that the following hazards from the previous 2015 LMS Plan needed to be reclassified, omitted because there was not enough documentation, or the hazard is not commonly recognized on the eastern coast of Florida:

- Agricultural Pest and Disease – no model was available to determine the potential loss and the probability of future occurrence for the hazard is low.
- Erosion – this hazard was reclassified as beach erosion.
- Geological Hazards – no information was available for earthquakes or sinkholes on the eastern coast of Florida.
- Hurricanes – this hazard was reclassified under Tropical Cyclones.

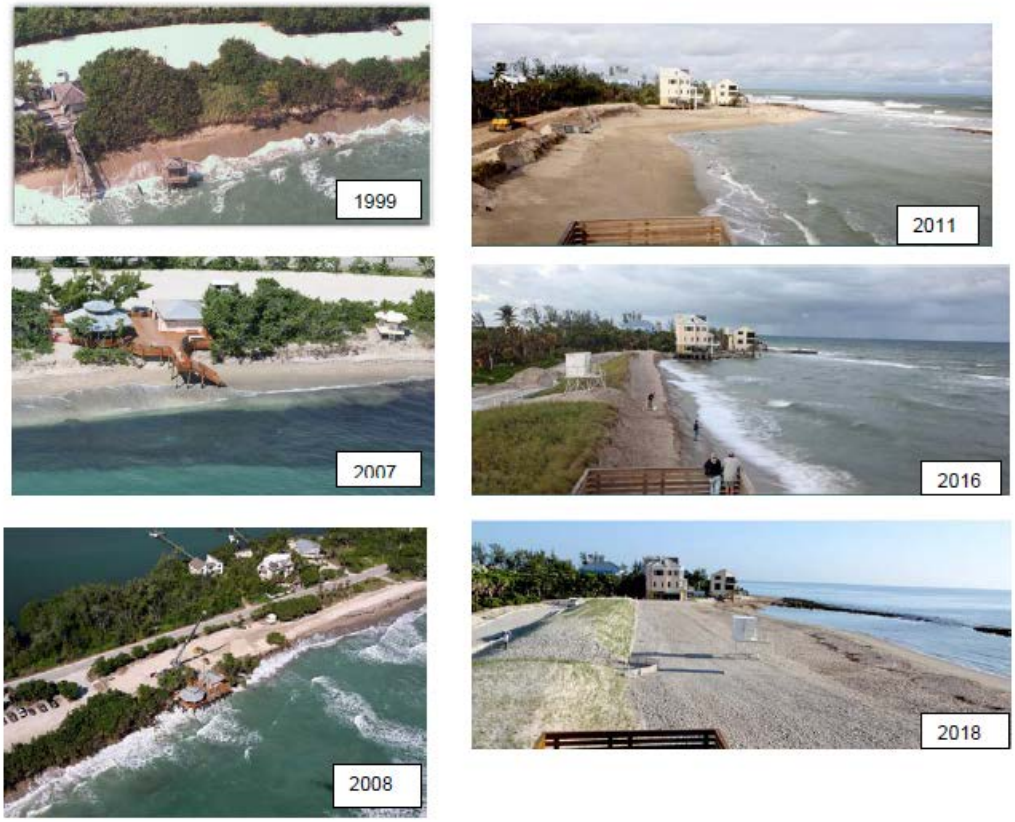
SIII.1.2 Natural Hazards

Martin County is susceptible to several natural hazards with the potential to cause extensive damage within the community. The cost of responding to and recovering from these disasters has proven to be significant and planning for these events before they occur can significantly reduce costs in the future. Hurricane and flood related disasters were responsible for the most property damaged during this time period. It has also been discovered that natural hazards (weather events) have an impact on climate change[12]. This subsection will give an overview of each identified natural hazard.

[12] https://www.cdc.gov/climateandhealth/policy.htm

SIII.1.2.1 Beach Erosion

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



Source: https://www.martin.fl.us/BathtubReefBeach

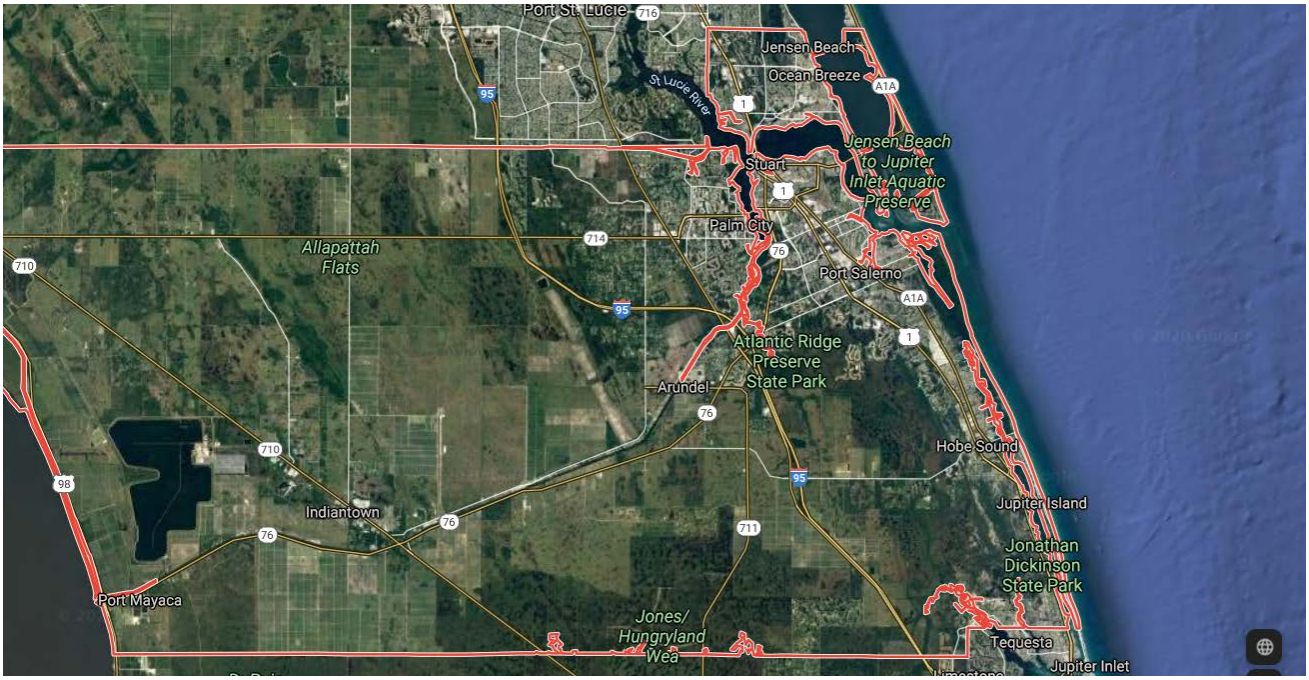
The FDEP has identified Martin County as a medium-high risk to erosion. The beaches of Florida will continue to shift and change over time, especially when faced with the current levels of development. This is especially a high probability hazard, especially in conjunction with hurricanes, winter storms,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

Extent/Unit of Measurement

The unit of measurement is based on cubic feet or tons of mission soil in the affected areas.

Assessments

Vulnerability: Low	**Consequence Analysis**
Probability: Moderate	The identified hazard would have an impact on the following:
Frequency: 5 – 10 years	☐ Public ☐ Responders ☐ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☐ Public confidence in the jurisdiction's governance
Location: Coastline areas (Hobe Sound, Hutchinson Island, Jensen Beach, Jupiter Island)	



Vulnerability Assessment

Coastal properties, roadways, bridges and beaches are vulnerable to beach erosion. There are properties along our coastline that have attempted to mitigate the effects of beach erosion, but in some causes the efforts are not enough. Roadways and bridges are being washed away during disasters and the efforts of seawalls, beach nourishment, revegetation and artificial reefs is costly and the erosion continuous.

Erosion can have the following potential impacts within Martin County:

- Erosion
- Economic disruption
- Damage to critical environmental resources
- Stormwater drainage impairment

Martin County's vulnerability to soil collapse and beach erosion is moderate along the entire coastline. The City of Stuart and the Town of Jupiter Island both have moderate soil erosion vulnerabilities, Jupiter Island along its beachfront and Stuart along its shoreline with the St. Lucie Estuary. Erosion also is a potential vulnerability for the Town of Sewall's Point due to its location on both the Indian River and St. Lucie Estuary. Vulnerability in the rest of the County is low to very low except for Bathtub Reef Beach and specific locations along the Okeechobee barge canal. Martin County's location adjacent to the Atlantic and other waterways makes the probability of future occurrence of erosion medium to high.

Risk Assessment

The FDEP updated a statewide assessment of beach erosion in 2014. In that assessment, the FDEP defined the "critical erosion area" as a segment of shoreline where natural processes or human activity have caused or contributed to erosion and recession of the beach or dune system to such a degree that upland development, recreation interests, wildlife habitat, or important cultural resources are threatened or lost.

The 2004 Hurricane season was particularly active and included Hurricanes Frances and Jeanne, which made approximate landfall at Bathtub Beach and the House of Refuge, respectively, within a period of three weeks. Hurricane Frances made landfall within Bathtub Beach on September 5, 2004. Hurricane Jeanne made landfall approximately one mile north, at the House of Refuge, on September 25, 2004.

The County placed approximately 84,000 CY of dune fill along the adjacent shoreline reach north of Bathtub Beach in February 2005 as a part of the MacArthur Boulevard Emergency restoration project due to hurricane damage. In addition, the Martin County Shore Protection Project was re-nourished in the spring of 2005, contributing approximately 885,000 CY of sand between monuments R-1 to R-26.

Overall, since the 2004 hurricanes, the shoreline near Bathtub Beach has been predominantly erosional with the most erosion experienced between R-35 to R-37. The exception was the period from July 2009 to July 2010, in which this entire area experienced shoreline accretion. However, during this time frame, a significant amount of fill had also been placed directly on the shoreline within this area. Sailfish Point placed 30,000 CY of fill above MHW between R-36 and R-38 on an emergency basis via truck-haul between December 2009 and February 2010. In addition, in April 2010 the Bathtub Beach Restoration Project was completed which included the placement of 34,900 CY of sand within the beach and dune between 650 feet north and 700 feet south of R-35.

For the period after the 2004 Hurricanes, from June 2005 to August 2011, the northern shoreline at R-35, R-36, and R-37 experienced significant erosion rates of 18, 9, and 6 feet/per year respectively. This shoreline erosion occurred despite the placement of over 168,800 CY of fill within the project shoreline during this period. Thus, the actual erosion was higher.

Source: Google Earth 2020

Source: Google Earth 2014

In 2008 Tropical Storm Fay required emergency hauling of 3,426 Tons of sand to Bathtub Beach. In 2012, Tropical Storm Isaac caused significant erosion to Bathtub Beach, requiring an initial emergency truck-haul in excess of 27,000 Tons of sand. Winter Storms - In 2013, Bathtub Beach received additional emergency truck-hauls of approximately 3,000 Tons of sand for erosion from high surf. Similarly, on December 9, 2014, Hutchinson Island beach received several washouts because of erosion damage from a high surf event. Martin County immediately responded to Bathtub Beach by moving sand previously stockpiled at the beach to begin repairs and by hauling 1,500 Tons of sand to fill the breach in the dune/berm.

Historical Events

The coastline in Martin County is vulnerable to natural disasters and other events that effects the erosion along its shores. As the images show above, Bathtub Beach is considered a critical area due to the continuous erosion and restoration projects. Hurricanes and/or tropical storms from 1933 to the present has affected the coastlines.

SIII.1.2.2 Dam/Levee Failure

A dam is a barrier constructed to hold back water and raise its level, the resulting reservoir being used in the generation of electricity or as a water supply.

A levee is an embankment to prevent flooding or a continuous dike or ridge for confining the irrigation areas of land to be flooded.

Source: https://www.saj.usace.army.mil/Missions/Civil-Works/Lake-Okeechobee/Herbert-Hoover-Dike/

There are more than 91,457 dams in the United States, according to the 2019 update to the National Inventory of Dam[13]. Approximately one life and property if failure occurs. Dam failure or levee breaches can occur with little warning. Intense storms may produce a flood in a few hours or even minutes for upstream locations. Other failures and breaches can take much longer to occur, from days to weeks, as a result of debris jams or the accumulations of other hazards[14]. Dam failures are most likely to happen for one of five reasons[15]:

- Overtopping – caused by water spilling over the top of a dam.
- Foundation Defects – settlement and slop instability which causes about 30% of the failures.
- Cracking – caused by movements like the natural settling of a dam.
- Inadequate maintenance and upkeep
- Piping – when seepage through a dam is not properly filtered and soil particles continue to progress, and form sink holes.

Extent/Unit of Measurement

A failure would be measured by the inundation area, which is the total flooded area that resulted from dam failure. The size of the inundation area depends on the size of the impoundment, the dam failure scenario being analyzed, the topography of the area, and the flow of water from the impoundment[16].

[13] https://nid.sec.usace.army.mil/ords/f?p=105:113:810133782887::NO:::
[14] https://www.fema.gov/dam-failure-information
[15] https://www.damsafety.org/dam-failures#The%20Causes%20of%20Dam%20Failures
[16] https://damsafety.org/sites/default/files/files/FEMA%20TM%20AssessingtheConsequencesofDamFailure%20March2012.pdf

Assessments

Vulnerability: Low	**Consequence Analysis**
Probability: Low	The identified hazard would have an impact on the following:
Frequency: N/A	☒ Public ☒ Responders ☐ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☐ Public confidence in the jurisdiction's governance
Location: Western Martin County near Lake Okeechobee	

Vulnerability Assessment

Dam/Levee failure can have the following potential impacts in Martin County:

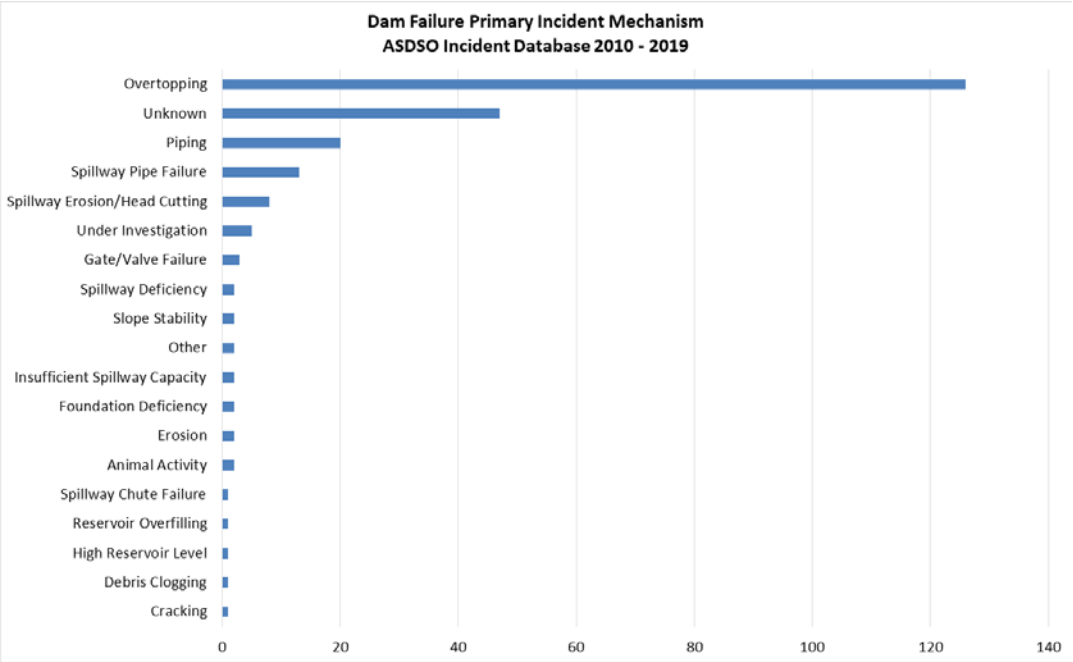
- Economic disruption
- Damage to agriculture lands and livestock
- Damage to critical environmental resources
- Damage to personal and commercial properties
- Human Health & Safety
- Psychological Hardship
- Agricultural/Fisheries Damages

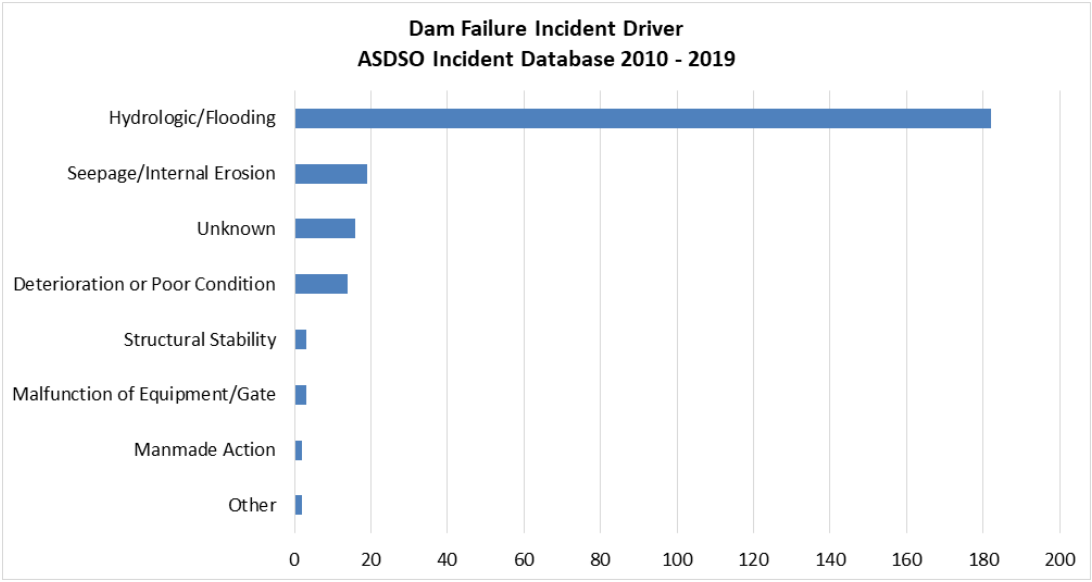
Martin County may experience serious flood inundation in two distinct areas of the county as a result of an incident related to Lake Okeechobee; specifically, a failure of the dike or mechanical problems with the water control structure S80 also known as the St. Lucie Locks.

The western portion of the County, which is in the immediate vicinity of the dike, may be impacted by floodwaters. This area is unincorporated with a population of approximately 500 residing along the length of CR 441 west of the L 64 and L 65 canals.

The second area of potential impact is in the vicinity of the S80 Water Control Structure/St. Lucie Locks. If the S80 Water Control Structure/St. Lucie Locks fails, the surrounding area could become inundated with floodwater. The S80 Water Control Structure/St. Lucie Locks are located in the central portion of the county in proximity to the South Fork of the St. Lucie River. This area has not been fully evaluated for potential flood inundation and it is unclear how far the floodwaters may reach.

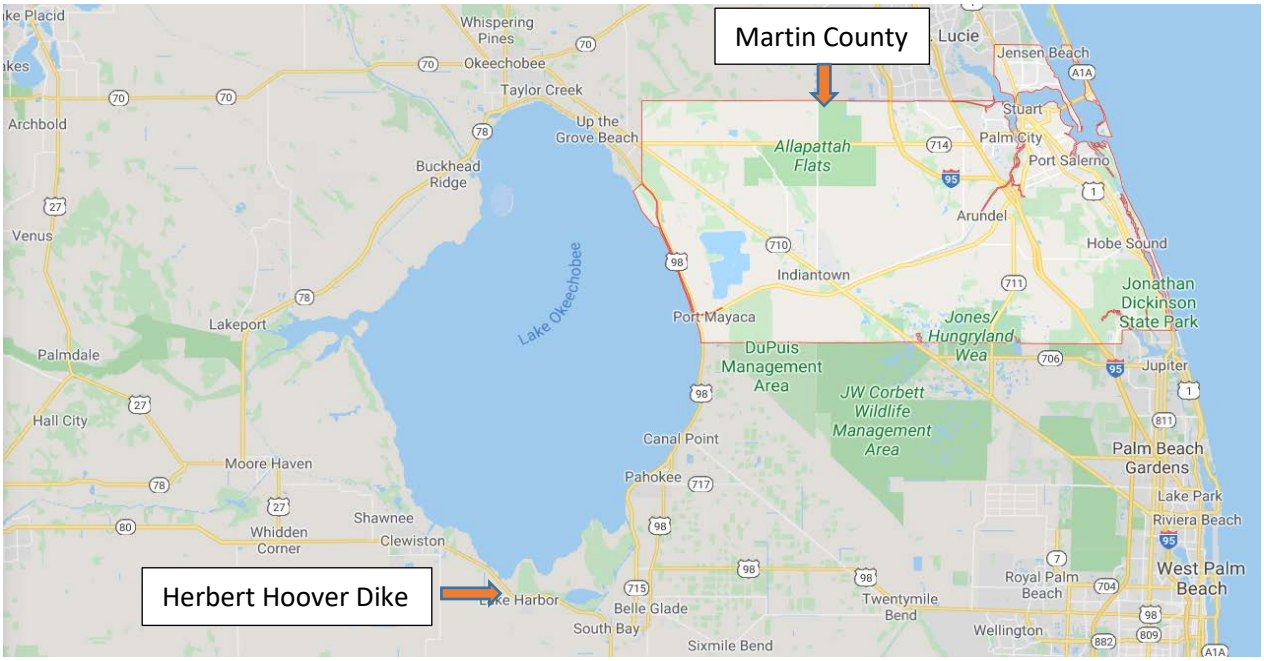
According to the Association of State Dam Safety Officials, dam failures are most likely to happen for one of five reasons – overtopping, foundation defects, cracking, inadequate maintenance and upkeep, and piping[17].





The Herbert Hoover Dike, which is a 143-mile earthen dam that surrounds Lake Okeechobee, would affect Martin County if there were a failure. The below map shows the location of the dike and the western area in Martin County.

Source:
[17] https://www.damsafety.org/dam-failures



A breach or failure of the dike would not automatically predicate a failure of the St. Lucie Locks. The Army Corp of Engineers (ACOE) and the South Florida Water Management District may also decide to implement a controlled release at the S80 Water Control Structure/St. Lucie Locks. A controlled release is designed to relieve pressure in the water management system or may be conducted to prevent or reduce flooding, over drainage, prevent environmental degradation and pollution, or otherwise affect the quality and quantity of discharges. A controlled release may also pose a flooding threat to surrounding areas.

Risk Assessment

The U.S. Army Corps of Engineers (USACE), Jacksonville District, is responsible for the maintenance of the dike and has reported that areas of the dike are prone to water seepage and stability problems. Soil erosion, known as “piping,” can create large cavities in the dike, potentially resulting in a breach and flooding in the surrounding communities. The risk of a breach increases with an increased lake level of Lake Okeechobee.

In late summer and early fall of 1995, Lake Okeechobee rose to an elevation of 18.6 feet. This caused near-failure of the dike at nine separate areas along the south and southeast shores including locations near Lake Harbor, Pahokee, and Belle Glade ranging in length from 100 feet to more than a mile. In 1998, the lake again rose above 18 feet, with similar effects in some of the same locations as well as new ones. Both events resulted in observed indicators of unsatisfactory performance, which included piping of embankment and

foundation materials, berm collapses, excessive seepage, boils, and sinkholes in the embankment crest[18].

The 1995 and 1998 occurrences were not isolated incidents, with significant distress to the dike also reported in 2003 near South Bay and again in 2004 at four locations from Belle Glade to north of Canal Point, and most recently in 2005 near the Pahokee Airport.

A breach of the Herbert Hoover Dike poses a threat to population and property in western Martin County. The most significant risk related to a breach is flooding due to substantial rainfall raising the lake level and its eastward migration to final discharge in the Indian River Lagoon. The ACOE maintains a release program when Lake levels rise and release water, however Lake outflow capacity is approximately 6 times less than lake inflow potential. This severely challenges lake management capabilities and options. Structural and non-structural techniques to slow and contain this runoff incorporate several drainage systems. Rainfall in excess of designed capacities could cause erosion of constructed drainage facilities and flooding of many areas including primary roadway evacuation routes. According to the National Inventory of Dams, there are 7 dams in Martin County - Culvert #16, Structure 308 B, Structure 308 C, Martin Plant Cooling Water Reservoir, Pumping Station 135 and Lock, Structure 80, Structure 48[19].

Under normal circumstances, drainage is controlled and managed effectively by the South Florida Water Management District and Martin County Engineering Department. Drainage problems are created by long periods of unusually heavy rainfall, after which the operation of locks and lift stations are incapable of preventing floods in certain areas of the County. Conversely, during periods of drought, the lack of released water from reservoirs threatens east coast well fields with salt intrusion (Martin County CEMP, 2018).

Flooding vulnerability to western Martin County and the intra-coastal waterways exists from the potential for a breach of the Herbert Hoover dike around Lake Okeechobee. The release of water from Lake Okeechobee may have an impact on the S-80 structure at St. Lucie Locks. The ACOE have completed vulnerability assessments, but models do not adequately address flooding concerns in the Tropical Farms and St. Lucie Settlement areas.

Historical Events

The 1928 Hurricane devasted the counties around Lake Okeechobee. There was a 5-foot muck dike that crumbled causing an unleashing store surge with the fury of a tide wave that resulted in an estimated loss of life for 2,500 Floridians[20].

SIII.1.2.3 Drought

[18] ACOEACOE. “Lake Okeechobee and the Herbert Hoover Dike: A Summary of the Engineering Evaluation of Seepage and Stability Problems at the Herbert Hoover Dike.
[19] https://nid.sec.usace.army.mil/ords/f?p=105:22:810133782887::NO:::
[20] https://www.floridatoday.com/story/news/2017/08/29/florida-frontiers-hurricane-1928/611732001/

Drought is a protracted period of deficient precipitation resulting in extensive damage to crops, and a consequential loss of yield[21]. In fact, each year some part of the U.S. has severe or extreme drought. There are four basic approaches to measuring drought[22]:

- Meteorological – basis of the degree of dryness and the duration of the dry period.
- Hydrological – associated with the effects of periods of precipitation shortfalls on surface or subsurface water supply.
- Agricultural – links carious characteristics of drought to agricultural impacts, focusing on precipitation shortages, differences between actual and potential evapotranspiration, soil water deficits, reduced groundwater or reservoir levels.
- Socioeconomic – associate the supply and demand of some economic good with elements of the other approaches.

In Martin County, the primary sources of water are watershed areas, Lake Okeechobee, and the County's well fields. Excess water from an interconnected series of lakes, rivers, canals, and marshes flows either north to the St. Johns River or east to the Indian River Lagoon.

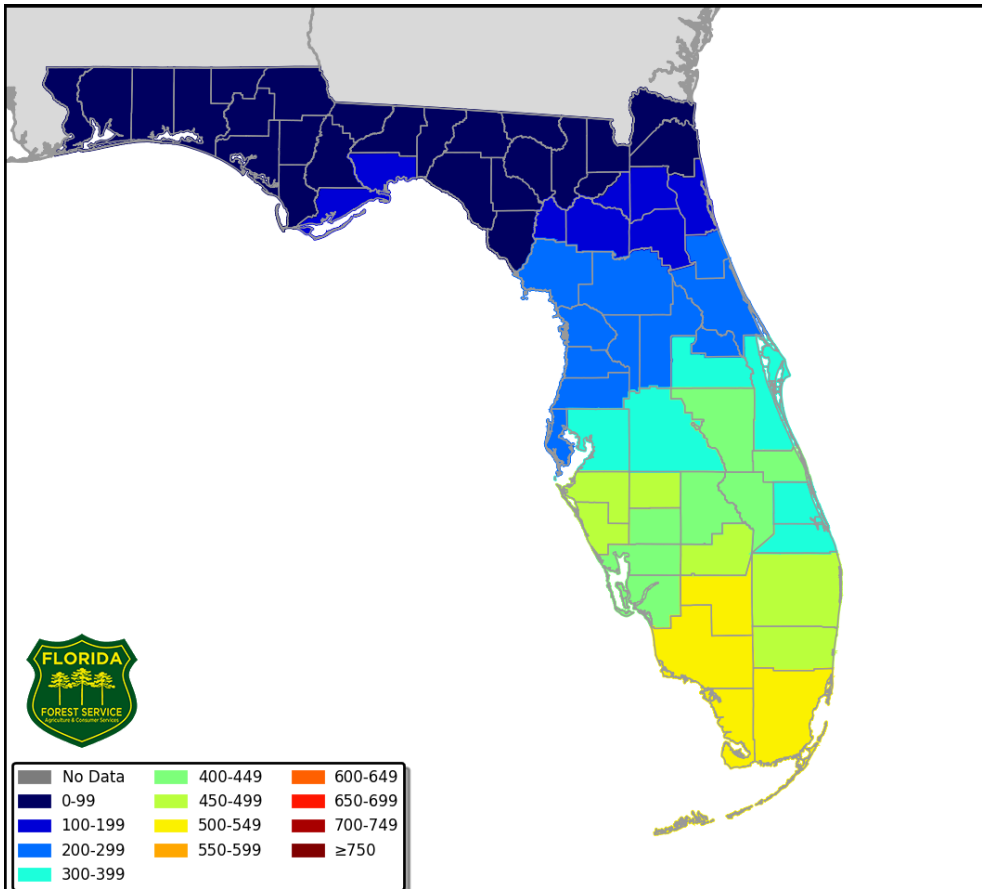
When this cycle is disrupted by periods of drought, one of the potentially most damaging effects is substantial crop loss in the western agricultural areas of the County. In addition to obvious losses in yields in both crop and livestock production, drought in Martin County is associated with increases in insect infestations, plant disease, and wind erosion. The incidence of forest fires increases substantially during extended droughts, which in turn places both human and wildlife populations at higher levels

Source: https://climatecenter.fsu.edu/topics/drought

Extent/Unit of Measurement

The unit of measurement for drought is the Keetch-Byram Drought Index (KBDI)

[21] https://drought.unl.edu/Education/DroughtIn-depth/WhatisDrought.aspx
[22] https://drought.unl.edu/Education/DroughtIn-depth/TypesofDrought.aspx



Source: http://currentweather.freshfromflorida.com/kbdi_index.html

Assessments

Vulnerability: Moderate	**Consequence Analysis**
Probability: Low	The identified hazard would have an impact on the following:
Frequency: 5 – 10 years	☒ Public ☒ Responders ☐ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☐ Public confidence in the jurisdiction's governance
Location: Countywide	

Vulnerability Assessment

While Martin County is moderately vulnerable to impacts from drought due to the County's large agricultural land tax base, some communities are less vulnerable due to their location and non-agricultural economic base. One population center, the Jensen Beach area, is particularly vulnerable because of its water supply.

Drought can have the following potential impacts within Martin County:

- Economic disruption
- Agricultural/fisheries damage
- Damage to critical environmental resources
- Fire

Risk Assessment

The Palmer Drought Index has become the semi-official drought index. It is most effective in determining long term drought—a matter of several months—and is not as good with short-term forecasts (a matter of weeks). It uses a 0 as normal, and drought is shown in terms of minus numbers; for example, minus 2 is moderate drought, minus 3 is severe drought, and minus 4 is extreme drought. The Palmer Index can also reflect excess rain using a corresponding level reflected by plus figures, i.e., 0 is normal, plus 2 is moderate rainfall, etc.

Another reference tool is the Keetch-Byram drought index (KBDI), which is a continuous reference scale for estimating the dryness of the soil and duff layers. The index increases for each day without rain (the amount of increase depends on the daily high temperature) and decreases when it rains. The scale ranges from 0 (no moisture deficit) to 800 (prime drought condition). The range of the index is determined by assuming that there is 8 inches of moisture in a saturated soil that is readily available to the vegetation.

There have been no historical occurrences to determine the potential risk associated with a drought in Martin County.

Historical Events

Upon completion of this document, no information has been found related to historical drought conditions in Martin County.

SIII.1.2.4 Epidemic/Pandemic

Epidemic

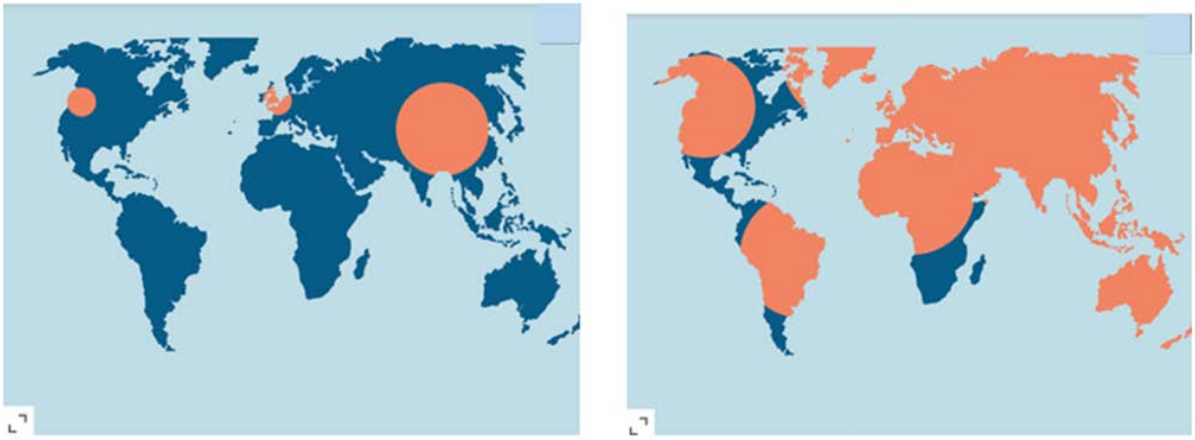
An epidemic is when an infectious disease spreads quickly to more people than experts would expect. It usually affects a larger area than an outbreak[23].

Pandemic

A pandemic is a disease outbreak that spread across countries or continents. It affects more people and take more lives than an epidemic[24].

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

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



Epidemic vs. Pandemic

Source: https://www.health.com/condition/infectious-diseases/epidemic-vs-pandemic

Extent/Unit of Measurement

Sources:

[23] https://www.webmd.com/cold-and-flu/what-are-epidemics-pandemics-outbreaks

[24] https://www.webmd.com/cold-and-flu/what-are-epidemics-pandemics-outbreaks

Epidemics and pandemics are measured by the number of individuals that present with symptoms of the virus and/or die from the virus.

Assessments

Vulnerability: Low	**Consequence Analysis**
Probability: Low	The identified hazard would have an impact on the following:
Frequency: 5 – 10 years	☒ Public ☒ Responders ☒ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☐ Environment ☒ Economic condition of the jurisdiction ☒ Public confidence in the jurisdiction's governance
Location: Countywide	

Vulnerability Assessment

Epidemics can have the following potential impacts within Martin County:

- Human Health & Safety
- Psychological Hardship
- Economic Disruption
- Disruption of Community Services
- Disruption of Government and Critical Services
- Agricultural/Fisheries Damages

High-density, low-income communities or neighborhoods that have antiquated well and septic systems in older neighborhoods tend to be at higher risk for illnesses associated with epidemics. The County has replaced antiquated septic and well systems in the Golden Gate, Booker Park, and Banner Lake neighborhoods. Advances in community health programs have reduced the potential for future occurrence of epidemics. The Martin County CEMP Appendix VI addresses planning, training, and exercise for pandemics. Currently, the potential for future occurrence is low.

