

# 2015

## Pinellas County Local Mitigation Strategy



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# Pinellas County Local Mitigation Strategy

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## ACKNOWLEDGEMENTS

The revision of the Pinellas County Local Mitigation Strategy (LMS) was accomplished through the support of the Pinellas County Board of County Commissioners and the City Councils of the 24 municipalities within the jurisdiction.

The LMS was developed and approved by the overall Local Mitigation Strategy Working Group, which included the (24) representatives from each municipality and the county, as well as the representatives from public and private sector agencies, organizations and corporations. The LMS was coordinated and the plan prepared by Pinellas County Planning Department with support from the Tampa Bay Regional Planning Council. The following persons and agencies have contributed to the development of this project.

### Leadership

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# Pinellas County Local Mitigation Strategy

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# Pinellas County Local Mitigation Strategy

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- Stacey Swank, Pinellas County Economic Development
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- Dayton Saltsman, Fire Chief, City of South Pasadena
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- Betti Johnson, Emergency Mgmt. Planner, Tampa Bay Regional Planning Council
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- Paula Cohen, City of Treasure Island
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### Membership Subcommittee

Dayton Saltzman, Fire Chief, City of South Pasadena

### Project Review Subcommittee

Robert Bray, Jr., Chair

Renea Vincent, Vice Chair

# Pinellas County Local Mitigation Strategy

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## Acronyms and Glossary

*BFE - Base Flood Elevation:* The highest elevation, expressed in feet above sea level, of the level of flood waters occurring in the regulatory base flood (i.e. 100-year flood event).

*Building Codes:* Regulations adopted by local government that establish standards for construction, modification, and repair of buildings and other structures.

*CDBG - Community Development Block Grants:* The objective of the CDBG program is the development of viable urban communities by providing decent housing and a suitable living environment and expanding economic opportunities primarily for persons of low- and moderate- incomes. Funds must be used so as to give maximum feasible priority to activities which will carry out one of the three broad national objectives of: benefit to low- and moderate-income families; or aid in the prevention or elimination of slums or blight; or activities designed to meet other community development needs having a particular urgency because existing conditions pose a serious and immediate threat to the health or welfare of the community where other financial resources are not available to meet such needs.

*CDP - Census Designated Places:* These are locations used for sub-county regions to insure consistency with other census-based products. Primarily used in the ELVIS attachment to Appendix 1.

*CEMP - Comprehensive Emergency Management Plan:* Required by Florida Statutes and addresses, the four inter-related phases of emergency management: preparedness, response, recovery and mitigation.

*CHHA - Coastal High Hazard Area:* The area vulnerable to storm surge flooding in a Category 1 hurricane event as determined by the SLOSH model and illustrated in the Tampa Bay Regional Hurricane Evacuation Study, *Storm Tide Atlas*.

*CIE – Capital Improvements Element:* A component of mitigation planning detailed in Appendix 5.

*CMCE – Coastal Management and Conservation Element:* A component of mitigation planning detailed in Appendix 5.

*COOP - Continuity Of Operations Plan:* A COOP is a plan for how an organization will recover from and restore partially or completely interrupted critical functions within a predetermined time after a disaster or extended disruption.

*Critical Facilities:* A structure from which essential services and functions for victim survival, continuation of public safety actions, and/or disaster recovery are performed or provided.

*CRS - Community Rating System:* An initiative of the Federal Insurance Administration to encourage increased efforts to reduce flood losses, facilitate accurate insurance ratings and promote the awareness of flood insurance.

*Cultural Facilities:* Establishments such as museums or art galleries of an historic, educational or cultural interest that are not operated commercially.

# Pinellas County Local Mitigation Strategy

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*Development:* The carrying out of any building activity or mining operation, the making of any material change in the use or appearance of any structure or land, or the dividing of land into three or more parcels.

*Disaster:* Any natural, technological, or civil emergency that causes damage of sufficient severity and magnitude to result in a declaration of a state of emergency by a county, the Governor, or the President of the United States. Disasters shall be identified by the severity of resulting damage, as follows:

- **Minor Disaster** - A disaster that is likely to be within the response capabilities of local government and to result in only a minimal need for State or Federal assistance.
- **Major Disaster** - A disaster that will likely exceed local capabilities and require a broad range of State and Federal assistance.
- **Catastrophic Disaster** - A disaster that will require massive state and federal assistance, including immediate military involvement.

*Drainage:* Surface water runoff or the removal of surface water or groundwater from land by drains, grading or other means.

*EHPA - Enhanced Hurricane Protection Area:* EHPA criteria apply only to specific elementary and community college educational facilities that are designated as EHPAs. EHPA areas shall provide emergency shelter and protection for people for a period of up to 8 hours during a hurricane. Facilities located in a Category 1, 2, or 3 evacuation zone is exempted from EHPA requirements.

*EMPA - Emergency Management, Preparedness and Assistance: Trust Fund Grant Program:* Competitive grant for the state or regional agencies, local governments and private non-profit organizations for the implementation of projects that will further state and local emergency management objectives.

*EPCRA - Emergency Planning and Community Right to Know Act:* EPCRA helps increase the public's knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment.

*Evacuation Routes:* Routes designated by Pinellas County Office of Emergency Management and the Tampa Bay Regional Planning Council (TBRPC) for the movement of persons to safety in the event of a hurricane.

*FCT - Florida Community Trust Program:* The Florida Communities Trust (FCT) is a Florida land acquisition grant program administered by the Department of Community Affairs (DCA). Grants are awarded annually on a competitive basis to local governments and non-profit environmental organizations for community-based parks, open space and greenways. These projects must further outdoors recreation and natural resources protection needs identified in the local governments Comprehensive Plans.

*FIRM - Flood Insurance Rate Map:* Flood maps show flood risk zones and their boundaries, and may also show floodways and Base Flood Elevations (BFEs).

*Floodplain Management Plan:* The operation of a program containing corrective and preventive measures for reducing flood damage including, but not limited to, flood control projects, floodplain land use regulations, floodproofing of buildings and emergency preparedness plans.

# Pinellas County Local Mitigation Strategy

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*Flood prone Areas:* Areas inundated during a 100-year event or areas identified by the National Flood Insurance Program as an “A Zone” on Flood Insurance Rate Maps or Flood Hazard Boundary Maps.

*FLUE – Future Land Use Element:* A component of mitigation planning detailed in Appendix 5.

*FMA - Flood Mitigation Assistance program:* The FMA is a program of the Federal Emergency Management Agency (FEMA) that is administered in the State of Florida by the Department of Community Affairs, Division of Emergency Management. FEMA provides approximately \$2.5 million annually to the Division for projects that reduce or eliminate the long-term risks of flood damage to buildings, homes, and other structures insured under the National Flood Insurance Program.

*FNAI - Florida Natural Areas Inventory:* The mission of the Florida Natural Areas Inventory is to collect, interpret, and disseminate ecological information critical to the conservation of Florida's biological diversity. FNAI's database and expertise facilitate environmentally sound planning and natural resource management to protect the plants, animals, and communities that represent Florida's natural heritage.

*Goal:* Long-term end toward which programs or activities are ultimately directed.

*Habitat:* The particular natural community or communities that typically support a population of a particular plant or animal species.

*Hazardous Material:* Any substance or material in a quantity or form which may be harmful to humans, animals, crops, water systems, or other elements of the environment if accidentally released. Hazardous materials include: explosives, gases (compressed, liquefied, or dissolved), flammable and combustible liquids, flammable solids or substances, oxidizing substances, poisonous and infectious substances, radioactive materials, and corrosives.

*HE – Housing Element:* A component of mitigation planning detailed in Appendix 5.

*Historic Resources:* All areas, districts or sites containing properties listed on the Florida Master Site File, the National Register of Historic Places, or designated by a local government as historically, architecturally, or archaeologically significant.

*HMGP - Hazard Mitigation Grant Program:* The program operates under the authority of Public Law 100-707, the Robert T. Stafford Disaster Relief and Emergency Assistance Act. (The Hazard Mitigation Grant Program (HMPG) was replaced in 2004 by Pre-Disaster Mitigation (PDM.) Section 404 provides 75/25 matching funds to eligible applicants to implement immediate and long-term hazard mitigation measures. Up to 15 percent of the combined public assistance and individual assistance programs are available to fund hazard mitigation projects. Section 406 is site-specific mitigation that is written if authorized by the federal/state/local officials and is in accordance with any applicable rules and regulations. This type of mitigation receives 75 percent federal money and requires a state/local match of 25 percent.

*Hurricane Shelter:* A structure which meets the shelter selection guidelines, designated by local officials to be pre-identified for sheltering residents during a hurricane.

*ICE – Intergovernmental Coordination Element:* A component of mitigation planning detailed in Appendix 5.

# Pinellas County Local Mitigation Strategy

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*IE – Infrastructure Element:* A component of mitigation planning detailed in Appendix 5.

*Infrastructure:* Man-made structures which serve the common needs of the population, such as: sewage disposal systems, potable water systems, potable water wells serving a system, solid waste disposal sites or retention areas, stormwater systems, utilities, piers, docks, wharves, breakwaters, bulkheads, seawalls, bulwarks, revetments, causeways, marinas, navigation channels, bridges, and roadways.

*LEPC - Local Emergency Planning Committee:* LEPCs assist in the development of emergency response plans, conduct reviews at least annually, and provide information about chemicals in the community to citizens.

*LIDAR – Light (Laser Imaging) Detection and Ranging:* LIDAR is a remote sensing system used to collect topographic data.

*LMS - Local Mitigation Strategy:* Plan developed to minimize negative impacts (potential loss of life or property damage) from a natural, man-made or technological disaster.

*Long-Term Temporary Housing:* Tents, mobile homes, suitable rental housing, or other readily fabricated dwellings set up for residents to live in until they are able to return to their own homes or find new homes. Utilization of this type of housing can last up to two weeks or longer.

*Mitigate:* To offset or reduce negative impacts through measures such as, but not limited to, the following:

- Not taking action or parts of a certain action.
- Limiting the degree or magnitude of the action.
- Repairing, rehabilitating, or restoring the affected resources.
- Preserving and maintaining operations over time during the life of the action, and
- Replacing or providing substitute resources or environment. Manufactured Home: See Mobile Home.

*MPO - Metropolitan Planning Organization:* Any of a group of municipal or county agencies involved in long range planning.

*Mobile Home:* A structure, transportable in one or more sections, twelve (12) body feet or more in width, and over forty (40) feet in length, which is built upon an integral chassis and designed to be used as a dwelling unit with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air conditioning, and electrical systems contained herein. If fabricated after June 15, 1976, each section shall bear a HUD label certifying that it was built in compliance with Federal Manufacturing Home Construction and Safety Standards 42 USC 5401 and 24 CR 3282 and 3283. These homes are properly called *manufactured homes*.

*Mobile Home Park:* A mobile home development consisting of a parcel of land under single ownership which has been, or is proposed to be, planned and improved for the placement of mobile & manufactured homes for non-transient use.

*Mobile Home Space:* A plot of land for placement of a single mobile or manufactured home within a mobile home park.

# Pinellas County Local Mitigation Strategy

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*NFIP - National Flood Insurance Program:* A federal program, which authorizes the sale of federally subsidized flood insurance in communities that agree to adopt and implement flood mitigation strategies and regulations.

*Objective:* A specific, measurable, intermediate end that is achievable and marks progress toward a goal.

*Open Space:* Undeveloped lands suitable for passive recreation or conservation uses.

*Post-Disaster Recovery:* Long-term activity designed to return life to normal or improved levels following a disaster.

*PEGS - Public, Educational and Governmental Channels:* Television channels who focus on government operations, public information, and education.

*Public Facilities:* Transportation systems or facilities, sewer systems or facilities, solid waste systems or facilities, drainage systems or facilities, potable water systems or facilities, educational systems or facilities, parks and recreation systems or facilities and public health systems or facilities.

*Recreational Vehicle:* Vehicle-type unit primarily designed as temporary living quarters for recreational, camping, or travel use, which either has its own motive power or is mounted on or drawn by another vehicle.

RES - Regional Evacuation Studies

*Retrofit:* Corrective measures taken on an existing structure to minimize damage caused by water, wind and fire.