Risk Assessment

The global pandemic that is known as Coronavirus 19 (COVID) has presented risk for Martin County. The risks associated with this issue has caused the county to reevaluate how it does business daily and interact with the community to include social distancing, teleworking, school and business closure, and identifying essential services that must be continued (Martin County Continuity of Operations/Continuity of Government, 2015).

Historical Events

Martin County along with the world is experiencing one of the largest pandemic events in the 21st century. Coronavirus 19 (COVID-19) was discovered in China in November 2019 and reached the US in January 2020.

Notable epidemics and/or pandemics since Martin County incorporated in 1925[25]:

- 1957 – Asian Flu spread worldwide claiming an estimated 1.1 million lives
- 1981 – HIV/AIDS, 35 million people worldwide have died of AIDS since its discovery and a cure is yet to be found
- 1968 – Flu Pandemic (Hong Kong Flu) spread worldwide claiming an estimated 1 million lives
- 2003 – Severe Acute Respiratory Syndrome (SARS) spread from possibly bats, to cats, to humans in China and then 26 other countries, infecting 8,096 people with 774 deaths
- 2009 – Swine Flu (H1N1) was first detected in the US and spread worldwide claiming up to 575,400 lives
- 2014 – Ebola epidemic had a big impact on West Africa, Guinea, Liberia and Sierra claiming 11,325 lives (one in the US) according to the CDC
- 2019-2020 – As of August 2020, COVID-19 spread worldwide claiming an estimated 716,000 lives. The State of Florida had an estimate of 7,700 fatalities and Martin County had 87 fatalities. This is an ongoing response.

SIII.1.2.5 Extreme Temperatures

Freezing Temperatures

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

- Wind Chill – Is not the actual temperature but rather how wind and cold feel on exposed skin
- Frostbite – Is damage to body tissue caused by extreme cold
- Hypothermia – Is a condition brought on when the body temperature drops less than 95 degrees Fahrenheit

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Sources:
[25] https://www.health.com/condition/infectious-diseases/worst-pandemics-in-history
https://www.cdc.gov/vhf/ebola/history/2014-2016-outbreak/index.html
https://www.history.com/topics/middle-ages/pandemics-timeline

According to the Department of Agriculture and Consumer Services, a moderate freeze may be expected every 1 to 2 years. Severe freezes may be expected on an average of once every 15 to 20 years. Freezes pose a major hazard to the agriculture industry in Martin County on a recurring basis and are a significant threat to the economic vitality of the State's agriculture industry. Agricultural lands represent nearly one-half of all land in Martin County (University of Florida, 2001).

Source: cambridgema.gov

Source: news5cleveland.com

Extreme Heat

A heat wave is described as temperatures that remain 10° or more above the average high temperature for a region and last for several weeks are defined as extreme heat (FEMA, 1993). Humid conditions, which add to the discomfort of high temperatures, occur when an area of high atmospheric pressure traps hazy, damp air near the ground.

A heat wave is an extended period of extreme heat, and is often accompanied by high humidity (FEMA, Ready, 2015). Humid conditions, which add to the discomfort of high temperatures, occur when an area of high atmospheric pressure traps hazy, damp air near the ground.

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

- Excessive Heat Watch - Conditions are favorable for an excessive heat event to meet or exceed local Excessive Heat Warning criteria in the next 24 to 72 hours.
- Excessive Heat Warning - Heat Index values are forecast to meet or exceed locally defined warning criteria for at least 2 days (daytime highs = 105-110° Fahrenheit).
- Heat Advisory - Heat Index values are forecast to meet locally defined advisory criteria for 1 to 2 days (daytime highs = 100-105° Fahrenheit).

As a result of the latest research findings, the NWS has devised the "Heat Index" (HI). The HI, given in degrees Fahrenheit, is an accurate measure of how hot it really feels when relative humidity is added to the actual air temperature. The NWS will initiate alert procedures when the HI is expected to exceed 105°F for at least two consecutive days.

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

Extent/Unit of Measurement

The unit of measurement for these hazards are based on temperature index.

Classification of Temperatures

Classification	Index
Very Cold	32°F - 55°F
Cold	55°F - 65°F
Cool	65°F – 80 °F
Neutral	80°F – 92°F
Warm	92°F – 98°F
Hot	98°F – 104°F
Very Hot	104°F and above

Source: NOAA

Assessments

Vulnerability: Low	**Consequence Analysis**
Probability: Low	The identified hazard would have an impact on the following:
Frequency: 1 – 5 years	☒ Public ☒ Responders ☐ Continuity of Operations including continued delivery of services ☐ Property, Facilities, and infrastructure ☒ Environment ☐ Economic condition of the jurisdiction ☐ Public confidence in the jurisdiction’s governance
Location: Countywide	

Vulnerability Assessment

Freezing temperatures and Extreme Heat can have the following potential impacts in Martin County:

- Human health and safety
- Psychological hardship
- Economic disruption
- Agricultural/fisheries damage
- Damage to critical environmental resources

Extreme temperatures, freezing or heat, would affect all residents and visitor as well as animals in Martin County. These affects may cause more life-threatening health and safety related issues for the vulnerable population (children, adults over 65 and the homeless). Martin County has an average high temperature of 74°F and low temperature of 55°F[26]. When temperature fall below 40°F, this may cause problems for the vulnerable populations as well as individuals/families living in homes with no central heat. If cold weather shelters are not opened for the homeless, many will be affected with health-related and safety issues and/or death. For individuals/families with not central heating, they may use items such are space heaters and opening ovens to keep the home warm, but these methods may cause life-threatening actions like home fires and carbon monoxide poisoning. Freezing temperature also affects crops (fruit and vegetable farms, nurseries) and animals (domestic, wild, livestock).

Temperatures over 100°F, will affect the same vulnerable population as well as individuals working in the heat when it comes to staying cool and hydrated. Temperature over 100°F will also affect the County's agriculture industry with their crops by having to water more frequently and livestock with keeping them hydrated and cool. Information from the Florida Department of Health[27] show the following heat-related events for Martin County in 2019:

- # of heat-related hospitalizations during summer months – 15
- # of heat-related deaths during summer months – 0
- # of heat-related emergency department visits during summer months - 45

Extreme heat events have long threatened public health in the United States. Deaths result from heat stroke and related conditions, but also from cardiovascular disease, respiratory disease, and cerebrovascular disease. Heat waves are also associated with increased

[26] https://www.weather-us.com/en/florida-usa/stuart-climate
[27] https://www.floridatracking.com/healthtracking/topic.htm?i=13

hospital admissions for cardiovascular, kidney, and respiratory disorders. Extreme summer heat is increasing in the United States, and climate projections indicate that extreme heat events will be more frequent and intense in coming decades[28].

Vulnerability to winter weather depends on many non-climate factors, including housing, age, and baseline health. While deaths and injuries related to extreme cold events are projected to decline due to climate change, these reductions are not expected to compensate for the increase in heat-related deaths[29].

Risk Assessment

At the time of publication, data were not available to determine potential loss in Martin County due to extreme temperatures. Given past extreme temperature events, the probability of future occurrence is low.

Historical Events

According to the NWS and Time and Date.com, the coldest and hottest temperatures for Martin County was:

Source	Coldest	Hottest
National Weather Services	January 22, 1985 at 23° F	July 21, 1942 at 105° F
Time and Date.com30	December 10, 2011 at 23°F	May 31, 2012 at 102°F
	January 4, 2012 at 39°F	June 25, 2015 at 102°F
	February 12, 2012 at 43°F	April 26, 2018 at 100°F
	December 22, 2012 at 41°F	July 3, 2018 at 102°F
	February 17, 2013 at 43°F	
	March 3, 2013 at 43°F	
	January 19, 2014 at 37°F	
	February 26, 2014 at 41°F	
	December 11, 2014 at 43°F	
	January 25, 2015 at 45°F	
	February 20, 2015 at 36°F	
	January 24, 2016 at 37°F	
	February 8, 2016 at 43°F	
	January 31, 2017 at 45°F	
	December 12, 2017 at 45°F	
	January 18, 2018 at 37°F	

[28] https://www.cdc.gov/climateandhealth/effects/temperature_extremes.htm#:~:text=Extreme%20heat%20events%20have%20long,Many%20cities%2C%20including%20St.&text=Urban%20heat%20islands%2C%20combined%20with,health%20impacts%20in%20the%20future.

[29] https://www.cdc.gov/climateandhealth/effects/temperature_extremes.htm#:~:text=Extreme%20heat%20events%20have%20long,Many%20cities%2C%20including%20St.&text=Urban%20heat%20islands%2C%20combined%20with,health%20impacts%20in%20the%20future.

[30] https://www.timeanddate.com/weather/usa/stuart/historic (information 2011 to the present)

	February 8, 2018 at 30°F	
	November 28, 2018 at 43°F	
	December 23, 2018 at 43°F	
	January 21, 2019 at 41°F	
	January 22, 2020 at 39°F	

SIII.1.2.6 Flooding

A flood is defined by the National Weather Service as any high flow, overflow, or inundation by water, which causes or threatens damage. There are several types of floods, such as:

- **River Flood** – Occurs when water levels rise over the top of riverbanks due to excessive rain from tropical systems making landfall, persistent thunderstorms over the same area for extended periods of time, combined rainfall and snowmelt, or an ice jam.
- **Coastal Flood** – The inundation of land areas along the coast causes by higher than average high tide and worsened by heavy rainfall and onshore winds (i.e., wind blowing landward from the ocean).
- **Storm Surge** – An abnormal rise in water level in coastal areas, over and above the regular astronomical tide, caused by forces generated from a severe storm's wind, waves, and low atmospheric pressure. Storm surge is extremely dangerous, because it is capable of flooding large coastal areas.
- **Inland Flooding** – Occurs when moderate precipitation accumulates over several days, intense precipitation falls over a short period, or a river overflows because of an ice or debris jam, or dam or levee failure.
- **Flash Flood** – Caused by heavy or excessive rainfall in a short period of time, generally less than six hours. Flash floods are usually characterized by raging torrents after heavy rains that rip through riverbeds, urban streets, or mountain canyons sweeping everything before them.

Source: martin.fl.us

Extent/Unit of Measurement

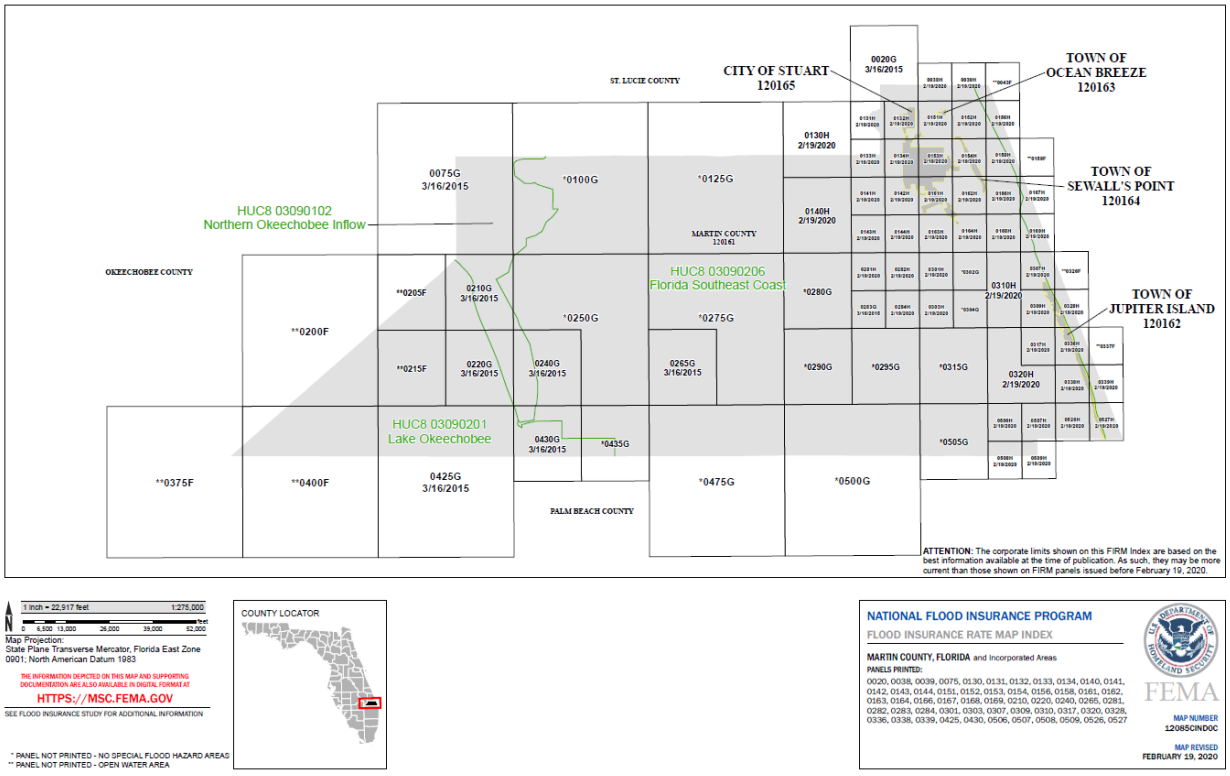
Flooding is measured by the depth/amount of water that is accumulated in an area. Martin County also uses FEMA's Flood Insurance Rate Map (FIRM) for special flood hazard areas[31].

Map Legend for FIRM	
Zone A	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. No base (1% annual chance) flood elevations (BFEs) or depths are shown within this zone.
Zone AE	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. Base flood elevations derived from the hydraulic analyses are shown within this zone.
Zone AH	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot BFEs derived from the hydraulic analyses are shown at selected intervals within this zone.
Zone AO	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the hydraulic analyses are shown within this zone.
Zone AR	The flood insurance rate zone that corresponds to areas that were formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
Zone A99	The flood insurance rate zone that corresponds to areas of the 1% annual chance floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or flood depths are shown within this zone.
Zone V	The flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations are not shown within this zone.
Zone VE	Zone VE is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations derived from the coastal analyses are shown within this zone as static whole-foot elevations that apply throughout the zone.

Martin County FIRM Index

[31] https://www.martin.fl.us/resources/flood-insurance-study-volume-1

Figure 1: FIRM Index



7

Assessments

Vulnerability: High	**Consequence Analysis**
Probability: High	The identified hazard would have an impact on the following:
Frequency: 1 – 5 years	☒ Public
Locations: Hobe Sound, Palm City, Sewall's Point, Western Martin County, Rio	☒ Responders ☒ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☒ Public confidence in the jurisdiction's governance

Vulnerability Assessment

Flooding events can have the following potential impacts within Martin County:

- Excessive water
- Soil/beach erosion
- Electric power outage

- Surface and air transportation disruption
- Navigable waterway impairment
- Potable water system loss or disruption
- Sewer system outage
- Human health and safety
- Psychological hardship
- Economic disruption
- Disruption of community services
- Agricultural/fisheries damage
- Damage to critical environmental resources
- Damage to identified historical resources
- Fire
- Toxic releases
- Storm water drainage impairment

Risk Assessment

Flooding is the single hazard producing the most recurrent impacts in Martin County, thus making the probability of future occurrence of flooding high. All communities within Martin County are highly vulnerable to flooding, but they are not all vulnerable for the same reasons. The barrier island communities (Jupiter Island and Sewall's Point) are obviously highly vulnerable to storm surge damage from hurricanes. The communities fronting on Martin County's estuaries and rivers also are highly vulnerable to flooding associated with high tides, extreme rainfall in a short period of time, hurricane winds and storm surge. Communities along the estuaries and rivers could receive flooding up to 4 feet under these conditions. Communities away from the water may be more vulnerable to flooding associated with rain rather than storm surge. Not all the areas within any given jurisdiction is equally vulnerable to flooding, but all jurisdictions have specific areas where flooding is a problem.

In 1999, Martin County developed a Local Flood Mitigation Strategy to reduce the community's vulnerability to this hazard. During the development of the Martin County Local Flood Hazard Mitigation Strategy, exposure figures were established for the municipalities. This analysis was completed in 1999 and is based on NFIP-insured properties.

Martin County, as well as municipalities within the county, participates in the Community Rating System (CRS) of the National Flood Insurance Program (NFIP). As participants in the CRS, the County and those municipalities take measures beyond the NFIP's minimum requirements to reduce flooding risks and enhance flood protection. Those measures include:

- Maintaining flood elevation certificates for new and substantially improved buildings, as well as elevation certificates and FIRMs from prior years.
- Providing flood zone information to the public and publicizing the service annually.

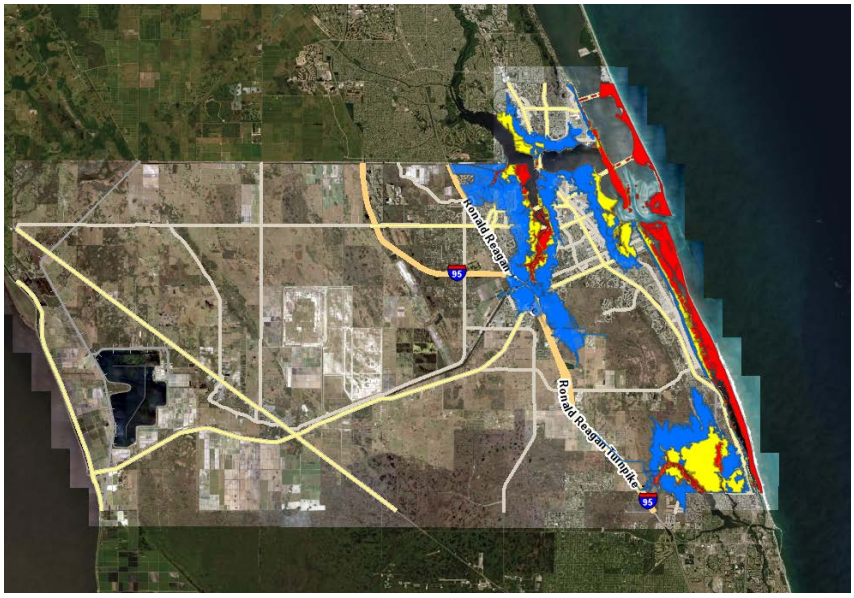
- Providing public outreach by placing flood information in local phone books distributed throughout the county on an annual basis, as well as providing flood information through displays in public facilities (libraries) and at public meetings.
- Requiring hazard disclosure information on recorded plats.
- Maintaining floodplain management documents in County libraries and on County and municipal websites.
- Inspecting and maintaining public drainage systems, including ongoing capital improvement projects to improvement drainage, and enforcing against illegal dumping in drainage systems.
- Maintaining a flood warning program.

Martin County has several variations of flood hazards occur due to the different effects of severe thunderstorms, hurricanes, seasonal rains, and other weather-related conditions. For most of the County, the primary causes of flooding are hurricanes or tropical storms. However, the County's low-lying topography, combined with its subtropical climate, make it vulnerable to riverine as well as storm-associated flooding.

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

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

Martin County's Storm Surge Evacuation Zones

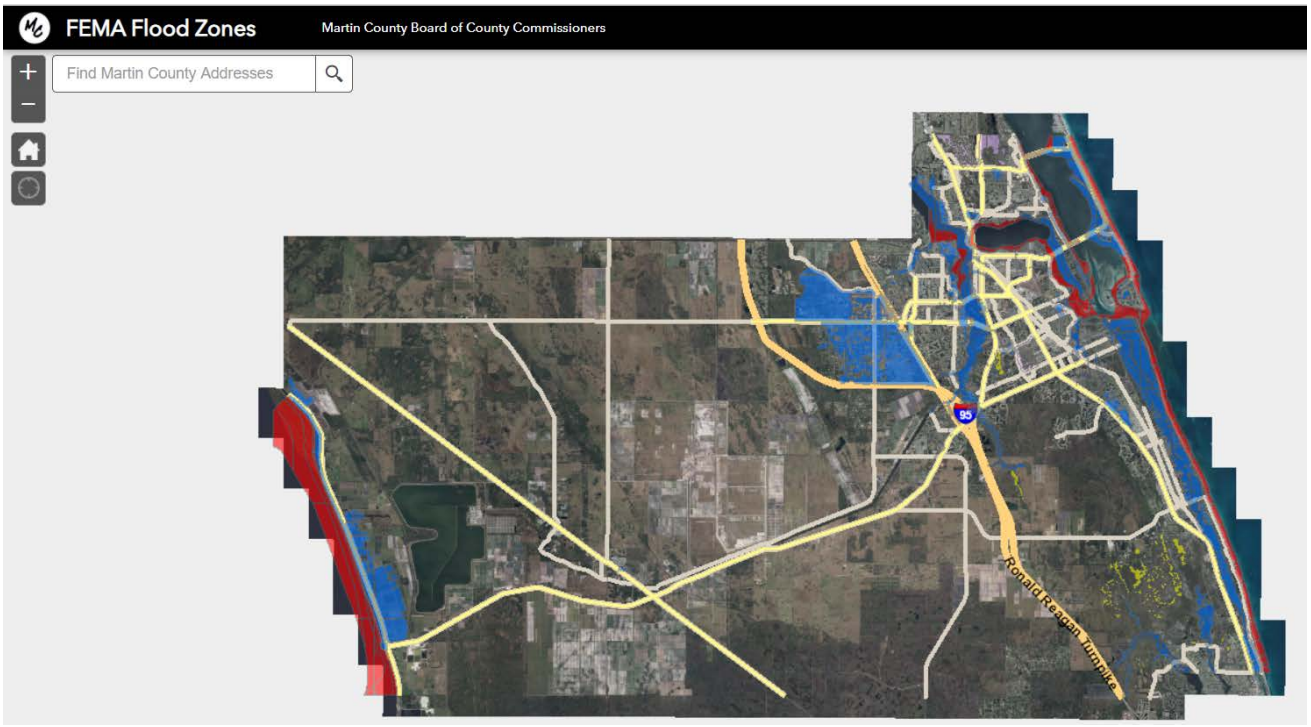


Historical Events

Martin County has experienced several flooding events since throughout the years. The following events are listed:

Year	Event	Overview of Event
1928	Hurricane	Category 4 hurricane caused a breech at a dam in Lake Okeechobee
1933	Hurricane	Category 3 hurricane major flooding throughout the county
1947	Flood	Heavy rainfall over a period of 5 months caused severe flooding
1949	Hurricane	Category 4 hurricane cause 8.5 tides causing flooding
1953	Flood	5 months of heavier than normal rainfall caused flooding in Indiantown
1994	Tropical Storm Gordon	Tropical Storm Gordon caused 17+ inches of rain in a 3 days period causing major flooding in the county
1999	Hurricane Irene	Hurricane Irene caused both flooding and wind damage to the county
2001	Tropical Storm Barry	Tropical Storm Barry produced flooding across county
2004	Thunderstorms	24 hours of rainfall reaching 8-12 inches causing flooding on many roadways
2004	Hurricane Frances	Hurricane Frances produced heavy rainfalls that caused widespread flooding
2004	Hurricane Jeanne	Hurricane Jeanne produced heavy rainfalls that caused flooding in the county
2005	Hurricane Wilma	Hurricane Wilma caused flooding and wind damage
2008	Tropical Storm Fay	Tropical Storm Fay produced 10 – 15 inches of rain causing flooding
2012	Tropical Storm Isaac	Tropical Storm Isaac produced 12- 14 inches of rain causing flooding
2016	Tropical Storm Julia	Rainfall producing 6 – 11 inches of rain caused flooding of many road roads
2020	Severe Thunderstorm	Rainfall producing up to 24 inches of rain caused flooding in several communities, especially in Hobe Heights
2020	Tidal Flooding	Hazardous seas and surf conditions caused flooding on Sewall's Point and St. Lucie Settlement roads

FEMA Flood Map for Martin County



http://mcgov.maps.arcgis.com/apps/webappviewer/index.html?id=4b72b96cb58c4e49bbb25ecb5313f681

The above FEMA Flood Map indicates the most vulnerable areas that would experience flooding (areas along the coast, rivers and near Lake Okeechobee). The below photos taken by Martin County Public Works, shows recent flooding that affected many areas throughout Martin County. The Hobe Sound area experienced flash and inland flooding; areas in Palm City and Jensen Beach experienced river flooding and areas in Jupiter and Hutchinson Island experienced river and coastal flooding as well as storm surges. Weather events that have occurred this year has caused unusual flooding in the County.

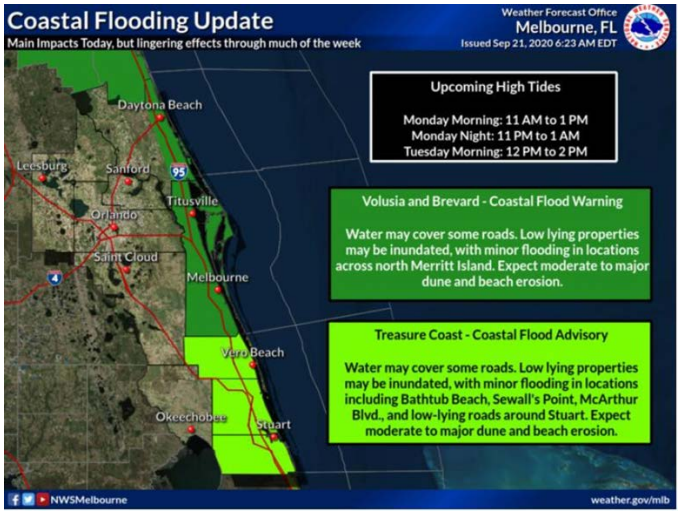
2020 Flooding

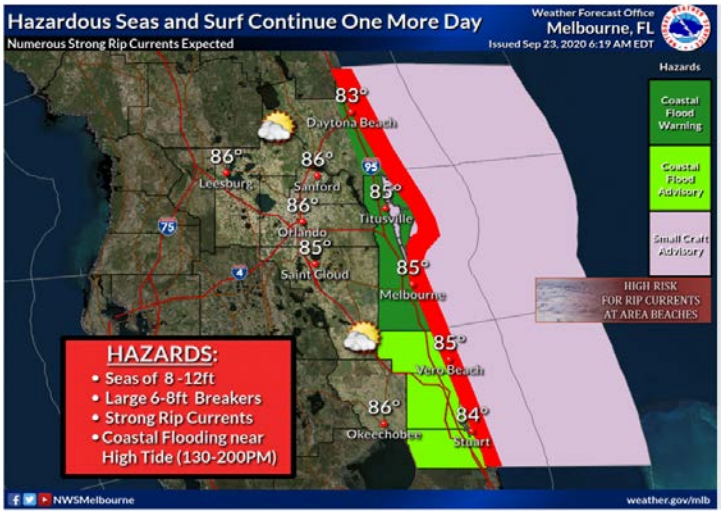
June 2020 (Hobe Heights, Hobe Sound)





September 2020 - Coastal/Tidal Flooding





Source: https://www.weather.gov/mlb/

Cove Point, Jupiter



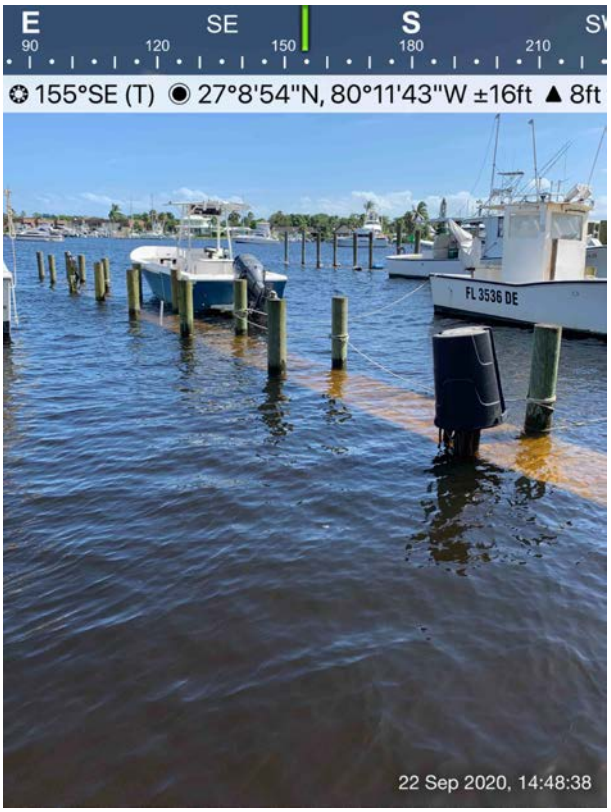

Dyer Point Road, Palm City

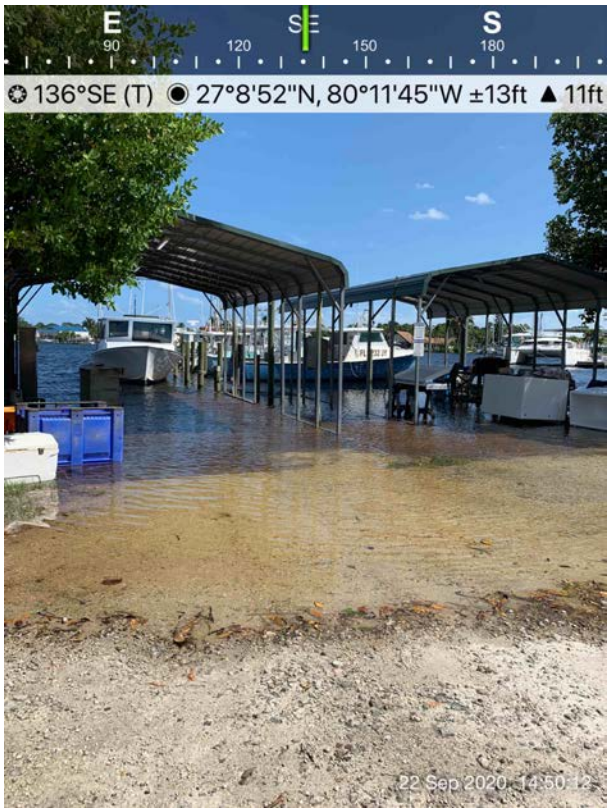
Jensen Beach Boat Ramp

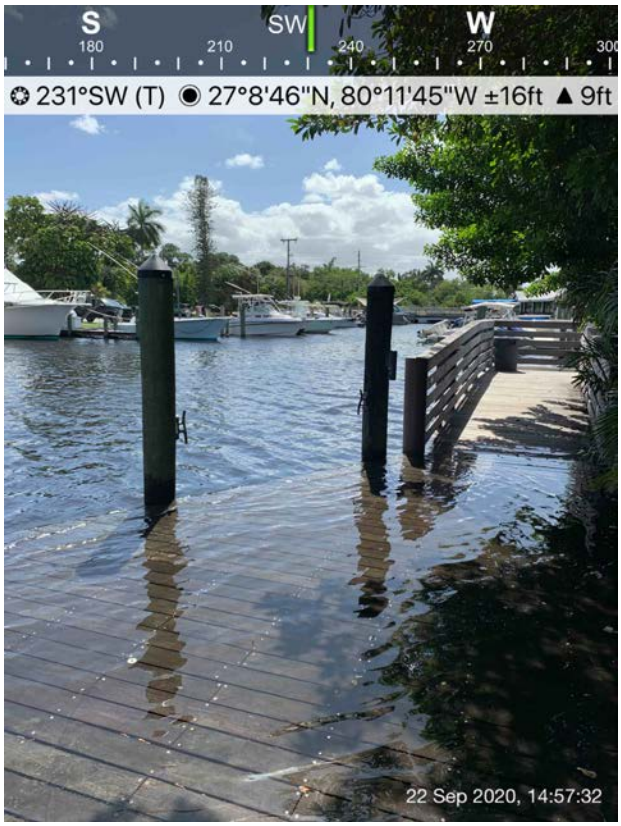
Jensen Beach Mooring

Leighton Park, Palm City

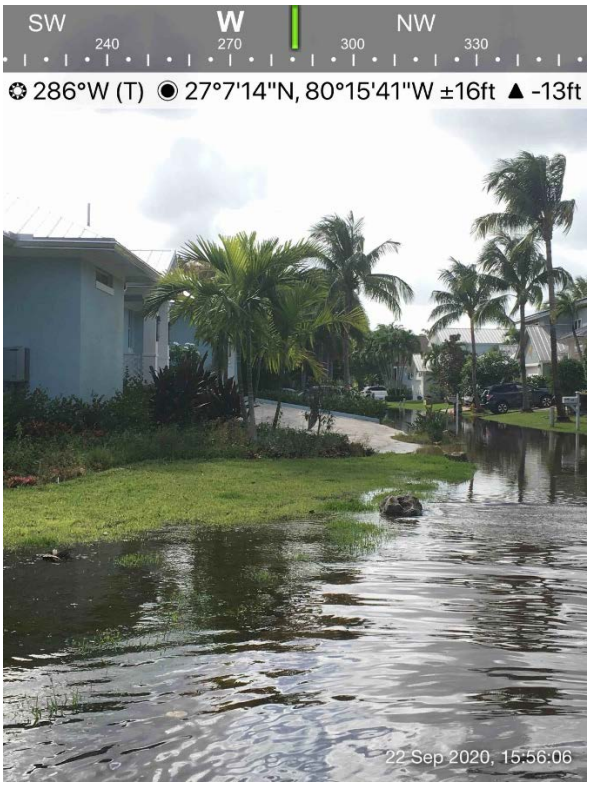
Manatee Pocket, Hutchinson Island



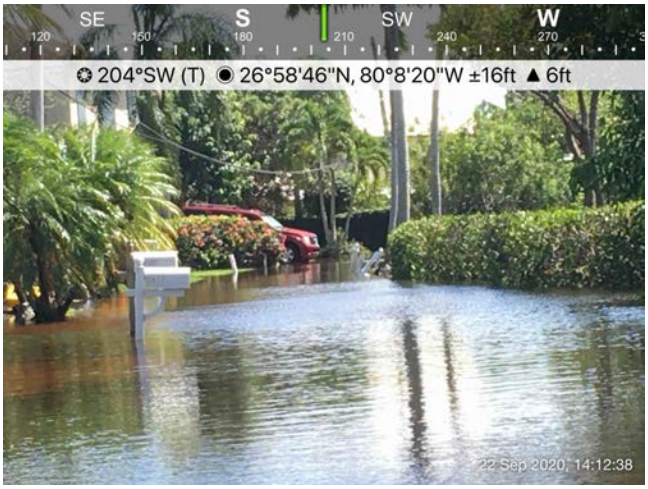




St. Lucie Settlement, Stuart



Merritt Way, Jupiter



SIII1.2.7 Tropical Cyclone

The National Hurricane Center describes a tropical cyclone as a rotating, organized system of clouds and thunderstorms that originates over tropical or subtropical waters and has a closed low-level circulation and are classified as[32]:

- Tropical Depression – a cyclone with maximum sustained winds of 38 mph or less

[32] https://www.nhc.noaa.gov/climo/

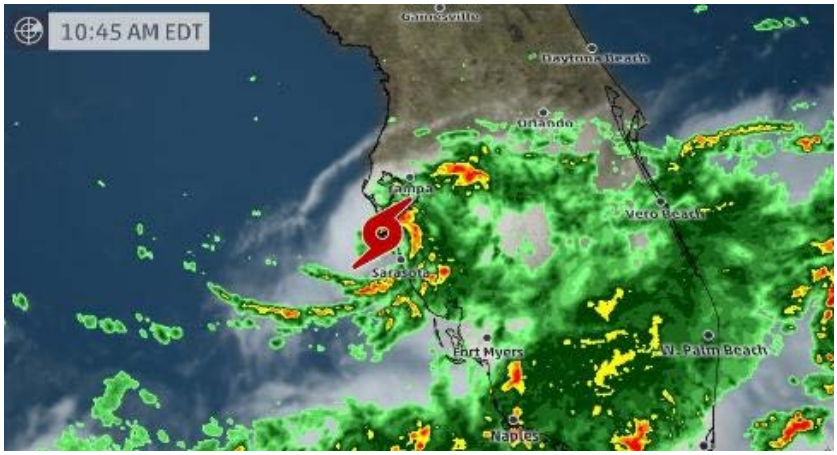
- Tropical Storm – a cyclone with maximum sustained winds of 39 to 73 mph
- Hurricane – a cyclone with maximum sustained winds of 74 mph or higher
- Major Hurricane – a cyclone with maximum sustained winds of 111 mph or higher (Category 3, 4 or 5)

Tropical Depression

A tropical depression is a tropical cyclone that has maximum sustain winds of 38 mph or less.

Tropical Storm[33]

A tropical storm is a tropical cyclone with maximum sustained winds of at least 39 mph and are given official names once they reach these wind speeds. Beyond 74 mph, a tropical storm is categorized a hurricane, typhoon, or cyclone based on the storm location. A tropical cyclone has a defined cyclonic rotation and severe thunderstorms around a central low-pressure zone. A tropical cyclone is one step above a tropical depression, but a step below a hurricane in terms of intensity. A ***Tropical Storm Watch*** is issued by the National Hurricane Center (NHC) when tropical-storm conditions are possible within the specified area. A ***Tropical Storm Warning*** is issued by the NHC when tropical-storm conditions are expected within the specified area.



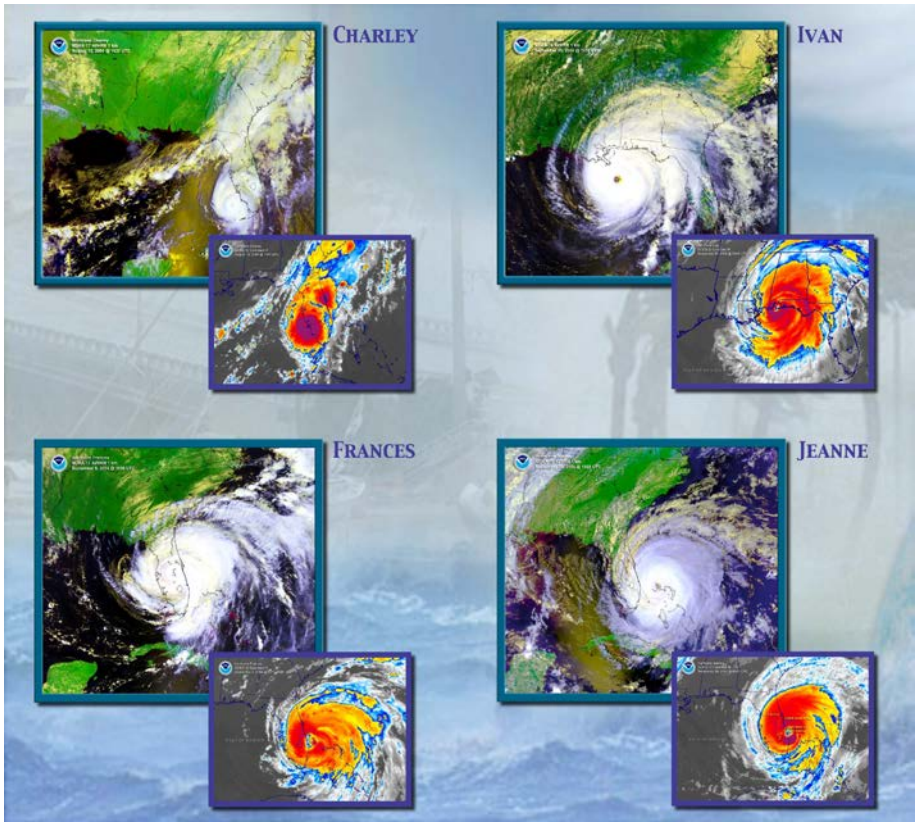
Source: https://weather.com/storms/hurricane/news/tropical-storm-emily-florida-heavy-rain-forecast

Hurricanes

Hurricanes are tropical cyclones with winds that exceed 74 mph and blow counterclockwise about their centers in the northern hemisphere. Hurricanes are essentially heat pumping mechanisms that transfer the sun's heat energy from the tropical to the temperate and polar regions which helps to maintain the global heat budget and sustain life. Hurricanes are formed from thunderstorms that form over tropical 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 are the energy source of a hurricane.

[33] https://www.weather.gov/mob/tropical_definitions

The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 rating based on a hurricane's sustained wind speed. This scale estimates potential property damage. Hurricanes reaching Category 3 and higher are considered major hurricanes because of their potential for significant loss of life and damage. Category 1 and 2 storms are still dangerous, however, and require preventative measures.



Source: https://www.weathernationtv.com/news/4-hurricanes-in-6-weeks-it-happened-to-florida-15-years-ago/

Extent/Unit of Measurement

The unit of measurement for these hazards are based on sustained winds using the Saffir-Simpson Scale.

Saffir-Simpson Scale

Category	Sustained Winds	Types of Damage
Tropical Depression	0-38 mph	Heavy rain and strong winds can cause minor flooding
Tropical Storm	39-73 mph	Heavy rain and strong winds can cause major flooding
1	74-95 mph	Very dangerous winds will produce some damage
2	96-110 mph	Extremely dangerous winds will cause extensive damage
3 (major)	111-129 mph	Devastating damage will occur
4 (major)	130-156 mph	Catastrophic damage will occur
5 (major)	156 mph or higher	Catastrophic damage will occur

Assessments

Vulnerability: High	**Consequence Analysis**
Probability: Moderate	The identified hazard would have an impact on the following: ☒ Public ☒ Responders ☒ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☒ Public confidence in the jurisdiction's governance
Frequency: 5 – 10 years	
Location: Countywide	

Vulnerability Assessment

Martin County is on the eastern side of Florida along the Atlantic Ocean therefore making it more vulnerable to tropical cyclones than inland counties. Martin County has a vulnerable population that includes individuals that are oxygen dependent, suffering from mental health issues, and social and economic issues. According to the U.S. Census Bureau, the County has 10.5% of the residence that live below the poverty line[34] and the Florida Department of Health's 2018 Florida Access and Functional Needs Profile, indicates the following vulnerability data[35]:

- 0.2% - Homeless
- 9.4% - Adults who use special equipment due to health problems
- 3.6% - Adults with seriously mental Illness
- 1.7% - Adults 18 to 64 with vision difficulty
- 2.4% - Adults 18 to 64 with health difficulty
- 5.9% - Adults 65+ with vision difficulty
- 14.2% - Adults 65+ with hearing difficulty
- 14.8% - Adults 65+ with probable Alzheimer

Martin County also have communities that have substandard housing and commercial property that would be greatly affected by a tropical cyclone.

Tropical cyclones can have the following potential impacts within Martin County:

- Excessive wind

[34] https://www.census.gov/quickfacts/fact/table/martincountyflorida/PST045219
[35] http://www.flhealthcharts.com/ChartsReports/rdPage.aspx?rdReport=ChartsProfiles.AccessAndFunctionalNeeds

- Excessive water
- Soil/beach erosion
- Electric power outage
- Surface and air transportation disruption
- Navigable waterway impairment
- Potable water system loss or disruption
- Sewer system outage
- Telecommunications system outage
- Human health and safety
- Psychological hardship
- Economic disruption
- Disruption of community services
- Agricultural/fisheries damage
- Damage to critical environmental resources
- Damage to identified historical resources
- Fire
- Toxic releases
- Storm water drainage impairment

Risk Assessment

All communities within Martin County are highly vulnerable to hurricanes, but they are not all vulnerable for the same reasons. The barrier island communities (Jupiter Island and Sewall's Point) are obviously highly vulnerable to both wind and storm surge damage from hurricanes. The communities fronting on Martin County's estuaries and rivers also are highly vulnerable to flooding associated with hurricane winds and storm surge. Communities away from the water may be more vulnerable to wind damage from hurricanes.

Inland communities may have less hurricane vulnerability from flooding but more hurricane vulnerability from wind damage due to their older or less substantial type of construction. Martin County's exposure to hurricanes is high, while the County's hazard history indicates that the probability of future occurrence is low to medium depending on the intensity of the storm.

Other than flooding, impact from tropical storms and hurricanes mitigation is the greatest consideration in mitigation efforts countywide. Public facilities are being hardened or built to

withstand greater winds, the need for backup power (generators) is considered for public facilities.

Historical Events

Martin County has recorded hurricanes and tropical storms that have affected the county since the 1960s. Below is a list of the historical events:

Years	Tropical Depressions	Tropical Storms	Hurricanes
1960 - 1969			4
1970 - 1979			2
1980 - 1989			5
1990 - 1999		1	4
2000 - 2009	2	2	3
2010 - 2019	4	4	2
2020 - 2029		1	1

SIII.1.2.8 Sea Level Rise

According to NASA Global Climate Change, sea level rise is caused primarily by two factors related to global warming – the added water from melting ice sheets and glaciers and the expansion of seawater as it warms[36].

Southeast Florida is vulnerable to sea level rise (SLR) due to its peninsular geomorphology and low topography. Mapping different sea level rise inundation scenarios helps to identify areas at potential risk and aids in planning for a sustainable community. Inundation maps, identifying land at elevations below sea level, highlight areas located near Martin County's coastline and tidal waterways. Inland areas identified as vulnerable are low-lying areas, which may be of future concern for storm water management but are not directly hydrologically connected to tidal waters. The sea level has risen in Florida about nine inches over the past century according to the South Florida Water Management District. The US National Research Council reported in 2008 that the global consensus is that the Earth's climate is warming, and the impact of that climate change is accelerated sea level rise. There is no consensus on the rate at which sea level will rise however and therefore with scientific literature offering various acceleration rate theories we are only able to be certain that sea level will continue to rise.

[36] https://climate.nasa.gov/vital-signs/sea-level/

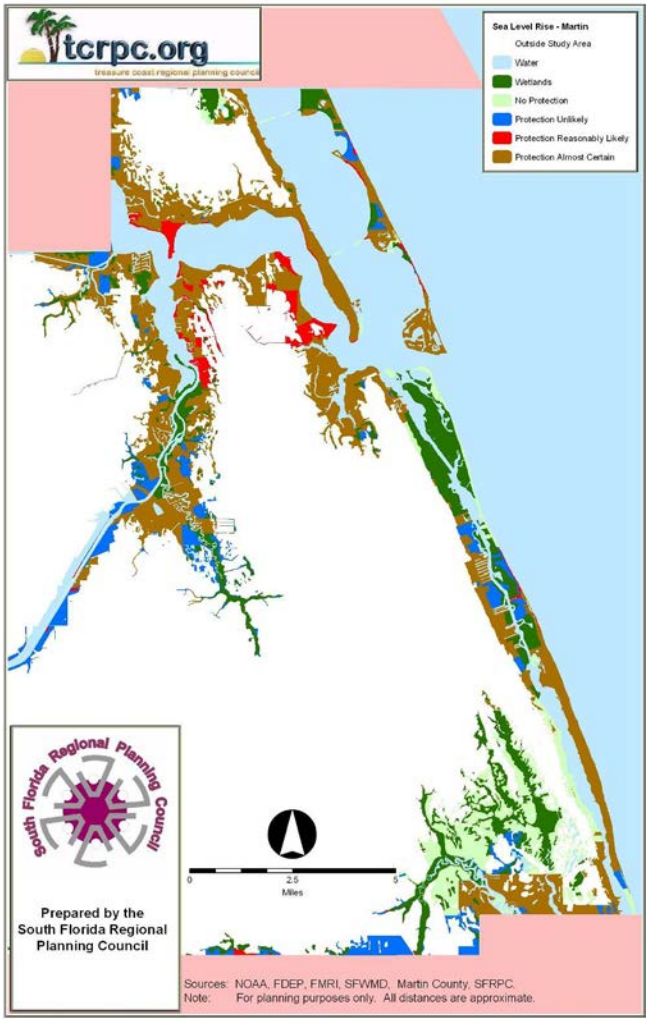
Martin County received a grant from the FDEP in 2019 to help prepared for sea level rise by analyzing the current and future effects of flooding from sea level rise, storm surge, heavy rains and other sources[37].

Extent/Unit of Measurement

Sea level rising is primarily measured using tide stations and satellite laser altimeters.

[37] https://www.tcpalm.com/story/news/local/indian-river-lagoon/health/2019/07/01/florida-dep-grants-sea-level-rise/1621291001/

Sea Level Rise-Martin

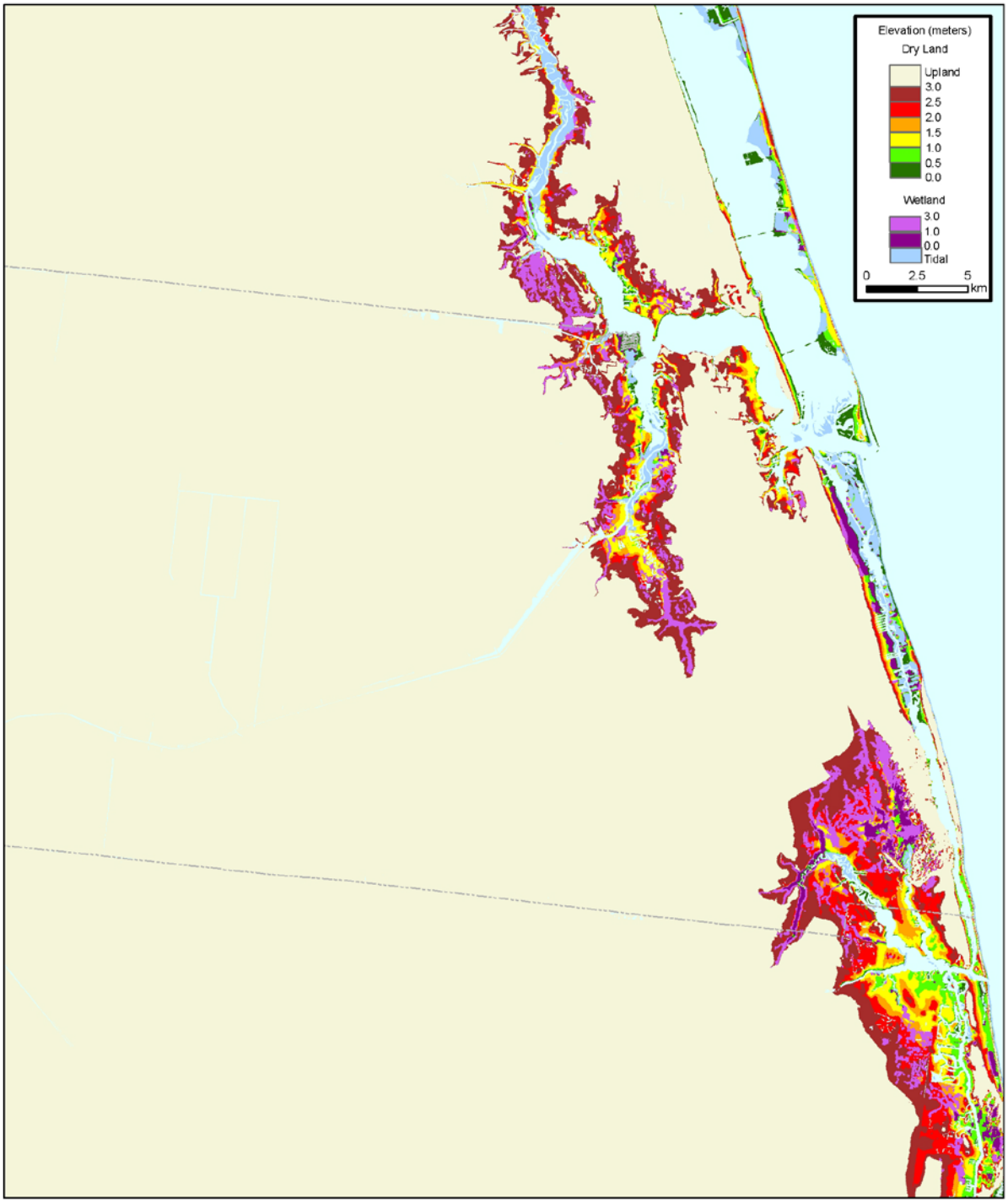


Source: http://plan.risingsea.net/view/S21_martin.html

Sea Level Rise Maps of Florida's Atlantic Coast

Florida

Martin County



Source: http://maps.risingsea.net/index.html

Assessments

Vulnerability: Low	**Consequence Analysis**
Probability: Low	The identified hazard would have an impact on the following:
Frequency: Unknown	☒ Public ☐ Responders ☐ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☐ Public confidence in the jurisdiction's governance
Location: Coastline Areas (Jensen Beach in the City of Stuart, Town of Ocean Breeze, Town of Jupiter Island and Town of Sewall's Point as well as many properties along the canals)	

Vulnerability Assessment

Widespread scientific consensus exists that the world's climate is changing. Some of the effects are likely to include more variable weather, heat waves, heavy precipitation events, flooding, droughts, more intense storms such as hurricanes, sea level rise, and air pollution. Each of these changes has the potential to negatively affect health[38]. The chart below shows the findings by the Centers for Disease Control and Prevention (CDC) as it relates to impact on health[39]:

Weather Event	Health Effects	Populations Most Affected
Heat waves	Heat stress	Extremes of age, athletes, people with respiratory disease
Extreme weather events,(rain, hurricane, tornado, flooding)	Injuries, drowning	Coastal, low-lying land dwellers, low SES
Droughts, floods, increased mean temperature	Vector – food – and water-borne diseases	Multiple populations at risk
Sea-level rise	Injuries, drowning, water and soil salinization, ecosystem and economic disruption	Coastal, low SES
Drought, ecosystem migration	Food and water shortages, malnutrition	Low SES, elderly, children
Extreme weather events, drought	Mass population movement, international conflict	General population
Increases in ground-level ozone, airborne allergens, and other pollutants	Respiratory disease exacerbations (COPD, asthma, allergic rhinitis, bronchitis)	Elderly, children, those with respiratory disease
Climate change generally; extreme events	Mental health	Young, displaced, agricultural sector, low SES

[38] https://www.cdc.gov/climateandhealth/policy.htm
[39] https://www.cdc.gov/climateandhealth/policy.htm

Martin County may experience serious flood inundation and there would be an impact on the following:

- Property
- Environment
- Public health
- Economy
- Flooding

Risk Assessment

The barrier islands of Martin County are Hutchinson Island north of the St. Lucie Inlet and Jupiter Island south of the inlet. State Road A1A extends south on Hutchinson Island into Martin County from St. Lucie County. Developed areas are predominately residential. The Indian River Lagoon lies west of the barrier island in Martin County and extends to Jupiter Inlet. This estuary is designated as an Estuary of National Significance. The Lagoon contains highly productive natural communities and ecosystem, including sea grass beds, algal beds, and oyster beds, mud flats, tidal marshes and mangrove swamps. The Lagoon is heavily used by recreational boaters and is important to the marine business communities as prime locations for boat facilities and waterfront development. Impacts include storm-water drainage systems, saltwater intrusion into public water supplies and sources, and ecological impacts of inundation and saltwater intrusion into estuaries and freshwater systems.

Sea level changes can have a compounded impact when a flooding or storm surge event impacts coastal and inland areas. Adaptation of current structures, mitigation and/or managed withdrawal of structures in redevelopment activities can lessen economic and social impacts to County businesses, government and residents (Martin County CEMP, 2018).

Historical Events

According to a study by the Florida Department of Environmental Protection et al., the sea has risen 5.5 inches in the past 50 years (1963-2012) based on data from the Union of Concerned Scientist (UCSUSA). The UCSUSA also suggests that changes in sea level arise largely from two sources: loss of land-based ice and warming of the ocean, which causes seawater to expand and take up more space. Over the course of the 20th century, warming oceans contributed the bulk of the sea level rise signal. But since 2005, about two-thirds of observed sea level rise has come from loss of ice. When we look into the future, there is still a considerable degree of uncertainty about how much ice loss will contribute to sea level rise[40].

[40] https://blog.ucsusa.org/kristy-dahl/nca-sea-level-rise

SIII.1.2.9 Severe Thunderstorms

A severe thunderstorm is defined as a thunderstorm containing one or more of the following phenomena: hail US quarter size or greater, winds gusting in excess of 58 mph, and/or a tornado (NOAA, NWS, 2014). 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. There are four types of thunderstorms[41]:

- **Single-cell** – small, brief, weak storms that grow and die within an hour or so; may produce brief heavy rain and lighting.
- **Multi-cell Storm** – thunderstorm in which new updrafts form along the leading edge of rain-cooled air; multi-cell storms may produce hail, strong winds, brief tornadoes, and/or flooding.
- **Squall Line** - storms arranged in a line, often accompanied by "squalls" of high wind and heavy rain.
- **Supercell** - a long-lived (greater than 1 ho an updraft (a rising current of air) that is tornadoes come from supercells.

Source: NOAA/NSSL; https://www.nssl.noaa.gov/education/svrwx101/thunderstorms/types/

Extent/Unit of Measurement

Thunderstorms are measured by the wind gust to at least 58 mph, and/or hail to at least one in in diameter[42].

Thunderstorm	Marginal (MRGL)	Slight (SLGT)	Enhanced (ENH)	Moderate (MDT)	High (HIGH)
No severe thunderstorms expected	Isolated severe thunderstorms possible	Scattered severe storms possible	Numerous severe storms possible	Widespread severe storms likely	Widespread severe storms expected

[41] Source: NOAA/NSSL; https://www.nssl.noaa.gov/education/svrwx101/thunderstorms/types/

[42] https://www.weather.gov/images/ind/spc_risks2015.png

Assessments

Vulnerability: Moderate	**Consequence Analysis**
Probability: High	The identified hazard would have an impact on the following:
Frequency: 1 – 5 years	☒ Public ☒ Responders ☒ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☒ Public confidence in the jurisdiction's governance
Location: Countywide	

Vulnerability Assessment

Thunderstorm events can have the following potential impacts within Martin County:

- Excessive wind
- Excessive water
- Damaging hail
- Electric power outage
- Surface and air transportation disruption
- Telecommunications system outage
- Human health and safety
- Psychological hardship
- Economic disruption
- Fire
- Storm water drainage impairment

Risk Assessment

At the time of publication, no model was available to determine potential loss in Martin County due to severe thunderstorms. The County can expect losses similar to those in the past. The probability of future occurrence for thunderstorms based on the hazard history is high. The Weather Channel reports that the State of Florida averages 24.7 lightning strikes per square mile per year. This would indicate that Martin County, with 555 square miles could average 13,708 lightning strikes per year, if the 70-100 days a year of severe thunderstorms in the State impact Martin County.

Vulnerability to severe thunderstorms and lightning is high in Martin County, but many of the jurisdictions and population centers have only moderate vulnerabilities relative to these hazards. This variation in relative levels of vulnerability is again primarily due to construction

practices and community characteristics. Working communities have a higher vulnerability to economic impacts by lightning than residential or retirement communities, all other factors being equal, while residential and retirement communities have a historically higher vulnerability in terms of lightning damages. The most vulnerable areas in Martin County would be open areas such as the shoreline, golf courses, open fields (i.e., Martin County Airport - Witham Field and Sailfish Splash Park). This vulnerability is increased because these areas are where large populations congregate. There could also be a significant loss of life as well as economic impacts to transportation systems, tourism, etc. The probability of future thunderstorms with winds, hail, and lightning occurrence based on hazard history is high. According to the Florida Climate Center, Florida has 100 days of thunderstorms annually[43].

Historical Events

The following conditions from severe thunderstorm events occurred in Martin County:

- 1953 or earlier – resulted in 26 thunderstorm wind damage incidents
- 1993 – high winds overturned a mobile home
- 1995 – there was one related death from a thunderstorm
- 2007 – lightning strike destroyed a guest house
- 2010-2014 – 63% of brush fires caused by lightning strikes resulted in nearly 3.000 acres being burned
- 2013 – lightning strike caused a structure fire and significant damage to a home
- 2014 – 20 mobile homes were damaged from straight-line wind
- 2020 – Strong wind gusts, heavy rain and hail caused property damage in Palm City

SIII.1.2.10 Tornadoes

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud extending to the ground. It is generated by a thunderstorm or hurricane when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. The most common type of tornado, the relatively weak and short-lived type, occurs in the warm season with June being the peak month. The strongest, most deadly tornadoes occur in the cool season, from December through April. Occasional windstorms accompanied by tornadoes, such as the winter storm of 1993, also are widespread and destructive. The damage from a tornado is a result of the high wind velocity and wind-blown debris.

[43] http://climatecenter.fsu.edu/

Florida's tornadoes usually occur in the Spring and Summer months. Summer season tornadoes (June-September) typically occur along strong sea breeze boundary collisions, as well as from tropical cyclones. Spring season tornadoes (February-May) can be more powerful and deadly as they are spawned from severe supercells along a squall line ahead of a cold front. These types of tornadoes are also possible in the fall and winter months (October-January). Florida tornado climatology shows us that strong to violent tornadoes are just as likely to occur after midnight as they are in the afternoon[44].

Source: Martin County Sheriff's Office

Extent/Unit of Measurement

Tornadoes are measured using the Enhanced Fujita Scale.

Enhanced Fujita Scale	
EF Rating	**3 Second Gust (mph)**
0	65 - 85
1	86 - 110
2	111 - 135
3	136 - 165
4	166 - 200
5	Over 200

The EF Scale was revised from the original Fujita Scale to reflect better examinations of tornado damage surveys to align wind speeds more closely with associated storm damage. The new scale has to do with how most structures are designed[45].

[44] https://floridadisaster.org/hazards/tornadoes/
[45] https://www.weather.gov/oun/efscale

Assessments

Vulnerability: M	**Consequence Analysis**
Probability: Moderate	The identified hazard would have an impact on the following:
Frequency: 5 – 10 years	☒ Public ☒ Responders ☒ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☒ Public confidence in the jurisdiction's governance
Location: Countywide (Stuart, Port Salerno, Indiantown, and Hobe Sound)	

Vulnerability Assessment

Martin County is on the eastern side of Florida along the Atlantic Ocean therefore making it more vulnerable to tropical cyclones than inland counties. Martin County has a vulnerable population that includes individuals that are oxygen dependent, suffering from mental health issues, and social and economic issues. According to the U.S. Census Bureau, the County has 10.5% of the residence that live below the poverty line[46] and the Florida Department of Health's 2018 Florida Access and Functional Needs Profile, indicates the following vulnerability data[47]:

- 0.2% - Homeless
- 9.4% - Adults who use special equipment due to health problems
- 3.6% - Adults with seriously mental Illness
- 1.7% - Adults 18 to 64 with vision difficulty
- 2.4% - Adults 18 to 64 with health difficulty
- 5.9% - Adults 65+ with vision difficulty
- 14.2% - Adults 65+ with hearing difficulty
- 14.8% - Adults 65+ with probable Alzheimer

Tornado events can have the following potential impacts within Martin County:

- Excessive wind
- Electric power outage
- Surface and air transportation disruption
- Telecommunications system outage
- Human health and safety

[46] https://www.census.gov/quickfacts/fact/table/martincountyflorida/PST045219
[47] http://www.flhealthcharts.com/ChartsReports/rdPage.aspx?rdReport=ChartsProfiles.AccessAndFunctionalNeeds

- Psychological hardship
- Economic disruption

Risk Assessment

Historical data indicate the overall hazard ranking of Martin County to tornadoes is low, (State of Florida Enhanced Hazard Mitigation Plan) but some specific communities have a moderate to high vulnerability to this hazard due to the type of construction or numbers of mobile homes (manufactured housing units) within their boundaries. These communities include Port Salerno, Indiantown, Hobe Sound, and Town of Ocean Breeze. These communities continue to be more vulnerable due to the type of construction of structures in the areas.

Because tornado hazards are not linked to geography or geology, it is difficult to determine the probability of future occurrence. However, based on historical data for the State of Florida and Martin County, Martin County would only expect an EF-0 or EF-1 magnitude tornado, as defined on the Enhanced Fujita Scale.

Historical Events

The following is a historical overview of tornados that affect Martin County:

Date	Location	Fujita Scale	Brief Description
03/16/2004	Hobe Sound	EF0	Tornado touched down briefly along US Highway 708 about 5 miles west of Hobe Sound. The tornado struck an animal hospital, damaging the roof of the structure, overturning a small trailer and damaging the roof of a barn. A few trees were also blown down.
03/16/2004	Hobe Sound	EF0	The tornado touched down to the west and lifted for about five miles and then touched down briefly in the Banner Lake area of Hobe Sound. The only reported damage was a few downed trees and power lines.
08/24/2006	Stuart	EF0	A tornado briefly touched down in the Rocky Point area damaging solar panels and roofs.
08/19/2008	Port Salerno	EF0	Rain bands from Tropical Storm Fay moving onshore from the Atlantic produced a tornado in Stuart. An EF0 tornado associated with a rain band moving on shore overturned a panel truck and damaged a service station awning.
10/18/2011	Indiantown	EF0	The tornado caused mainly light damage to a two-story home (several windows blown in, vinyl siding removed, soffit damaged), caused the roof of a pole barn to collapse upon itself, and totally removed the roof of an adjacent commercial building (VFW lodge). Several large tree branches were downed, and one tall pine tree was uprooted.

10/29/2011	Hobe Sound	EF0	The tornado removed the roof from one mobile home and carried it approximately 50 yards downwind. Small portions of metal roofs were peeled back from three other mobile homes. Thirty-eight additional mobile homes experienced minor damage to window awnings and carports. Two vehicles experienced damage due to movement by the wind into an adjacent structure. Three large palm trees were uprooted or toppled, and many smaller trees sustained damage. The tornado lifted just prior to reaching Highway A1A.
10/29/2011	Hobe Sound	EF0	The cell, which produced the Ridgeway Mobile Home Park tornado moments earlier, produced another brief tornado, which impacted the Loblolly Bay residential community. The tornado toppled multiple trees, then likely moved over Peck Lake as a waterspout. Winds were estimated at 65 to 75 mph.
1/17/2016	Hobe Sound	EF1	The tornado produce damage near U.S. Highway 1, and then weakened to an EF0 before lifting near the intracoastal waterway. There were numerous large trees with trucks snapped or were uprooted and roof and car damage resulting from trees falling.
5/14/2018	Stuart	EF0	The tornado, with estimated winds of 70-80 mph, caused minor damage to a screen porch and damaged roof shingles on a two-story home. It also ripped portions of a roof and shout-facing wall from an adjacent barn and uprooted a large tree.
5/27/2018	Port Salerno	EF0	A short-lived tornado only lasted a few seconds and caused a trampoline to become airborne and got stick in power lines atop a power pole.

SIII.1.2.11 Tsunami

A tsunami is a series of waves created when a body of water, such as in an ocean, is rapidly displaced. A tsunami has a much smaller amplitude (wave height) offshore, and a very long wavelength (often hundreds of kilometers long), which is why they generally pass unnoticed at sea, forming only a passing "hump" in the ocean. Tsunamis have been historically referred to as tidal waves because as they approach land, they take on the characteristics of a violent onrushing tide rather than the sort of cresting waves that are formed by wind action upon the ocean. Since they are not actually related to tides, the term is considered misleading and its usage is discouraged by oceanographers.

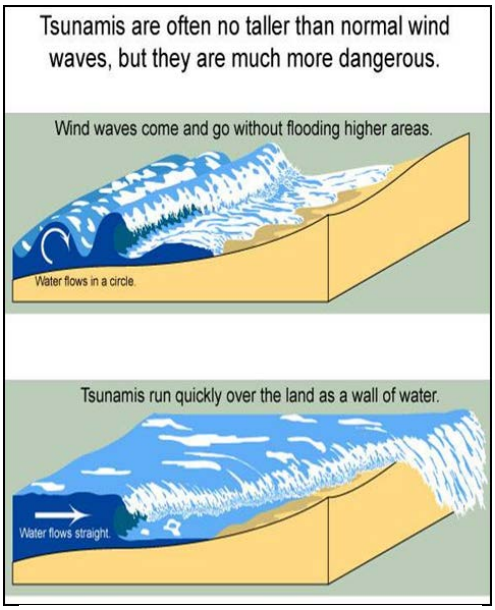
Source: https://earthdata.nasa.gov/learn/sensing-our-planet/sizing-a-tsunami

There is another phenomenon often confused with tsunamis called rogue waves. There remains debate as to whether these waves are related to tsunamis. They are included in this section as the mitigation plans address the threat in the same relative manner. The characteristics are:

- Unpredictable nature
- Little is known about the formation
- May be caused by regularly spaced ocean swells that are magnified by currents or the atmosphere

The NWS maintains and operates two Tsunami Warning Centers, which are staffed 24 hours a day, 7 days a week. The main mission of the warning centers is to help protect life and property from tsunamis.

When an earthquake occurs, seismic networks provide information about an earthquake's location, depth, magnitude, and other source characteristics. If a warning centers turn to water-level information, looking for changes in water-level height could indicate the existence and size of a tsunami. The primary sources of information about water-level change are a network of Deep-ocean Assessment and Reporting of Tsunami (DART) systems.



Source: Tsunami Terms and Definitions (FEMA, 2011)

Tsunami waves are unlike typical ocean waves generated by wind and storms. When tsunamis approach shore, they behave like a very fast-moving tide that extends far inland. Tsunamis are not like the typical wind-generated waves popular with surfers. Even "small" tsunamis are associated with extremely strong currents, capable of knocking someone off their feet. Because of complex interactions with the coast, tsunami waves can pers , natural phenomena, tsunamis can range in size from micro-tsunamis detectable only by sensitive instruments on the ocean floor to mega-tsunamis that can affect the coastlines of entire oceans, as with the Indian Ocean tsunami of 2004[48].

Extent/Unit of Measurement

DART (Deep-ocean Assessment and Reporting of Tsunami) systems were developed by NOAA for the early detection, measurement, and real-time reporting of tsunamis in the open ocean. The NWS's National Data Buoy Center operate f DART systems, which is part of a larger international net d

Source: Tsunami Terms and Definitions (FEMA, 2011)

[48] https://www.usgs.gov/faqs/what-are-tsunamis?qt-news_science_products=0#qt-news_science_products

of 39 systems (as of 2016) strategically located throughout the Pacific and Atlantic Oceans, the Gulf of Mexico, and the Caribbean Sea.

Each system consists of a bottom pressure recorder (BPR) anchored on the ocean floor and a separately moored companion surface buoy. When a tsunami passes over a BPR, the instrument detects and records the changes in the overlying water pressure. An acoustic link transmits information from the BPR to the surface buoy, which then relays it via satellite to the warning centers where the information is incorporated into tsunami forecast models[49].

Assessments

Vulnerability: Low	**Consequence Analysis**
Probability: Low	The identified hazard would have an impact on the following:
Frequency: NA	☒ Public ☒ Responders ☒ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☒ Public confidence in the jurisdiction's governance
Location: Coastline (Jensen Beach area in the City of Stuart, Town of Ocean Breeze, Town of Jupiter Island and Town of Sewall's Point)	

Vulnerability Assessment

Tsunami events occur most often in the Pacific Ocean, but they are a global phenomenon, and all are potentially dangerous, though they may not damage every coastline they strike. Analyzing the past 150 years of tsunami records shows that the most frequent and destructive tsunamis to affect the U.S. have occurred along the coasts of California, Oregon, Washington, Alaska, and Hawaii.