*RDSTF - Regional Disaster Security Task Force:* In the event a terrorist incident occurred in any of the listed regions, the designated Task Force in the effected area would immediately be called to aid in recovery and attack response efforts.

*RIS - Resource Identification Strategy:* This database contains information on historical and potential funding sources for disaster preparedness, response, mitigation, recovery, and long-term redevelopment projects funded by federal, state, and other organizations. The database is designed to provide communities with important information on potential assistance before a crisis, when developing a local mitigation strategy, or after a disaster strikes.

*Runoff:* The part of the rainfall that travels to surface streams and water bodies via surface or subsurface routes.

*RV - Recreational Vehicle Park:* Place set aside and offered by a person, for either direct or indirect remuneration of the owner, leaser, or operator of such place, for the parking, accommodation, or rental of five or more recreational vehicles or tents; and the group camping and similar recreational facilities.

*SLOSH - Sea Lake Overland Surge in Hurricanes:* A computerized model run by the National Hurricane Center (NHC) to estimate storm surge heights and winds resulting from historical, hypothetical, or predicted hurricanes by taking into account barometric pressure, size, forward speed, track, and winds.

## Pinellas County Local Mitigation Strategy

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*Storm Surge:* The abnormal rise in water level caused by the wind and pressure forces of a hurricane or tropical storm. Storm surge produces most of the flood damage and drowning associated with storms that make landfall or that closely approach the coastline.

*Stormwater:* Flow of water resulting from a rainfall event.

*Subdivision:* The division of land, lot, tract, or parcel into two or more lots, parcels, plats, or sites, or other divisions of land for the purpose of sale, lease, offer, or development, whether immediate or future. The term also includes the division of residential, commercial, industrial, agricultural, or other land whether by deed, metes and bounds description, lease, map, plat, or other instrument.

*Wetlands:* Areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils.

# Pinellas County Local Mitigation Strategy

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## List of References

Pinellas County Comprehensive Plan and Land Development Code  
Belleair Comprehensive Plan and Land Development Code  
Belleair Beach Comprehensive Plan and Land Development Code  
Belleair Bluffs Comprehensive Plan and Land Development Code  
Belleair Shore Comprehensive Plan and Land Development Code  
Clearwater Comprehensive Plan and Land Development Code  
Dunedin Comprehensive Plan and Land Development Code  
Gulfport Comprehensive Plan and Land Development Code  
Indian Rocks Beach Comprehensive Plan and Land Development Code  
Indian Shores Comprehensive Plan and Land Development Code  
Kenneth City Comprehensive Plan and Land Development Code  
Largo Comprehensive Plan and Land Development Code  
Madeira Beach Comprehensive Plan and Land Development Code  
North Redington Beach Comprehensive Plan and Land Development Code  
Oldsmar Comprehensive Plan and Land Development Code  
Pinellas Park Comprehensive Plan and Land Development Code  
Redington Beach Comprehensive Plan and Land Development Code  
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Safety Harbor Comprehensive Plan and Land Development Code  
St. Petersburg Comprehensive Plan and Land Development Code  
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Seminole Comprehensive Plan and Land Development Code  
South Pasadena Comprehensive Plan and Land Development Code  
Tarpon Springs Comprehensive Plan and Land Development Code  
Treasure Island Comprehensive Plan and Land Development Code

Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 44CFR Part 201 (Stafford Act) 42 U.S.C. 5165, as amended by the Disaster Mitigation Act of 2000 (DMA) (P.L. 106-390)

*Breaking the Cycle, Strengthening Florida before Disaster Strikes*, Florida Department of Community Affairs, Tallahassee, FL, February 1999.

*Climate Change 2013: The Physical Science Basis*, Intergovernmental Panel on Climate Change, 2013.

*Coastal Discovery Report (Final) HSFE04-12-J-0018*, Pinellas County, Florida, FEMA, August 2013

*CRS Coordinator's Manual*, August 2014

*FEMA Strategic Plan 2014-2018*, FEMA, 2014

*HAZUS-MH 2.0 software application*. Department of Homeland Security, Federal Emergency Management Agency, Mitigation Division. 2012.

*Integrating Hazard Mitigation into Local Planning: Case Studies and Tools for Community Officials*  
FEMA, March 1, 2013

# Pinellas County Local Mitigation Strategy

---

*Local Mitigation Planning Handbook*, FEMA, March 2013

*Local Multi-Hazard Mitigation Planning Guidance*, July 1, 2008, FEMA

*Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards*, FEMA, January 2013

*Pinellas County Comprehensive Emergency Management Plan (CEMP)*, Pinellas County Emergency Management Administration, 2013

*2014 National Climate Assessment*, U.S. Global Change Research Program, 2014.

*Planning for Flood Recovery and Long-Term Resilience in Vermont: Smart Growth Approaches for Disaster-Resilient Communities*; EPA, July 2014 ([www.epa.gov/smartgrowth](http://www.epa.gov/smartgrowth))

*Recommended Integration Practices: Strengthening the Floodplain Portions of the Local Mitigation Strategy*, Florida Division of Emergency Management and FSU Planning & Development Lab

*Regional Hazardous Materials Plan*, Tampa Bay Local Emergency Planning Committee (LEPC), 2013

*State of Florida Enhanced Hazard Mitigation Plan*, Florida Division of Emergency Management, August 2013.

*Strategic Beach Management Plan for the Southwest Gulf Coast Region*, State of Florida Department of Environmental Protection, Bureau of Beaches and Coastal Systems. 2008.

*Strategic Regional Policy Plan (SRPP, 2005)* Tampa Bay Regional Planning Council

## **Internet Web Sites:**

*Florida Estimates of Population 2013*, Bureau of Economic and Business Research (BEBR), University of Florida

“Tampa Bay Original Climate Page,” National Weather Service Tampa Bay Area, FL Weather Forecast Office website, <http://www.srh.noaa.gov/tbw/?n=tampabayoriginalclimatepage>. Date Accessed: June 17, 2014

“Labor Market Information,” Florida Bureau of Labor Market Statistics website, <http://www.floridajobs.org/labor-market-information>. Date Accessed: June 20, 2014

“Selected Economic Characteristics: 2010-2012 American Community Survey 3-Year Estimates,” American Community Survey (ACS), U.S. Census Bureau, [http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS\\_12\\_3YR\\_DP03&prodType=table](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_12_3YR_DP03&prodType=table). Date Accessed: June 18, 2014.

“Facts-at-a-Glance,” Pinellas County Schools website, <http://www.pcsb.org/Page/650>. Date Accessed: June 17, 2014.

# Pinellas County Local Mitigation Strategy

---

“Annual 2013 Visitor Profile,” Visit St. Petersburg/Clearwater website, <http://www.pinellascvb.com/sites/pinellascvb.com/master/files/Pinellas2013Annual.pdf>. Date Accessed June 18, 2014.

“Weather Articles and Summaries,” National Weather Service Tampa Bay Area, FL Weather Forecast Office website, <http://www.srh.noaa.gov/tbw/?n=tampabayweathersummary-event>. Date Accessed: June 23, 2014.

“Hurricanes,” Centers for Disease Control Morbidity and Mortality Weekly Report webpage, [http://www.cdc.gov/mmwr/mguide\\_nd.html](http://www.cdc.gov/mmwr/mguide_nd.html). Date Accessed: August 2014.

“Storm Event Database,” National Climatic Data Center website, <http://www.ncdc.noaa.gov/stormevents/>. Date Accessed: August 2014.

“Florida State Fire Marshal's Annual Report (1997-2011)”, Florida Division of State Fire Marshal website, [http://www.myfloridacfo.com/Division/SFM/FFIRS/ARCHIVE\\_annualreport.htm#.VFevCDTF-sM](http://www.myfloridacfo.com/Division/SFM/FFIRS/ARCHIVE_annualreport.htm#.VFevCDTF-sM). Date Accessed: August 2014.

“FEMA Disaster Declarations Summary,” Federal Emergency Management Agency website, <https://explore.data.gov/Other/FEMA-Disaster-Declarations-Summary/uihf-be6u>. Date Accessed: August 2014.

National Weather Service River Forecast Center – Southeast RFC:  
<http://www.srh.noaa.gov/serfc/?n=dammap>  
<http://www.srh.noaa.gov/serfc/index.php>  
<http://www.srh.noaa.gov/serfc/>

NOAA’s National Weather Service:  
[http://www.weather.gov/os/water/high\\_water/](http://www.weather.gov/os/water/high_water/)  
[http://www.weather.gov/os/water/high\\_water/hw-map.shtml](http://www.weather.gov/os/water/high_water/hw-map.shtml)

National Flood Insurance Program (NFIP):  
<http://www.floodsmart.gov/floodsmart/>  
<http://www.floodsmart.gov/toolkits/>  
[http://www.floodsmart.gov/floodsmart/pages/media\\_resources.jsp](http://www.floodsmart.gov/floodsmart/pages/media_resources.jsp)

Glossary from NFIP:  
[http://www.floodsmart.gov/floodsmart/pages/glossary\\_A-I.jsp](http://www.floodsmart.gov/floodsmart/pages/glossary_A-I.jsp)  
[http://www.floodsmart.gov/floodsmart/pages/glossary\\_I-R.jsp](http://www.floodsmart.gov/floodsmart/pages/glossary_I-R.jsp)  
[http://www.floodsmart.gov/floodsmart/pages/glossary\\_S-Z.jsp](http://www.floodsmart.gov/floodsmart/pages/glossary_S-Z.jsp)

Glossary from SFWMD:  
<http://www.sfwmd.gov/portal/page/portal/levelthree/water%20managers%20glossary>

National Inventory of Dams:  
<http://geo.usace.army.mil/pgis/f?p=397:12:2880880371845165>

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Catalog of Federal Domestic Assistance:

<https://www.cfda.gov/>

U.S. General Services Administration:

<http://www.gsa.gov/portal/content/101097>

# Pinellas County Local Mitigation Strategy

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## Record of Document Revisions

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01/29/2016	Appendix 9 & 10 Updated
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01/10/2018	Appendix 7, 9 & 10 Updated

## **BASIC PLAN**

# Pinellas County Local Mitigation Strategy

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# BASIC PLAN

## Background

The nation and the State of Florida can no longer afford to bear the extraordinarily high human and economic costs of disasters. All levels of government must take steps to decrease the vulnerability of their citizens, businesses, infrastructure, and institutions to the impact from these events. Every Florida community will always be vulnerable to hurricanes, other natural disasters, technological hazards, and man-made emergencies. However, the state's counties and municipalities do not have to remain unnecessarily vulnerable to the consequences of these events. The development of a community-wide local mitigation strategy is a good first step in the effort to reduce or eliminate the costs of disasters and plan for an organized and timely post-disaster redevelopment.



The purpose of the Local Mitigation Strategy is to establish an ongoing process that will make hazard mitigation part of the daily functioning of the entire community, including both public and private sectors and our residents themselves. The Local Mitigation Strategy serves as a bridge between local governments' comprehensive growth management plans, the county comprehensive emergency management plan, land development regulations, and relevant ordinances and codes such as those for floodplain management. It may also fulfill some of the requirements of Florida Statutes Chapter 163, "Comprehensive Growth Management Plan." This strategy integrates mitigation initiatives established through various policies, programs, and regulations into a single stand-alone working document.

In early 1998, The Florida Department of Community Affairs (DCA) now the Department of Economic Opportunity (DEO) requested that Pinellas County and its municipalities develop a unified, community-wide local mitigation strategy. Their request was aimed at controlling the skyrocketing costs of disasters. Most of the burdens of recovering from a disaster fall squarely on the shoulders of local government. A major disaster can bring extraordinary hardship to citizens, devastate the economic base, and diminish its quality of life for years to come. Recent events, such as the storms of the 2004 hurricane season as well as Hurricane Katrina (2005), Wilma (2005) and Ike (Texas 2008) demonstrate the need to plan ahead and mitigate potential impacts wherever we can. If we can avoid the hardships we have seen in other parts of the country by making smarter decisions before the disaster, we will have served the best interest of our citizens, businesses and communities.

In addition, disaster events create enormous pressure for local government to take action, and that action must be taken quickly. Therefore, it is critical to rebuild communities in ways that will guarantee that the same destruction and hardship will not be repeated in future disasters. In order to make those critical decisions after a disaster, you must have a plan or "blueprint" to guide decision-makers in those difficult times.

The purpose of the local mitigation strategy is to develop a “blueprint” or guide intended to provide a unified and consistent course of action needed to eliminate or reduce the impact of disasters that threaten Pinellas County and its municipalities. This strategy was originally developed in accordance with the Florida Department of Community Affairs publication, *The Local Mitigation Strategy: A Guidebook for Florida Cities and Counties*, and other applicable guidance promoted by the Department of Community Affairs (DCA), the Florida Division of Emergency Management (DEM) and the Federal Emergency Management Agency (FEMA).

The Department of Community Affairs, through a contractual agreement with Pinellas County as grantee, provided the original grant funding for this effort in 1998. Municipal participation in the process was funded through subcontract agreements between Pinellas County and those municipalities that voluntarily agreed to produce a single, unified Local Mitigation Strategy.

In addition to county and municipal government representation, the local mitigation strategy process included a broad range of private and public sector interests including representatives from the regional planning council, chambers of commerce, public utilities, health care, public transportation, community associations, the insurance industry, business contingency planners, volunteer and community-based organizations, construction industry, and education.

At the inception of the workgroup, it decided to be divided into two groups, voting members and non-voting members. The voting members were the twenty-three (23) municipalities which officially committed to the process via their subcontract with Pinellas County and the Pinellas County Planning Department. The non-voting members were the remaining thirty-one (31) partners from the private and public sectors, who agreed to participate to share their insights and recommendations on the topics relevant to their areas of expertise.

The workgroup conducted its first meeting on March 11, 1998. Over the ensuing fifteen months, a total of twenty-two (22) meetings took place to produce the deliverables required by contract. Pinellas County and its municipalities developed and adopted a unified Local Mitigation Strategy in 1999. By developing the Local Mitigation Strategy, it was hoped Pinellas County could increase the resiliency of the community to the disruption and hardship of disasters and attempt to reduce the potential and actual costs of their impact.

The State of Florida requires an annual update of the countywide LMS. This update process focused on the revision of the risk assessment, the identification of accomplishments and the update of the initiatives or projects list. Through its regular quarterly meetings, the county and its municipalities encouraged participation in the ongoing mitigation initiatives at the local level.<sup>1</sup>

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<sup>1</sup> Requirements - The Florida Division of Emergency Management (DEM) and the Federal Emergency Management Agency (FEMA) define the local mitigation strategy requirements. The State requires that the Local Mitigation Strategy will provide the processes for application, project selection, and distribution of funds under the Hazard Mitigation Grant Program. Under Administrative Rule 9G-22, the Local Mitigation Strategy Workgroup must meet several new conditions to maintain compliance. These requirements are:

1. No later than the last working weekday of each January, the Chairperson of the Board of County Commissioners shall submit to the Florida Division of Emergency Management, a list of the members of the Local Mitigation Strategy Workgroup and its designated chairperson and vice-chairperson.
2. The Workgroup shall include, at a minimum, representatives from various agencies of county government, representatives from all interested municipalities in the county, and representatives from interested private and civic organizations, Native American tribes or organizations, trade and commercial support groups, property owners associations, water management districts, regional planning councils, independent special districts, and non-profit groups. The county shall submit documentation that indicates that, within the preceding year, it has issued a written invitation to each group as specified above in #2.

## The 2004 Update of the Pinellas LMS

In 2004 Pinellas County completed the first comprehensive update of the countywide Local Mitigation Strategy prompted by new requirements of the Disaster Mitigation Act of 2000. This update incorporated new risk assessments based on a National Flood Insurance Program (NFIP) Flood Study (conducted in 2002), the hurricane evacuation study update (2000), the hazardous material facility inventory (2004), and hazards modeling using the The Arbitrator Of Storms (TAOS) model. Appendix 4 (Local Mitigation Strategy Goals and Objectives) and Appendix 5 (Policies and Ordinances) were updated by the local governments identifying the adopted goals, objectives and policies within their Local Government Comprehensive Plans (LGCPs) and Land Development Regulations (LDRs) and the relevant sections of the Evaluation and Appraisal Reports (EARs) submitted to the Florida Department of Community Affairs. Vulnerabilities including repetitive loss properties and critical facilities inventories were updated and mapped using Geographic Information System (GIS) technology. In addition, the Appendix 9 Mitigation Initiatives and Appendix 10 Accomplishments were discussed and updated based on consensus of local priorities.

Following the LMS Update in 2004, all 25 jurisdictions incorporated the hazard identification and the risk assessment into their local government comprehensive plans including the goals and policies of the Future Land Use, Coastal and Conservation, Parks and Recreation, Infrastructure and Transportation Elements (See Appendix 5) through the Evaluation and Appraisal Report (EAR) process. Mitigation initiatives and projects identified were incorporated into Capital Improvement Programs (CIPs) including stormwater management projects, transportation improvements and land acquisition projects (floodplain and wetland protection). The 2009 hazard identification and risk assessment in this updated LMS will also be incorporated into the Pinellas County Post-Disaster Redevelopment Plan (PDRP), a project recommended by the LMS and currently under development.

In addition and probably most visibly, publically-owned critical facilities (such as fire stations, law enforcement facilities and county/municipal buildings which required strengthening, hardening and/or floodproofing) identified and prioritized for funding, were included in the jurisdictions' Capital Improvement Programs or applications were made for mitigation funding following the 2004 Hurricane Season. Jurisdictions have used the LMS as a tool to better identify these mitigation projects, specifically hardening and strengthening of critical infrastructure. Many of these facilities are included in the ranked projects (Appendix 9) or, if completed, in Appendix 10.

Many of the mitigation actions are implemented through land development regulations including zoning and building codes, subdivision regulation, site reviews, and permitting processes within each jurisdiction. For example, the siting of critical facilities such as hospitals, skilled nursing facilities and large Assisted Living Facilities (ALFs) is restricted in hurricane vulnerable zones consistent with state, regional and county plans. Increased density within the Coastal High Hazard Area (CHHA) is prohibited in coastal communities as are new mobile home developments within

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3. The Local Mitigation Strategy Workgroup shall be charged with the responsibilities of designating a Chairperson and Vice-Chairperson; developing and revising the Local Mitigation Strategy as necessary; coordinating all mitigation activities within the County; setting an order of priority for local mitigation projects, and submitting an annual LMS update to the Florida Division of Emergency Management by the last working weekday in January of each year. The update shall include changes to the hazard assessment, project priority list, critical facilities list, repetitive loss list, and revisions to all maps.

the floodplain. Floodplain management regulations identified in local ordinances are enforced through the local site plan review, permitting, and code enforcement.

As part of the planning process, the LMS Committee identifies current plans, programs, policies/ordinances, and studies/reports that will augment or help support mitigation planning efforts (Appendix 5). The LMS Work Group will be the mechanism for ensuring that entities integrate hazard mitigation into its future planning activities. The LMS Vice Chair will continue to ensure that policies, programs and mitigation actions are consistent between the LMS Plan and the Pinellas County CEMP. Further, all jurisdictional Emergency Operations Plans (EOPs) require consistency with the County CEMP.

## The 2009 Update of the Pinellas LMS

Many jurisdictions indicated that they reduced their Community Rating System (CRS) Class rating as a result of adopting the 2004 LMS Plan. In 2009 jurisdictions had the option of including the jurisdiction-specific Floodplain Management Action Plan in the adopted LMS. As described, local government functions provide a myriad of methods in which to implement actions identified in the mitigation strategy. In Florida, the required consistency of the Local Government Comprehensive Plans (LGCP) and Land Development Regulations (LDRs) ensures consistency of federal (NFIP), state, regional and local goals and policies. Others include, but are not limited to:

- ❖ Land Development Plans
  - Local Government Comprehensive Plans
    - Future Land Use Element
    - Coastal and Conservation Elements
    - Infrastructure and Utilities Element
    - Parks and Recreation Element
    - Transportation Element
    - Capital Improvements Program (CIP)
  - Historic Preservation Programs
- ❖ Land Development Regulations
  - Statewide Building Code
  - Architecture Design Review
  - Zoning Ordinances
  - Subdivision Regulations
  - Permitting Process and Code Enforcement
- ❖ Floodplain Management Plans
- ❖ Storm Water Management
- ❖ Solid Waste & Hazardous Materials Regulations
- ❖ Beach Conservation
  - Dune Protection
  - Beach Renourishment
  - Habitat Protection
  - Beach Access Protection
- ❖ Emergency Operations
  - CEMP and Emergency Operations Plans (All Hazards)
  - Evacuation Studies
- ❖ Post Disaster Redevelopment Plan (PDRP)
- ❖ Firewise Communities and Fire Protection Programs

- ❖ School District Facilities Plan
- ❖ Penny for Pinellas Program
  - The local Penny for Pinellas Program funds many projects including the improvement of evacuation routes, acquisition of Environmentally Sensitive Lands, stormwater projects, etc.
- ❖ Water Conservation Programs
  - Water restrictions and Emergency Water Restrictions
- ❖ Public Education and Outreach Programs
  - Emergency Preparedness Website, Newsletters, E-Letters, Publications
    - Tropical Storms and Hurricanes (Reducing risk: Securing home and business)
    - Wildfire
    - Hazardous Materials
    - Flooding
    - Sinkholes
    - Severe Weather
    - Other – Public Safety
- ❖ Business Preparedness/ Economic Development Programs
- ❖ College and University Facilities Plans
- ❖ Emergency Operations Plans and Mitigation Plans
- ❖ Recover Pinellas - COAD (Community Organizations Active in Disasters) and LTRO (Long-Term Recovery Organizations)
- ❖ Mitigation (Hardening of Facilities) Projects and COOP Planning

In a manner similar to the 2004 update to the Pinellas LMS, the 2009 update to the LMS plan was incorporated into the update to the Pinellas County CEMP underway at this time. And, in similar manner, the LMS Workgroup members will influence the deliberations and decisions of other county and regional planning groups.

In 2008, Pinellas County, its municipalities and other mitigation partners including the regional planning council, Pinellas Planning Council, water management district, utilities, health and social service agencies, non-profit organizations, economic development agencies, private sector representatives and others embarked on another comprehensive update of the Pinellas County LMS.

This was an important opportunity to reassess our vulnerabilities – not just vulnerabilities to natural hazards, but to technological and human-caused events as well. It is an opportunity to incorporate the lessons learned from recent floods, wildfires, the unprecedented 2004 and 2005 hurricane seasons and the tragic events of September 11, 2001. This update of the LMS was viewed as an opportunity to challenge ourselves to creating a safer community in these changing times.

The 2009 LMS Update focuses on updating the data and risk analyses as well as addressing the requirements identified in the most recent FEMA guidance (*Local Multi-Hazard Mitigation Planning Guidance*, July 1, 2008) specified under 44 CFR §201. According to the guidance, the most successful of mitigation plans – where practical, meaningful mitigation actions resulted – have two common elements:

1. Comprehensive risk and capability assessments that form a solid foundation for decision making; and

2. Participation by a wide range of stakeholders who play a role in identifying and implementing mitigation actions.

These priorities were reflected in the planning process, evaluation and revision of the Pinellas County LMS in 2009.

## **The 2015 Update of the Pinellas LMS: The Planning Process: Organizing to Prepare the Plan**

In 2014, Pinellas County, its municipalities and stakeholders once again embarked on a comprehensive update of the Local Mitigation Strategy. The county and its partners recognize that the planning process is as important as the plan itself. Therefore, it documents the planning process including how the plan was prepared and updated, who was involved in the process and how the public was involved. Using the 10-step planning process identified in the FEMA Floodplain Management Planning (*CRS Coordinator's Manual*, 2013), members worked together to enhance the planning process and strengthen the overall multi-jurisdictional mitigation strategy.