However, the State of Florida is located within the Caribbean area, and over the past 156 years, the Caribbean has experienced more total tsunami events, which have ultimately resulted in over 2,500 deaths. Overall, Florida has experienced few destructive tsunami or rogue wave events, but there were several small events.

Modeling has indicated that a wave generated in a tsunami threatening Martin County would be 6-8 feet in height. Impact to the County would be comparable to impact as a result of significant storm surge due to a hurricane. At the time of publication, no specific data were

[49] https://www.tsunami.gov/?page=tsunamiFAQ

available to determine the local potential loss associated with a tsunami incident in Martin County.

A tsunami event can have the following potential impacts within Martin County:

- Excessive water
- Soil/beach erosion
- Electric power outage
- Surface disruption
- Navigable waterway impairment
- Potable water system loss or disruption
- Sewer system outage
- Human health and safety
- Psychological hardship
- Economic disruption
- Disruption of community services
- Damage to critical environmental resources
- Damage to identified historical resources
- Storm water drainage impairment

Risk Assessment

Florida has directly experienced few destructive tsunami and rogue wave events since 1900, with only five small recorded occurrences. The probability of future tsunami and rogue wave events in Martin County is very low, however, the eastern side of Martin County is coastal and there is always a potential.

Historical Events

There is no evidence that a tsunami has affected the County, but Martin County is currently researching how to become a Tsunami Ready Community.

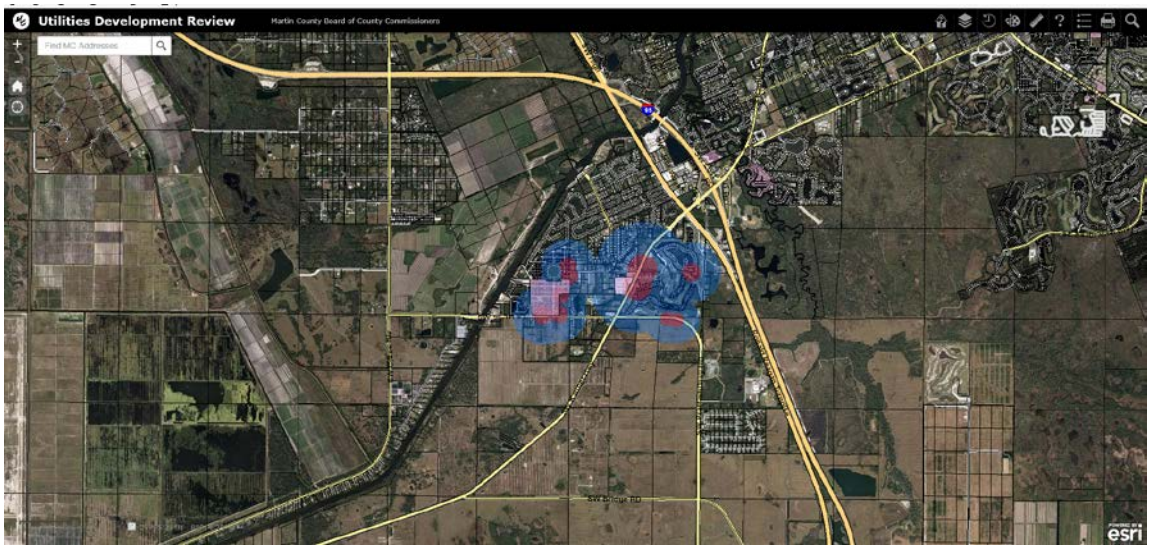
SIII.1.2.12 Wellfield Contamination

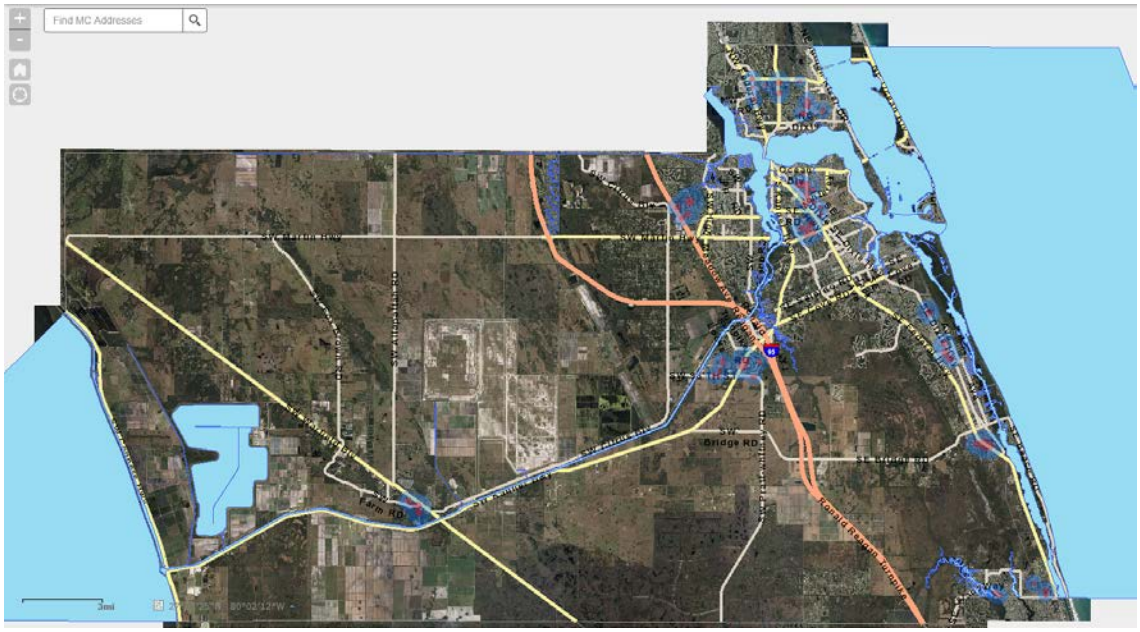
The development of wellfield protection programs is a major preventative approach for the protection of community drinking water supplies. Wellfield protection is a means of safeguarding public water supply wells by preventing contaminants from entering the area that contributes water to the well or wellfield over time. Management plans are developed for the wellfield protection area that include inventorying potential sources of ground water contamination, monitoring for the presence of specific contaminants, and managing existing and proposed land and water uses that pose a threat to ground water quality.

Ground water is an essential natural resource. It is a source of drinking water for more than half of the U.S. population and more than 95% of the rural population. In addition, ground water is a support system for sensitive ecosystems, such as wetlands or wildlife habitats.

Contamination is a daily threat from pollutants seeping into the ground, especially in areas next to the wells that pump water out of the aquifer - known as wellfields. To address existing and future threats to the drinking water supply, ERM was created in 1987 to implement the new Wellfield Protection Ordinance[50]. Cleaning up contaminated ground water can be technically difficult, extremely expensive, and sometimes simply cannot be done. Contaminated ground water also affects the community by discouraging new businesses or residents from locating in that community.

Martin County Wellfields





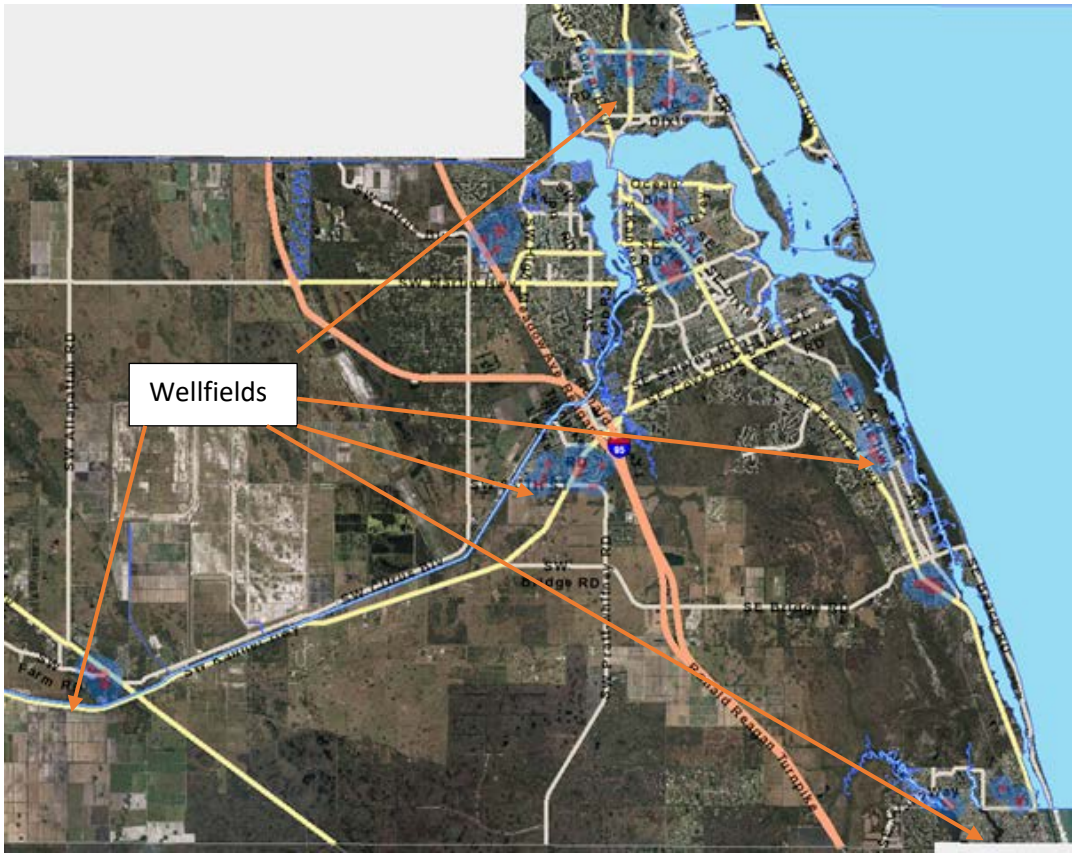
[50] https://discover.pbcgov.org/erm/PermitsRegulation/Wellfield-Protection.aspx#:~:text=Contamination%20is%20a%20daily%20threat,the%20new%20Wellfield%20Protection%20Ordinance%20.

Extent/Unit of Measurement

The unit of measurement for wellfield contaminations is based on the number of occurrences of contamination.

Assessments

Vulnerability: Low	**Consequence Analysis**
Probability: Low	The identified hazard would have an impact on the following:
Frequency: Unknown	☒ Public ☐ Responders ☐ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☐ Public confidence in the jurisdiction's governance
Location: Countywide (see map)	



Vulnerability Assessment

Wellfield contamination can present serious problems for residences, businesses, agriculture and wildlife that would make the county vulnerable to public health, livestock, aquifer and other issues that would cause the below mentioned impacts.

Wellfield contamination can have the following potential impacts within Martin County:

- Potable water system loss or disruption
- Sewer system outage
- Human health and safety
- Psychological hardship
- Economic disruption
- Disruption of community services

Wellfield contamination has not been a major problem for most of Martin County. There is some potential exposure to this hazard in Jensen Beach, Hobe Sound, and Indiantown, but overall, county vulnerability to this hazard is considered low. The probability of future occurrence also is low, but continued monitoring will be necessary for future prevention.

Risk Assessment

Cleaning up contaminated ground water can be technically difficult, extremely expensive, and sometimes simply cannot be done. Contaminated ground water also affects the community by discouraging new businesses or residents from locating in that community

At the time of publication, no data were available to determine the potential loss associated with wellfield contamination in Martin County.

Historical Events

There is no historical data showing that wellfield contamination has been a major problem in Martin County. Due to the recent flooding events, the wellfields will be monitored more closely.

SIII.1.2.13 Wildland Fires

Wildfire is defined by the National Fire Program as an unplanned fire caused by lightning or other natural causes or by an escaped prescribed fire and wildland fire is an overarching term describing any non-structure fire that occurs in vegetation and natural fuels[51]. Wildfires occur in Florida every year and are part of the natural cycle of Florida's fire-adapted ecosystems. Many of these fires are quickly suppressed before they can damage or destroy property, homes and lives. There are several types of fires[52]:

[51] https://www.nps.gov/orgs/1965/wildfires-prescribed-fires-fuels.htm
[52] https://www.nrcan.gc.ca/our-natural-resources/forests-forestry/wildland-fires-insects-disturban/forest-fires/fire-behaviour/13145

- **Crown Fires:** burn trees up their entire length to the top. These are the most intense and dangerous wildland fires.
- **Ground Fires:** occur in deep accumulations of humus, peat and similar dead vegetation that become dry enough to burn. These fires move very slowly, but can become difficult to fully put out, or suppress.
- **Surface Fires:** burn only surface litter and duff. These are the easiest fires to put out and cause the least damage to the forest.

Source: https://cbs12.com/news/local/lightning-causes-10-acre-fire-in-martin-county

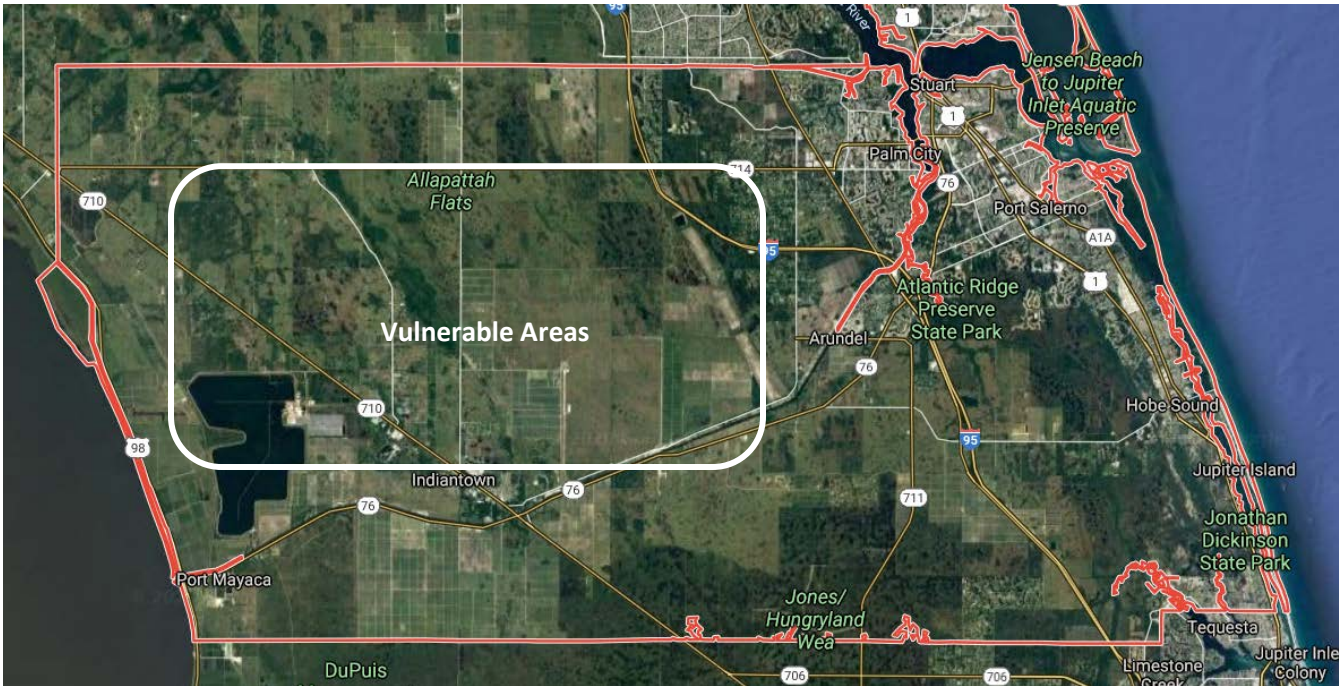
Large Fires in Martin
Source: treasurecoast.com

Extent/Unit of Measurement

Wildland fires are measured by the burnt acreage for each event.

Assessments

Vulnerability: Low	**Consequence Analysis**
Probability: Moderate	The identified hazard would have an impact on the following: ☒ Public ☒ Responders ☒ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☐ Public confidence in the jurisdiction's governance
Frequency: 5 – 10 years	
Location: Countywide with the western portion being more susceptible due to undeveloped areas	



Vulnerability Assessment

Wildland fires can have the following potential impacts within Martin County:

- Life & Property Loss
- Electric power outage
- Surface and air transportation disruption
- Telecommunications system outage
- Human health and safety
- Psychological hardship
- Economic disruption
- Disruption of community services
- Agricultural/fisheries damage
- Loss of livestock
- Damage to critical environmental resources
- Damage to identified historical resources

Risk Assessment

Low Wildfire Hazard - Homes are built with concrete and appropriate non-flammable roofing materials. Short grass, low shrubs and light duff are present. The forest and heavy vegetation are not continuous throughout the community. Wildfires that do occur in these areas are less intense and easier to suppress because of the lower volume of fuel to feed and sustain the fire (Jupiter Island, Ocean breeze, Sewall's point, City of Stuart, Hutchinson Island, North River Shores, Lighthouse Point, Port Mayaca, Tropical Park).

Medium Wildfire Hazard - Wildland vegetation is continuous throughout the community. Tall grass, medium shrubs, thick duff and ladder fuels are prominent in the area. Vegetation is

less than 30 feet from homes. Homes are built with vinyl, plastic or other types of less fire-resistant materials. Access is limited and the concentration of fuel to feed fires causes more intense fire behavior. Fire suppression becomes more difficult and costly. (Jensen Beach (Savanna's Preserve State Park), Palm City (every year), Port Salerno (squatters/homeless wildfires), Rio (kids and arson wildfires), Coral Gardens, Golden Gate)

High Wildfire Hazard - Dense, highly flammable vegetation surrounds the neighborhood and is within a few feet of homes. A thick layer of vegetation is present on the forest floor. Access to the neighborhood is limited to one entrance and/or on poorly maintained roads. Homes are rarely built with fire-resistant materials. Continuous, overgrown vegetation limits access and creates intense wildfire conditions. Fire suppression is challenging and requires more resources (engines, dozers, aircraft) and firefighters than normal. (Hobe sound (J.D. State Park), Indiantown (May 2009 major wildfires lost 2 homes in Indianwood), Port Mayaca (every year Dupuis Reserve), Sugar Hill (Maleluca), Gomez (Port Salerno).

There are two Firewise Communities in Martin County (Country Place & Indianwood). These communities are aware of their wildfire risk and take action to reduce the risk.

Historical Events

Martin County's historical information related to wildland fires:

Year	# of Occurrences
2019	3
2018	25
2017	25
2016	0
2015	17
2014	24
2013	17
2012	33
2011	79
2010	40

Source: Martin County Fire Rescue, 4/2020

SIII.1.3 Technological Hazards

Technological hazards include radiological accidents, power failure, hazardous materials accidents, transportation system accidents, well field contaminations, and critical infrastructure disruption. The hazard identification describes each hazard provides historical

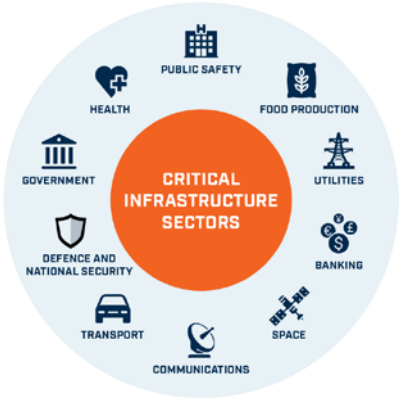
impacts if available. When available, maps are provided to illustrate the location and extent of the hazards. Disasters are classified by the magnitude of their effect.

SIII.1.3.1 Critical Infrastructure Disruption

According to the U.S. Cybersecurity and Infrastructure Security Agency (CISA), there are 16 critical infrastructure sectors whose assets, systems, and networks, whether physical or virtual, are considered so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, national public health or safety, or any combination thereof[53]:

- Chemical
- Communication
- Dams
- Emergency Services
- Financial Services
- Government Facilities
- Information Technology
- Transportation Systems
- Commercial Facilities
- Critical Manufacturing
- Defense Industrial Base
- Energy
- Food & Agriculture
- Healthcare & Public Health
- Nuclear Reactors, Materials & Waste
- Water & Wastewater Systems

Martin County has many of these sectors, therefore, making our area as vulnerable as any of the counties in Florida. Disruption of any one of the sectors will cause a cascading effect that may cause the county to activate their Continuity of Government (COG) and Continuity of Operations Plans (COOP).



Source: https://10qf889n1r732w79i2see5tb-wpengine.netdna-ssl.com/wp-content/uploads/2018/04/Critical-Infrastructure.png

Extent/Unit of Measurement

The unit of measurement will be based on the number of occurrences.

[53] https://www.cisa.gov/critical-infrastructure-sectors

Assessments

Vulnerability: Low	**Consequence Analysis**
Probability: Low	The identified hazard would have an impact on the following: ☒ Public ☒ Responders ☒ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☒ Public confidence in the jurisdiction's governance
Frequency: Unknown	
Location: Countywide	

Vulnerability Assessment

Critical infrastructure disruption has the same potential impacts in all Martin County communities. The vulnerabilities of all communities to these hazardous are considered low and probability of future occurrence in Martin County is low.

Critical Infrastructure Disruption can have the following potential impacts on a community:

- Communication systems failures
- Electric power outage
- Surface and air transportation distribution
- Potable water system loss or disruption
- Sewer system outage
- Telecommunications system outage
- Human and health safety
- Psychological hardship
- Economic disruption
- Disruption of community services

Risk Assessment

The disruption to the communications sector will produce adverse economic impacts in government and business rather than retirement or residential communities. On the other hand, communications system failures in residential and retirement communities may put more human lives at risk. The probability of future occurrence of communications failure in Martin County is low. Martin County and all jurisdictions within the County maintain a robust system of redundancy in the communications structure.

Martin County has two redundant data centers, one at the County Administrative Center and one at the Public Safety Complex/Emergency Operations Center. These data centers back

each other up and can run all critical applications independently should one be unavailable. We also have a third data center at the former EOC, now called the Disaster Recovery Center, that houses backup storage for the other two data centers as well as a backup public safety dispatch center.

All through data centers are connected to a redundant 10G fiber optic cable ring. In 2010, Martin County built a 140-mile underground fiber optic network that connects 132 sites around the County supporting network connections to the County, the City of Stuart, Towns of Jupiter Island and Sewall's Point, Martin School District and Martin Health Systems. Nearly every site on the network has redundant connections to two data centers from alternate directions, so in the event of fiber network failure, all sites should remain connected and operational.

Power failures have the same potential impacts in all Martin County communities. The vulnerabilities of all communities to power failures are considered moderate. The power grid throughout Martin County is diversified, and there are no single choke points or distribution nodes whose failure would disrupt power distribution to the entire community. The probability of future occurrence of small-scale power outages in Martin County is high, due to the frequency of thunderstorms and lightning as well as transportation system accidents. The probability of future occurrence of large-scale power outages in Martin County is low.

Historical Events

Martin County has experienced some level of disruption to its critical infrastructure sectors – such as loss of electricity/water that effects the utilities sector, an epidemic/pandemic that effected the health and government sectors, staff shortages that effected the public safety sector, closing of the banks that affected the banking sector and the list continues depending on the incident/event.

SIII.1.3.2 Hazardous Materials Accidents

Hazardous materials accidents can occur anywhere there is a road, rail line, pipeline, or fixed facility storing hazardous materials. Virtually the entire state is at risk to an unpredictable accident of some type. Most accidents are small spills and leaks, but some result in injuries, property damage, environmental contamination, and other consequences. These materials can be poisonous, corrosive, flammable, radioactive, or pose other hazards and are regulated by the Department of Transportation.

Emergencies involving hazardous materials can be expected to range from a minor accident with no off-site effects to a major accident that may result in an off-site release of hazardous or toxic materials. The overall objective of chemical emergency response planning and preparedness is to minimize exposure for a wide range of accidents that could produce off-site levels of contamination in excess of Levels of Concern established by the EPA.

Source: https://www.wflx.com/story/28696080/fire-damages-biodiesel-facility-in-stuart/

A large volume of hazardous materials is transported to and through the County by railroad and highway, air, water, and pipeline daily. Within Martin County, there are both public and private fixed facilities that produce or use hazardous materials. Coordinating procedures for hazardous material response are found within the County's Emergency Plan for Hazardous Materials. U.S. Highway 1 is the main urban north-south route connecting the adjacent counties and serving the coastal area. The Florida Turnpike, a north-south toll route, and Interstate 95 bisect the County, running parallel to each other. Two railroads pass through Martin County, running north and south. The eastern railroad is serviced by Florida East Coast Railway, and the western railroad by the CSX Corporation. Within the County there are numerous public and private facilities that store hazardous materials and Extremely Hazardous Substances (EHS's). The frequency of fixed facility hazardous materials releases is 3-5 per year with the majority of these having been small-scale incidents. The severity of impact of such an event depends on the proximity to population, chemical character, wind direction, response capability and situational awareness. Under SARA Title III reporting there are fifty-two sites storing EHS's in the County. The number of facilities varies from year to year as new facilities come online and others permanently remove chemicals.

The Florida Gas Transmission Company owns and operates a line that transports natural gas through Martin County. There are three offshoots to meter stations owned by vendors: to Indiantown; to Tampa Electric/Peoples Gas at the I-95/Indiantown Road intersection; and to Florida Power and Light (FP&L). A fuel oil pipeline also runs through the County to the FP & L generating station in Indiantown from the Port of Palm Beach.

Extent/Unit of Measurement

The unit of measurement would be based on the number of occurrences.

Assessments

Vulnerability: High	**Consequence Analysis**
Probability: Moderate	The identified hazard would have an impact on the following:
Frequency: 5 – 10 years	☒ Public
Location: Countywide	☒ Responders ☒ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☐ Public confidence in the jurisdiction's governance

Vulnerability Assessment

Hazardous materials events can have the following potential impacts within Martin County:

- Surface and air transportation disruption
- Human health and safety
- Psychological hardship
- Economic disruption
- Disruption of community services
- Fire
- Toxic releases

A community's vulnerability to hazardous materials accidents depends on three factors:

- The major transportation routes that pass through the community.
- The hazardous material generators located in or near the community.
- The resources in terms of people and property are in an area of possible impact from a hazardous materials release.

Overall, Martin County has a moderate vulnerability to impacts from hazardous materials releases. There are relatively few major generators within the County, and those that do exist are generally away from major population centers. Areas of high vulnerability for these hazardous materials accidents are the City of Stuart, Jensen Beach, Port Salerno, and Hobe Sound due to the transportation network (both highway and rail) that passes through those areas and Indiantown due to both the transportation network and the agricultural economic base. The probability of future occurrence of hazardous materials accidents in Martin County is medium, due to the number of major transportation routes in the County. The frequency of fixed facility hazardous materials releases is 3-5 per year with the majority of these having been small-scale incidents.

Risk Assessment

At the time of publication, no model was available to determine the potential loss associated with hazardous materials accidents in Martin County.

Historical Events

On April 1, 2015, Martin County firefighters battled a fire at a biodiesel company for several hours (see photo above). Four 10,000-gallon tanks of biodiesel caught fire causing a disruption to area businesses and a school[54].

SIII.1.3.3 Radiological/Nuclear Accidents

While an actual release of radioactive material is extremely unlikely and the immediate threat to life extremely low, vulnerability to a nuclear plant disaster could consist of long-range health effects with temporary and permanent displacement of population from affected areas. The potential danger from an accident at a nuclear power plant is exposure to radiation. This exposure could come from the release of radioactive material from the plant into the environment, usually characterized by a plume (cloudlike) formation. The area the radioactive release may affect is determined by the amount released from the plant, wind direction and speed, and weather conditions (e.g., rain) that would quickly drive the radioactive material into the ground, hence causing increased deposition of radionuclides.

Thirty of the 67 counties in the State of Florida are involved in preparedness planning for a commercial nuclear power plant emergency. Emergency Planning Zones (EPZs) have been designated for each power plant to enhance planning efforts for an emergency. An EPZ is comprised of two zones, the 10-mile plume exposure zone and the 50-mile ingestion exposure zone. Specific coordinating procedures for response to a General Emergency at a nuclear power plant have been prepared in the form of Standard Operating Procedures. These include Emergency Classification Levels, which assist in notifying the public if a problem occurs at a plant. They are defined by four categories (Florida Department of Emergency Management, 2012):

Source: https://www.fpl.com/clean-energy/nuclear/st-

[54] https://www.tcpalm.com/story/news/local/martin-county/2019/04/29/martin-sues-over-2015-viesel-fuel-fire-seeking-1-million-clean-up/3616059002/

- Notification of Unusual Event - The event poses no threat to plant employees, but emergency officials are notified. No action by the public is necessary. This is the least serious of the four levels.
- Alert - An event has occurred that could reduce the plant's level of safety, but back-up systems still work. Emergency agencies are notified and kept informed, but no action by the public is necessary.
- Site Area Emergency - The event involves major problems with the plant's safety and has progressed to the point that a release of some radioactivity into the air or water is possible but is not expected to exceed EPA's Protective Action Guidelines (PAGs). Thus, no action by the public is necessary.
- General Emergency - The event has caused a loss of safety systems. If such an event occurs, radiation could be released that would penetrate the site boundary. State and local authorities will take action to protect the residents living near the plant. The alert and notification system will be sounded. People in the affected areas could be advised to evacuate, or in some situations, to shelter in place. When the sirens are sounded, radio and television alerts will have site-specific information and instructions. This is the most serious of the four levels.

Extent/Unit of Measurement

The unit of measurement would be based on the number of occurrences.

Assessments

Vulnerability: Low	**Consequence Analysis**
Probability: Low	The identified hazard would have an impact on the following: ☒ Public ☒ Responders ☒ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☐ Public confidence in the jurisdiction's governance
Frequency: Unknown	
Location: Countywide	

Vulnerability Assessment

The St. Lucie Nuclear Power Plant is located 5.5 miles north of Stuart on Hutchinson Island in St. Lucie County. The facility contains two reactors and is owned and operated by the Florida Power & Light Corporation. This place the northeast quadrant of Martin County, the City of Stuart and Sewall's Point (Zone 7) within the 10-mile EPZ and the entire County 50-mile Ingestion Pathway Zone. Martin County Emergency Management Agency has a

radiological planner on staff. Due to precautions and construction at the nuclear power plant in St. Lucie County, the probability of future occurrence of radiological accidents is low.

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

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

Annually, Florida Power and Light with its partners in preparedness, such as Martin County, complete tables to and fully functional exercises to exercise existing plans for preparedness. Such exercises are evaluated by the Florida Bureau of Radiation Control, Federal Nuclear Regulatory Commission, Federal Emergency Management Agency and Florida Department of Emergency Management to ensure Martin County's compliance and ability to respond to such emergencies.

Risk Assessment

At the time of publication, no data were available to determine the potential loss associated with a radiological accident in Martin County. A countywide exercise is conducted with the Utility, FEMA, the State DEM, and risk and host counties annually for an incident at the St. Lucie Nuclear Power Plant. There have not been any emergencies requiring response and activation for an incident at the plant to date.

Historical Events

There is no documented data showing any historical events related to radiological-nuclear accidents in Martin County.

SIII.1.3.4 Transportation System Accidents

Florida has a large transportation network consisting of major highways, airports, marine ports, and passenger railroads. The heavily populated areas of Martin County are particularly vulnerable to serious accidents, which can produce mass casualties. With the linear configuration of several major highways in Martin County, such as interstate highways and the Florida Turnpike, major transportation accidents could occur in a relatively rural area, severely stressing the capabilities of local resources to respond effectively. Similarly, a major transportation accident could involve many tourists and visitors from other countries, given

Florida's popularity as a vacation destination, further complicating the emergency response to such an event.

Martin County has about 22 miles of Atlantic Ocean coastline that is subject to contamination caused by an oil spill. Oil spills may occur from various activities including pipeline ruptures; well blowouts; leaking oil storage containers; and activities associated with offshore oil exploration, production, and transportation.

Photos[55]

Extent/Unit of Measurement

The unit of measurement would be based on the number of occurrences.

[55] Sources: The Palm Beach Post https://www.palmbeachpost.com/news/20191125/safety-of-beeline-highway-rail-crossings-questioned-after-deadly-amtrak-crash

https://www.tcpalm.com/story/entertainment/whattodoin772/2019/11/22/stuart-air-show-must-go-on-but-when-support-needed-make-next-year/4273351002/

https://www.wptv.com/news/local-news/martin-county/serious-crash-closes-2-intersections-in-martin-county

https://www.history.com/topics/1980s/exxon-valdez-oil-spill

Assessments

Vulnerability: Moderate	**Consequence Analysis**
Probability: Moderate	The identified hazard would have an impact on the following:
Frequency: 5 – 10 years	☒ Public ☒ Responders ☐ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☐ Public confidence in the jurisdiction's governance
Location: Countywide	

Vulnerability Assessment

Transportation system accidents can have the following potential impacts within Martin County:

- Surface and air transportation disruption
- Navigable waterway impairment
- Human health and safety
- Economic disruption
- Disruption of community services
- Environment
- Wildlife and Habitat
- Fire
- Toxic releases

There are no major airports in Martin County, but it operates a 726-acre airport. Although there is no commercial service at the Airport, it is home to more than 200 private and business aircraft. Individual community and population center vulnerabilities to this hazard are entirely dependent upon location. Stuart, Port Salerno, Hobe Sound, and Indiantown have high vulnerabilities to this hazard because of the concentration of rail and highway systems that pass through them. Sewall's Point and Jupiter Island have virtually no exposure to this type of hazard. The probability of future occurrence for transportation system accidents in Martin County is high, due to the number of major transportation routes in the County.

Risk Assessment

At the time of publication, data were not available to determine the potential loss in Martin County due to transportation system accidents.

Historical Events

Martin County's fire rescue and law enforcement personnel respond to transportation accidents daily. Listed below are a few out of the ordinary:

- 2016 – A vehicle and train were involved in a crash resulting in two fatalities
- 2016 – A train struck a pedestrian resulting in a fatality
- 2017 – A large oil spill from a fuel truck spilled more than 300 gallons of fuel in the St. Lucie River
- 2019 – A plane crashed at the Stuart Air Show resulting in one fatality

SIII.1.4 Societal Hazards

Societal hazards include terrorism and sabotage, civil disturbances, and immigration crises.

SIII.1.4.1 Civil Disturbances

The Florida Statutes defines civil disorder as a public disturbance involving acts of violence by an assemblage of three or more persons, which disturbance causes an immediate danger of, or results in, damage or injury to the property or person of any other individual within the United States (Chapter 790.29(2), F.S.).

As in any other area, Martin County is subject to civil disturbances in the form of riots, mob violence, and a breakdown of law and order in a focalized area. Communities with racial mixtures, gang violence, and drug trafficking are increasingly aware of the need to plan for civil disturbance emergencies. Although they can occur at any time, civil disturbances are often preceded by periods of increased tension caused by questionable social and/or political events such as controversial jury trials or law enforcement actions. Police services are responsible for the restoration of law and order in any area of the County.

Source: National School Walkout (CNN.com)

Extent/Unit of Measurement

The unit of measurement will be based on the number of occurrences.

Assessments

Vulnerability: Low	**Consequence Analysis**
Probability: Low	The identified hazard would have an impact on the following:
Frequency: Unknown	☒ Public ☒ Responders ☒ Continuity of Operations including continued delivery of services ☐ Property, Facilities, and infrastructure ☐ Environment ☒ Economic condition of the jurisdiction ☐ Public confidence in the jurisdiction's governance
Location: Countywide	

Vulnerability Assessment

Civil disturbance can have the following potential impacts within Martin County:

- Surface and air transportation disruption
- Human health and safety
- Psychological hardship
- Economic disruption
- Disruption of community services
- Damage to identified historical resources
- Fire

The probability of future occurrence of civil disturbances in Martin County is considered very low. The City of Stuart has a moderate vulnerability in this area, and the Indiantown area has a low vulnerability. In general, civil disturbance is not a significant hazard faced by Martin County.