The local mitigation strategy planning process is critical in the creation of the LMS. The process defines not only who should be involved, but how the process is going to work, and an understanding of how the process facilitates the production of the final product. With the inception of Administrative Rule 9G-22, the LMS Workgroup has re-defined itself and its methodology to meet the intention of the rule and new federal guidelines.

### **STEP 1: THE PLANNING ORGANIZATION**

The development of a mitigation strategy requires the involvement of representatives from the public, private, and governmental sectors. Therefore, every attempt has been made to include the following entities in the workgroup membership:

- Representatives from Pinellas County and its 23 Municipal planning and/or code enforcement or building departments, emergency management services, environmental protection and public information departments<sup>2</sup>;
- State Agencies (Cooperative Extension Service, Department of Health, Florida Division of Emergency Management Regional Coordinator);
- Private utilities (Duke Energy, Clearwater Gas, etc.);
- Businesses, (Health Care, Business Contingency Planners, and the Hotel/Motel Industry, etc.);
- Educational (Eckerd College, St. Pete College, and Pinellas School Board);
- Civic Organizations
- Southwest Water Management District;
- Tampa Bay Regional Planning Council;
- Volunteer organizations, (Recover Pinellas, Regional COAD, Red Cross, Salvation Army, Hospice, Habitat for Humanity);
- Private non-profit organizations (PARC, etc.);

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<sup>2</sup> Within each jurisdiction, there was an attempt to identify representatives who have community planning, code enforcement responsibilities to include planners, building inspectors, environmental protection planners. In addition, emergency management coordinators and Public Information Officers were to part of the team.

- Surrounding county mitigation representatives (Hillsborough, Manatee, Pasco counties) and CRS Coordinators, and
- Public including Pinellas County Neighborhood Association, CAC members, County and municipal leadership programs.

Through the involvement of the members of the LMS Workgroup, the LMS was developed in coordination with neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have development review authority, businesses, academia and other private and non-private interests. Representatives are brought together to enhance the Pinellas County LMS Workgroup. These additional stakeholders, as well as the public are welcome to attend any meeting encouraging both a dynamic membership and participation of the Workgroup. Meetings are noticed on County and municipal websites and online event calendars.

The LMS Workgroup elects a Chairperson and Vice-Chairperson at its regular annual meeting in January of each year. The Workgroup voted to meet at least every quarter in a central location with additional meetings to be scheduled as the workload dictates. In order to complete the 5-year update of the LMS in 2014-15, the LMS Workgroup met monthly from January 2014 to November 2014. The quarterly meeting schedule resumed in January 2015 augmented with conference calls to address comments and recommendations from the State Division of Emergency Management and FEMA. The meeting calendar is provided in Appendix 2 and reflects the workgroup work through the development and the revision of the LMS.

The Pinellas LMS website ([www.pinellaslms.org](http://www.pinellaslms.org)) provides all meeting notices, agendas, attendees, and minutes of the meetings. In addition it has been a valuable tool in updating and in some cases, creating new sections of the Plan. Through the SharePoint section of the website, members can update their projects and accomplishments, the departmental responsibilities and local goals, policies, LDRs<sup>3</sup> and mitigation programs. In addition, the website has a feature where the public can weigh-in on the development of the strategy and provide recommendations and comments on the risk assessment, goals and objectives, mitigation initiatives and public awareness programs.

Pinellas County has contracted with the Tampa Bay Regional Planning Council (TBRPC) when assistance is required to update the study. TBRPC provided additional staff support for the 2004 and 2009 5-year comprehensive updates, as well as the 2015 update.

The representatives commit their time and available resources to develop a mitigation strategy that would protect life, property, and the environment as well as contribute to the economic well-being of the county. The implication of the Hazard Mitigation Planning and Hazard Mitigation Grant Program (HMGP) Interim Final Rule is that each of the jurisdictions and representatives on the workgroup must show participation in the planning process to qualify for HMGP, Pre-Disaster Mitigation Program (PDM) and Flood Mitigation Assistance Program (FMAP) funding. The definition of participation as determined by the workgroup is attendance at a minimum of 50% of the scheduled meetings during the year. Each member signs in at each meeting for documentation purposes.

## Subcommittees

**Membership Committee** mission: Review the organizational rules regarding LMS membership, voting, and quorum and conflict mitigation.

**LMS Goals Subcommittee** mission: Review the goals and objectives in the LMS to ensure that they reflect the current risk and capability assessment and provide a report to the workgroup for review and comment. The workgroup recognized it may need to update its goals statement in recognition of the recent changes of the Community Rating System (CRS) and National Flood Insurance Programs.

**Public-Private Coordination Subcommittee** mission: Identify strategies to encourage participation of the private sector including faith based organizations, non-governmental organizations and private sector in the local mitigation strategy. Identify specific entities to receive invitations and meeting notices.

**Public Information/Communication/Outreach Committee** mission: Identify and implement strategies to encourage public participation in the LMS planning process. Solicit input on mitigation strategies and priorities in the current economic climate. In addition, identify and implement strategies to educate different target audiences about their risks and mitigation options incorporating social media and electronic communications. A Mitigation Outreach and Public Information Program was developed. The plan seeks to involve as many stakeholders and interested citizens in the planning process as possible. The committee was charged with the task of creating an overall strategy to expand participation in the planning process as well as to increase awareness of mitigation opportunities. The plan is included as Appendix 7.

**CRS/LMS Interface Committee** mission was to review the 2013 CRS Planning Guidance to incorporate the 10-point planning process into the LMS Update and identify where we can strengthen the floodplain management programs and LMS.

**Project Verification Committee** mission: Review project applications and rankings for inclusion in the LMS Project List (provided in Appendix 9). Meets annually or as needed and includes, at a minimum the Chair and Vice Chair of the LMS Working Group.

## LMS Meeting Schedule

Typically, LMS Workgroup meetings are quarterly. With the 2015 update approaching, the LMS Committee switched to monthly meetings to accommodate reports from the several subcommittees and discussions of their recommendations. In addition, presentations from stakeholders and partners such as the National Weather Service, FDEM Statewide CRS Coordinator, the Regional Domestic Security Task Force, etc. provided additional information to representatives.

Quarterly meetings resumed in 2015 once the final adopted LMS was submitted to FEMA.

## STEP 2: INVOLVING THE PUBLIC

In the initial phase of this LMS Update, several approaches were taken to solicit community involvement in the development of the strategy. The approaches included sending letters to a variety of organizations, associations, and businesses asking for their input and participation; conducting county and city meetings and workshops on the topic of the LMS and mitigation;

scheduling interviews and speaking engagements; and including mitigation issues on regional and local governmental Website home pages.

There was a much greater reliance on electronic and online communications. Meeting reminders and most communications are handled via E-Mail. The meetings are announced on the County (Electronic) Calendar on the website ([www.pinellas.org](http://www.pinellas.org)) and in numerous electronic newsletters to citizens via email (see Appendix 7 examples of outreach including the countywide newsletter, “Connections”). The county, as well as many of the municipalities, maintain government-access or cable television stations which also identify meetings and locations on their events list. The Pinellas County Communications Department held electronic Town Hall meetings, solicited input from citizen focus groups and prepared videos focusing on the county-wide Local Mitigation Strategy, flood insurance and mitigation for homeowners. The Pinellas County Economic Development agency reached out to businesses and associations with key messages regarding the update of the LMS, business preparedness (Continuity Planning) and resiliency. Other organizations including the Pinellas County Cooperative Extension Office, Regional Planning Council, Agency on Bay Management and National Estuary Program have spearheaded multi-jurisdictional collaborative efforts to address sustainability and resiliency issues complementing local efforts at the grass roots level.

Pinellas County and each municipality noticed and held public workshops to present the final plan and hear public comments prior to the adoption of the LMS. In addition the draft documents as well as the final FEMA approved document (pending adoption) were available in local public buildings, libraries and on the website, [www.pinellaslms.org](http://www.pinellaslms.org) with an ongoing opportunity for online public comment. County and municipal websites linked to this site with a notice about the current update and pending adoption of the LMS by the local government. (See Appendix 7 for more detailed information)

### **STEP 3: COORDINATION**

The LMS Committee representatives have responsibility to not only participate in the committee and its subcommittees, but to also reach out in their community to “spread the message”, to coordinate activities within the county and to bring back perspectives of their constituency. The intent is for the representatives to contact agencies, organizations and their residents to collect information related to hazards and mitigation activities, provide information regarding the LMS and its update as well as offer these agencies and organizations an opportunity to be involved in the planning effort. (See Appendix 7 for more detailed information)

### **STEP 4: ASSESSING THE HAZARD**

One of the most important tasks required of the LMS Workgroup is to conduct, and maintain a hazard identification and vulnerability assessment. The information provided by the assessment is the foundation on which decisions about future mitigation initiatives are based. An analysis of both natural and technological hazards is on-going as new information and technology evolves and events occur. The hazard identification and vulnerability assessment data is gathered from FEMA, National Oceanographic and Atmospheric Administration (NOAA) and the National Weather Service, the Tampa Bay Regional Planning Council (TBRPC); the National Hurricane Center SLOSH (Sea Lake Overland Surge in Hurricanes) model; the Laser Infrared Detection and Ranging system (LIDAR); the municipalities and their departments; and Pinellas County departments of Emergency Management, Planning, Building, Information Systems, Public Works, Utilities, and Developmental Review Services. The Hazards Analysis and Vulnerability Assessment relied heavily on GIS planning tools to

identify vulnerable areas, populations and recognize geographic vulnerabilities of critical facilities and key infrastructure.

It was discussed at length that the hazard analysis of the 2015 update of the Pinellas County LMS should include the potential impact of sea level rise as a result of climate change. Investigation was conducted to determine the status of the most recent research regarding the potential impacts of climate change with a specific emphasis on sea level rise. The Committee heard several presentations which provided historic information and new reports. It was decided to wait until current regional collaborative efforts and local studies currently underway released their findings and recommendations to incorporate into the hazards analysis, goals and objectives and mitigation initiatives. It is hoped this will be accomplished prior to the next 5-year update of the LMS.

## **STEP 5: ASSESSING THE PROBLEM**

This previous step assessed the hazards facing the community. This step quantifies the impact of those hazards on the community. The LMS Committee collected population and demographic data from the 2010 Census and American Community Survey (ACS) data, critical infrastructure and facilities inventories, flood insurance data, building type/valuation from the property appraiser data, historical damage and an estimation of potential future events,

This section also described the areas within the floodplain that provide natural functions including wetlands, riparian areas, sensitive areas and habitat. This was tied to the community goals and policies reflected in the local government comprehensive plans which provide a description of the development, redevelopment and population trends.

## **STEP 6: GOALS AND OBJECTIVES**

In 2009 a Goals and Objectives Subcommittee was tasked with the development of recommendations for new goals and objectives. The Subcommittee and Workgroup decided to follow the Federal Guidance and develop hazard-specific goals addressing the major hazards facing the county: coastal flooding (storm surge, coastal erosion and wave action), inland and riverine flooding, severe winds (hurricanes and tornadoes), hazardous material incidents, and security hazards (terrorism, civil disruptions, etc.). In addition, an all-hazards goal was developed for those mitigation objectives or actions which addressed a broader safety goal or more than one hazard. In 2014 the Subcommittee revisited the Goals and Objectives and made only minor adjustments to specifically address sea level rise, as appropriate.

The LMS then focused on the identification and analysis of mitigation actions and addressed existing and new buildings and infrastructure. The County followed the FEMA suggestion that the mitigation actions be sorted into the following groups:

- Prevention
- Property Protection
- Public Education and Awareness
- Natural Resource Protection
- Structural Projects

This exercise was beneficial in that the workgroup then needed to reassess its own goals/policies/LDRs, programs in light of the new LMS goals and objectives. It was then easier to notice where the gaps may be in our mitigation actions, as well as to clearly identify our priorities and challenges.