Risk Assessment

At the time of publication, no data were available to determine the potential loss in Martin County due to civil disturbance.

Historical Events

In 2020, there was a credible threat which prompted law enforcement action for a civil disturbance in Martin County; however, the event remained a peaceful protest.

SIII.1.4.2 Immigration Crises

Florida's location as the nearest U.S. landmass bordering the Caribbean basin makes it a chosen point of entry for many migrants attempting to enter the country illegally. A major consequence of a mass arrival of illegal immigrants could be a disruption of the routine functioning of the impacted community, resulting in significant expenditures related to the situation. These events are typically preceded by periods of increasing tension abroad, which can be detected and monitored. Enforcement of immigration laws is a Federal government responsibility. However, it is anticipated that joint jurisdictional support of any operation will be required from the State and local governments.

The Atlantic shore of Martin County is the frequent scene of the arrival of undocumented aliens. The County has both the history and the potential for the unannounced arrival of many aliens. Until relieved of the responsibility by the State and Federal governments, Martin County must be capable of providing mass refugee care to include shelter, food, water, transportation, medical, police protection, and other social services. Martin County is growing slowly but steadily in population. However, a sudden mass exodus or migration to the area could strain or overwhelm local resources and infrastructure. During a mass migration, community populations can increase significantly when large numbers of families are displaced from other communities fleeing disaster impacts. Temporary mass migration into the County may require shelter services in a host capacity. Additional reliance on community members, hotels, churches and state and federal programs may be necessary to house dislocated families.

Source: Florida Memory; State Library & Archives of Florida - https://www.floridamemory.com/items/show/98693)

Extent/Unit of Measurement

The unit of measurement would be based on the number of occurrences.

Assessments

Vulnerability: Low	**Consequence Analysis**
Probability: Low	The identified hazard would have an impact on the following:
Frequency: Unknown	☒ Public ☒ Responders ☒ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☐ Environment ☒ Economic condition of the jurisdiction
Location: Countywide	

	☐ Public confidence in the jurisdiction's governance

Vulnerability Assessment

Immigration crises can have the following potential impacts within Martin County:

- Human health and safety
- Psychological hardship
- Economic disruption
- Disruption of community services

Reviewing the data on past illegal immigration and mass population movements such as the Haitian influx and Cuban raft incidents of the 1980's indicates that illegal immigration has never reached a crisis state for the local authorities in Martin County. Overall, the County vulnerability to this hazard is very low. Due to demographic features, the City of Stuart has a slightly higher, but still low vulnerability to illegal immigration impacts, and the Hobe Sound and Indiantown areas have moderate vulnerabilities in this regard. The probability of future occurrence also is low.

Risk Assessment

At the time of publication, no data were available to determine the potential loss in Martin County due to mass immigration.

Historical Events

There is no recorded information relating to an immigration crisis in Martin County.

SIII.1.4.3 Terrorism, Cyber Attacks and Sabotage

Terrorist attacks both foreign and domestic may pose a threat to our community at any time. These attacks may take the form of chemical releases, accidents, mass shootings, cyber or improvised explosives. The public governmental/political, transportation, commercial, infrastructure, cultural, academic, research, military, athletic, and other activities and facilities constitute ideal targets for terrorist attacks, which may cause catastrophic levels of property and environmental damage, injury, and loss of life.

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

- Human error
- Insider use of authorized access for unauthorized disruptive purposes
- Recreational hackers with or without hostile intent
- Criminal activity for financial gain, to steal information or services, or organized crime

- Industrial espionage
- Terrorism including various disruptive operations
- National intelligence information warfare, intended disruption of military operations

Extent/Unit of Measurement

The unit of measurement would be the number of occurrences.

Assessments

Vulnerability: Low	**Consequence Analysis**
Probability: Low	The identified hazard would have an impact on the following: ☒ Public ☒ Responders ☒ Continuity of Operations including continued delivery of services ☒ Property, Facilities, and infrastructure ☒ Environment ☒ Economic condition of the jurisdiction ☒ Public confidence in the jurisdiction's governance
Frequency: 10 years or more	
Location: Countywide	

Vulnerability Assessment

Terrorism and sabotage events can have the following potential impacts within Martin County:

- Electric power outage
- Surface and air transportation disruption
- Potable water system loss or disruption
- Sewer system outage
- Telecommunications system outage
- Human health and safety
- Psychological hardship
- Economic disruption
- Disruption of community services

- Damage to critical environmental resources
- Damage to identified historical resources
- Fire
- Toxic releases

The possibilities for terrorism and sabotage in Martin County are extremely limited, and the County's vulnerability to this hazard is very low. The City of Stuart has a slightly higher vulnerability to terrorism as the center of government, but this vulnerability is still considered low. Sewall's Point and Jupiter Island have a slightly higher risk of what may be described as "Celebrity Terrorism" due to the national prominence of some of their citizens, but the overall community vulnerability remains low. Martin County would be vulnerable to terrorist acts targeting (a) the nuclear power facility; (b) food production facilities; (c) water and wastewater treatment facilities; (d) public/crowded events; and (e) residents with considerable wealth. Although terrorism has come to the forefront recently, in Martin County, the probability of future occurrence is low.

Risk Assessment

At the time of publication, no data were available to determine the potential loss in Martin County due to terrorism, cyber-attack and/or sabotage.

Historical Events

In 2019, the City of Stuart was a victim of computer ransomware resulting in no access to emails and their servers as well as losing vital information.

SIII.2 Vulnerability Assessment

The vulnerability Assessment (Table 1) for each hazard describes the community assets and potential impacts for each hazard. A community's vulnerability depends on the extent of the hazard exposure and the value of potentially vulnerable assets. Higher risk areas with higher potential damage warrant mitigation practices that are more extensive. Communities in this situation may rely on land use and site design rather than on relatively simple measures such as building codes and hardening existing structures. Other factors that influence vulnerability and are important for communities to consider when selecting mitigation practices are for pre-disaster mitigation, the amount of undeveloped and underdeveloped land, and in the case of post-disaster mitigation, the amount of developed land within the community.

There are three types of vulnerability - individual, social, and biophysical. Individual vulnerability describes the susceptibility of a person or a structure to potential harm from hazards. Social vulnerability describes demographic characteristics of social groups that make them susceptible to the adverse impacts of hazards. Biophysical vulnerability examines the distribution of hazardous conditions arising from a variety of initiating events such as natural hazards, chemical contaminants, or industrial accidents (MDC, 2009).

Factors influencing vulnerability include, but are not necessarily limited to a community's location, type of construction, demographics, and cultural characteristics. The general hazards to which Martin County is vulnerable and their projected impact potential across the entire spectrum of community exposure and services is discussed below. The hazards identified and discussed here are organized based on the maximum projected impact potential (i.e., hazards capable of producing the maximum community-wide impact, such as hurricanes and floods, are discussed first). This does not mean other identified hazards are less important or less worthy of mitigation, only that their potential to affect the total community is lower.

In order to effectively plan hazard mitigation projects and allocate scarce financial resources, a community's vulnerability to a specific hazard must be coupled with other critical factors to perform a risk assessment.

Risk, or the probability of loss, depends on three elements:

- Frequency - How frequently does a known hazard produce an impact within the community?
- Vulnerability - How vulnerable is a community to the impacts produced by a known hazard?
- Exposure - What is the community's exposure in terms of life and property to the impacts produced by a specific hazard?

Once these three factors are established, the risk level faced by a community regarding any specific hazard can be calculated using the "Risk Triangle" approach (Crichton, 1999; Figure 1).

In this approach, these three factors become the sides of a triangle, and the risk or probability of loss is represented by the triangle's area (Figure 1). The larger the triangle, the higher the community's risk with respect to a given hazard. If a community reduces any of these three factors, they reduce their risk or potential for loss.

For example, if a community reduces its exposure to hurricanes, as has happened historically, by moving from a barrier island to the mainland, they will reduce their exposure and therefore their risk of loss. Likewise, if a community reduces its vulnerability to hurricanes by strengthening its buildings, it also will reduce its risk of loss.

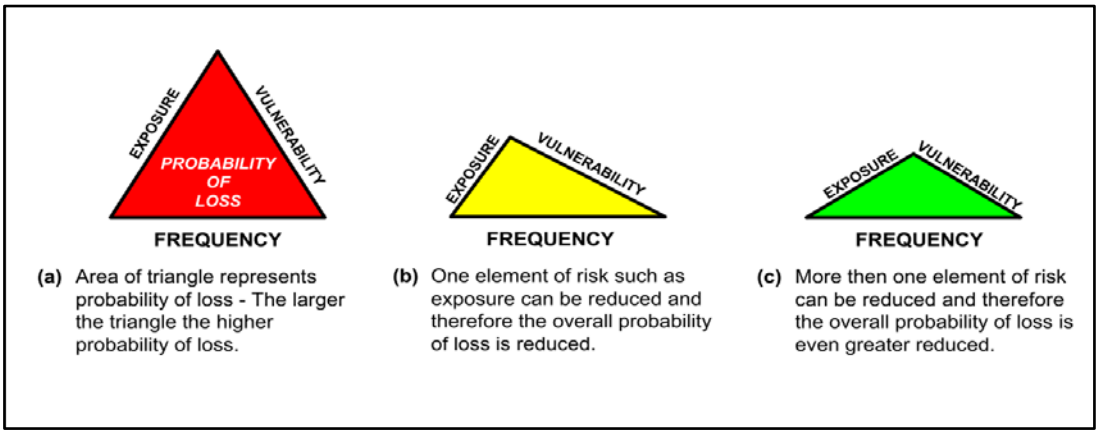


Figure 1 – Risk Triangle

Martin County is vulnerable to a wide range of natural and human-caused hazards that threaten life and property. FEMA's current regulations and guidance under the Disaster Mitigation Act of 2000 (DMA 2000) require, at a minimum, an evaluation of a full range of natural hazards. An evaluation of human-caused hazards (i.e., technological hazards, terrorism) is encouraged, though not required for plan approval. The initial identification of hazards for inclusion in the risk assessment was based on a review of the State of Florida Hazard Mitigation Plan and FEMA mitigation planning guidelines.

In terms of natural hazards, there is very little if anything that can be done to change the frequency with which they produce impacts in a community. Mitigation planning relative to those hazards must therefore focus on reducing the community's vulnerability or exposure. In terms of technological and societal hazards, the most cost-effective type of mitigation is to limit or reduce the frequency with which such hazards occur.

Hazards Vulnerability Matrix

Natural Hazards					
Hazards	**Vulnerability**	**Probability**	**Unit of Measurement**	**Frequency**	**Location**
Beach Erosion	Low	High	Cubic feet or tons of missing soil	5 – 10 years	Coastline
Dam/Levee Failure	Moderate	Low	Acre-Feet Inundation	N/A	N/A
Drought	Moderate	Low	Keetch-Byram Drought Index	5 – 10 years	Countywide
Epidemics / Pandemics	High	Moderate	# of Sickness/Death	10 years or more	Countywide
Extreme Temperature	Moderate	Moderate	Minimum numbers of days at expected temperature	1 – 5 years	Countywide
Floods	High	High	Flood Magnitude	1 – 5 years	Countywide
Tropical Cyclones	High	Moderate	Saffir-Simpson Scale/Sustained Surface Winds	5 – 10 years	Countywide
Sea Level Rise	Moderate	Moderate	Tide Stations & Satellite Laser Altimeters	Unknown	Coastline
Severe Thunderstorms	Moderate	High	Wind Gust	1 – 5 years	Countywide
Tornadoes	Moderate	Moderate	Enhanced Fujita Scale	5 – 10 years	Countywide
Tsunami	Low	Low	DART (Deep-ocean Assessment and Reporting of Tsunami)	N/A	Coastline
Wellfield Contamination	Low	Low	# of Incidents	Unknown	Countywide
Wildfire	Moderate	Moderate	Acres burned/per event	1 – 5 years	Countywide

Technological Hazards					
Hazards	**Vulnerability**	**Probability**	**Unit of Measurement**	**Frequency**	**Location**
Critical Infrastructure Disruption	Moderate	Moderate	# of Incidents	Unknown	Countywide
Hazardous Materials	High	Moderate	# of incidents	5 – 10 years	Countywide
Radiological / Nuclear Accidents	High	Low	# of Incidents	Unknown	Countywide
Transportation System Accidents	Moderate	Moderate	# of Accidents	5 – 10 years	Countywide
Societal Hazards					
Hazards	**Vulnerability**	**Probability**	**Unit of Measurement**	**Frequency**	**Location**
Civil Disturbances	Moderate	Moderate	# of Incidents	Unknown	Countywide
Immigration Crises	Low	Low	# of Incidents	Unknown	Countywide
Terrorism and Sabotage	Moderate	Moderate	# of Incidents	Unknown	County wide

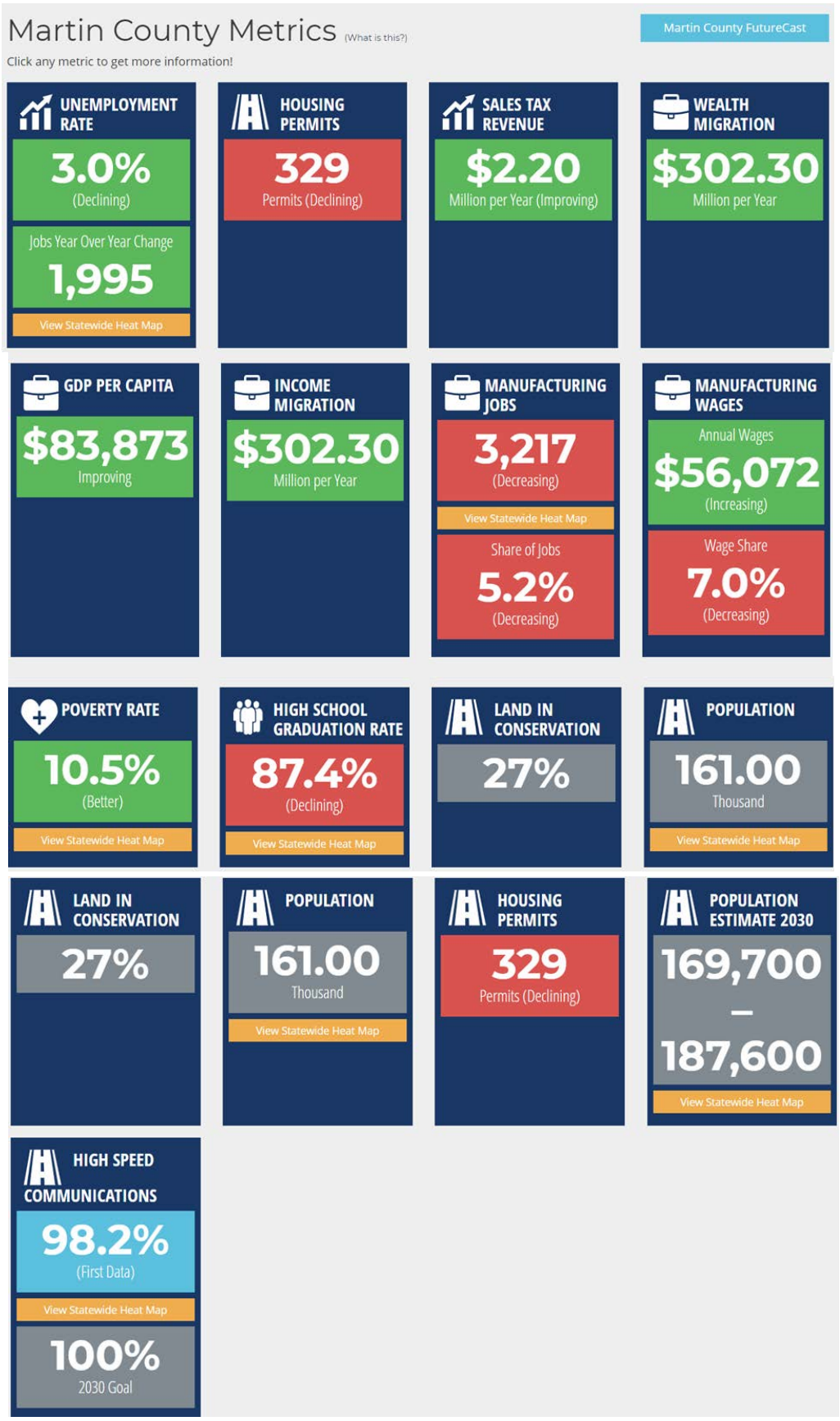
Table 1

Appendix H - Hazards Scales and Ranking Information

SIII.2.1 Economic

Martin County statistics shows a growing community and business environment. The following information from the Stuart/Martin County Chamber of Commerce gives an overview of the economy[56]:

[56] Source: https://www.stuartmartinchamber.org/


Martin County Metrics (What is this?)
Martin County FutureCast
Click any metric to get more information!
UNEMPLOYMENT RATE
3.0%
(Declining)
Jobs Year Over Year Change
1,995
View Statewide Heat Map
HOUSING PERMITS
329
Permits (Declining)
SALES TAX REVENUE
$2.20
Million per Year (Improving)
WEALTH MIGRATION
$302.30
Million per Year
GDP PER CAPITA
$83,873
Improving
INCOME MIGRATION
$302.30
Million per Year
MANUFACTURING JOBS
3,217
(Decreasing)
View Statewide Heat Map
Share of Jobs
5.2%
(Decreasing)
MANUFACTURING WAGES
Annual Wages
$56,072
(Increasing)
Wage Share
7.0%
(Decreasing)
POVERTY RATE
10.5%
(Better)
View Statewide Heat Map
HIGH SCHOOL GRADUATION RATE
87.4%
(Declining)
View Statewide Heat Map
LAND IN CONSERVATION
27%
POPULATION
161.00
Thousand
View Statewide Heat Map
LAND IN CONSERVATION
27%
POPULATION
161.00
Thousand
View Statewide Heat Map
HOUSING PERMITS
329
Permits (Declining)
POPULATION ESTIMATE 2030
169,700
–
187,600
View Statewide Heat Map
HIGH SPEED COMMUNICATIONS
98.2%
(First Data)
View Statewide Heat Map
100%
2030 Goal

SIII.2.2 Repetitive Loss Data

Reducing the losses associated with repetitive flood loss properties is a high priority nationally. This is reflected by the priority placed on repetitive loss properties in Federal grant applications. For this analysis, documented repetitive losses are restricted to the narrow FEMA definition and represent only those residential and commercial properties whose owners have made more than one claim on their flood insurance policies as recorded by the NFIP. As of December 2019, Martin County had a total of 157 repetitive loss for residential properties, down from the 166 reported in 2018. The areas of the repetitive loss are in Martin County, Town of Jupiter Island, Town of Sewall's Point and the City of Stuart.

SIII.2.3 Critical Facilities

Martin County's critical facilities list includes public safety, hospitals, and nursing facilities as well as county infrastructures that supports daily operations.

Listed below are the types of facilities but the names are not listed:

Type of Facility	# of Facilities
Hospitals	5
Fire Stations	17
Law Enforcement	4
Public Facilities	28
Nursing Homes/Adult Living Facilities	25
Schools	33
Utilities/Lift Stations	332
Intersections	95
Airport	1
Hospice	1
Public Safety	21
Parks/Community Centers	93

SECTION IV: LOCAL MITIGATION STRATEGY

Community organizations can range from faith-based organizations to Chambers of Commerce to the local historic society. These groups represent the diverse interests present within a community and provide vital services to the community as well. Many services provided by Martin County's community organizations can help to achieve the goals of hazard mitigation identified in this mitigation strategy. Participating organizations on the Committee identified goals and objectives to guide the LMS Committee.

SIV.1 Goals and Objectives

The Martin County LMS Committee identified the following goals and objectives. The goals and objectives were selected because of their ability to address community issues that were

identified earlier in the mitigation planning process. Goals as defined by FEMA are general guidelines that explain what you want to achieve. They are usually broad policy statements and are long-term in nature. Objectives as defined by FEMA are strategies or implementation steps to attain the identified goals. Unlike goals, objectives are specific and measurable. The identified goals and objectives define the broad direction of the mitigation strategy and provide the focus for developing and adopting mitigation projects and activities for Martin County's LMS:

Goal 1. Reduce the loss of life and property

- Objective 1.1 Reduce flooding and/or wind damage.
- Objective 1.2 Eliminate or retrofit repetitive loss properties.
- Objective 1.3 Retrofit and/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 dealing with 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/or function of natural resource.
- Objective 2.3 Prepare informational materials explaining the positive relationship between sustainable communities and disaster-resistant communities.
- Objective 2.4 Create and maintain current an all-hazards database.
- Objective 2.5 Promote the 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 disaster-resistant businesses.
- Objective 3.2 Ensure the economic viability of the local business community following a disaster event.

Goal 4. Optimize the effective use of all available resources.

- Objective 4.1 Establish public/private partnerships.
- Objective 4.2 Establish procedures that strengthen intergovernmental coordination and cooperation.

SIV.2 National Flood Insurance Program (NFIP)

The U.S. Congress established the NFIP with the passage of the National Flood Insurance Act of 1968. The NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community, floodplain, management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between communities and the Federal Government.

If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the Federal Government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an insurance alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods.

Martin County, the City of Stuart, Town of Sewall's Point, Town of Jupiter Island, and Town of Ocean Breeze are participating communities in the NFIP Program.

Each jurisdiction within the county is an active participant in the NFIP.

In an effort 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).
2. Continue to maintain all records pertaining to floodplain development, which shall be available for public inspection.
3. Continue to notify the public when there are proposed changes to the floodplain ordinance or Flood Insurance Rate Maps.
4. Maintain the map and Letter of Map Change repositories.
5. Continue to promote Flood Insurance for all properties.
6. Continue their Community Rating System outreach programs, as applicable.

Community Rating System per Jurisdiction[57]

Community Name	CRS Entry Date	Current Effective Date	Current Class	% Discount for SFHA[1]	% Discount for Non-SFHA Status	Status[2]	NFIP
Martin County	10/1/1992	5/1/2018	6	20	10	C	Yes
City of Stuart	N/A						Yes
Town of Jupiter Island	10/1/1995	10/1/2015	7	15	5	C	Yes

[57] https://www.fema.gov/floodplain-management/community-rating-system

Town of Ocean Breeze	N/A						
Town of Sewall's Point	10/1/1996	5/1/2019	10	0	0	R	Yes
Village of Indiantown	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1- For the purpose of determining CRS discounts, all AR and A99 Zones are treated as non-SFHAs. 2- Status: C=Current							

SIV.3 County Mitigation Projects/Initiatives

Martin County continues to work on the identified goal in the 2015 LMS Plan - complete and adopt a Hazard Mitigation Plan as well as the below projects and initiatives to mitigate potential damage resulting from various hazards:

- Continued enhancements and hardening of critical infrastructure
- MacArthur Boulevard Beach Erosion Control
- Hobe Heights Outfall Drainage Improvements
- Outfall Modifications
- Home elevations
- Creek Improvements
- Street Outfall Drainage Improvements
- Septic to Sewer Conversion

In addition, as many other counties have done since Hurricane Andrew, the County has upgraded its building code to include elevated finished floor elevations, corrosion-resistant hurricane clips, water-resistant adhesives for shingles, and trusses manufactured in accordance with local wind models.

For some of the hazards that Martin County may be vulnerable, however low, mitigation is provided through public education in preparedness, planning and exercising, warning and emergency notification systems. The Martin County website provides public education with disaster information in flooding, tornadoes, severe weather, developing a disaster plan, hazardous materials, radiological incidents, terrorism, wildfires, hurricanes. The Emergency Management Agency provides many public education presentations throughout the year in disaster preparedness and distributes hundreds of materials.

SIV.4 Jurisdictions Mitigation Projects/Initiatives

City of Stuart

The City has undertaken several flood mitigations projects. Many have been constructed to eliminate home, yard, and street flooding. Ninety-five percent of the projects identified in the stormwater master plan have been completed.

Other mitigation efforts involve the City participating in mock drills with the County emergency management staff. Internally, City staff have developed a Disaster Recovery Plan based on the ESF structure, which focuses primarily on flooding and hurricane evacuation matters. The City has an Emergency Management Plan, which is all-hazard. This plan will include procedures for response to all hazardous conditions, and including flooding, hurricanes, tornadoes, radiological incidents, terrorism incidents, and wild land fire incidents, and will include a Recovery Annex. In addition, the City actively participates on the ad hoc storm water managers committee for Martin and St. Lucie County. The City annually participates in the hurricane exercise. The City also has posted the EOC Standard Operating Procedures and the Emergency Action Plan on the City's Intranet site. In 2003, FEMA's FIRM were integrated into the City's geographic information system (GIS) system. The City is maintaining an electronic messaging board system for communicating during events, consisting of two mobile trailer-mounted message boards.

All essential staff for the City of Stuart have received Florida DEM-provided COOP (Continuity of Operations Plan) initial training, and the City is pursuing implementation of a COOP.

All essential staff for the City of Stuart, including Fire Rescue, Police, Public Works, Financial Services, Planning and Development, Information Services, and Human Resources have received training in at least Basic Incident Command. The City's EOC Standard Operating Procedures and updated Emergency Management Plan follow the Incident Command System structure. The City completed the initiative to provide shutters on all Public Facilities. The mitigation initiatives for the City are:

- Provide free residential yard waste and tree trimming collection in the month of June for Hurricane Season.
- Maintain city trees year-round with dedicated bucket truck and operator.
- Continue implementation of Stormwater Master Plan to reduce structure, street and yard flooding.
- Participation in the Countywide mass notification system.
- Continue participation with County Emergency Management and partners in planning, preparedness, exercises, and mitigation efforts.

Town of Jupiter Island

The Town has no comprehensive storm water plan. For the most part, storm water either percolates into the soil or sheet flows over land to swales, natural low areas, or watercourses. In a few instances where man-made structures such as roads and parking lots impeded or altered the natural sheet flow, the Town has addressed those drainage problems using swales.

The Town has a scheduled maintenance program to ensure that the swales and drainage facilities are operating adequately. The Town has reinforced the roof, installed hurricane impact glass doors and windows at The Public Safety Building. The Town has removed all overhead electric wires and installed a complete underground system. The Town has also

re-nourished the beaches and improved drainage along Gomez road. The mitigation initiatives for the Town are:

- Continue with improving the hardening of structures and internal operational improvements for emergency management.
- Continue participation with County Emergency Management and partners in planning, preparedness, exercises, and mitigation efforts.
- Continued participation in public outreach in disaster preparedness.

Town of Ocean Breeze

The Town has coordinated with Martin County on roadway and drainage improvements to Indian River Drive, a key north-south, County-maintained roadway, situated within the Town along its eastern border. Also, the Town has a scheduled maintenance program for its storm water drainage system.

While the Town is very small in size and population, 102 acres in size, 0.2 square miles with a current population of 171 residents, however with redevelopment population may potentially go to 550. The predominant structural building type is manufactured homes. Since the Town fronts directly on the Indian River Lagoon, potential damage and destruction during a major flood event or a hurricane could be significant. However, at present, the Town has no post-disaster redevelopment plan in place. A vision of what the Town should be, should a catastrophic event such as a major hurricane were to occur, needs to be given careful thought now before the event occurs. Whatever the concept, it should be embrace the idea of sustainability. The Town is currently working with a private owner/developer to replace mobile homes with manufactured homes in order to meet the current building and FEMA regulations. The Town does not own or maintain any utilities or public facilities. All public services are provided by Martin County. The Town is active with Martin County in providing disaster preparedness and recovery education to its residents. Since the Town of Ocean Breeze does not own public buildings, or provide infrastructure services, even the roads within the Town are private, there is limited projects to consider for mitigation. No buildings to harden and no critical facilities within the Town. The mitigation initiatives for the Town are:

- Continue participation with County Emergency Management and partners in planning, preparedness, exercises, and mitigation efforts
- Continued participation in public outreach in disaster preparedness.

Town of Sewall’s Point

Historically, South Sewall's Point Road has experienced frequent flooding; however, the Town has developed an improvement program to correct the problem. The Town has completed several improvement projects that were partially funded with South Florida Water Management District (SFWMD) funds, but have other projects identified on the project list.

Besides the completion of capital projects, the Town participates on an ad hoc storm water managers committee that includes local governments in Martin and St. Lucie counties. This serves as a forum for information exchange and as an opportunity for local governments to coordinate the planning and execution of storm water projects.

The Town's Building Code includes key hazard-specific provisions. They include brace gable end roof framing, corrosion-resistant hurricane clips, and pressure positively treated lumber. In addition, the Town has modified its Flood Damage Prevention Ordinance by raising the base floor elevation.

In addition, the Town has an Emergency Operations Plan and conducts two hurricane evacuation drills each year. Building officials frequently attend seminars and conferences to advance skills and increase their knowledge of building construction techniques as it relates to hurricanes and flooding. The mitigation initiatives for the Town are:

- Town Hall/Public Safety Building raising and hardening
- Stormwater retrofits to provide additional storage for flood waters and discharges
- Monitor and replace aging stormwater infrastructure
- Provide Higher Elevation Evacuation Route
- Continued public outreach in disaster preparedness covering all hazards the Town is vulnerable to.
- Continue participation with County Emergency Management and partners in planning, preparedness, exercises, and mitigation efforts

Village of Indiantown

The Village of Indiantown adopted its Comprehensive Plan[58] in December 2019 which identified capital improvement initiatives:

- Stormwater improvements
- Sustainable and resilient infrastructure development
- Continue public outreach on preparedness and planning
- Continue participation with County Emergency Management and partners in planning, preparedness, exercises, and mitigation efforts

Martin County School District

All schools and buildings constructed post-2000 have been designed to meet windstorm requirements at the time of construction. When replacing a specific school or building the District has constructed those schools outside of flood prone areas or has placed replacement schools or buildings above flood stage levels. Other mitigation efforts involve the District participating in mock drills with the County emergency management staff. Internally, District

[58] https://www.indiantownfl.gov/planning-development/page/village-indiantown-comprehensive-plan

staff has developed a Disaster Recovery Plan based on the ESF structure, which focuses primarily on hurricane evacuation matters. The District also has an all-hazard Crisis Plan. This plan will include procedures for response to all hazardous conditions, and includes flooding, hurricanes, tornadoes, radiological incidents, terrorism incidents. All essential staff in the District have received NIMS training in at least Basic Incident Command.

In the past and recently, the District has installed shutters on several schools and/or support facilities and, emergency shelters to mitigate storm damage to the schools and protect occupants being used as shelters during an emergency. Additionally, newer schools have been designed to meet EHPA requirements to ensure proper levels of shelter capability for County and regional residents. The District continues to include mitigation strategies to all buildings and property when building, renovating or relocating facilities on District property. The mitigation initiatives for the School District:

- Hardening of facilities
- Provide for backup power systems
- Continue education in disaster preparedness
- Continue participation with County Emergency Management and partners in planning, preparedness, exercises, and mitigation efforts

Mitigation Initiative in Martin County

	Jurisdictions/Organizations										
Projects/Initiatives/Programs/ Ordinances	*Martin County*	*Emergency Management*	*Engineering Department*	*General Services*	*Growth Management*	*City of Stuart*	*Town of Sewall' s Point*	*Town of Jupiter Island*	*Town of Ocean Breeze*	*Village of Indiantown*	*Martin County Schools*
Acquisition of Property	X					X					
Retrofitting of Public Facilities	X		X	X		X	X	X	X		X
Structural Hazard Control	X		X	X		X	X	X			X
Stormwater Drainage	X		X			X	X	X		X	
Beach Preservation	X		X			X		X			
Warning Systems	X	X				X					
Hazard Specific Building Codes/Development Regulations	X				X	X	X	X			
Public Information Campaigns	X	X	X			X	X	X	X	X	X
Preparedness Training	X	X	X	X		X	X	X	X	X	X
Maintenance Programs	X		X	X		X	X	X	X	X	X

Hazardous Materials Management	X	X				X					
Emergency Operations Plans	X	X	X	X		X	X	X			X
Continuity of Government	X					X	X	X	X		X
Continuity of Operations Plans	X	X	X	X		X	X	X		X	X
Post Disaster Redevelopment Plan	X	X	X		X	X	X	X	X		X

SIV.5 Completed, Deleted and Deferred Mitigation Initiatives

Martin LMS Committee members meet quarterly to discuss and review mitigation projects. The projects are updated to reflect the current status as no change, pending, new or other.

SECTION V: INITIATIVE DEVELOPMENT AND SELECTION

SV.1 Project Submittal Process

Martin County departments, jurisdictions and community partners are encouraged to submit projects and/or initiatives to the LMS committee for review. All projects and/or initiatives are submitted using the Martin County Mitigation Initiative Proposal Form (Appendix E). The form asks general information about the initiative including the cost to implement (which is an estimate based on similar projects in the area/State, but is not the in-depth cost-benefit analysis done by engineers that is required if the project is funded). All information is recorded on the project list for review by all LMS members.

SV.1 Project Selection and Submission Criteria

In order to evaluate the projects, the LMS Committee must first establish the priority goals and hazards using the following questions:

- Will the project reduce the loss of life and property?
- Will the project achieve safe and fiscally sound, and sustainable communities?
- Will the project facilitate orderly recovery during post-disaster redevelopment?
- Will the project optimize the effective use of all available resources?

The LMS Committee members will be provided a list of all submitted projects and each member and stakeholder will complete a Project Scoring Sheet for each project. After scoring each project, a list of each stakeholder's projects will be prioritized. If any projects received the same ranking, the LMS Committee members will determine the final ranking order. A summary of the rankings was provided to all LMS Committee members and those rankings were submitted to the FDEM on January 23, 2020.

SV.2 Scoring and Prioritization Methodology

The LMS Steering Committee decided to have each participating jurisdiction that submitted a project score their project based on a Risk Factor and Evaluation Criterion (Appendix F).

Once the score is tallied, the project is prioritized based on score. If there are several projects with the same score, the LMS Committee members vote to determine the order of importance.

SV.3 Mitigation Project Priority List

The LMS Committee approved the 2019-2020 Hazard Mitigation Grant Program prioritized project list and submitted to the FDEM on January 23, 2020 (Appendix G). Projects are not deleted from the list, only marked as “Complete” and the status is updated year.

SV.4 Project Implementation

The implementation strategy for projects are based on a collaborative effort from the Steering Committee as well as key community stakeholders and citizens. The identified projects’ documents and applications are ready when Federal and/or State funding opportunities are announced. During the waiting period for Federal and/or State funding, many of the jurisdiction are researching other funding sources to get projects started.

SECTION VI: TEST, TRAIN AND EXERCISE

Pre-event training and exercises in the implementation of this plan and supportive procedures will be coordinated by the Martin County Emergency Management Agency as outlined within the Martin County Multi-Year Training and Exercise Plan.