## STEP 7: POSSIBLE ACTIVITIES: MITIGATION OPPORTUNITIES AND INITIATIVES

The process of developing the local mitigation strategy culminated in the identification of potential mitigation opportunities and initiatives. Each workgroup member is required to review, evaluate, and analyze his or her current policies and ordinances regarding mitigation. The information is then shared and compared with the other members of the workgroup. This allows for the exchange of good ideas, accomplishments, and past experiences both successful and unsuccessful. The process also identifies any inconsistencies between communities. The most successful policies limit public expenditures in areas subject to repetitive damage from disasters; protect critical facilities and infrastructure; preserve, restore and enhance natural resources that can mitigate hazards; encourage economic diversification as protection from the loss of any one asset; encourage structural retrofitting, property acquisition and relocation; and identify procedures to expedite post-disaster recovery and permitting.

Because of the education gained from this process, the workgroup is better prepared to determine the future mitigation initiatives that should be or need to be pursued. Some of the needed mitigation initiatives require unified intergovernmental coordination and participation. Other initiatives can be accomplished on an individual community basis.

## STEP 8: AN ACTION PLAN

Objectives were identified for each Goal to specifically identify action items and are reflected in six categories of mitigation activities:

- **Preventive** – activities which keep vulnerability from getting worse. The use and development of vulnerable areas through planning, land acquisition or regulation. This includes hazard vulnerability mapping and data; open space preservation; floodplain regulations, coastal setbacks; planning and zoning; Stormwater management; drainage system maintenance and building codes.
- **Property protection** – activities which are usually undertaken by property owners or the community on a parcel by parcel basis, including relocation, acquisition, building elevation, retrofitting, sewer backup protection and insurance.
- **Natural resource protection** – activities which preserve or restore natural areas or the natural function of the floodplain and watershed areas. These activities include wetlands protection, erosion and sediment control, natural area preservation or restoration, water quality improvement, coastal barrier protection, and environmental corridors.
- **Emergency services** - activities taken during any emergency to minimize its impact. This includes hazard threat recognition, warning, response operations, critical facilities protection, and post disaster mitigation actions.
- **Structural projects** – are those traditionally engineering/maintenance projects that protect vulnerable populations and structures including seawalls, levees, Stormwater/drainage improvements or maintenance, access restrictions, etc.
- **Public Information** – activities which advise property owners and visitors about hazards, ways to protect people and property from the hazards. These include maps, outreach projects, real estate disclosure, technical assistance and education.

Pinellas County and each of the twenty-three (23) participating municipalities submit a list of their prioritized mitigation initiatives. The initiatives are then placed on a consolidated county-wide list, which is divided into the six categories relevant to specific goals and objectives.

These mitigation actions were then evaluated using the STAPLEE method. This technique identifies the following local conditions: Social, Technical, Administrative, Political, Legal, Economic and Environmental. Actions are also evaluated using other criteria:

- Compatibility with the State Hazard Mitigation Plan and State Comprehensive Plan
- Compatibility with the Strategic Regional Policy Plan (SRPP)
- Compatibility with Local Government Comprehensive Plans

The new process and procedure for ranking submitted projects is identified Appendix 8. The interactive form is available for LMS Workgroup participants on the website.

The philosophy of the workgroup was that each government would be encouraged to accomplish at least one of their mitigation initiatives annually. To reach the goal of a disaster-resilient community such planning and commitments will be required. Participants were encouraged to identify their accomplishments in Appendix 10 and it was rewarding for local governments to document the combined achievements of their concerted efforts.

## **STEP 9: ADOPTION OF THE STRATEGY**

Pinellas County and each municipality notified and held a public workshop to present the final plan and hear public comments prior to the adoption of the LMS. In addition the draft documents, as well as the final FEMA approved document, will be available in public buildings including libraries and on the website, [www.pinellaslms.org](http://www.pinellaslms.org) with an opportunity for online public comment. County and municipal websites linked to this site with a notice about the current update and pending adoption of the LMS by the local government. (See Appendix 7 for more detailed information)

## **STEP 10: IMPLEMENTATION, EVALUATION AND REVISION**

The Pinellas County Local Mitigation Strategy serves as a guide for hazard mitigation activities on a county-wide basis. The strategy is intended to be a dynamic document that will be updated regularly.

Consistent with federal and state requirements, the LMS Workgroup will meet to update and review the effectiveness of the local mitigation strategy quarterly and will submit annual LMS updates to the Florida Division of Emergency Management no later than the last working weekday of each January. This update follows an annual review of the plan by the LMS Committee. The LMS Chair will be responsible for monitoring the plan on an ongoing basis. If by email or other communication, the LMS Chair receives information to warrant a meeting, then a special meeting will be called to discuss the changes. Any workgroup member also may request a special meeting. Pinellas County Planning Department and the LMS Chair will coordinate scheduling and notification of workgroup meetings. A minimum of thirty (30) days advance notice will be given for annual meetings. As much advance notice as possible will be given for regular and special meetings including conference calls or online webinars.

On an ongoing basis, new initiatives will be considered by the workgroup for inclusion into the strategy. Completed initiatives, termed Accomplishments, will be removed from the Initiatives List and detailed in the Accomplishments Listing. The new initiatives will be added as they are identified, ranked and approved by the Workgroup. Every five years, or after any major change, the

strategy will be resubmitted to municipal councils/commissions and to the Board of County Commissioners for re-adoption.

## **Contents of the Plan**

### **APPENDIX ONE: MULTI-HAZARD IDENTIFICATION & RISK ASSESSMENT**

The Local Mitigation Strategy Workgroup conducts and maintains an analysis of Pinellas County's hazard vulnerabilities. The analysis includes a general geographic description, population and housing estimates, economic indicators, transportation routes and methods, and threats from natural and technological hazards. Captured in the documentation of each hazard analysis is a brief history that includes information about any significant related events, the probability of the specific hazard occurring in Pinellas County, the impact it would have, and an example to illustrate the maximum threat. This Appendix was updated and significantly revised.

### **APPENDIX TWO: WORKGROUP MEMBERS**

The local mitigation strategy workgroup is comprised of representatives from the public, private and governmental sectors, in accordance with Administrative Rule 9G-22. Documentation that such invitation has occurred will be included in each annual update of the plan and detailed in Appendix Two. All members are encouraged to consistently attend the workgroup meetings and there is an ongoing effort to solicit participation from both governmental and non-governmental organizations.

### **APPENDIX THREE: MITIGATION STRATEGY CONFLICT RESOLUTION**

Conflict resolution within the workgroup will focus on issues which are opposed by 50% or more of the voting workgroup. Some items can be deferred for future evaluation. However, for items that need immediate resolution, a majority vote will be required.

### **APPENDIX FOUR: GOALS & OBJECTIVES**

The goals and objectives of the workgroup are to serve as guidance in the planning of future hazard mitigation initiatives and are applicable to both pre-disaster and post-disaster efforts. The Goals and Objectives were revised in the 2009 Update to include six (6) hazard-specific goals and one (1) over-arching all-hazards goal. These include:

- Become a more Disaster Resilient Community.
- Minimize Coastal Flooding Losses in the Coastal High Hazard Area (CHHA) Coastal Storm Area and Hurricane Vulnerability Zone.
- Minimize Riverine or Inland Flooding Losses in multiple flood zones.
- Minimize Severe Wind Losses in the County.
- Minimize Losses from Hazardous Material Incidents.
- Minimize Wildfire Losses in the Wildland Urban Interface areas.
- Minimize Losses from Security Attacks.

Each goal identified objectives which fell into six (6) measures (Preventive, Property Protection, Public Education and Awareness, Natural Resource Protection, Emergency Services, and Structural Projects.). Goal 1 was revised to include an objective to research and collaborate to identify adaptive strategies to address climate change in the next LMS Update, as appropriate.

## **APPENDIX FIVE: LOCAL PROGRAMS, POLICIES AND CAPABILITIES**

Pinellas County and each municipality evaluated and compared existing local policies and ordinances regarding mitigation. Commonalities among jurisdictions were evident in floodplain management, restrictions on expansion of infrastructure and building densities in the CHHA, and compliance with or exceeding requirements established by the Federal Emergency Management Agency (FEMA). This section required considerable input from the Workgroup members as a new format (Excel Spreadsheet) was developed and recent legislation relating to public safety and mitigation had required changes to the Coastal and Conservation and Future Land Use Elements of the Local Government Comprehensive Plans (LGCPs).

## **APPENDIX SIX: LOCAL DEPARTMENTAL RESPONSIBILITIES IN MITIGATION IMPLEMENTATION**

Pinellas County and each of the municipalities identifies the local hazard mitigation functions that are being practiced on a daily basis. The identification of these functions serves to complement the evaluation of the policies and procedures that have been conducted. The performance of these functions indicates that mitigation is a part of our daily operations. A new format for this section was developed to facilitate multi-jurisdictional input.

## **APPENDIX SEVEN: COMMUNITY PARTICIPATION AND OUTREACH**

To develop an effective mitigation strategy, partnerships between the private and public sectors must be formed and maintained. Businesses and citizens need to understand the importance of building disaster resilient communities BEFORE a disaster strikes. Stakeholders from a wide variety of businesses and public and private non-organizations are always invited to participate, as directed in Administrative Rule 9G-22.

In order to facilitate increase public and private participation in the crafting and maintenance of the LMS as well as to increase public awareness of the importance of preparedness and mitigation, an ongoing public outreach initiative, a strategy was developed and approved by the LMS Workgroup. For this particular update to the plan, we set up a series of public focus groups where input was solicited concerning mitigation goals, objectives and actions. This process will be maintained and repeated for the next update to the plan.

## **APPENDIX EIGHT: PRIORITIZATION METHODOLOGY**

Pinellas County and each municipality are responsible for submitting all of their mitigation initiatives to the Workgroup annually. The Workgroup uses a prioritizing procedure that involves the local representatives assigning points to 16 parameters describing their initiatives. These scores are reviewed by the LMS Vice Chair and are used to rank the projects objectively.

## **APPENDIX NINE: MITIGATION INITIATIVES**

The list of mitigation initiatives reflects all of the initiatives submitted by all participants including the County, each municipality, regional entities and private non-profit organizations. These mitigation initiatives are evaluated using the STAPLEE method. This technique identifies the following local conditions: Social, Technical, Administrative, Political, Legal, Economic and Environmental.

If mitigation funds are made available to the Pinellas County area, the Workgroup would refer to the Initiatives List and identify those that could be accomplished with the given funds. Next, the governments of those identified initiatives would be asked if they were interested and prepared to apply. Each entity must consider that it is likely that the applicant may need to provide some matching funds.

The Initiative List will be updated each year as part of the annual review process. Initiatives that have been completed are moved to the Accomplishments List. The Initiative List and any prioritization procedures may also be updated following a major disaster event, a change in funding sources, or as determined appropriate by the workgroup.

## **APPENDIX TEN: MITIGATION ACCOMPLISHMENTS AND SUCCESS STORIES**

An accounting of completed projects detailed by jurisdiction and showing cost data, an estimate of the total benefit and source of funding. The list of Mitigation Accomplishments does not include ALL of the projects completed over the last 10. However, it does represent an impressive group of success stories.

## **APPENDIX ELEVEN: POTENTIAL FUNDING SOURCES**

Many potential funding sources exist for hazard mitigation projects. The workgroup conducted research of the various state and federal grant programs, to become better educated about all potential options. The findings of the research indicate that a variety of programs is only available prior to a disaster, and others are only available following a disaster. Therefore, the workgroup's list of potential funding sources is divided into pre-disaster and post-disaster sections. If and/or when a funding source is identified, the Workgroup will meet and decide, by majority vote, which projects will be submitted. It is the goal of the Workgroup to continually survey programs for potential sources of mitigation funding and alert participants.

## **APPENDIX TWELVE: CRITICAL FACILITIES**

The Critical Facilities Inventory (CFI) Database for the county was updated and is available through the county emergency management and regional planning council. The database itself is protected under security laws and not distributed as part of the LMS to the general public.

## **APPENDIX THIRTEEN: REPETITIVE LOSS PROPERTY INVENTORY**

A county-wide record of all of the Repetitive Loss Properties in Pinellas County was updated as of January 2014. These parcels were geo-coded and mapped to illustrate repetitive loss area within the county and its jurisdictions. The database itself is protected under privacy laws and not distributed as part of the LMS to the general public.