APPENDICES

Appendix A – Acronyms

Appendix B – Plans Maintenance

Appendix C – Local Mitigation Notifications

Appendix D – Local Mitigation Meeting Documents

Appendix E – Martin County Initiative Proposal Form

Appendix F – Scoring and Prioritization Methodology

Appendix G – Prioritized Project List

Appendix H – Hazards Scales and Ranking Information

Appendix A – Acronyms

CDBG	Community Development Block Grant
CEMP	Comprehensive Emergency Management Plan
COG	Continuity of Government
COOP	Continuity of Operations Plan
CRS	Community Rating System
DMA2000	Disaster Mitigation Act of 2000
EHS	Extremely Hazardous Substance
EMPA	Emergency Management and Preparedness Assistance
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
EPZ	Emergency Planning Zone
ESF	Emergency Support Function
F.A.C.	Florida Administrative Code
FDEM	Florida Division of Emergency Management
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FMA	Flood Mitigation Assistance
FPL	Florida Power & Light
FRD	Fire Rescue Department
F.S.	Florida Statutes
HI	Heat Index
KBDI	Keetch-Byram Drought Index
LMS	Local Mitigation Strategy
MCBOCC	Martin County Board of County Commissioners
MCEMA	Martin County Emergency Management Agency
MCFR	Martin County Fire Rescue
mph	miles per hour

NASA	National Aeronautics and Space Administration
NFIP	National Flood Insurance Program
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
PAGs	Protective Action Guidelines
PDM	Pre-Disaster Mitigation
PPL	Project Prioritization List
SFWMD	South Florida Water Management District
USACE	United States Army Corp of Engineers
VHF	Very High Frequency

Appendix B – Plans Maintenance

Martin County Emergency Management Agency

Plan Maintenance

Page #	1 of 5	**Date Issued**	2/17/2020
Approved By	Sonji Hawkins	**Date Revised**	N/A
Approved Date	2/17/2020	**Revision #**	N/A

Standard Operating Guide: Plan Maintenance

Purpose:

The purpose of this guidance is to define the approach Martin County Emergency Management Agency (MCEMA) will use to maintain all plans, policies, procedures, SOPs and SOGs. This guidance is intended to ensure consistency when reviewing and updating emergency and operational plans, policies, procedures, SOPs and SOGs.

Scope:

All plans should be considered "living documents" that must be reviewed and revised on a regular basis in order to ensure compliance with current policies, procedures, rules and/or laws and to maintain preparedness to respond and recover from emergencies. The overall coordination of the reviewing and updating process is the responsibility of MCEMA. In this role, the below schedule is suggested for reviewing and updating all plans, policies, procedures, SOPs and SOGS monitored by MCEMA. MCEMA also serves as the custodian by maintaining the needed electronic files and records, printing documents, and monitoring/tracking distribution of the plans.

Plan Review and Update Schedule:

All plans should be on a schedule to be reviewed annually and updated according to statutes, rules, policies and/or procedures.

Plan	Schedule for Review	Schedule for Update
Comprehensive Emergency Management Plan (CEMP)	Annually	Every 4 years
Continuity of Operations (COOP)	Annually	Every 5 years
Debris Management (Public Works)	Annually	Every 5 years
Disaster Recovery Annex	Annually	Every 4 years
Local Mitigation Strategy	Annually	Every 5 years
Radiological	Annually	Every 5 years
Strategic Plan	Annually	Annually
All Standard Operating Procedures (SOP) or Guidance (SOG)	Annually	Annually

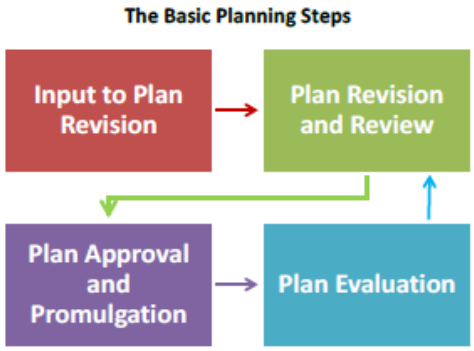
Martin County Emergency Management Agency

Plan Maintenance

Page #	2 of 5	Date Issued	2/17/2020
Approved By	Sonji Hawkins	Date Revised	N/A
Approved Date	2/17/2020	Revision #	N/A

Plan Maintenance Procedure:

This procedure is intended to ensure that MCEMA meets the requirements and that adequate emergency and operational planning priorities have been identified to include life, safety, health, property protection, environmental protection, restoration of essential utilities, restoration of essential program functions and coordination among appropriate stakeholders. Plan maintenance will follow the Basic Planning Steps:



The actions taken to implement this process are coordinated by MCEMA, with the assistance and support of the designated lead and support agencies for the County's Emergency Support Functions.

Actions will vary with the characteristics of the current needs for the specific plan, but updating may include any or all of the following:

Input to Plan Revision

Input to plan revision may come from several sources, including:

- Interagency conferences and consultations between state, county and municipal agencies regarding current needs
- Change in regulations and guidelines applicable to the content or format
- Recent experience with hazard mitigation, emergency response, and disaster recovery operations
- Changes in the mitigation, response and recovery capabilities, and resources of the participating agencies and organizations

- Changes in the demographic, social, or political characteristics of the communities in the county
- Recognition of additional or modified hazards confronting the county or increased vulnerability to those hazards
- Identified corrective actions from exercise improvement plans
- Input provided by stakeholders via the Advisory Committee meetings

Plan Revision and Review

Given the inputs to the plan revision process, the steps in this process will generally involve the following:

1. MCEMA initiates the process for updating the plan by:
   - Establishing the schedule
   - Assigning staff/contractors to accomplish the necessary work
   - Conducting meetings with the involved agencies and organizations, or via the Advisory Committee meetings
   - Reviewing applicable requirements and other changes in the community
2. Under the direction of MCEMA, the assigned staff/contractor utilizes the inputs to the planning process to develop a draft of the updated plan for review by all participants
3. A schedule for review of the draft is established by MCEMA and the documents are distributed to the involved participants
4. As indicated, meetings between MCEMA, the assigned staff, primary and support agencies may be necessary to discuss modifications to the draft plan
5. The assigned staff/contractor modifies the draft plan according to the outcome of the review process and prepares a final draft plan
6. If indicated, another review of the final draft plan is conducted by the participating agencies and organizations and a final plan is prepared
7. The final plan is distributed by MCEMA to the participating agencies and organizations for final approval
   - For the CEMP, which is a designated "four year" update, and the LMS, which is a designated "five year" update, both with the Florida Division of Emergency Management, then and the CEMP must be approved by the Division prior to the Martin County Board of County Commissioners request for adoption

Plan Approval and Promulgation

All plans and procedures are reviewed on an annual basis, and changes are incorporated into the plan by the approval of the Emergency Management Director.

For the CEMP and the LMS, the final update is presented to the Martin County Commission for review and adoption. If requested by the Commission, final changes will be made in the CEMP/LMS prior to adoption.

The County Commission adopts the CEMP/LMS update in accordance with normal procedures. The adoption is documented appropriately, and a letter or similar notification of promulgation is included in the plan documents as an Appendix to the Introduction.

Upon adoption, a copy of the CEMP/LMS, if modified, is again made available to all county agencies, municipalities, and involved community organizations. While the CEMP has its own distribution plan, all other plans are available to stakeholders during Advisory Committee meetings or by request.

Agencies are advised of plan updates and the expectation is that all primary and support agencies would conduct such preparedness actions as needed to maintain readiness to implement the actions prescribed in the plan.

Plan Evaluation

Plans are evaluated on a continuing basis between normally scheduled updates, and such evaluations are utilized to improve and enhance the effectiveness of the plans during the next update. If indicated, updates to portions of the plan will be made promptly, before the next scheduled update.

Since the evaluation of the effectiveness of plans is a continuing process, plans should be viewed as a document in a constant state of change and improvement. Whenever possible, MCEMA will make changes to plans and circulate such modifications.

Plan evaluation occurs through the following continuing mechanisms:

- "After-action" evaluation of the emergency response to any significant disaster or emergency
- Critique and analysis of training or exercises
- Continuing evaluation of the hazards threatening the community and the vulnerability to those hazards

- Continuing evaluation of the capabilities of the participating agencies and organizations to conduct hazard mitigation, emergency response and disaster recovery operations
- Continuing review of each ESF by the designated primary and support agencies during periods between formal updates of the plan
- Review and analysis of the plan and its underlying procedures and information bases by county personnel, outside experts, and state agency personnel

Training and Exercise

Training and exercise of all plans will occur based on the guidance provided within the Multi-Year Training and Exercise Plan, stakeholder input and involvement, and determination of the Emergency Management Director.

Appendix C – LMS Meeting Notifications

Having trouble viewing this email? Click here

View all County news here.

For immediate release: June 24, 2020

Contact: Donna Gordon, Administration, 772.221.1352 or Email Donna

Notice is hereby given of the following meetings to be held at the John F. & Rita M. Armstrong Wing of the Blake Library, 2351 SE Monterey Road, Stuart, Florida and other locations as indicated for **July 2020**. Matters affecting your personal and property rights may be heard and acted upon. All interested persons are invited to attend and be heard.

1

LIBRARY BOARD OF TRUSTEES

July 15, 2020 at 4:00 pm

Location: Hoke Library, 1150 NW Jack Williams Way, Jensen Beach

LOCAL MITIGATION STRATEGY

July 22, 2020 at 2:30 PM

Please join my meeting from your computer, tablet or smartphone.

https://global.gotomeeting.com

Join the conference call:

Call In: 1-877-437-5856
Participant Code: 497-8162#
Join from a video-conferencing room or system.
Dial in or type: 67.217.95.2 or inroomlink.goto.com
Meeting ID: 824 125 461
Or dial directly: 824125461@67.217.95.2 or 67.217.95.2##824125461

Martin County's unified Local Mitigation Strategy provides the tools for the County, its municipalities, non-governmental agencies and residents to continue in ongoing efforts to reduce vulnerabilities to disasters. The LMS also provides for mitigation priorities and eligibility for mitigation funding when it becomes available.

LOCAL PLANNING AGENCY

July 2 **&** 16, 2020 at 7:00 pm

Location: John F. & Rita M. Armstrong Wing of the Blake Library, 2351 SE Monterey Road, Stuart

These meetings will be televised live on MCTV Channel 20 (Comcast), Channel 99 (U-verse), and online at www.martin.fl.us.

PORT SALERNO NEIGHBORHOOD ADVISORY COMMITTEE

July 13, 2020 at 6:00 pm

Location: John F. and Rita M. Armstrong Wing of the Blake Library, 2351 SE Monterey Road, Stuart

PUBLIC ART ADVISORY COMMITTEE

The Community Development Agency sits as the Public Art Advisory Committee.

July 27, 2020 at 4:00 pm

Location: John F. & Rita M. Armstrong Wing of the Blake Library, 2351 SE Monterey Road, Stuart

From: Martin County BOCC <dgordon@martin.fl.us>
Sent: Thursday, December 26, 2019 8:20 AM
To: Donna Gordon <dgordon@martin.fl.us>
Subject: Martin County ~ January 2020 Meetings

Having trouble viewing this email? Click here

Like

View all County news here.

For immediate release: Dec. 26, 2019

Contact: Donna Gordon, Administration, 772.221.1352 or Email Donna - Click HERE

Notice is hereby given of the following meetings to be held at the Martin County Administrative Center, 2401 SE Monterey Road, Stuart, Florida and other locations as indicated for **January 2020**. Matters affecting your personal and property rights may be heard and acted upon. All interested persons are invited to attend and be heard. Written comments may be sent to the Board of County Commissioners, 2401 SE Monterey Road, Stuart, FL 34996.

Persons with disabilities who need an accommodation in order to participate in this proceeding are entitled, at no cost, to the provision of certain assistance. This does not include transportation to and

1

January 15, 2020 at 4:00 pm

Location: Hobe Sound Public Library, 10595 SE Federal Highway, Hober Sound

LOCAL MITIGATION STRATEGY

January 22, 2020 at 2:00 PM

Location: Fire Administration Building, 800 SE Monterey Road, 2nd floor, Stuart

Martin County's unified Local Mitigation Strategy provides the tools for the County, its municipalities, non-governmental agencies and residents to continue in ongoing efforts to reduce vulnerabilities to disasters. The LMS also provides for mitigation priorities and eligibility for mitigation funding when it becomes available.

LOCAL PLANNING AGENCY

January 16, 2020 at 7:00 pm

Location: Commission Chambers

This meeting will be televised live on MCTV Channel 20 (Comcast), Channel 99 (U-verse), and online at www.martin.fl.us.

PARKS AND RECREATION ADVISORY BOARD

January 16, 2020 at 5:00 pm

Location: Growth Management Department Conference Room (1st floor)

PUBLIC ART ADVISORY COMMITTEE

The Community Development Agency sits as the Public Art Advisory Committee.

January 27, 2020 at 4:00 pm

Location: Commission Chambers

This meeting will be televised live on MCTV Channel 20 (Comcast), Channel 99 (U-verse), and online at www.martin.fl.us.

RIO NEIGHBORHOOD ADVISORY COMMITTEE

January 23, 2020 at 6:00 pm

Location: Vincent Bocchino Community Center, 2369 NE Dixie Highway, Jensen Beach

HAPPY NEW YEAR!

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
LMS Meeting
March 4, 2016
10:00am – 11:30am

PRINT NAME	AGENCY OR DEPARTMENT	PHONE #	EMAIL ADDRESS
CAROL DRYBURGH	MC FR/EM	772-419-2664	cdryburg@martin.fl.us
Shannon McCarthy	Engineering	772.288.5956	ShannonMemartin.fl.us
GREG NOLTE	ENG/ECOSYSTEM	772.221.2380	GNOLTE@MARTIN.FL.US
DAVID M. BLOCK	FLORIDA DIVISION OF EMERGENCY MANAGEMENT	561 537 0398	DAVID.BLOCK@EM.MYFLORIDA.COM
KEITH MUNIZ	ARC of MARTIN	772-283-2525	KMuniz@arcmc.org
JIM GORTON	ENG/Field OPS	772 214 4905	JGORTON@MARTIN.FL.US
Aaron Howard	Martin County School District Facilities	407 702 7048	howarda@martin.k12.fl.us
Melissa Yunas	FL Forest Service	772 260 0053	melissa.Yunas@FreshFromFlorida.com
Stuart Trent	Jupiter Island	772-260-8936	STRENT@JI.MARTIN.FL.US
PATRICIA LACONTE	LaConte Engineering	772-215-0354	placonte@laconteengineering.com
Joe Capra	Captec Engineering	772 692-4344	JCAPRA@GOCAPTEC.COM
BILL PECCI	MC EM	772-463-2852	WPECCI@MARTIN.FL.US
SAM AMERSON	CITY OF STUART	772-2885331	samerson@ci.stuart.fl.us
DEBRA MCCAUGHEY	MC FR/EM	772-419-	DMCCAUGH@MARTIN.FL.US
*DAVID BLOCK	SERT (Speaker)	850-413-9959	DAVID.BLOCK@EM.MYFLORIDA.COM

Martin County Local Mitigation Strategy (LMS) Committee
Meeting Minutes
Friday, March 4, 2016 – 1000-
Martin County Building Department
900 SE Ruhnke Street, Stuart, 34997

In attendance: Debra McCaughey, Sam Amerson, Shannon McCarthy, Greg Nolte, Patrick LaConte, Jim Gorton, Stuart Trent, Joe Capra, Melissa Yunas, Keith Muniz, Aaron Howard, Bill Pecci, Carol Dryburgh and guest speaker, David Block

Debra McCaughey, Martin County Emergency Management Director introduced herself and the guest speaker from the Florida Department of Emergency Management, David Block. She also thanked everyone for participating and gave a brief overview of the LMS Approval background and shared the fact Mr. Block was our reviewer.

A review of the Stakeholders list was discussed and several changes in representation were made during the individual introductions by those in attendance.

During a brief review of the updated, most reviewed ever, LMS Strategy, Debbie wanted to thank David Block and Patrick LaConte for their involvement in the completed product. Keith Holman also assisted Deb during the process. David was an invaluable resource for the location of needed information.

Debbie continued: Please remember to think outside the box, be proactive, bring information to the meetings and send information to her as identified. The LMS is updated yearly and is a living document. Please remember that projects can be added at any time as we want to capture everything possible and that not all jurisdictions have projects on the projects list. Projects can be removed anytime, but you MUST submit a detailed outline of the reasoning.

- Other things to note in the current LMS include:
  - Table 1.9 was split.
  - The State reviews "natural hazards" to fully profile.
  - Look at Section 4 to gauge details needed.

David Block began his power point presentation with many notable highlights such as:

- Martin County's plan has a great base making it much easier to add to it.
- Complacency is a problem and focus can be lost.
- Goals are set to make the County more resilient.
- Review of FEMA funding guides for recently updated funding availability for Flood Mitigation Assistance (FMA) and Pre-Disaster Mitigation competitive grant programs (PDM). Funding is

more open and not just for infrastructure at this time. Papers with information were handed out at the meeting. David will also find out State totals.

- PDM and FMA applications begin March 15, 2016 and close May 03, 2016. Funds will be awarded in August. All applications must be submitted by the County.
- PDM allows for Planning Funding and pre-spent funds may be eligible for reimbursement is project is approved. Other projects like generators for critical facilities, lightning detection systems and culverts will also be considered.
- Call the State directly with questions.
- Keep in mind that project size can eat up available funding and projects not on the current priority list can still apply for funding
- Period of performance is months not weeks or years.

- Funding is also available for the Residential Construction Mitigation Program. An information handout was available at the meeting.
- EMAP accreditation can also bring in money and build CRS credits.
- FEMA is prioritizing climate change.
- Guidance documents will be coming out soon from SERT to make the LMS process in the future smoother and easier to build from. Keep having strong meetings to allow for a better product every 5 years. This concluded his presentation.

Debra will send out the link to the State site for the application processes. Different types of funding may become available and everyone needs to take an all hazards approach to our projects.

Debra called for an approval of the May 21, 2015 minutes; so moved by Patrick LaConte, seconded by Melissa Yunas and unanimously approved by all in attendance.

Joe Capra brought up that Sewall's Point is concerned about sea level rise. More conversations may be needed between jurisdictions.

David Block pointed out that the LMS has a TCRPC analysis, but it couldn't be fully profiled. NOAA, Palm Beach and Monroe County are doing good work on that subject.

Sam Amerson said salt water intrusion is a complicated issue when discussing sea level rise. FEMA will be addressing issues, such as the flood program. In 2012, Don Donaldson, Martin County Engineer, presented a study derived from more southern counties. Joe asked about a copy and it was agreed that Mr. Donaldson has always shared information when asked.

Joe also said that small municipalities would like to participate in the County drills and not create their own. Debra pointed out that all municipalities in Martin County are on various lists including trainings, drills/exercises and they only need to attend. Attendance is also part of the CRS point system. Flash reports are sent to various people in each jurisdiction and it is up to the jurisdiction to forward the information to those they feel are in need of the update. It has proven very difficult to manage the size mailing that would be needed to allow Martin County to

send it to all interested parties. So 2-3 points of contact are typically maintained and they forward any information to those they need to.

Current projects on the list can be updated at any time. Each jurisdiction can amend the ranking of their projects. Please review your list and provide updates. There are no changes to the list at this time.

Additional Comments/ Questions:

- Keith Muniz is having problems with the changes to the base floor elevations requirements. His project is in jeopardy of losing a $350,000 grant. The building must be ADA compliant. It was suggested that he look more closely at the property's true land value after Mr. Muniz said no variance can be granted for flood plain issues.

A move to adjourn was made, seconded and approved unanimously.

Meeting adjourned at 11:25AM.

Submittal information:

ATTN: Debra McCaughey, Emergency Management Director
dmccaugh@martin.fl.us **772-219-4942 office phone**

DMc/cad

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
LMS Meeting
December 15, 2016
12:00pm to 5:00pm

PRINT NAME	AGENCY OR DEPARTMENT	PHONE #	EMAIL ADDRESS
Laura Waterman	FDEM	(850)912-9063	laura.waterman@em.myflorida.com
Michael Yustin	MC Eng	(772) 220-7114	myustin@martin.fl.us
Shannon McCarthy	MC Eng	772.288.5956	ShannonM@martin.fl.us
Rosemarie Zummo	ADM/OCD	7722212487	rzummo@martin.fl.us
Jim Gorton	MC ENG/Field OPs	(772)2194905	jgorton@MARTIN.FL.US
Shari Trent	Town of Jupiter Island	772-545-0171	STRENT@TJIS.MARTIN.FL.US
CAROL DRYBURGH	MC FR/EM	772-419-2664	CDRYBURG@MARTIN.FL.US
Joe Capra	Town of Sewalls Pt	772.692.4344	JCAPRA@gocapre.com
GREG NOLTE	MC ECOSYSTEM	772-221-2380	GNOLTE@MARTIN.FL.US
SAM AMERSON	CITY OF STUART	772-260-9613	samerson@ci.stuart.fl.us
FRANK LASAGA	SFR	772 288-5353	flasaga@ci.stuart.fl.us
Don Donaldson	Martin County	772 288 5920	ddonalds@martin.fl.us
Bill Pecci	MARTIN COUNTY EM	772-463-2852	WPECCI@MARTIN.FL.US

Martin County Local Mitigation Strategy (LMS) Committee
Meeting Minutes
Thursday, December 15, 2016 – 1000-1130
Martin County EOC
800 SE Monterey Road 2nd floor, Stuart, 34997

In attendance: Daniel Wouters, Sam Amerson, Don Donaldson, Frank Lasaga, Mike Huston, Rosemarie Zummo, Shannon McCarthy, Greg Nolte, Jim Gorton, Stuart Trent, Joe Capra, Bill Pecci, Carol Dryburgh and guest speaker Laura Waterman

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Dan Wouters, Martin County Division Chief of Emergency Management introduced himself and the guest speaker from the Florida Department of Emergency Management, Laura Waterman and asked everyone to identify themselves and their organization. *Two additional members of the SERT Mitigation bureau attended by phone.

Laura Waterman began her power point presentation with many notable highlights such as:

- 406 PA (Public Assistance) Program: Site Specific *applied to a facility damaged by the specific event
- 404 HMGP (Hazard Mitigation Grant Program) Program * can be applied to a non-damaged facility
- Martin County's plan has a great base making it much easier to add to it and it has already been adopted, as required, for funding consideration.
- NOFA (Notice of Funding Availability) will be out in late January
  - Lists each County allocation
  - Applications must be submitted within 3 months of NOFA
    - State review – up to 3 months
    - FEMA review up to 12 months **
    - Contract phase – a few months
    - Funds released- can be almost 2 years form date of incident
  - DO NOT start work before receiving funding
- ** There is a FEMA pilot program (PAS) that creates no duplicate review by FEMA of the State of Florida reviewed projects and should considerably reduce the time for approval and fund release.
- If you are not sure of a project's eligibility, the State will do a courtesy review of the Scope of Work. Make sure your intro is VERY detailed then forward to Dan Wouters for submittal to the State.
- There are three (3) tiers to the funding process.
  - Over submit for the allocation
  - Keep in mind that project size can eat up available funding so pick projects with varying budget levels for submittal
- Cost share is 75% Federal/25% Local, but it's a reimbursement so you must have 100% up front.

- There are checklists on the website to refer too (See **References** page of the PPT or go to the FDEM HGMP webpage at
  - https://www.floridadisaster.org/mitigation/hazard/index.htm
- There is an Environmental and Historic Preservation Compliance review required.

Presentation ended with a reminder to reference the handout (Guide for Citizens Seeking Mitigation Project Funding) for more information and resources.

Dan thanked Laura and added questions based on the recent CIEM Meeting regarding tier submittals and "first come first served" rules for tier 3. Laura responded that Martin County can submit for tier 3 funding for Hermine now. Reminding us to over submit using the same submittals for Matthew but to make sure the Declaration numbers are changed to match the storm event and to try to keep the Tier 3 submittals in lower dollar amounts. Wildfire management eligibility was confirmed and land acquisition must have a structure on the property to be eligible. Engineering is working with the Division of Forestry on a draft submittal.

A review of the Stakeholders list was discussed and several changes in representation and projects were suggested. It was noted that not all jurisdictions have projects on the projects list. Please remember that projects can be added at any time as we want to capture everything possible. Current projects on the list can be updated at any time. Each jurisdiction can amend the ranking of their projects. Please review your list and provide updates as available. Projects can be removed anytime, but you MUST submit a detailed outline of the reasoning. The project list can be revisited after funding allocations and availability is known.

Annual reviews and timelines were discussed

- January 3rd :Stakeholders should review and resubmit their individual project ranking
  - With a focus on small projects that can be submitted for Hermine tier 3 funding.
  - *"Small" projects are under 1 million.
- Communications will be sent electronically
- January 31st : Updated project list must be submitted to the State
- February 6th : Next Stakeholders meeting (Tentatively at 10AM at the EOC)
- March 31st : List will be submitted for Matthew funding consideration of Tier 1 and 2
- Survey Monkey will be used to calculate rank of project submittals
- Dan will forward the Critical Facilities list to each jurisdiction for possible changes.

A motion to approve the March 4, 2016 meeting minutes was made, seconded and approved unanimously

With no further discussion a move to adjourn was made, seconded and approved unanimously.
Meeting adjourned at 11:09AM.

Submittal information:

ATTN: Dan Wouters, Division Chief of Emergency Management
dwouters@martin.fl.us **772-219-4942 office phone**

DW/cad

MARTIN COUNTY		
2016 Unified Local Mitigation Strategy Working Group		
McCaughey, Debra Chairperson	dmccaugh@martin.fl.us	Director, Martin County Emergency Management Office Phone: (772) 219-4942 Address: Martin County Fire Rescue Administration 800 SE Monterey Road, Stuart, FL 34994
Amerson, Sam Co-Chairperson	samerson@ci.stuart.fl.us	City of Stuart Public Works Director Office Phone: (772) 288-5331 Address: 121 SW Flagler Avenue, Stuart, FL 34994
Donaldson, Don	ddonalds@martin.fl.us	Director, Martin County Engineering
Rauth, Terry	trauth@martin.fl.us	Deputy Director, Martin County Engineering
Wichser, Lisa	lwichser@martin.fl.us	Martin County Engineering -Traffic & Dev Rev
Gorton, James	jgorton@martin.fl.us	Martin County Engineering - Field Operations
Dzama, George	gdzama@martin.fl.us	Martin County Engineering - Capital Projects
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Abbate, Kevin	kabbate@martin.fl.us	Director, Martin County Parks and Recreation
Markey, Harold	hmarkey@martin.fl.us	Director, Martin County General Services
Drum, Deborah	ddrum@martin.fl.us	Martin County Environmental Quality Manager
Parmelee, Kate	kparmele@martin.fl.us	Martin County Intergovernmental Relations
Rauth, Gene	grauth@tji.martin.fl.us	Town Manager, Town Of Jupiter Island
Ventura, Michael	mventura@tji.martin.fl.us	Town Of Jupiter Island
Lasaga, Frank	flasaga@ci.stuart.fl.us	City of Stuart
Adams, John	jadams@sewallspoint.martin.fl.us	Building Official, Town of Sewall's Point
O'Neil, Terry	twoneil@aol.com	Contracted Project Manager, Town of Ocean Breeze
Orr, Pam	townofoceanbreeze@bellsouth.net	Town Clerk, Town of Ocean Breeze
Walker Mac'Kie, Pamela	pwalker@sewallspoint.org	Town Manager, Town of Sewall's Point
Boer, Kate	kboer@tcrpc.org	Treasure Coast Regional Planning Council
Capra, Joe	captecinfo@gocaptec.com	President/Project Manager Captec Engineering (Project Manager for Town of Sewall's Point)
Muniz, Keith	kmuniz@arcmc.org	ARC (Advocates for the Rights of the Challenged) President & CEO
Cocco, Mark	coccom@martin.k12.fl.us	Safety Manager, Martin County School District
Carter, Hugo	hcarter@sfwmd.gov	SFWMD
Howard, Aaron	howarda@martin.k12.fl.us	Martin County School District
Leighton, Steve	sgleighton@sheriff.martin.fl.us	EM Director, Martin County Sheriff's Office
Holman, Keith	kholman454@gmail.com	Resident
Kozey, John	jkozey@martin.fl.us	Martin County General Services
LaConte, Patrick	lacontep@comcast.net	LaConte Engineering, Consultant to Martin County ENG
Dryburgh, Carol	cdryburg@martin.fl.us	Martin County Emergency Management
Garzia, Corrado	cgarzia5430@att.net	Resident
Yunas, Melissa	Melissa.Yunas@freshfromflorida.com	Wildfire Mitigation Specialist, Florida Forest Service

Historical information – can only find a sign-in sheet

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
LMS Meeting
March 22, 2017
10:15am to 12:00pm

PRINT NAME	AGENCY OR DEPARTMENT	PHONE #	EMAIL ADDRESS
CAROL DRYBURGH	MCFR-EMA	772-419-2664	onfile
FRANK LASAGA	SFR	772 288 5353	flasaga@ci.Stuart.fl.us
Mark Cocco	MC Schools	772 219 1200	COCCOM@MARTIN.K12.FL.US
Sara Amerson	City of Stuart	772-260-9613 288-5331	Samerson@ci.stuart.fl.us
Michael Ventura	Town of Jupiter Island	772 545-0104	MVENTURA@TJI.MARTIN.FL.US
Shannon McCarthy	MC Engineering	772-288-5956	ShannonM@martin.fl.us
Tom Vokoun	LaConte Engineering	772 260 8790	thomascvokoun@bellsouth.com
Jim Gorton	MC ENG	772 219 4905	JGORTON@martin.fl.us
Kathy LaMartina	SFWMD	561 682 6407	KLAMART@SFWMD.GOV
Don Donaldson	Martin County Eng.	772 288 5920	ddonalds@martin.fl.us
Joe Capra	Town of Sewall Pt	772 692 4734	jcapra@goCAPRA.com
Dan Wouters	MC FR-EM	772-219-4982	onfile

MARTIN COUNTY		
2017 Unified Local Mitigation Strategy Working Group		
Wouters, Daniel Chairperson	dwouters@martin.fl.us	Director, Martin County Emergency Management Office Phone: (772) 219-4942 Address: Martin County Fire Rescue Administration 800 SE Monterey Road, Stuart, FL 34994
Amerson, Sam Co-Chairperson	samerson@ci.stuart.fl.us	City of Stuart Public Works Director Office Phone: (772) 288-5331 Address: 121 SW Flagler Avenue, Stuart, FL 34994
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Rauth, Terry	trauth@martin.fl.us	Deputy Director, Martin County Engineering
Wichser, Lisa	lwichser@martin.fl.us	Martin County Engineering -Traffic & Dev Rev
Gorton, James	jgorton@martin.fl.us	Martin County Engineering - Field Operations
Dzama, George	gdzama@martin.fl.us	Martin County Engineering - Capital Projects
Nolte, Greg	gnolte@martin.fl.us	Martin County Engineering - Ecosystem Restor & Mgmt
Polley, John	jpolley@martin.fl.us	Director, Martin County Utilities and Solid Waste
Abbate, Kevin	kabbate@martin.fl.us	Director, Martin County Parks and Recreation
Markey, Harold	hmarkey@martin.fl.us	Director, Martin County General Services
Drum, Deborah	ddrum@martin.fl.us	Martin County Environmental Quality Manager
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Lasaga, Frank	flasaga@ci.stuart.fl.us	City of Stuart
Adams, John	jadams@sewallspoint.martin.fl.us	Building Official, Town of Sewall's Point
O'Neil, Terry	twoneil@aol.com	Contracted Project Manager, Town of Ocean Breeze
Orr, Pam	townofoceanbreeze@bellsouth.net	Town Clerk, Town of Ocean Breeze
Walker Mac'Kie, Pamela	pwalker@sewallspoint.org	Town Manager, Town of Sewall's Point
Boer, Kate	kboer@tcrpc.org	Treasure Coast Regional Planning Council
Capra, Joe	captecinfo@gocaptec.com	President/Project Manager Captec Engineering (Project Manager for Town of Sewall's Point)
Muniz, Keith	kmuniz@arcmc.org	ARC (Advocates for the Rights of the Challenged) President & CEO
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Howard, Aaron	howarda@martin.k12.fl.us	Martin County School District
Leighton, Steve	sgleighton@sheriff.martin.fl.us	EM Director, Martin County Sheriff's Office
Youngblood, Kevin	kryoungblood@sheriff.martin.fl.us	Finance Director, Martin County Sheriff's Office
Holman, Keith	kholman454@gmail.com	Resident
Kozey, John	jkozey@martin.fl.us	Martin County General Services
LaConte, Patrick	placonte@laconteengineering.com	LaConte Engineering, Consultant to Martin County ENG
Dryburgh, Carol	cdryburg@martin.fl.us	Martin County Emergency Management
Garzia, Corrado	cgarzia5430@att.net	Resident
Yunas, Melissa	Melissa.Yunas@freshfromflorida.com	Wildfire Mitigation Specialist, Florida Forest Service

Martin County Fire Rescue
Emergency Management Agency
LMS Meeting
Thursday, January 18, 2018
1:30pm – 3:00pm

PRINT NAME	AGENCY OR DEPARTMENT	PHONE NUMBER	EMAIL ADDRESS
Daniel Wouters	Martin Co EM	772-219-4942	dwouters@martin.fl.us
BILL JOHNSON	MARTIN CO EM	772-219-2464	WJOHNSON@MARTIN.FL.US
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BILL PECCI	MARTIN COUNTY EM	772-219-	WPECCI@MARTIN.FL.US
George Dzama	Martin County ENG	(772) 463-2057	gdzama@martin.fl.us

Martin County Fire Rescue
Emergency Management Agency
LMS Meeting
Thursday, January 18, 2018
1:30pm – 3:00pm

PRINT NAME	AGENCY OR DEPARTMENT	PHONE NUMBER	EMAIL ADDRESS
PATRICK LACONTE	MARTIN COUNTY LACONTE ENGINEERING	772-215-0354	placonte@laconteengineering.com

AGENDA

Local Mitigation Strategy (LMS) Meeting
January 18, 2018
1:30 – 3:00 pm
Martin County Fire Rescue
800 SE Monterey Road
Stuart, FL 34994

1. Introductions/ Sign in
2. Review of current projects and updated status
    a. Funding projects
3. Review of stakeholders list
4. Hurricane Irma HMGP Funding discussion
5. Projects list prioritization
6. Meeting dates (tentative)
    a. As soon as HMGP Notice of Funding is issued.
    b. April 12, 2018
    c. July 12, 2018
    d. October 11, 2018
7. Additional Comments/ Questions

Martin County Fire Rescue
Emergency Management Agency
LMS Meeting
Thursday, May 03, 2018
1:30pm – 3:30pm

PRINT NAME	AGENCY OR DEPARTMENT	PHONE NUMBER	EMAIL ADDRESS
John Kozey	MCBOCC GSD	772-419-2757	JKozey@martin.fl.us
1 STUART STRENT	Town of Jupiter Island	772-260-8636	STRENT @ TJI. MARTIN.FL.US
2 SAM AMERSON	samerson@martin.fl.us	772-260-9613 Alt Primary	UTILITIES & SOLID WASTE
3 JIM GORTON	MCBOCC PWD	772 2194905	jgorton@martin.fl.us
4 Jeff Dougherty	MC GSD	772-320-3032	jdougher@martin.fl.us
BILL JOHNSON	MC EMA	7/419-2664	WJOHNSON@MARTIN.FL.US
FRANK LASAGA	STUART	772-2885353	flasaga@ci.stuart.fl.us
5 NICK MUZIA	MC PWD	772-2885761	nmuzia@martin.fl.us
6 Kloee Ciuperger	MC ADM	772 4864134	kciuperg@martin.fl.us
7 PATRICK LACONTE	LACONTE ENGINEERING	772-215-0354	placonte@laconteengineering.com
8 Jim Capra	CAPTEC	772 215-0330	JCAPRA @gocaptec.com
9 GREG NOCTE	MC ECOSYSTEM	772 221 2380	GNOCTE@MARTIN.FL.US
10 KEITH MUNIZ	ARC of MARTIN	772-283-2525	Kmuniz@arcmc.org