## **APPENDIX FOURTEEN: RESOLUTIONS ADOPTING THE LOCAL MITIGATION STRATEGIES**

Federal law 44 CFR 201.6(c)(5) requires all participating jurisdictions to adopt the Local Mitigation Strategy (LMS). A copy of the municipalities' resolutions supporting mitigation programs and initiatives in the county and adopting the *Pinellas County Local Mitigation Strategy*, as revised, are filed here.

## APPENDIX FIFTEEN: LOCAL FLOODPLAIN MANAGEMENT PLAN AND ANNUAL REPORT

Local jurisdictions who have a floodplain management action plan to accompany the LMS plan can file it in this appendix.

### Conclusion

The benefits of developing and maintaining the Local Mitigation Strategy are apparent. The LMS identifies the plans and policies, goals and objectives, the existing actions and proposed future projects which will; hopefully, make our community safer.

The Workgroup has sought to expand its membership to include a broader scope of stakeholders. There is an ongoing concerted effort to reach out to the public as well as to non-traditional players in this effort. It is recognized that it will take a team effort to accomplish this task and that a key component is the private sector, including businesses, retailers, the health care industry, the private non-profits service providers, our colleges and universities, etc. A coordinated multi-jurisdictional approach, the LMS also recognizes the need to reach out beyond the county limits to adjacent counties and the existing regional partnerships, such as the regional planning council, Regional Disaster Security Task Force (RDSTF) and Local Emergency Planning Committee (LEPC).

The Workgroup members committed significant time to update the sections relating to its comprehensive plans, programs and local activities/departmental responsibilities. We felt it was important to demonstrate each jurisdiction's commitment to building a more disaster-resilient community "everyday" and readiness to push forward with mitigation initiatives if federal funding becomes available.

It is this commitment which has allowed for the Workgroup to work together to continue to enhance this LMS Strategy and to provide the County and its jurisdictions with a clear blueprint for mitigation efforts and guide for making our community a safer place to live and work.

**APPENDIX 1**  
**MULTI-HAZARD IDENTIFICATION AND RISK ASSESSMENT**

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# Pinellas County Local Mitigation Strategy

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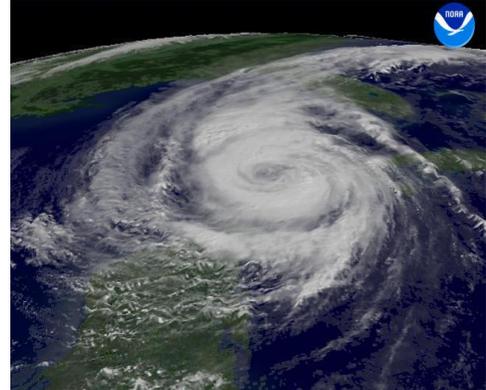
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## APPENDIX 1: MULTI-HAZARD IDENTIFICATION AND RISK ASSESSMENT

### Overview

Pinellas County is vulnerable to the effects of a number of different types of natural hazards. In varying degrees, future meteorological, environmental, and geologic events have the potential to cause human casualties, damage and destruction to the built and natural environments, and economic losses.



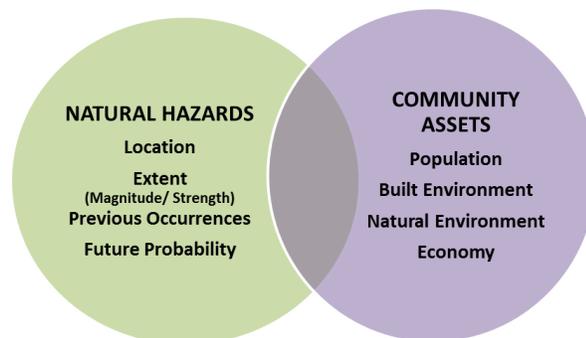
This Multi-Hazard Identification and Risk Assessment for Pinellas County provides the foundation for the hazard mitigation planning process. In order to minimize negative impacts on lives, properties, businesses, and natural systems, information about each natural hazard that may potentially threaten the county is presented. This information informs the hazard mitigation planning process and the prioritization of mitigation initiatives for the Local Mitigation Strategy (LMS).

The Multi-Hazard Identification and Vulnerability Assessment includes a description of the types of hazards that may affect Pinellas County, their probability of occurrence, the geographic locations that are vulnerable, the number of structures and population affected, and potential loss estimates. This information, gathered from a variety of sources, provides the best available data for describing and quantifying the potential impacts from natural hazards that may affect Pinellas County.

Figure 1- 1: Defining Risk

### Defining Risk Assessment

Risk, for the purpose of hazard mitigation planning, is the potential for damage, loss, or other impacts created by the interaction of natural hazards with community assets. Hazards are natural processes, such as tornados and earthquakes. The exposure of people, property, and other community assets to natural hazards can result in disasters depending on the impacts. Impacts are the consequences or effects of the hazard on the community and its assets. The



type and severity of impacts are based on the extent of the hazard and the vulnerability of the asset, as well as the community's capabilities to mitigate, prepare for, respond to, and recover from events. (Source: FEMA, *Local Mitigation Planning Guidebook*, March 2013)

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## General Description of Pinellas County

Pinellas County is a peninsula located on the west central coast of Florida, bordered on the north by Pasco County, on the south by Tampa Bay, on the east by Tampa Bay and Hillsborough County, and on the west by the Gulf of Mexico (See Map 1-1). Pinellas County has the second-smallest land area of Florida's 67 counties, with 280 square miles in addition to another 334 square miles of water surface area. The county has a total of 588 miles of coastline. Pinellas is the most densely populated county in Florida, with 3,361 persons per square mile of land area. (BEBR, 2014)

### TOPOGRAPHIC FEATURES

The elevation of Pinellas County ranges from mean sea level (msl) to 110 feet. The county is divided into five subsections based on topography: the ridge, which generally runs in a north-south orientation through the county with elevations between 40 and 110 feet; a sloping transition area, with elevations between 10 and 40 feet; the flood plain, with elevations between zero and ten feet; the barrier beach islands, with elevations between zero and ten feet; and the coastal filled areas, that have elevations between zero and five feet.

Most of Pinellas County may be characterized as relatively flat, with only a five small areas that are identified as having short, steep slopes. These areas are generally along creek banks (parts of Possum, Bishop, and Curlew creeks in the northern part of the county and part of Booker Creek in St. Petersburg), in addition to the western mainland shore from Clearwater Harbor to Belleair. (Source: Conservation and Coastal Zone Management Element, Countywide Comprehensive Plan for Pinellas County, PPC)

### SURFACE HYDROLOGY: RIVERS, STREAMS, AND LAKES

The Anclote River is the only river that flows through Pinellas County. With headwaters in adjacent Pasco County, the Anclote River crosses into Pinellas County along its northern border and runs only a few miles before emptying into the Gulf of Mexico at Tarpon Springs. Along with its importance as a natural resource, the Anclote River is also significant for tourism, as it runs through the famed Tarpon Springs sponge docks.

There are numerous streams, creeks and drainage channels that run through Pinellas County. Of these, the County has identified 25 creeks and canals that serve as major drainage features. The National Inventory of Dams, a congressionally authorized database maintained by USACE documents dams in the United States. In the National Inventory of Dams, Taylor Lake Dam is the only privately owned dam along the McKay Creek. The Sawgrass Lake structure and Structure 551 on Lake Tarpon Canal, which are owned by the SWFWMD, and Lake Seminole Dam, owned by the local government (Pinellas County), are identified in Pinellas County. There is an Emergency Action Plan for Structure 551 on Lake Tarpon Canal (USACE, 2012). See Map 1-2 for Pinellas County Major Drainage Features.

Prior to the urbanization, there were hundreds of lakes in Pinellas County, many that were indistinguishable from marshes and swamps. To accommodate development, many of the lakes in the urbanized areas of the county were landscaped, deepened, dredged, drained, or filled. Today, there are still a number of lakes and ponds located throughout Pinellas County. Some of the larger lakes include:

- Lake Tarpon: Covering 2,534 acres in the northern part of the county, Lake Tarpon is the county's largest lake. Lake Tarpon is fed by groundwater and at the surface by Brooker Creek.

## Pinellas County Local Mitigation Strategy

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Until 1967, the lake had a hydrological connection to Spring Bayou (eventually flowing into the Anclote River) but was subsequently damned off by the US Army Corps of Engineers in order to control saltwater intrusion into the lake. A controlled height canal is an outfall for the lake into Tampa Bay near the City of Safety Harbor, which is used to periodically lower the water level of the lake.

- Lake Seminole: Formerly an estuary at the north end of Long Bayou in west-central Pinellas County, Lake Seminole has a surface area of 980 acres. The lake level is typically between 4 to 5 feet above mean sea level.
- Lake Maggiore: Located in the southern part of the City of St. Petersburg, Lake Maggiore covers 380 acres in size. Runoff from surrounding developed areas adds silt and organics to the lake, making the lake bottom a loose murky layer of mud and decomposing organics up to six feet thick.
- Other large lakes in the County include: Salt Lake, 220 acres; Lake Del Oro, 75 acres; Alligator Lake, 77 acres; Lake St. George and Lake Chautaugua, each about 50 acres.



Pinellas County proactively develops Watershed Management Plans (WMP) through funding from the County's Surface Water Assessment Fee, cooperative funding from SWFWMD and in some cases other municipalities within the County. These plans, in most cases, develop an existing conditions stormwater model the delineate drainage patterns in the watershed under certain storm events.

These analyses also develop boundaries of floodplains at a more detailed level than currently available floodplain boundaries and are more representative of current conditions. The drainage patterns are then further analyzed, with the help of historical information, to develop conceptual projects that could reduce the flooding conditions within the watershed.

In addition to analyzing drainage patterns, these plans also evaluate the potential sources of pollutants in the watershed and develop recommended projects and strategies to help reduce or treat some of the pollutants. These WMPs are also utilized during the development of other projects since the preliminary drainage analysis has already been completed in the particular watershed.

Pinellas County currently has WMPs for the following watersheds:

- Allen's Creek
- Brooker Creek
- Clearwater Harbor / St. Joseph Sound Watershed
- Cross Bayou
- Lake Seminole
- Lake Tarpon
- Long Branch
- McKay Creek
- Roosevelt Creek
- Starkey Basin

The County is also working on a WMP for Joes Creek and is updating the Lake Tarpon WMP.

# Pinellas County Local Mitigation Strategy

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## ISLANDS AND SIGNIFICANT HABITATS

There are a series of barrier islands in close proximity to the mainland coast. These islands extend about 34 miles along the western coastline of the County. With a few exceptions (notably, Caladesi Island and Anclote Key), all barrier islands are connected to the mainland by a series of 14 causeways and bridges. A few of the islands are publicly-owned and managed, such as Honeymoon and Caladesi Islands, Mullet Key/Fort DeSoto Park, Anclote Key, and others. However, most of the barrier islands are densely populated and completely built out. The barrier islands contain miles of light sandy beaches, which are a key element in Pinellas County's thriving tourist industry, and a major contributor to the overall economy of the county. In addition to the barrier islands, Pinellas County has invested in the mitigation and acquisition of large portions of environmentally sensitive lands to protect these valuable resources. Map 1-3 provides a graphic of the significant habitat locations, including parks and managed lands.

The wetland resources of Pinellas County provide a number of benefits. Freshwater and tidal wetlands provide habitats for wildlife such as birds, mammals and reptiles, including some endangered species. Because of their important function as a source of organic matter which functions as the base of the detrital food chain, tidal wetlands provide habitat, breeding areas and nurseries for commercial and recreational marine fisheries. Freshwater wetlands attenuate the damaging effects of storm and flood waters during peak runoff by slowing and storing those waters, then releasing them gradually. Coastal shorelines and uplands are buffered from the severity of tidal surge during a storm by the adjacent coastal wetlands. (*Natural Resource Conservation and Management Element of the Pinellas County Comprehensive Plan*, Pinellas County Planning Department as staff to the Local Planning Agency for the Board of County Commissioners of Pinellas County, Florida, Adopted March 2008)

Wetlands also function as a natural filtration system, cleansing storm water runoff before it enters Tampa Bay, the Gulf of Mexico or other surface water bodies. Sedimentation of the down stream waters is reduced by slowing the water velocity, allowing sediments to drop out of the water column while in the wetland. Subsequently, pollutants that are attached to the sediments are buried in the wetland soil. Excess nutrients and other chemicals may be filtered out of the water and soil by the wetland vegetation, stored in their biomass (leaves, stems and roots) and buried in the organic soil when the plants die. The associated birdlife and open vistas of wetlands provide aesthetic beauty and visual relief from the urbanized landscape of Pinellas County. (*Natural Resource Conservation and Management Element of the Pinellas County Comprehensive Plan*, Pinellas County Planning Department as staff to the Local Planning Agency for the Board of County Commissioners of Pinellas County, Florida, Adopted March 2008)

## CLIMATE

The climate in Pinellas County is humid subtropical (Köppen climate classification: *Cfa*), characterized by warm, humid summers and mild winters. There is a definite rainy season which generally lasts from June through September. During these four months, the county receives, on average, about 60% of its average annual rainfall. "Dry" season, is a relative term, since the county average rainfall for the October-May period is about 20 inches. However, rain events are much less frequent in the dry season and rainfall intensity generally lower than in the rainy season. Snow events are very rare in Pinellas County, though a dusting of snow was recorded on January 19, 1977, and small amounts of sleet and snow fell on December 23, 1989.

The 30-year (1891-2010) mean annual temperature for the weather station at Albert Whitted Airport, located on the waterfront near downtown St. Petersburg, is 74.2 degrees Fahrenheit (°F). The normal daily maximum temperature ranges from 65.9°F in January to 90.9°F in July. The

# Pinellas County Local Mitigation Strategy

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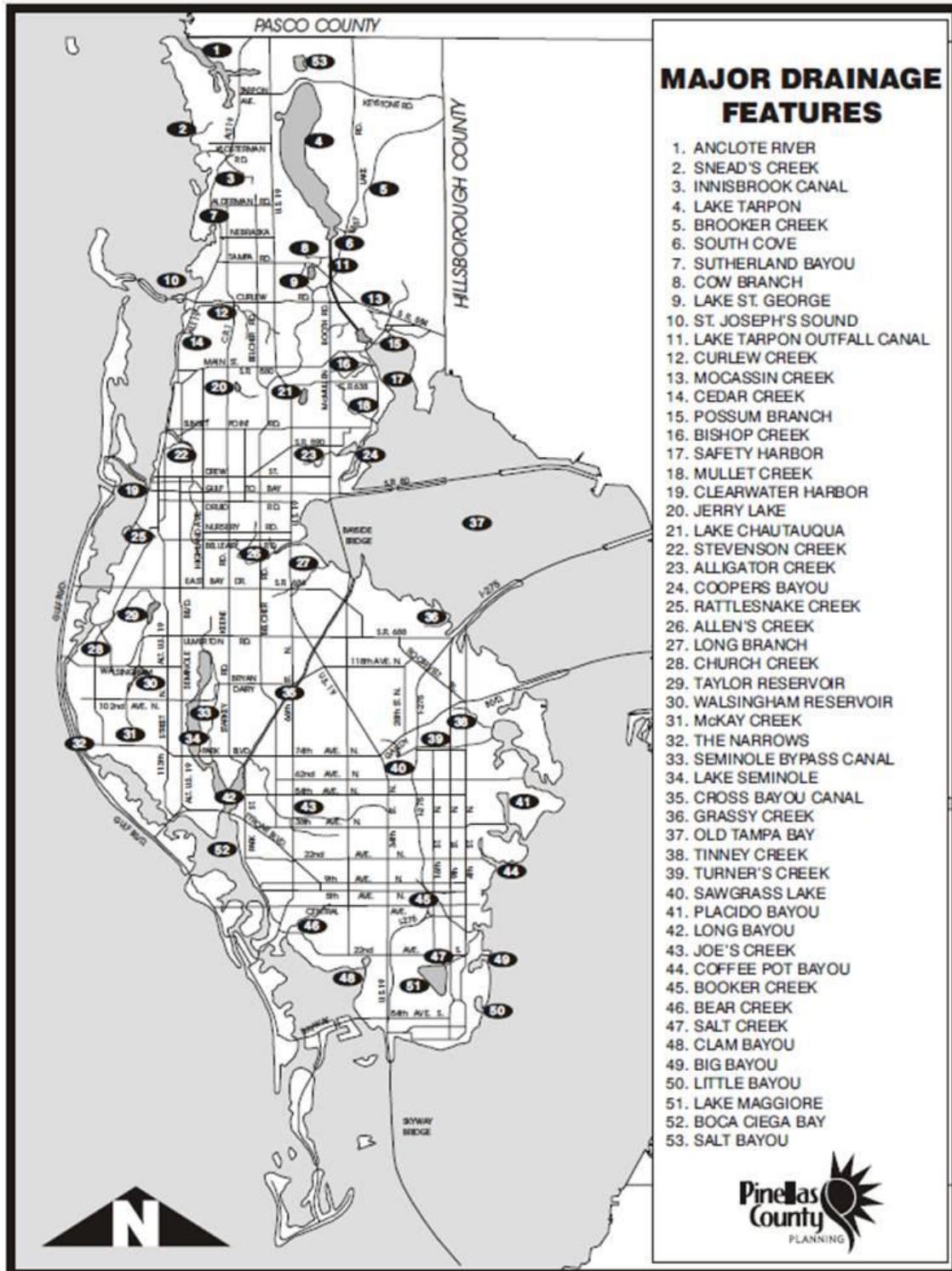
normal daily minimum temperature ranges from 53.7°F in January to 77.0°F in August. The highest daily maximum temperature recorded at St. Petersburg is 100°F (most recently on July 15, 2011). The lowest daily minimum temperature recorded at St. Petersburg is 22°F on December 13, 1962.

**Map 1- 1: Pinellas County Location**



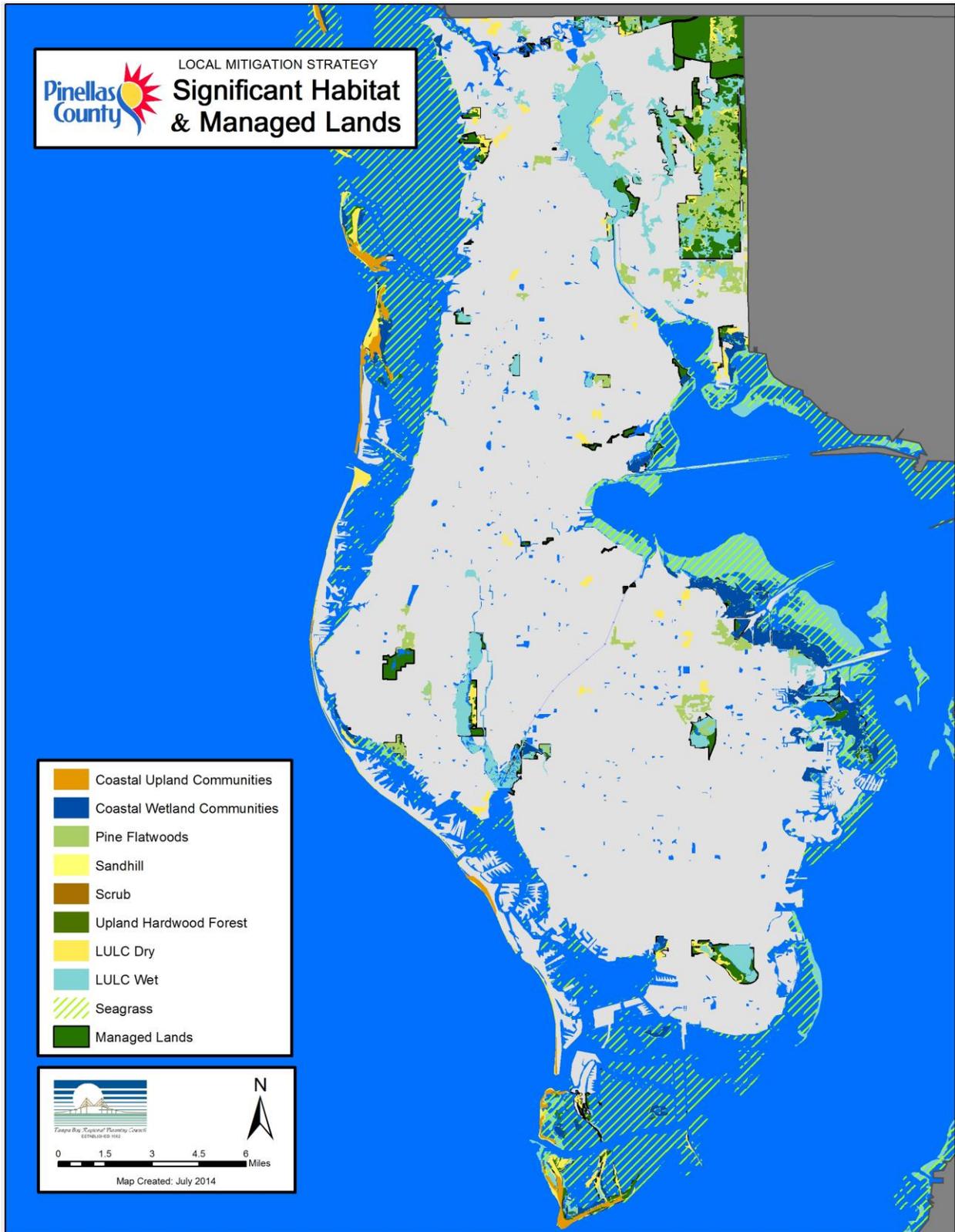
# Pinellas County Local Mitigation Strategy

Map 1- 2: Major Drainage Features



# Pinellas County Local Mitigation Strategy

*Map 1- 3: Pinellas County Significant Habitats and Managed Lands*



# Pinellas County Local Mitigation Strategy

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Located nearly entirely on a peninsula, Pinellas County has the relatively warmer waters of Tampa Bay and the Gulf of Mexico help to moderate cold temperatures in winter. Therefore, freezes are rare, especially hard freezes or freezes of duration greater than a couple of hours. The daily minimum temperature falls to 32°F or below an average of about once every three years at the weather station in St. Petersburg. The longest streak of consecutive days where the minimum temperature fell to 32°F or below is four days, On December 23-26, 1989. Another station near Tarpon Springs, near the northern boundary records a daily minimum temperature of 32°F or below an average of about 3 days per year.

Thunderstorms affect Pinellas County on a frequent basis, especially in the rainy summer months (June through September). Pinellas lies at the western edge of an area that runs along Interstate 4 through Tampa, Lakeland, and Orlando where thunderstorms occur an average of 85 to 100 days per year. These thunderstorms are significant because they often produce frequent lightning and intense rainfall. On occasion, Pinellas County experiences damaging thunderstorm winds in excess of 60 miles per hour and/or small hail, though these more intense events are not frequent.