Martin County Fire Rescue
Emergency Management Agency
LMS Meeting
Thursday, May 03, 2018
1:30pm – 3:30pm

PRINT NAME	AGENCY OR DEPARTMENT	PHONE NUMBER	EMAIL ADDRESS
Don Donaldson	Martin County	288 5503	ddonalds@martin.fl.us

AGENDA

Local Mitigation Strategy (LMS) Meeting
May 3, 2018
1:30 – 3:00 pm
Martin County Fire Rescue
800 SE Monterey Road
Stuart, FL 34994

1. Introductions/ Sign in

2. Hurricane Irma HMGP Funding NOFA

3. Review of current projects and updated status

    a. Funding projects

4. Projects list prioritization

5. Next Meeting dates (tentative)

    a. July 12, 2018
    b. October 11, 2018

6. Additional Comments/ Questions

MARTIN COUNTY		
2018 Unified Local Mitigation Strategy Working Group		
Wouters, Daniel Chairperson	dwouters@martin.fl.us	Director, Martin County Emergency Management Office Phone: (772) 219-4942 Address: Martin County Fire Rescue Administration 800 SE Monterey Road, Stuart, FL 34994
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Boer, Kate	kboer@tcrpc.org	Treasure Coast Regional Planning Council
Capra, Joe	captecinfo@gocaptec.com	President/Project Manager Captec Engineering (Project Manager for Town of Sewall's Point)
Muniz, Keith	kmuniz@arcmc.org	ARC (Advocates for the Rights of the Challenged) President & CEO
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Howard, Aaron	howarda@martin.k12.fl.us	Martin County School District
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Garzia, Corrado	cgarzia5430@att.net	Resident
Yunas, Melissa	Melissa.Yunas@freshfromflorida.com	Wildfire Mitigation Specialist, Florida Forest Service
Lisa Wynee	lwynne@hcc4kids.org	Hibiscus House

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
LMS Meeting
800 SE Montery Road Stuart, FL 34994
June 21, 2019 2:00pm-3:30pm

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Melissa Yungs	FL Forest Service	(772) 260 0053	melissa.yungs@freshfromflorida.com
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Chris Van Vliet	Martin County Public Works	772-288-5956	cvanvlie@martin.fl.us
Michael Ventura	Town of Jupiter Island	772-545-0104	mventura@tji.martin.fl.us
Derek Ortado	Stuart PD	772-220-3917	dortado@ci.stuart.fl.us
Kirsten DeLatour		(772) 486-5537	kdelatour@knights.ucf.edu
Jeff Mayors	Salvation Army	904-460-4002	Jeff.Mayors@uss.salvationarmy.org
Nick Muzia	MC PUD	772-2885761	nmuzia@martin.fl.us
Keith Muniz	ARC MC	772-283-2525	Kmuniz@arcmc.org
KEVIN LANDRY	GSD	320-3046	klandry@martin.fl.us
John Perez	MCSO	220-7194	jlperez@sheriff.martin.fl.us
Lisandra Bonet	MC Admin - OMB	288-5468	lbonet@martin.fl.us
Lisa Wichser	Public Works	223-7945	lwichser@martin.fl.us

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
LMS Meeting
800 SE Montery Road Stuart, FL 34994
June 21, 2019 2:00pm-3:30pm

PRINT NAME	AGENCY OR DEPARTMENT	PHONE #	EMAIL ADDRESS
Kathy FitzPatrick	MC - PUD	772 288 5427	kfitzpat@martin.fl.us
George Dzama	MC PUD	(772) 463-2837	gdzama@martin.fl.us
Joe Capra	Town of Sewalls Point Town Engineer	772 692 4344	jcapra@captec.com
Michele Jones	MCFR-EMA	772-559-8930	mjones@martin.fl.us
Lisa Poziomek	MCFR EMA	772-559-8930	lpoziomek@martin.fl.us

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
800 SE Montery Road, Stuart, FL 34994
6-21-2019 1400-1600

1. Welcome and Introductions

2. Election of Officers
    a. Steering Committee Members/Alternates

3. Review of Draft Bylaws
    a. Adoption or Revision

4. Local Mitigation Strategy
    a. Overview of Program
    b. Current Project List
    c. Scoring and Prioritization

5. Hurricane Michael HMGP NOFA
    a. New Mitigation Initiatives
    b. Mitigation Proposal Process-Scoring

6. Plan Update – Final Changes Due September 2020

7. Meeting Frequency and Dates
    a. Proposed Bi-Annual
        i. January 2020
        ii. June 2020
    b. Special Meetings/NOFA Announcements

8. Additional Comments and Questions

9. Meeting Adjourned

LOCAL MITIGATION STRATEGY COMMITTEE ROSTER **8/13/2019**

Last Name	First Name	Agency	Prim/Alt	Email	Signature
Abbate	Kevin	MC Parks and Rec		kabbate@martin.fl.us	
Boer	Kathryn	LEPC	Primary	kboer@tcrpc.org	
Bonet	Lisandra	MC Admin OMB	Primary	lbonet@martin.fl.us	
Brown	Howard	Village of Indiantown		hbrown@indiantown.org	
Capra	Joe	Sewall's Point	Primary	jcapra@gocaptec.com	
Ciuperger	Kloee	Legeslative Coordinator	Primary	kciuperg@martin.fl.us	
Cocco	Mark	MCSD	~~Alternate~~	coccom@martin.k12.fl.us	
Dougherty	Jeff	MC General Services		jdougher@martin.fl.us	
Dzama	George-Chair	MC Public Works		gdzama@martin.fl.us	
Fitzpatrick	Kathy	MC Public Works		kfitzpat@martin.fl.us	
Gorton	James	MC Public Works		jgorton@martin.fl.us	
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Lynch	Mark	MC Parks and Rec	Secondary	mlynch@martin.fl.us	
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Last Name	First Name	Agency	Prim/Alt	Email	Signature
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Muzia	Nicholas	MC Public Works		nmuzia@martin.fl.us	
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Ortado	Derek	City of Stuart PD	Primary	dortado@ci.stuart.fl.us	
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Peters	David	City of Stuart PW		dpeters@ci.stuart.fl.us	
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Rauth	Terry	MC Public Works		trauth@martin.fl.us	
Rauth	Gene	Town of Jupiter Island		grauth@tji.martin.fl.us	
Trent	Stuart	Town of Jupiter Island		strent@tji.martin.fl.us	
Van Vliet	Christopher	MC Public Works	~~Primary~~	cvanvlie@martin.fl.us	
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Walker	Pamela	Sewall's Point		pwalker@sewallspoint.org	
Walton	Jimmy	MCSD	Primary	waltonj@martin.k12.fl.us	
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ROJAS	BILL	Resident		bill.rojas@mac.com	
ROJAS	JAN	Resident		janrojas@mac.com	

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
800 SE Montery Road, Stuart, FL 34994
Tuesday, August 13, 2019 1:30PM-3:30PM

1. Welcome and Introductions
2. Approval of 6-21-2019 Meeting Minutes
3. Identification of Primary and Secondary for continuity
4. Application Process and CBA
   https://floridadisaster.org/dem/mitigation/hazard-mitigation-grant-program/
5. Local Mitigation Strategy Initiatives
   a. New Projects Submitted
   b. Current Project List
   c. Scoring and Prioritization
6. Update on Funding
7. Plan Update – Final Changes Due September 2020
8. Proposed Meeting Dates
   a. Tuesday, January 21, 2020 2:30PM
   b. Wednesday, June 17, 2020 2:30PM
9. Additional Comments and Questions
10. Meeting Adjourned

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
Minutes 08/13/2019 1330-1530

Chair: George Dzama Vice Chair: Melissa Yunas

ITEMS	DISCUSSION	ACTION ITEMS	AGENCY/PERSON RESPONSIBLE
LMS Meeting called to order at 1330			
Approval of Minutes	• Unable to approve 6-21-2019 Minutes due to no quorum	• Send an electronic vote to Steering Committee	Lisa Poziomek
Committee Members	Review of proposed Bylaws and outline of Steering Committee members. The committee shall consist of one representative, not to exceed 11 members, from each of the following: • Government of Martin County and each of the participating municipalities (Sewalls Point, Jupiter Island, City of Stuart, Ocean Breeze and Indiantown) • Martin County School District • Critical Healthcare Facility • Non-profit organization or agency • Key business, industry or community interest group • Individual, selected by majority vote, from the general public	Each agency will need to assign an alternate to ensure agency representation at all meetings.	All
• Application Process and CBA	• Hurricane Michael NOFA will be released soon and agencies with approved initiatives should begin the application process as soon as possible. These grants will be awarded on a first come, first serve basis of approved projects. https://floridadisaster.org/dem/mitigation/hazard-mitigation-grant-program/	• Continue to provide information as it comes in from the state to all members.	Lisa Poziomek

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
Minutes 08/13/2019 1330-1530

LMS INTIAITVES			
• New Projects Submitted	• Several new projects were presented and discussed at this meeting. Unable to approve to be placed on the list due to no quorum.	• Send an electronic vote to Steering Committee for project approval. • Update Current Project list to reflect this change.	Lisa Poziomek Lisa Poziomek
• Current Project List	• Current Project list was briefly discussed. Due to time constraints those with projects will need to provide updated on the projects via email. These will be changed on the current list.	• All changes should be sent to lpoziomek@martin.fl.us	All members
• Scoring and Prioritization	• Some of this has been done at an agency level. Overall project prioritization needs to be completed and voted on.	• Schedule another meeting to continue this work	Lisa Poziomek
• Update on Funding	Funding to be released soon. Applications and CBA information can be found at **https://floridadisaster.org/dem/mitigation/hazard-mitigation-grant-program/**		All members submitting projects

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
Minutes 08/13/2019 1330-1530

• LMS Plan Update	The current LMS Plan for the county was approved in 2015. Final changes will be due September 2020. Martin County Emergency Management will be working with each agency to update the plan over the next year.	Work with all agencies to update their part of the plan.	Lisa Poziomek Michele Jones All members
• Meeting Frequency Proposed future meetings	A proposed bi-annual schedule was discussed, and a determination was made that with the funding releases we should meet more often to ensure our projects are moving forward.	Send A Doodle Poll to schedule the next meeting. Schedule a meeting to bring the Steering Committee together.	All
• Meeting Adjourned 1530	NA	NA	NA

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency

Local Mitigation Strategy Meeting
Minutes 08/13/2019 1330-1530

LMS Members Present:

Lisandra Bonet-MC Admin OMB
Mark Cocco-MCSD
George Dzama-MC Public Works
Kathy Fitzpatrick-MS Public Works
Jim Gorton-MC Public Works
Holt Hamilton-St. Lucie Settlement
Michele Jones-MCEMA
John Kozey-MC General Services
Domenica Labbate-Admin Project Manager
Derek Ortado-City of Stuart PD
David Peters-City of Stuart Public Works
Lisa Poziomek MCEMA
Chris Van Vliet-MC Public Works
Jimmy Walton-MCSD
Drew Wolcott-MC Parks and Rec
Gregg Burdick-Resident
Bill Rojas-Resident
Jan Rojas-Resident

LOCAL MITIGATION STRATEGY COMMITTEE ROSTER **10/9/2019**

Last Name	First Name	Agency	Prim/Alt	Email	Signature
Steering Committee					
Dzama	George-Chair	MC Public Works	Primary	gdzama@martin.fl.us	
Gorton	James	MC Public Works	Alternate	jgorton@martin.fl.us	
Capra	Joe	Sewall's Point	Primary	jcapra@gocaptec.com	
		Sewalls Point	Alternate		
Ortado	Derek	City of Stuart PD	Primary	dortado@ci.stuart.fl.us	
Peters	David	City of Stuart PW	Alternate	dpeters@ci.stuart.fl.us	
Trent	Stuart	Town of Jupiter Island	Primary	strent@tji.martin.fl.us	
Ventura	Michael	Town of Jupiter Island	Alternate		
O'Neil	Terry	Ocean Breeze	Primary	twoneil@aol.com	
		Ocean Breeze	Alternate		
Brown	Howard	Village of Indiantown	Primary	hbrown@indiantown.org	
		Village of Indiantown	Alternate		
Walton	Jimmy	MCSD	Primary	waltonj@martin.k12.fl.us	
Cocco	Mark	MCSD	Alternate	coccom@martin.k12.fl.us	
Wolfberg	Steve	Cleveland Clinic	Primary	steve.wolfberg@martinhealth.org	
		Healthcare Facility	Alternate		
Marquis	Jeff	Salvation Army-Non Profit	Primary	jeff.marquis@uss.salvationarmy.org	
Spicer	Jay	NON Profit	Alternate		
Lisiecki	Michael	FL Forest Service	Primary	michael.lisiecki@freshfromflorida.com	
		Key Business/Industry			
Holman	Keith	Member of Public	Primary	kholman454@gmail.com	
Hamilton	Alex	Member of Public	Alternate	alex.cherri.hamilton@gmail.com	

	LOCAL MITIGATION STRATEGY COMMITTEE ROSTER			10/9/2019	
Last Name	**First Name**	**Agency**	**Prim/Alt**	**Email**	**Signature**
MEMBERS					
Boer	Kathryn	LEPC		kboer@tcrpc.org	
Bonet	Lisandra	MC Admin OMB	Alternate	lbonet@martin.fl.us	
Burdick	Gregg	Resident		gregg@gnburdick.com	
Ciuperger	Kloee	Legeslative Coordinator	Primary	kciuperg@martin.fl.us	
Colonna	Gina	Sewall's Point		gcolonna@gocaptec.com	
Dougherty	Jeff	MC General Services		jdougher@martin.fl.us	
Fitzpatrick	Kathy	MC Public Works		kfitzpat@martin.fl.us	
Hamilton	Alexandra	St. Luce Settlement	Primary	alex.cherri.hamilton@gmail.com	
Hinkle	Matt	MC ITS	Primary	mhinckle@martin.fl.us	
Jones	Michele	MC EMA		mjones@martin.fl.us	
Kores	Susan	Off Comm Develop		skores@martin.fl.us	
Kozey	John	MC General Services		jkozey@martin.fl.us	
Labbate	Domenica	Admin Project Manager	Primary	dlabbate@martin.fl.us	
LaMartina	Mike	FPL		Michael.L.LaMartina@fpl.com	
Landry	Kevin	MC General Services		klandry@martin.fl.us	
Lynch	Mark	MC Parks and Rec	Alternate	mlynch@martin.fl.us	
Muniz	Keith	ARC Martin County	Primary	kmuniz@arcmc.org	
Muzia	Nicholas	MC Public Works	Alternate	nmuzia@martin.fl.us	
Orr	Pamela	Ocean Breeze		TownClerk@townofoceanbreeze.org	
Perez	John	MCSO	Primary	jlperez@sheriff.martin.fl.us	
Poziomek	Lisa	MC EMA		lpoziomek@martin.fl.us	
Rauth	Terry	MC Public Works		trauth@martin.fl.us	
Rauth	Gene	Town of Jupiter Island		grauth@tji.martin.fl.us	

Rojas	Jan	Resident		janrojas@mac.com	
Rojas	Bill	Resident		bill.rojas@mac.com	
Spicer	Jay	MC Fair Non Profit		jay@martincountyfair.com	
Van Vliet	Christopher	MC Public Works		cvanvlie@martin.fl.us	[illegible]
Ventura	Michael	Jupiter Island	Primary	mventura@tji.martin.fl.us	
Walker	Pamela	Sewall's Point		pwalker@sewallspoint.org	
Wichser	Lisa	MC Public Works		lwichser@martin.fl.us	
Wolcott	Drew	MC Parks and Rec	Primary	awolcott@martin.fl.us	[illegible]
Youngblood	Kevin	MCSO	Alternate	kryoungblood@sheriff.martin.fl.us	
SPRAGUE	JOHN	ST LUCIE SETTLEMENT	CHAIRMAN BOARD	SPRAGUE.MIAF@ME.COM	[illegible]
Delater	Kirsten	Marton		Kdelater5@ufl.edu	
Lisicki	Mike	Florida Forest Service		michael.lisicki@fdacs.gov	[illegible]

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
800 SE Montery Road, Stuart, FL 34994
Wednesday, October 9, 2019 2:00PM-3:30PM

1. Welcome and Introductions-George Dzama
2. State FDEM Presentation- Funding Availaibilty,Timelines and Procedures- https://floridadisaster.org/dem/mitigation/hazard-mitigation-grant-program/
3. Approval of Meeting Minutes 8-13-2019
4. Election of Vice Chair
5. Election of Steering Committee members
6. Local Mitigation Strategy Initiatives
   a. New Projects requiring vote
   b. Current Project List
   c. Scoring and Prioritization
7. Identification of Primary and Secondary representatives for continuity
8. Proposed Meeting Schedule through NOFA-NOFO
9. Comments
10. Meeting Adjourned

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
Minutes 10/09/2019 1400-1530

Chair: George Dzama Vice Chair: Stuart Trent

ITEMS	DISCUSSION	ACTION ITEMS	AGENCY/PERSON RESPONSIBLE
LMS Meeting called to order at 1400	**There was a quorum for this meeting**	**NA**	
State FDEM Presentation	A few questions were presented to FDEM for clarification • • Would we be able to submit to multiple grants? FDEM stated that each project could be submitted to multiple grants but could only receive funding from one. • What is the timeline for review once submitted? There is not timeline, however, Request for Information cold be sent within a one week to 3-month period. FEMA approval approximately 2 to 3 months once received. Projects need to be finalized within 2 to 3 years. • What type of grant would be best for St. Lucie Settlement? Flood Mitigation Assistance (FMA) Grant would be best for this project but apply for all. • Do all projects need a Cost Benefit Analysis? Projects under $175,000 do not require a CBA. The state, if available will assist with CBA.	• **All stakeholders with approved initiatives on the list should be submitting their applications ASAP.** • **Project priority list does not apply to this funding source.** • **Hurricane Michael NOFA was released soon and agencies with approved initiatives should begin the application process as soon as possible. These grants will be awarded on a first come, first serve basis of approved projects.** **https://floridadisaster.org/dem/mitigation/hazard-mitigation-grant-program/**	**All** **L Poziomek**
Approval of Minutes 8-13-2019	Motion to approve-Derek Ortado Seconded- Joe Capra. All in favor	• **Minutes approved-No further action**	NA

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
Minutes 10/09/2019 1400-1530

Election of Vice Chair	• Melissa Yunas has accepted a new position outside of Forestry and will no longer be able to serve as Vice Chair. • George Dzama asked for nominations or anyone interested in serving in the position. • George nominated Stuart Trent from Jupiter Island Motion to Approve-Derek Ortado Seconded-Joe Capra All in Favor	• **Stuart Trent will serve as the Vice Chair of the LMS Steering Committee**	NA
Election of Steering Committee members	In accordance with Martin County LMS Bylaws the Primary and Alternate Member of the Public represented on the Steering Committee must be voted in by the majority of the Steering Committee members. All members will be voted approved at the final meeting of the calendar year. • A nomination of Keith Holman to serve as Primary Public Alex Cherry to serve as Alternate Member of the Public was presented Motion to Approve-Derek Ortado Seconded-Stuart Trent All in favor • The Steering Committee was approved as submitted with the alternates needing to be identified. Motion to Approve-Derek Ortado Seconded-Stuart Trent All in favor	• **Keith Holman will serve as Primary Member of the Public** • **Alex Cherry will serve as Alternate Member of the Public** • **Send all members current roster for 2020** • **Identify Alternate and provide contact information to lpoziomek@martin.fl.us**	**L Poziomek** **All Steering Committee members**

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
Minutes 10/09/2019 1400-1530

New Initiatives	• Jay Spicer with Martin County Fair presented an initiative for 160 hurricane rated large animal stalls which will be located at the Equestrian Center in Indiantown. Motion to approve-Derek Ortado Seconded -Alex Cherry All in Favor	• **Jay will need to get his application submitted now** • **That this initiative is approved included in the Local Mitigation Strategy.**	**Jay Spicer**
Current Initiatives and Project Prioritization	• There was a significant amount of discussion on prioritizing the LMS projects. • A determination by the group was made to prioritize the projects by choosing the first project from each area and begin sequential numbering. This was a short-term answer to moving forward with prioritization and was not a factor for the HMGP funding available as this was on a first come/first serve basis. • This was put up for a vote to proceed with this process until January 2020 when the LMS initiatives will be ranked. Motion to approve-Derek Ortado Seconded-Stuart Trent All in Favor • The first meeting in January 2020 the initiatives will be formally ranked for the whole strategy in accordance with the Bylaws and LMS requirements.	• **Send out the Prioritization and Ranking guidance and current LMS Initiatives so all can have an opportunity to work on this prior to the meeting in January.**	**L Poziomek**

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
Minutes 10/09/2019 1400-1530

Identification of the Primary and Secondary Steering Committee Members	• Chair, George Dzama presented the need for continuity the need to identify Primary and Alternate for all the members on the LMS Steering Committee. We are required to include all eleven of the following on the Steering Committee. One representative form Martin County One representative from Sewall's Point One representative from Jupiter Island One representative from Town of Ocean Breeze One representative Village of Indiantown One representative from City of Stuart One representative from community non-profit One representative from key business/industry One representative from Critical Healthcare Facility One representative from Martin County School District One representative from the Public • To maintain good standing, members of the Steering Committee or their alternate must not have more than one unexcused absence from annual meetings. • George Dzama stressed the importance of the committee to ensure we are able, as representatives of our agencies and municipalities, to continue to receive many grant funded opportunities as they open.	• **All responsible parties on the Steering Committee need to complete this identification and provide contact information.** • **If you no longer are able to represent you agency and are still on the committee list provided, we ask that you please identify the appropriate person so we do not lose funding in the future.**	**Steering Committee**

Proposed meeting schedule for 2020	• After discussion the group determined that scheduled quarterly meetings would be beneficial. In accordance with the Bylaws we still have the ability to call Ad Hoc meetings and/or vote electronically should the need arise.	• **Work with Chair and Vice Chair to determine meeting schedule for 2020.** • **Send calendar invites and schedules to LMS partners once determined** • **Send schedule to the county for public notice**	**L Poziomek**

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
Minutes 10/09/2019 1400-1530

LMS Steering Committee Members Present:

Martin County-George Dzama, Chair
Jupiter Island Primary-Stuart Trent, Vice Chair
MC Alternate-Jim Gorton
Sewall's Point Primary-Joe Capra
City of Stuart Primary-Derek Ortado
Non-Profit Alternate-Jay Spicer
Florida Forest Service/Key Business-Michael Lisiecki
Alternate Member of the Public-Alex Cherry

LMS Members Present:

Martin County ITS-Matt Hinkle
MCEMA-Michele Jones
MCEMA-Lisa Poziomek
Martin County CRS Coordinator-Chris Van Vliet
Martin County Parks and Rec-Drew Wolcott
Public-John Sprague
MCEMA Intern-Kirsten Delater

2019 LOCAL MITIGATION STRATEGY COMMITTEE ROSTER

Last Name	First Name	Agency	Prim/Alt	Email	Signature
Steering Committee					
Dzama	George-Chair	MC Public Works	Primary	gdzama@martin.fl.us	
Gorton	James	MC Public Works	Alternate	jgorton@martin.fl.us	
Capra	Joe	Sewall's Point	Primary	jcapra@gocaptec.com	
		Sewall's Point	Alternate		
Ortado	Derek	City of Stuart PD	Primary	dortado@ci.stuart.fl.us	
Peters	David	City of Stuart PW	Alternate	dpeters@ci.stuart.fl.us	
Trent	Stuart	Town of Jupiter Island	Primary	strent@tji.martin.fl.us	
Ventura	Michael	Town of Jupiter Island	Alternate	mventura@tji.martin.fl.us	
O'Neil	Terry	Town of Ocean Breeze	Primary	twoneil@aol.com	
		Town of Ocean Breeze	Alternate		
Brown	Howard	Village of Indiantown	Primary	hbrown@indiantown.org	
		Village of Indiantown	Alternate		
Walton	Jimmy	MCSD	Primary	waltonj@martin.k12.fl.us	
Cocco	Mark	MCSD	Alternate	coccom@martin.k12.fl.us	
Wolfberg	Steve	Cleveland Clinic	Primary	steve.wolfberg@martinhealth.org	
		Healthcare Facility	Alternate		
Marquis	Jeff	Salvation Army-Non Profit	Primary	jeff.marquis@uss.salvationarmy.org	
Spicer	Jay	NON Profit	Alternate	jay@martincountyfair.com	
Lisiecki	Michael	FL Forest Service	Primary	michael.lisiecki@freshfromflorida.com	
		Key Business/Industry			
Holman	Keith	Member of Public	Primary	kholman454@gmail.com	
Hamilton	Alex	Member of Public	Alternate	alex.cherri.hamilton@gmail.com	

	LOCAL MITIGATION STRATEGY COMMITTEE ROSTER			**10/9/2019**	
Last Name	**First Name**	**Agency**	**Prim/Alt**	**Email**	**Signature**
MEMBERS					
Boer	Kathryn	LEPC		kboer@tcrpc.org	
Bonet	Lisandra	MC Admin OMB	Alternate	lbonet@martin.fl.us	
Burdick	Gregg	Resident		gregg@gnburdick.com	
Ciuperger	Kloee	Legeslative Coordinator	Primary	kciuperg@martin.fl.us	
Colonna	Gina	Sewall's Point		gcolonna@gocaptec.com	
Dougherty	Jeff	MC General Services		jdougher@martin.fl.us	
Fitzpatrick	Kathy	MC Public Works		kfitzpat@martin.fl.us	
Hamilton	Alexandra	St. Luce Settlement	Primary	alex.cherri.hamilton@gmail.com	
Hinkle	Matt	MC ITS	Primary	mhinckle@martin.fl.us	
Jones	Michele	MC EMA		mjones@martin.fl.us	
Kores	Susan	Off Comm Develop		skores@martin.fl.us	
Kozey	John	MC General Services		jkozey@martin.fl.us	
Labbate	Domenica	Admin Project Manager	Primary	dlabbate@martin.fl.us	
LaMartina	Mike	FPL		Michael.L.LaMartina@fpl.com	
Landry	Kevin	MC General Services		klandry@martin.fl.us	
Lynch	Mark	MC Parks and Rec	Alternate	mlynch@martin.fl.us	
Muniz	Keith	ARC Martin County	Primary	kmuniz@arcmc.org	
Muzia	Nicholas	MC Public Works	Alternate	nmuzia@martin.fl.us	
Orr	Pamela	Ocean Breeze		TownClerk@townofoceanbreeze.org	
Perez	John	MCSO	Primary	jlperez@sheriff.martin.fl.us	
Poziomek	Lisa	MC EMA		lpoziomek@martin.fl.us	

Rauth	Terry	MC Public Works		trauth@martin.fl.us	
Rauth	Gene	Town of Jupiter Island		grauth@tji.martin.fl.us	
Rojas	Jan	Resident		janrojas@mac.com	
Rojas	Bill	Resident		bill.rojas@mac.com	
Van Vliet	Christopher	MC Public Works		cvanvlie@martin.fl.us	
Walker	Pamela	Sewall's Point		pwalker@sewallspoint.org	
Wichser	Lisa	MC Public Works		lwichser@martin.fl.us	
Wolcott	Drew	MC Parks and Rec	Primary	awolcott@martin.fl.us	
Youngblood	Kevin	MCSO	Alternate	kryoungblood@sheriff.martin.fl.us	

One representative from the government of Martin County and each participating municipality, Martin County, City of Stuart, Town of Ocean Breeze, Village of Indiantown, Jupiter Island and Sewalls Point.
- One representative from organizations and associations representing key community non-profit agencies of Martin County,
- One representative from organizations and associations representing key business, industry, and community interest groups of Martin County, and
- One representative from the Martin County School District,
- One representative from a critical healthcare facility to represent healthcare agencies of Martin County,
- Other interested individuals from the general public appointed by a majority vote of the Steering Committee.

One representative and one alternate will be selected to represent each of the stakeholder groups listed above.

LOCAL MITIGATION STRATEGY COMMITTEE ROSTER **1/22/2020**

Last Name	First Name	Agency	Prim/Alt	Email	Signature
Steering Committee					
Dzama	George-Chair	MC Public Works	Primary	gdzama@martin.fl.us	
Gorton	James	MC Public Works	Alternate	jgorton@martin.fl.us	
Capra	Joe	Sewall's Point	Primary	jcapra@gocaptec.com	
		Sewall's Point	Alternate		
Ortado	Derek	City of Stuart PD	Primary	dortado@ci.stuart.fl.us	on phone
Peters	David	City of Stuart PW	Alternate	dpeters@ci.stuart.fl.us	
Trent	Stuart-Co-chair	Town of Jupiter Island	Primary	strent@tji.martin.fl.us	
Ventura	Michael	Town of Jupiter Island	Alternate	mventura@tji.martin.fl.us	
O'Neil	Terry	Town of Ocean Breeze	Primary	twoneil@aol.com	
		Town of Ocean Breeze	Alternate		
Brown	Howard	Village of Indiantown	Primary	hbrown@indiantown.org	
		Village of Indiantown	Alternate		
Walton	Jimmy	MCSD	Primary	waltonj@martin.k12.fl.us	
Cocco	Mark	MCSD	Alternate	coccom@martin.k12.fl.us	
Wolfberg	Steve	Cleveland Clinic	Primary	steve.wolfberg@martinhealth.org	
Lewis	Susan	Healthcare Facility	Alternate	Susan.Lewis@martinhealth.org	
Marquis	Jeff	Salvation Army-Non Profit	Primary	jeff.marquis@uss.salvationarmy.org	
Spicer	Jay	NON Profit	Alternate	jay@martincountyfair.com	
Lisiecki	Michael	FL Forest Service	Primary	michael.lisiecki@freshfromflorida.com	
		Key Business/Industry			
Holman	Keith	Member of Public	Primary	kholman454@gmail.com	
Hamilton	Alex	Member of Public	Alternate	alex.cherri.hamilton@gmail.com	

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Members				1/22/2020	
Last Name	**First Name**	**Agency**	**Prim/Alt**	**Email**	**Signature**
MEMBERS					
Boer	Kathryn	LEPC		kboer@tcrpc.org	
Bonet	Lisandra	MC Admin OMB	Alternate	lbonet@martin.fl.us	
Burdick	Gregg	Resident		gregg@gnburdick.com	
Ciuperger	Kloee	Legeslative Coordinator	Primary	kciuperg@martin.fl.us	
Colonna	Gina	Sewall's Point		gcolonna@gocaptec.com	
Dougherty	Jeff	MC General Services		jdougher@martin.fl.us	
Fitzpatrick	Kathy	MC Public Works		kfitzpat@martin.fl.us	
Hamilton	Alexandra	St. Luce Settlement	Primary	alex.cherri.hamilton@gmail.com	
Hinkle	Matt	MC ITS	Primary	mhinckle@martin.fl.us	
Jones	Michele	MC EMA		mjones@martin.fl.us	
Kores	Susan	Off Comm Develop		skores@martin.fl.us	
Kozey	John	MC General Services		jkozey@martin.fl.us	
Labbate	Domenica	Admin Project Manager	Primary	dlabbate@martin.fl.us	
LaMartina	Mike	FPL		Michael.L.LaMartina@fpl.com	
Landry	Kevin	MC General Services		klandry@martin.fl.us	
Lynch	Mark	MC Parks and Rec	Alternate	mlynch@martin.fl.us	
Muniz	Keith	ARC Martin County	Primary	kmuniz@arcmc.org	
Muzia	Nicholas	MC Public Works	Alternate	nmuzia@martin.fl.us	
Orr	Pamela	Ocean Breeze		TownClerk@townofoceanbreeze.org	
Perez	John	MCSO	Primary	jlperez@sheriff.martin.fl.us	
Poziomek	Lisa	MC EMA		lpoziomek@martin.fl.us	
Rauth	Terry	MC Public Works		trauth@martin.fl.us	
Rauth	Gene	Town of Jupiter Island		grauth@tji.martin.fl.us	

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Rojas	Jan	Resident		janrojas@mac.com	
Rojas	Bill	Resident		bill.rojas@mac.com	
Van Vliet	Christopher	MC Public Works		cvanvlie@martin.fl.us	
Walker	Pamela	Sewall's Point		pwalker@sewallspoint.org	
Wichser	Lisa	MC Public Works		lwichser@martin.fl.us	
Wolcott	Drew	MC Parks and Rec	Primary	awolcott@martin.fl.us	
Youngblood	Kevin	MCSO	Alternate	kryoungblood@sheriff.martin.fl.us	
Smith	Samuel	FDEM		samuel.smith@em.myflorida.com	
Baker	Claudia	FDEM		claudia.baker@em.myflorida.com	
Daly	Leslie	MCSO		Daly1@martin.142.fl.us	
Hawkins	Sonji	MCEMA		Shawkins@martin.fl.us	

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One representative from the government of Martin County and each participating municipality, Martin County, City of Stuart, Town of Ocean Breeze, Village of Indiantown, Jupiter Island and Sewalls Point.

- One representative from organizations and associations representing key community non-profit agencies of Martin County,
- One representative from organizations and associations representing key business, industry, and community interest groups of Martin County, and
- One representative from the Martin County School District,
- One representative from a critical healthcare facility to represent healthcare agencies of Martin County,
- Other interested individuals from the general public appointed by a majority vote of the Steering Committee.

One representative and one alternate will be selected to represent each of the stakeholder groups listed above.

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
800 SE Montery Road, Stuart, FL 34994
Wednesday, January 22, 2020 2:00PM-4:00 PM

1. Welcome and Roll Call-George Dzama
2. Approval of October 9, 2019 Minutes
3. New CGDG-MIT Funding Highlights
4. Local Mitigation Strategy Initiatives
   a. New Projects requiring vote
   b. Review Current Project List
   c. Scoring and Prioritization
5. Steering Committee additions
6. Bylaws update and Alternate identification
7. 2020 Meeting Schedule
   - Wednesday April 22nd 2:30PM to 4PM
   - Wednesday July 22nd 2:30PM to 4PM
   - Wednesday October 28th 2:30PM to 4PM
8. Meeting Adjourned

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting Minutes
January 22, 2020 @ 2:00pm

Chair: George Dzama Vice Chair: Stuart Trent

ITEMS	DISCUSSION	ACTION ITEMS	AGENCY/PERSON RESPONSIBLE
Welcome and Roll Call	George Dzama called the meeting to order at 2:06pm and quorum was identified through roll call	None	None
Approval of October 9, 2019 Minutes	George asked that the minutes be reviewed and approved Motion was made to approve the minutes by Stuart Trent and seconded by Joe Capra. All were in favor	None	None
CBDG-MIT Funding	L. Poziomek presented CBDG-MIT future funding opportunity.	All are encouraged to submit projects and think long term, big picture projects.	All agencies with mitigation projects
Local Mitigation Strategy Initiatives - New Projects requiring a vote	George reviewed the ranking process and Stuart Trent discussed the evaluation criteria. George reviewed the preliminary ranked project list with all members	None	None

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting Minutes
January 22, 2020 @ 2:00pm

Local Mitigation Strategy Initiatives – Review Current Project List;	The following was discussed before the ranking process was completed • There is no limit to the number of projects that can be submitted under the Michael Funding • MCSD would like wiring for portable generators. With this information, all their projects can be combined. George asked for a new justification to be completed • Jay Spicer asked if their project can be revised. They would like to have a building that can be used as a shelter to help elevate using schools. Michele Jones mentioned that the building would be consider a critical facility. George suggested that the Fair submit a second project with a project sheet. Once the information is received, it can be voted on electronically. • Joe Capra of Sewell's Point will be adding a new project • Lisa reminded everyone that projects will stay on the master list and the information will be updated as the project progress. • Lisa Poziomek reminded members that updated information on projects should be sent so that the master list can be updated. • Lisa Poziomek reviewed the future WebEOC Board for LMS project tracking. This should be finalized by the next meeting.	Send project Proposal Forms to all members for project submittal Send updated information to Lisa (lpoziomek@martin.fl.us) or Sonji (shawkins@martin.fl.us)	L. Poziomek/S. Hawkins All members with initiatives on the LMS projects list

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting Minutes
January 22, 2020 @ 2:00pm

Project Initiative Scoring and Prioritization	• George led the discussion and project priority discussion. The LMS Steering committee was able to come to a consensus on the project priorities. • Stuart Trent made a motion to approve the list and Joe Capra seconded this motion. All were in favor	Send the finalized list to the LMS Group for their records.	L. Poziomek/S. Hawkins
Steering Committee Additions and Alternate Identification	• Lisa asked that recommendations be made for new Steering Committee members who may be willing to serve on the committee. • Lisa requested those agencies that do not have an alternate identified to please send this information so we can continue to have a quorum moving forward. • MCSD changed Primary and Alternate representatives. Mark Cocco will serve as Primary and Leslie Daly as Alternate.	Send information to Lisa (lpoziomek@martin.fl.us) or Sonji (shawkins@martin.fl.us) Make changes to LMS roster	Primary Steering Committee Primary L. Poziomek/S. Hawkins
Bylaws update	• Lisa reviewed the suggested changes for the bylaws. These changes would allow for better identification of members in good standing and ensure a quorum in the meetings. • A motion was made by Stuart Trent and seconded by Joe Capra. All were in favor	Send new bylaws to the group for their records	L.Poziomek/S. Hawkins
2020 Meeting Schedule	George reviewed the schedule for the 2020 meeting schedule • Wednesday, April 22nd at 2:30pm • Wednesday, July 22nd at 2:30pm • Wednesday, October 28th at 2:30pm	None	None
Meeting Adjourned	• Meeting was adjourned at 3:16pm	None	None

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting Minutes
January 22, 2020 @ 2:00pm

LMS Steering Committee Members Present:
George Dzama (Chair), Martin County Public Works
Stuart Trent (Co-chair), Town of Jupiter Island
James Gorton, Martin County Public Works
Joe Capra, Sewall's Point
Derek Ortado, City of Stuart Police Department
Jimmy Walton, Martin County School District
Mark Cocco, Martin County School District
Jay Spicer, Martin County Fairground (Non-Profit)
Keith Holman, Member of the Public

LMS Members Present:
Michele Jones, Martin County Emergency Management Agency
Lisa Poziomek, Martin County Emergency Management Agency
Sonji Hawkins, Martin County Emergency Management Agency
Christopher Van Vliet, Martin County Public Works
Drew Wolcott, Martin County Parks and Recreation
Samuel Smith, Florida Division of Emergency Management
Claudia Baker, Florida Division of Emergency Management
Leslie Daly, Martin County School Board

LMS Meeting

ID: 824125461, Max Participants: 15

7/22/2020
2:12 PM - 3:05 PM 54 min

Features Used:

Name	Location	Webcam Resolution	Join & Leave Times
Andrew Wolcott	Stuart	-	2:28 PM - 3:05 PM 38 min
Christopher Van Vliet	Stuart	320 x 240	2:30 PM - 3:05 PM 36 min
Domenica Labbate	Stuart	320 x 240	2:25 PM - 3:05 PM 41 min
George Dzama gdzama@martin.fl.us	Stuart	-	2:29 PM - 3:05 PM 37 min
James Gorton	Stuart	-	2:29 PM - 3:05 PM 37 min
Jay Spicer	Pompano Beach	640 x 480	2:20 PM - 3:05 PM 46 min
Jessica Garland	Stuart	-	2:26 PM - 3:05 PM 40 min
Joseph Capra jcapra@gocaptec.com	Stuart	640 x 480	2:20 PM - 3:05 PM 46 min
Kathy Fitzpatrick kfitzpat@martin.fl.us	Miami	640 x 480	2:27 PM - 3:05 PM 39 min
Keith Holman	-	-	2:12 PM - 3:05 PM 54 min
Keith Muniz	Pompano Beach	640 x 480	2:30 PM - 3:05 PM 35 min
Leslie Daly MCSD	-	-	2:33 PM - 3:05 PM 33 min

Name	Location	Webcam Resolution	Join & Leave Times
Lisa Poziomek (Organizer) mjones@martin.fl.us	Stuart	-	2:26 PM - 3:05 PM 40 min
Lisa Wichser	Stuart	-	2:38 PM - 3:05 PM 27 min
Sonji Hawkins (Organizer) mjones@martin.fl.us	Stuart	-	2:12 PM - 3:05 PM 54 min

Show Server Status Download Attendee List Note: this report cannot be used for billing purposes. Powered by GoToMeeting

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
800 SE Monterey Road, Stuart, FL 34994
July 22, 2020 @ 2:30 PM
Go-To-Meeting Info: https://global.gotomeeting.com/join/824125461
Conference Call: 877-437-5856
Participant Code: 497-8162#

NOTE: Meeting is being held virtually due to COVID-19

1. Welcome and Roll Call

2. Approval of Minutes – January 22, 2020

3. Topics for Discussion
   - Amendment to Hobe Heights Projects
   - Updating HMPG Project List 1/22/2020
   - 2020 LMS Plan (sent to FDEM 6/10/2020 for preliminary review)
   - Community Development Block Grant-Mitigation Programs
     - Critical Facility Hardening Grant (application closed on 6/30/2020)
     - General Planning Support Grant (application closes on 7/31/2020)
     - General Infrastructure Grant (application closes on 9/14/2020
     - New COVID-19 CDBG-MIT Public Notice Requirement
   - 2021 Proposed Meeting Dates
     - January 20, 2021
     - April 21, 2021
     - July 21, 2021
     - October 20, 2021

4. Steering Committee additions

5. 2020 Meeting Schedule
   - Wednesday October 28th 2:30PM to 4PM

6. Meeting Adjourned

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
Minutes for July 22, 2020 @ 2:30 PM

Go-To-Meeting Info: https://global.gotomeeting.com/join/824125461
Conference Call: 877-437-5856
Participant Code: 497-8162#
NOTE: Meeting was held virtually due to COVID-19

Chair: George Dzama Vice Chair: Stuart Trent

AGENDA ITEMS	DISCUSSION	ACTION ITEMS	AGENCY/PERSON RESPONSIBLE
Welcome and Roll Call	Meeting opened at 2:40 PM and Sonji Hawkins did the roll call. There was a quorum for this meeting	None	None
Approval of Minutes – January 22, 2020	A motion to approve the minutes was made by Joe Capra and seconded by Jim Gorton. All attendees approved by a vote of "I"	None	None
Topics for Discussion • Amendment to Hobe Heights Projects	Public Works (Jim Gorton) applied for a grant to mitigate the two Hobe Heights projects on the LMS Project List and the Florida Division of Emergency Management (FDEM) asked that the projects be combined into one project, but 3 Phases. A survey was sent out on July 8, 2020 to the Steering Committee members asking for a vote of approval. The approval was given on July 9, 2020.	Update LMS Project List to reflect the changes to the Hobe Heights Projects (update completed 7/23/20)	MCEMA/Sonji Hawkins
• Updating HMPG Project List 1/22/2020	Participating municipalities gave updates to the projects on the LMS List	Update LMS Project List to reflect the status updates for each project (updated completed 7/23/20)	MCEMA/Sonji Hawkins
• 2020 LMS Plan (sent to FDEM 6/10/2020 for preliminary review	Sonji Hawkins gave an update on the plan	None	None

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
Minutes for July 22, 2020 @ 2:30 PM

• Community Development Block-Grant Programs
  ○ Critical Facility Hardening Grant (application closed on 6/30/2020)
  ○ General Planning Support Grant (applications close on 7/31/2020)
  ○ General Infrastructure Grant (application close on 9/14/2020)
  ○ New COVID-19 CDBG-MIT Public Notice Requirement
• 2021 Proposed Meeting Dates
  ○ January 20, 2021
  ○ April 21, 2021
  ○ July 21, 2021
  ○ October 20, 2021
	Sonji Hawkins gave an update on the grants and reminded everyone about the Public Notice requirement.
	
	Topic will be discussed at the next meeting
		Jay Spicer asked that information be resent to him.
		
		None
			MCEMA/Sonji Hawkins
			
			None

Steering Committee Additions	There were no additions added	None	None
2020 Meeting Schedule • Wednesday, October 28th 2:30 PM to 4 PM	George Dzama reminded everyone of the next meeting	None	None
Meeting Adjourned	Joe Capra asked if grant applications can be compared in order to help each other and to be sure information is being interpreted the same The meeting was adjourned at 3:05 PM	George Dzama will follow-up on the request	MCPW/George Dzama

MARTIN COUNTY FIRE RESCUE
Emergency Management Agency
Local Mitigation Strategy Meeting
Minutes for July 22, 2020 @ 2:30 PM

LMS Steering Committee Members Present:
Martin County-George Dzama, Chair
MC Alternate-Jim Gorton
Sewall's Point Primary-Joe Capra
City of Stuart Primary-Derek Ortado
Non-Profit Alternate-Jay Spicer
Martin County School District-Leslie Daly
Member of Public-Keith Holman

LMS Members Present:
Martin County Public Works-Kathy Fitzpatrick
Martin County Public Works-Jessica Garland
Martin County Emergency Management Agency-Sonji Hawkins
Martin County Administrative Services-Domenica Labbate
ARC Martin County-Keith Muniz
Martin County Sheriff's Office-John Perez
Martin County Emergency Management Agency-Lisa Poziomek
Martin County Public Works-Christopher Van Vliet
Martin County Public Works-Lisa Wichser
Martin County Parks and Recreation-Drew Wolcott

Appendix E – Initiative Proposal Form

Martin County
Mitigation Initiative Proposal Form

SCORE Click here to enter text.

Date Submitted: click arrow then use calendar.

Jurisdiction Name:		
Agency Submitting Initiative (Sponsor):		
Contact Person:		
Email Address:		
Phone Number:		
Is this initiative new or a revision of an earlier initiative?	☐ New	☐ Revision
Is the mitigation initiative consistent with the Guiding Principles, Goals, and Objectives of the Martin County Local Mitigation Strategy?	☐ Yes	☐ No

Mitigation Initiative Project Title:	
Description:	
Cost to Implement the Mitigation Initiative:	

Hazard Identification Identify the hazards intended to be addressed by this initiative by checking all applicable boxes below.					
X	Natural Hazards	X	Technological Hazards	X	Societal Hazards
☒	High winds	☐	Bulk Fuel Tank	☐	Pandemic/Epidemic
☐	Storm Surge/ Tsunami	☐	Radiological Release	☐	Mass Casualty
☐	Coastal Erosion	☐	Rail Transportation Incident	☐	Transportation Accidents
☐	Flood	☐	Oil/Hazmat Spill	☐	Civil Disorder/Crime
☐	Tornados	☐	Loss of Comm. Systems	☐	Other Societal Hazard Click here to enter text.
☐	Thunderstorms/ Lighting	☐	Prolonged Utility Failure		
☐	Sea Level Rise	☐	Terrorism		
☐	Drought	☐	Other Tech. Hazard Click here to enter text.		
☐	Severe Winter Storms				
☐	Extreme Heat				
☐	Wildfire				
☐	Ag. Infestation/ Disease				
☐	Other Natural Hazard Click here to enter text.				

Funding Source *Select the most appropriate category of funding for the proposal from the list below.*					
☐	General Fund	☐	Flood Mitigation Assistance Grant	☐	Residential Construction Mitigation Program
☐	BRIC Grant	☐	Hazard Mitigation Grant Program	☐	406 PA Mitigation
☐	State Homeland Security Program	☐	Community Development Block Grant	☐	Other type of funding Click here to enter text.

This section to be completed by Steering Committee Chairperson or designee		
Has this mitigation initiative been approved by the Steering Committee?	☐ Yes	☐ No
If yes, date accepted:		
Steering Committee Priority Ranking Score		
Notes:		

Appendix F – Scoring and Prioritization Methodology

Local Mitigation Strategy Scoring and Prioritization Methodology

Title: Name of Project		
Risk Factor	**Evaluation Criterion**	**Value**
Area Impacted		FALSE
Health & Safety Consequences		FALSE
Consequences to Property		FALSE
Consequences to Environmental Resources		FALSE
Economic Consequences		FALSE
Probability of Occurrence		FALSE
	Priority Score for Relative Risk =	0

Risk Factor	Evaluation Criterion Questions
Area Impacted	• No developed area impacted – 0 point • Less than 25% of the developed area impacted – 1 point • Less than 50% of the developed area impacted – 2 points • Less than 75% of the developed area impacted – 3 points • Over 75% of developed area impacted – 4 points
Health & Safety Consequences	• No health or safety impact – 0 point • Few injuries/illness – 1 point • Few fatalities by many injuries/illness – 2 points • Numerous fatalities – 3 points
Consequences to Property	• No property damage – 0 point • Few properties destroyed or damaged – 1 point • Few destroyed – many damaged – 2 points • Few damaged – many destroyed – 2 points • Many properties destroyed or damaged – 3 points
Economic Consequences	• No economic impact – 0 points • Low direct / or low indirect costs – 1point • Low direct and high indirect costs – 2 points • High direct and low indirect costs – 2 points • High direct and high indirect costs – 3 points
Probability of Occurrence	• Greater that 500 year occurrence – 0 point • 500 years or less occurrence – 1 point • 100 years or less occurrence – 2 points • 25 years or less occurrence – 3 points • Once a year or more occurrence – 4 points

Appendix G – Prioritized Project List

Martin County Unified LMS Project Prioritization List 2019-2020

Project Title and Description	Responsible Jurisdiction/Agency	Cost	Supporting Objective	Prioritized Rank	Potential Funding Sources	Mitigation Actions	Ready for Implementation	Duration	Updated Status
Martin County									
McArthur Boulevard (Chastain through Bathtub Beach) The proposed mitigation measure is to elevate the roadway and reinforce it with a sheet-pile wall.	Martin County/Public Works	$2,525,000	1.4, 1.5	1	CDBG, PWIP, FCP, NFMF, PA, STP	Reduce flooding potential/Prevent erosion	Awaiting funding	30 months	No Changes Reported; 7/6/2020 - Funding still pending, permitting
Hobe Heights Outfall Project Phase 1 - Acquisition of the 13 homes with the lowest FFEs in the neighborhood that cannot be flood protected even with the proposed pump system. The homes will be demolished, and the lots will be restored to the natural grade. Phase 2- This project includes final design and permitting of pump system. Phase 3 - This project includes construction of pumped outfall.	Martin County/Public Works	$1,200,000	1.1, 1.5	2	CDBG, PWIP, FCP,NFMF,PA, STP	Reduce flooding potential/Prevent erosion	Awaiting funding	12 months	Previous project divided into phase 1 and 2 no changes reported; 7/9/2020 - projects were combined and DR-4399 HMGP Application was submitted
Hobe Heights Outfall Phase 3- This project includes construction of pumped outfall.	Martin County/Public Works	$900,000	1.1, 1.5	9	CDBG, PWIP, FCP,NFMF,PA, STP	Reduce flooding potential		12 months	Previous project divided into phase 1 and 2 no changes reported; 7/9/2020 - project was combined into 1 project
Palm City outfall modifications - Multiple Stormwater facilties backup and lose handling capacities due to sea level rise during storm surge and king tide events. The goal is to install series of backflow preventers to maintain storage capacity within storm water treatment facilties. Sites identified in FDEP 2030 Resilient Coasts Program Saltwater Intrusion to wetland	Martin County/Public Works	$175,000	1.1, 1.2	16	CDBG, PWIP, FCP,NFMF,PA, STP	Reduce flooding potential/Prevent coastal erosion	Awaiting funding		7/22/2020-no changes reported
SW Mockingbird Lane Drainage & Outfall Modifications - Improvement to stormwater outfall to protect access to roadway due to flooding from tidal high waters. Drainage improvements (weir / duckbill) to keep water in river instead of on the road	Martin County, Public Works	$100,000	1.1, 1.3	3	CDBG, PWIP, FCP,NFMF,PA, STP	Reduce flooding potential, prevent coastal erosion	Awaiting funding		3/8/2020 Submitted DR-4399 HMGP Michael Application
Danforth Creek Hardening - Sections of Danfotrthe Creek with banks that are seen as a risk of collapse during major storm events This would impact a large number of residents that rely on the creek to drain during rain events. Focus is on the Martin Highway/Martin Downs. A portion of the creek bank is at sea level. Drainage improvements and creek slope hardening to prevent/reduce erosion; would need design and permitting to be completed	Martin County, Public Works	$1,100,000	1.1, 1.4	23	Flood Mitigation Assistance Grant	Reduce flooding potential, prevent coastal erosion	Awaiting funding		7/22/2020-no changes reported

Martin County Unified LMS Project Prioritization List 2019-2020

Project Title and Description	Responsible Jurisdiction/Agency	Cost	Supporting Objective	Prioritized Rank	Potential Funding Sources	Mitigation Actions	Ready for Implementation	Duration	Updated Status
East Fork Creek- Design, permitting and installation of five (5) culverts within the East Fork Creek Tributary basin, and the construction of a lake and STA.	Martin County Public Works	$1,000,000	1.1, 1.9	13	CDBG, PWIP, FCP, NFMF, PA, STP	Reduce flooding potential, prevent coastal erosion	Awaiting funding	24 months	7/22/2020-no changes reported
NE Elaine St - drainage improvements/house flooding	Martin County Public Works	$500,000	1.1, 1.5	20	CDBG, PWIP, FCP, NFMF, PA, STP	Reduce flooding potential, prevent coastal erosion	Awaiting funding	12 months	July 2020 Final design and permitting underway
Installation of impact glass to replace installing plywood shutters for hurricanes. These centers are used for daycares after storm events to allow for citizens to help restore their communities. The impact glass will reduce Category B expenses from FEMA, time and labor for plywood shutter installation and allow for a quicker transition while adding additional protection to the building. - Cassidy Center - Hobe Sound Community Center - New Monrovia - Palm City Community Center - Rio Community Center	Martin County/Parks and Recreation	$84,904	1.1, 1.3	21	Hazard Mitigation Grant program	Reduce wind damage/Prevent property damage	Awaiting funding		New Project 07/2019; 3/2020 Submitted DR-4399 HMGP Michael Application
Julia Court Outfall - drainage improvements/flood protection	Martin County/Public Works	$350,000	1.1, 1.5	18	CDBG, PWIP, FCP, NFMF, PA, STP	Reduce flooding potential/Prevent erosion	Awaiting funding	18 months	7/22/2020-no changes reported
Fire Management Mitigation Equipment	Martin County/Public Works	$200,000	1.6	17		Reduce the potential threat of fires, wildland and structural/Prevent disruption to critical infrastructure	Awaiting funding	2-3 months	7/222020-no changes reported
The Warner Creek Improvement project includes design and construction of an enlarged, benched cross section of the creek between NE Jensen Beach Blvd and NE Savannah Road. The purpose of the project is to provide additional capacity in the creek for flows during major storm events.	Martin County/Public Works	$2,300,000	1.1, 1.5	12	CDBG, PWIP, FCP,NFMF,PA, STP	Reduce flooding potential/Prevent erosion	Awaiting funding	12 months	7/22/2020-no changes reported

Martin County Unified LMS Project Prioritization List 2019-2020

Project Title and Description	Responsible Jurisdiction/Agency	Cost	Supporting Objective	Prioritized Rank	Potential Funding Sources	Mitigation Actions	Ready for Implementation	Duration	Updated Status
The proposed mitigation measure is to elevate the homes proposed to prevent future water intrusion after a long history of flooding in our neighborhood. This would mitigate against ocean, tidal, and Lake Okeechobee releases. Phase 1 was 21 homes in this area, would seek Phase 2 to elevate 8 additional homes. Lots Proposed: 13 (Nguyen, 650 SW Salerno Rd) 19 (Rosemary Dow Arconti, 750 SW Salerno Rd) 20 (Betancourt, 780 SW Salerno Rd) – 3 flood claims 26 (Sprague, 840 SW Salerno Rd) 29 (805 SW Salerno Rd) – 3 flood claims 30 (Hamilton, 785 SW Salerno Rd) – 3 flood claims 34 (Rojas, 715 SW Salerno Rd) – 2 flood claims 18 (Burdick 730 SW Salerno Rd)- 1 claim	Martin County/Public Works	$1,600,000	1.1, 1.2, 1.4,	10	Flood Mitigation Grant Program, Residential Construction Mitigation Program, Hazard Mitigation Grant Program	Reduce Flooding potential Eliminate repetetive loss properties	Awaiting funding		New Project 07/2019; 3/2020 Submitted DR-4399 HMGP Michael Application
County wide roofing - Convert older asphalt roofs at various parks in the county to metal roofing. The asphalt roof shingles are deteriorating and become weaker during storm events, requiring repair of what has been damaged. The metal roofs are more durable and provide extra protection to the building while reducing the need to repair after storm events. Hobe Sound Community Center Eastridge Park bathrooms Greenfiled Par pavillions Zues Park pavillions	Martin County/Parks and Recreation	$150,000	1.1, 1.3	19	Hazard Mitigation Grant program	Reduce wind damage	Awaiting funding		New Project 07/2019; 3/2020 Submitted HMGPO Application
Audible Lightning Predictors for Beaches in Martin	Martin County/Fire Rescue	$54,000	1.7, 1.9	NA	Identifying Grant Opportunties	Increase Public Awareness of Hazards and Impacts	Started	2-3 months	**Obtained funding from other source**

Martin County Unified LMS Project Prioritization List 2019-2020

Project Title and Description	Responsible Jurisdiction/Agency	Cost	Supporting Objective	Prioritized Rank	Potential Funding Sources	Mitigation Actions	Ready for Implementation	Duration	Updated Status
An area in south Martin County, below Jonathan Dickinson State Park, has inadequate in building radio communications to manage first responder communications in the county. This project would build a new tower at Station 36 located at 18405 SE County Line Road., Jupiter FL 33469, providing increased coverage and provide redundancy in communications. This would also include relocating a tower to the old landfill on Bridge Road further enhancing communications for public safety.	Martin County/ITS	$2,000,000	2.1,	31	Identifying Grant Opportuntites	Reduce communication failure/Increase communications operability	Started	1-2 years	Potential funding from other source
Golden Gate Phase III (Ellendale/ Fairmont/ Garden)- Drainage improvements and flood protection	Martin County/Public Works	$700,000	1.1, 1.5	NA	CDBG, PWIP, FCP,NFMF,PA, STP	Reduce flooding potential	Completed	18 months	Obtained funding from other source
Coordinate mitigation activites to include training, exercises and educational inforemation for community partners and residents. Collaborate with local, State and Federal partners for disaster planning and training to prepare the community for all hazard response.	Martin County-wide/Emergency Management		1.7,2.1, 2.3, 2.4, 3.1, 4.1, 4.2	N/A	HMGP and other grant funding opportunities	N/A	Ongoing	Ongoing	N/A
City of Stuart									
City of Stuart Water Reclamation Facility Structural Improvements - Motor Control Center Building-The existing motor control center at the City's Water Reclamation Facility was constructed in the mid nineteen-nineties. The existing metal building has numerous deficiencies and major renovations must be designed to resist the effects of flood hazards and wind loads. Current flood zone maps depict the site to be located in a special flood hazard area. Structural failure due to flooding or wind would result in a loss of all power to the reclamation facility and create an environmental health hazard to the public.	City of Stuart/Public Works	$500,000	1.3	NA	Hazard Mitigation Grant program	Reduce wind damage and flooding potential that prolonged utility failure/Prevent disruption to critical infrastructure	Started		Obtained Funding from other source
Town of Jupiter Island									
Participate in trainings, planning, disaster preparedness and exercies sponsored by Martin County Emergency Management	Town of Jupiter Island/Public Safety	$0	2.1, 4.1, 4.2	N/A	N/A	N/A	N/A	Ongoing	N/A
Town of Ocean Breeze									
Participats in trainings, planning, disaster preparedness and exercies sponsored by Martin County Emergency Management	Town of Ocean Breeze/Council	$0	2.1, 4.1, 4.2	N/A	N/A	N/A	N/A	Ongoing	N/A

Martin County Unified LMS Project Prioritization List 2019-2020

Project Title and Description	Responsible Jurisdiction/Agency	Cost	Supporting Objective	Prioritized Rank	Potential Funding Sources	Mitigation Actions	Ready for Implementation	Duration	Updated Status
Town of Sewall's Point									
South Sewall's Point Road (SSPR) improvments Phase 2 - stormwater storage and discharge, address sea level rise while adding control structures to alleviate sedimentation	Town of Sewall's Point/Public Works	$2,500,000	1.1, 1.4, 1.5	4	Flood Mitigation Assistance Grant, Hazard Mitigation Grant Program	Reduce flooding potential/Prevent coastal erosion	Awaiting funding	5 Years	Phase 2 New Project 07/2019; 3/9/2020 Submitted DR-4399 HMGP Michael Application
Periwinkle Outfall Repairs - add controal structures, with modifications to control blocking discharge	Town of Sewall's Point/Public Works	$200,000	1.1, 1.4, 1.5	13	Flood Mitigation Assistance Grant, Hazard Mitigation Grant Program, 406 PA Mitigation	Reduce flooding potential/Prevent coastal erosion	Awaiting funding		New Project 07/2019; 3/9/2020 Submitted DR-4399 HMGP Michael Application
South Sewall's Point Road (SSPR) improvments Phase 3 - stormwater storage and discharge, address sea level rise while adding control structures to alleviate sedimentation	Town of Sewall's Point/Public Works	$2,500,000	1.1, 1.4, 1.5	6	Flood Mitigation Assistance Grant, Hazard Mitigation Grant Program	Reduce flooding potential/Prevent coastal erosion	Awaiting funding	5 Years	Phase 3 New Project 07/2019; 3/9/2020 Submitted DR-4399 HMGP Michael Application
Knowles Outfall Repairs - add control structures, with modifications to control blocking discharge	Town of Sewall's Point/Public Works	$200,000	1.1, 1.4, 1.5	14	Flood Mitigation Assistance Grant, Hazard Mitigation Grant Program, 406 PA Mitigation	Reduce flooding potential/Prevent coastal erosion	Awaiting funding		New Project 07/2019; 3/9/2020 Submitted DR-4399 HMGP Michael Application
South Sewall's Point Road (SSPR) improvments Phase 4 - stormwater storage and discharge, address sea level rise while adding control structures to alleviate sedimentation	Town of Sewall's Point/Public Works	$2,500,000	1.1, 1.4, 1.5	7	Flood Mitigation Assistance Grant, Hazard Mitigation Grant Program	Reduce flooding potential/Prevent coastal erosion	Awaiting funding	5 Years	Phase 4 New Project 07/2019; 3/9/2020 Submitted DR-4399 HMGP Michael Application
India Lucie Outfall Repairs - add control structures, with modifications to control blocking discharge	Town of Sewall's Point/Public Works	$200,000	1.1, 1.4, 1.5	15	Flood Mitigation Assistance Grant, Hazard Mitigation Grant Program, 406 PA Mitigation	Reduce flooding potential/Prevent coastal erosion	Awaiting funding		New Project 07/2019; 3/9/2020 Submitted DR-4399 HMGP Michael Application

Martin County Unified LMS Project Prioritization List 2019-2020

Project Title and Description	Responsible Jurisdiction/Agency	Cost	Supporting Objective	Prioritized Rank	Potential Funding Sources	Mitigation Actions	Ready for Implementation	Duration	Updated Status
Town of Sewall's Point Stormwater Improvements - South Sewall's Point - The Town plans to replace aging stormwater management infrastructure in South Sewall's Point. This includes replacing cmp pipes with rcp/hdpe pipes, inlets, stormwater manholes and excavate/clean/remove exotics in the retention areas, add check valves/flap gates at the outfalls to provide additional flood relief improvements. In addition the Town plans to interconnect outfalls. The improvements will reduce the frequency of flooding on South Sewall's Point Rd and thus provide emegency ingress/egress for South Sewall's Point.	Town of Sewall's Point/Public Works	$2,600,000	1.1,1.5	NA	CDBG, PWIP, FCP, NFMF, PA, STP	Reduce flooding potential/Prevent coastal erosion	Started	Start 2017 End 2025	Already Begun
North Sewall's Point Road drainage Improvements - additional storage, bio-swales/exfiltration pipe systems, underground storage/swales and detention areas	Town of Sewall's Point/Public Works	$2,600,000	1.1, 1.4, 1.5	5	Flood Mitigation Assistance Grant, Hazard Mitigation Grant Program, 406 PA Mitigation	Reduce flooding potential/Prevent coastal erosion	Awaiting funding		Pending; 3/9/2020 Submitted DR-4399 HMGP Michael Application
Town Hall/Public Safety Complex - raise and harden building structure, provide generator	Town of Sewall's Point/Public Works	$1,250,000	1.1, 1.4, 1.5	11	Flood Mitigation Assistance Grant, Hazard Mitigation Grant Program, 406 PA Mitigation	Reduce flooding potential/Prevent civil unrest and protect vital records			New Project 07/2019; 3/9/2020 Submitted DR-4399 HMGP Michael Application
Marguerita/Mandalay retention area - Alleviates flooding, open space preservation, removal of exotic vegetation within floodplain area, provides storage of upland storm water	Town of Sewall's Point/Public Works	$750,000	1.1, 1.5	NA	CDBG, PWIP, FCP, NFMF, PA, STP	Reduce flooding potential/Prevent erosion	Started	Start 2020 End 2022	**Funded under HMGP**
Village of Indiantown									
Phase 1 Stormwater Master Plan - Study of stormwater control systems to correct flooding problems throughout the Village.	Village of Indiantown/Planning & Development	$2,000,000	1.1, 1.5		Grant	Reduce flooding potential	**Completed**		**Received funding through Florida House Bill (HB5001); Completed in 2019**
Phase 2 Stormwater Master Plan - Continued study of the stormwater control systems to help analyze and develop a comprehensive plan to correct flooding problems throughout the Village.	Village of Indiantown/Planning & Development	$50,000	1.1, 1.5		CDBG	Reduce flooding potential	**Started in 2020**	1 year	Received funding through CDBG-MIT Community Planning Grant
Participation in training, planning, disaster preparedness and exercies sponsored by Martin County Emergency Management	Village of Indiantown/Planning & Development	$0	2.1, 4.1, 4.2		N/A	N/A			Ongoing
Martin County School District									

Martin County Unified LMS Project Prioritization List 2019-2020

Project Title and Description	Responsible Jurisdiction/Agency	Cost	Supporting Objective	Prioritized Rank	Potential Funding Sources	Mitigation Actions	Ready for Implementation	Duration	Updated Status
Design and installation of appropriately sized manual transfer switching devices, cabling, panels, and miscellaneous hookup incidentals to ensure connection to buildings for all the shelters identified in Martin County and the Main Maintenance Facility and Warehouse for the School District. Having these in place will allow for availability of additional power for shelter clients and increase the capacity of Special Needs clients in Martin County. Hidden Oaks Jensen Beach High Anderson Middle Port Salerno Willoughby Learning Center (pet shelter) Warfield Elementary Indiantown Middle Seawind Elementary JD Parker Elementary Indiantown Middle Citrus Grove	Martin County School District/Facilities	$3,114,751	1.3	8	Facilities Capital Outlay	Harden critical facility to reduce wind damage/Prevent disruption to critical infrastructure	Awaiting funding	1-2 years	3/6/2020 - Submitted DR-4399 Michael Applications
Installation of Hurricane Shutters at Spectrum Academy Alternative Middle School/High School. Having shutters in place will protect the contents and secure the building.	Martin County School District/Facilities	$26,500	1.1, 1.3	22	Facilities Capital Outlay	Reduce wind damage/Prevent damage to critical infrastructure	Awaiting funding	1.5 years	3/6/2020 - Submitted DR-4399 Michael Applications
Martin County/Non-Profit Agencies									
This project is for hardening horse stalls for the new Treasure Coast Agri-plex Equestrian Center. Farms in Western Martin County have a need for hardened structures to facilitate large animals during a hurricane. Animals include horses, zebras, emu, etc. The Equestrian Center is planning for 160 stalls to facilitate horse programs in Martin County.	Martin County/Martin County Fair Association	$300,000	1.1, 1.3	24	Hazard Mitigation Grant Program	Reduce wind damage/Harden Critical Facility	Awaiting funding	3 years	10/9/2019; seeking funding through CDBG-MIT
ARC of Martin County - Replace backup 175 KW power generator - Designated Disability EVAC shelter in Stuart.	Martin County/ARC of Martin County	$150,000		NA	Funded other source	Reduce wind damage/Harden Critical Facility	Completed	removed	**Funding other sources; Project completed**

Project Title and Description	Responsible Jurisdiction/Agency	Cost	Supporting Objective	Prioritized Rank	Potential Funding Sources	Mitigation Actions	Ready for Implementation	Duration	Updated Status
This is for the construction of a safe room with adjoining bathrooms and an emergency whole-home generator at the Tilton Family Children's Shelter in Jensen Beach. There is currently no safe room on the property, can not remain operational during a storm and children are evacuated to a community shelter when there are threats of hurricanes. The safe room will ensure children are safe and can remain in "their home" to minimize the trauma during this difficult event. This major endeavor will also enable our staff to care for our children while bringing their own children with them, so they do not have to make the heart-wrenching decision of leaving their family during a crisis.	Martin County/Hibiscus Children's Center	$648,899	1.1, 1.3	25		Reduce wind damage/Harden Critical Facility	Awaiting funding	12 Months	no changes reported

Appendix H – Hazards Scales and Ranking Information

Hazards Scales and Ranking Information

Legend

Vulnerability	Probability
• **0** None – Either no possibility of damage, injury or death, or insufficient data • **1** Low – Slight potential for damage, injury or death • **2** Moderate – Potential for damage, injury or death • **3** High – Strong potential for damage, injury or death	• **L** Low – Although the hazard is noted, either no previous occurrence is recorded or the potential for the hazard to exist is only once every 10 years or more • **M** Moderate – The potential is for the hazard to exist once every 5 – 10 years • **H** High – The potential is for the hazard to exist once every 1 – 5 years

Impacts

Public	• Public – This hazard would prompt evacuation
Responders	• Responders – High risk of injury to responders if winds exceed 40 mph; cannot safely respond to incidents
Continuity of Government	• This impact would affect the daily operations of elected officials and policy groups in local government
Continuity of Operations including Delivery of Services	• This impact would affect government agencies in providing mission essential services to the community • This impact will cause widespread disruption and destruction of critical infrastructure and would hinder commerce and delivery of services
Property, Facilities, and Infrastructure	• This impact will affect the restoration of power and telecommunications and will hinder recovery of other critical facilities and infrastructure
Economic Condition	• This impact would affect businesses because of potential destruction of buildings, but also potential destruction of product which would affect customer bases
Environment	• This impact would cause widespread environmental issues