## POPULATION

Pinellas County is the sixth most populous county in Florida, with an estimated 926,610 permanent residents. (BEBR, 2014) Pinellas County hosts an annual total of 5.5 million tourists throughout the year. The current population density is 3,361 persons per square mile, making Pinellas the most densely populated county in Florida. The county's population is projected to grow to around 945,000 by 2040 (BEBR, 2014). There are 24 incorporated municipalities within Pinellas County including the largest city, St. Petersburg (pop. 249,700) and the smallest, the Town of Belleair Shore (pop. 107)

***Table 1- 1: Pinellas County Population Past and Present***

1980	1990	2000	2010	2013
728,531	851,659	921,495	916,542	926,610

Source: US Census and BEBR, 2013

***Table 1- 2: Pinellas County Population Projections***

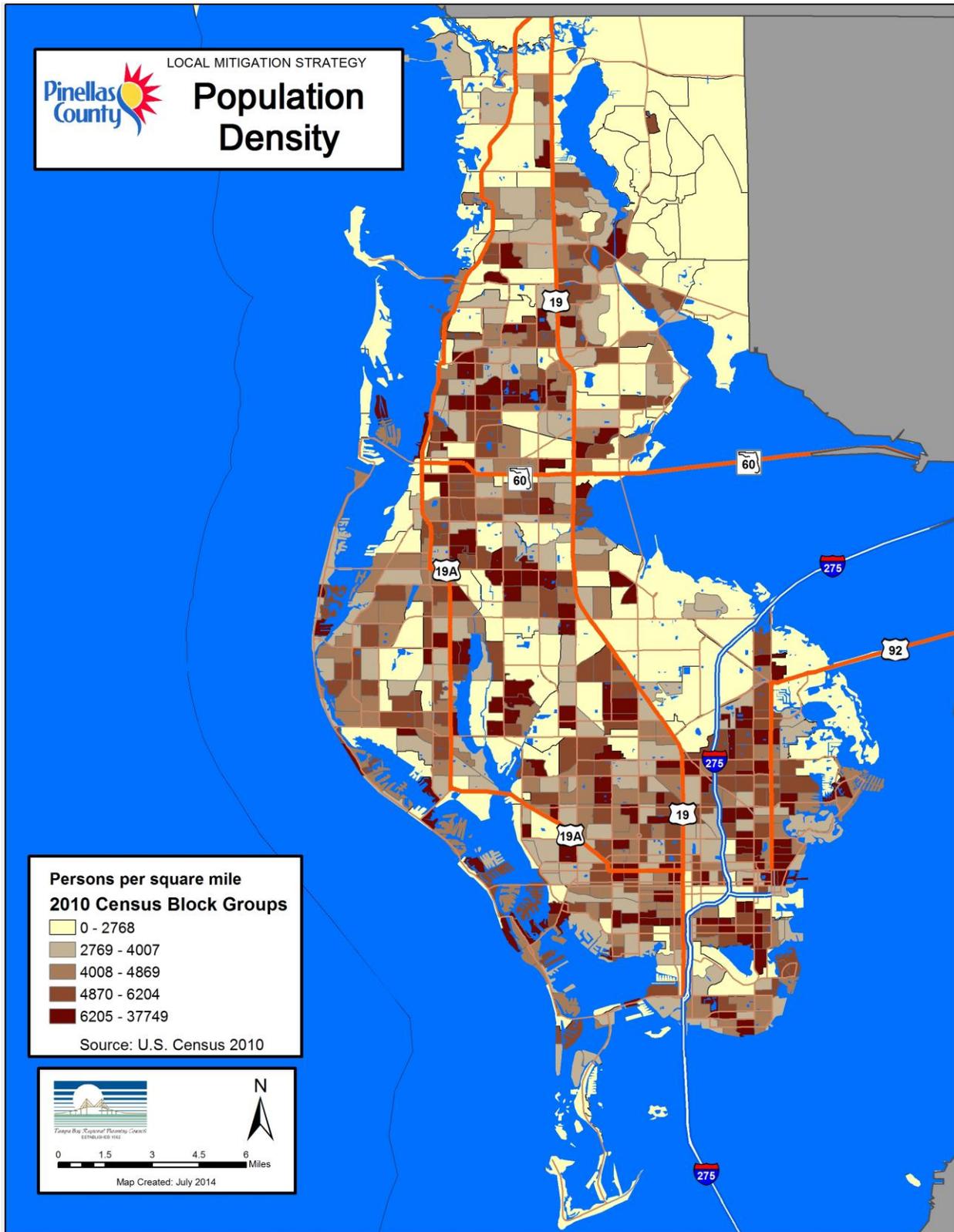
	2015	2020	2025	2030	2035	2040
Low	872,300	847,800	823,000	797,800	772,300	746,500
Medium	928,000	931,600	935,200	938,600	941,900	945,000
High	983,700	1,015,500	1,047,400	1,079,400	1,111,400	1,143,400

Source: US Census and BEBR, 2013

For graphic representation, please refer to Map 1-4 Pinellas County Population Density.

# Pinellas County Local Mitigation Strategy

Map 1- 4: Population Density



# Pinellas County Local Mitigation Strategy

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**Table 1- 3: Permanent Population Estimates by Municipality**

Jurisdiction	Population
Belleair	3,900
Belleair Beach	1,572
Belleair Bluffs	2,037
Belleair Shore	107
Clearwater	109,065
Dunedin	35,558
Gulfport	12,071
Indian Rocks Beach	4,172
Indian Shores	1,423
Kenneth City	4,975
Largo	78,488
Madeira Beach	4,313
North Redington Beach	1,437
Oldsmar	13,725
Pinellas Park	49,939
Redington Beach	1,441
Redington Shores	2,144
Safety Harbor	16,944
St. Petersburg	249,704
St. Pete Beach	9,363
Seminole	17,202
South Pasadena	5,081
Tarpon Springs	23,935
Treasure Island	6,787
Unincorporated	271,227
Total	926,610

Source: University of Florida Bureau of Economic and Business Research, 2013

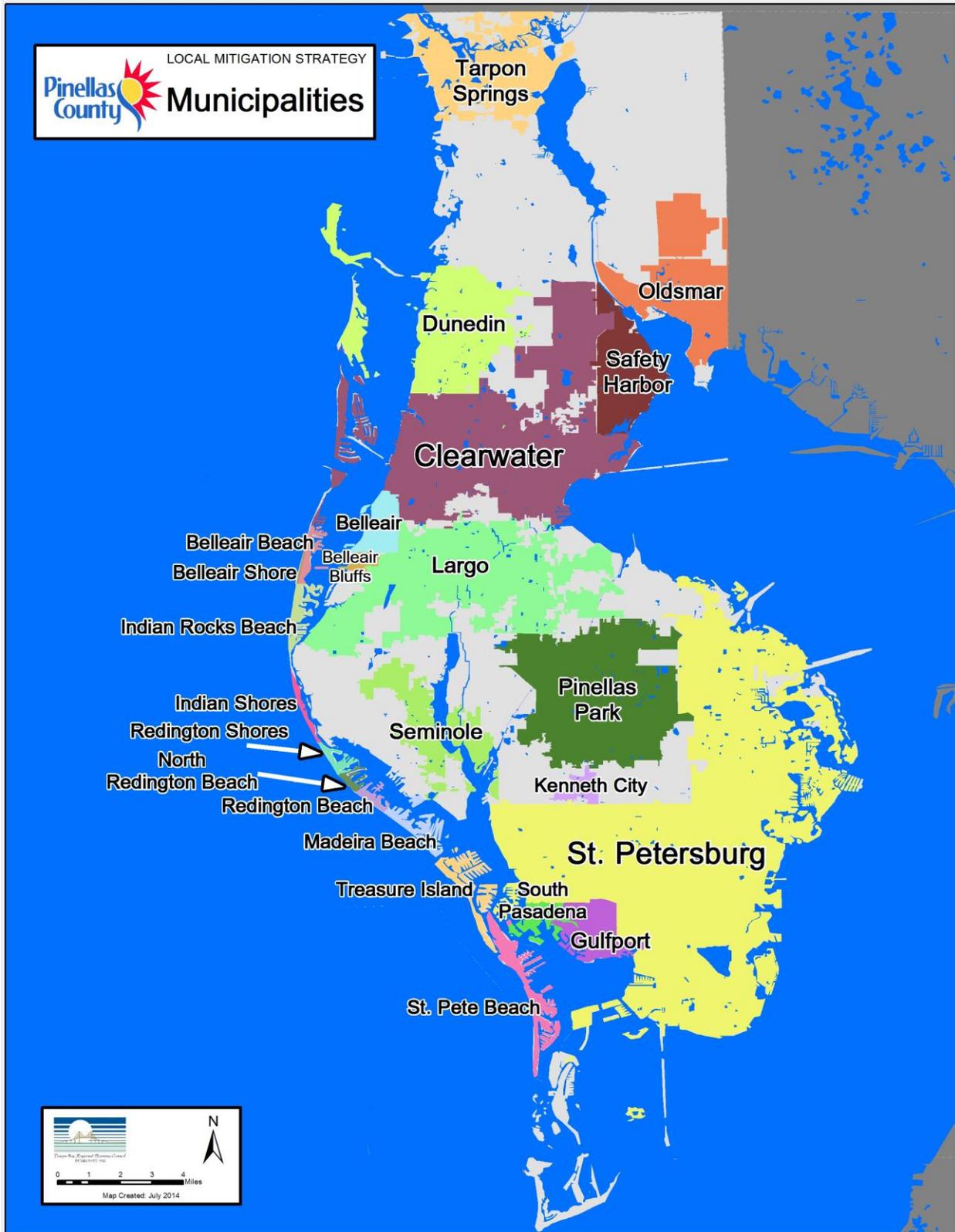
**To view municipal boundaries, please refer to Map 1-5.**

## **ECONOMIC INDICATORS**

- 2013 annual average unemployment rate was 7.1%, though the monthly unemployment rate has fallen to 6.0% as of May 2014, the latest month for which data are available. (Florida Labor Market Statistics, 2014)
- Median household income was \$44,927 in 2012, nearly identical to Florida’s median household income of \$45,040 (ACS, 2012)
- The county’s public school system, Pinellas County Schools, has a total K-12 enrollment of 101,337 students, making the district the sixth largest in Florida and 26<sup>th</sup> largest in the country.
- Tourism  
Over 5.5 million people visited Pinellas County in 2013, spending an estimated \$3.88 billion with a total economic impact of \$7.73 billion.

# Pinellas County Local Mitigation Strategy

Map 1- 5: Pinellas County Municipal Boundaries



# Pinellas County Local Mitigation Strategy

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## HOUSING

There are an estimated 502,215 housing units in Pinellas County (American Community Survey, 2012). There are 238,352 detached, single family homes, 214,634 multi-family housing units, 48,574 mobile homes; and 595 are recreational vehicles. The median sale price for single family homes in Pinellas County in May 2013 was \$162,250, an increase of 20.5% over May 2012.

## LAND USE

Consistent with the State Comprehensive Plan and the Regional Strategic Regional Policy Plan, Pinellas County and its municipalities have adopted comprehensive plans that present the communities' goals, objectives and policies for growth guidelines. These plans address the history and development of past growth patterns, existing conditions and land use patterns as well as the future land use map for the jurisdiction.

Map 1-6 presents the Future Land Use for unincorporated Pinellas County and the 24 municipalities. For more information on policies and programs, please refer to Appendix 5.

## TRANSPORTATION

Pinellas County is serviced by five major highways: I-275, US Highway 19, US 19A, US 92, and State Road 60. Other major transportation routes are Tarpon Avenue/SR582, Tampa Road/752-SR584, Curlew Road/SR586, East Bay/SR686, Ulmerton Road/SR688, Park Boulevard/Gandy Boulevard, CR611, SR580, SR 693 and Gulf Boulevard/SR699.

- **Airports**

There are three airports located in Pinellas County. St. Pete-Clearwater International Airport (PIE) is a full service airport with commercial passenger service, cargo, military, and general aviation operations. PIE accommodates virtually any size aircraft, from jumbo jets to charter planes to private aircraft. FAA-operated Air Traffic Control and an Automated Flight Service Station are located on site. Also, the largest Coast Guard Air Station in the U.S. is located at PIE. Albert Whitted Airport (KSPG) in downtown St. Petersburg is classified as a Regional General Aviation Airport by the FAA. Albert Whitted Airport is owned and operated by the City of St. Petersburg. Clearwater Airpark (KCLW), a general aviation facility owned by the City of Clearwater in central Pinellas County, has a 4108-foot runway at a ground elevation of 71 feet. Additionally, Tampa International Airport, the region's largest commercial/passenger air facility, is located nearby in neighboring Hillsborough County.

- **Bus**

The Pinellas Suncoast Transit Authority (PSTA) provides countywide public bus transit service, along with several routes to/from Hillsborough County. PSTA has a fleet of 203 vehicles, including 188 full-sized buses. Greyhound Lines, Inc. provides regularly scheduled bus service to out-of-county and out-of state locations from the Greyhound Bus Station in Downtown St. Petersburg. Additionally, the Pinellas County School Board operates a fleet of approximately 750 buses for the transport of students.

- **Railroad**

CSX operates a single line freight rail service through Pinellas County. Most of the railway in Pinellas County has been converted into the Pinellas Trail, a recreational thoroughfare that traverses the county.

## Pinellas County Local Mitigation Strategy

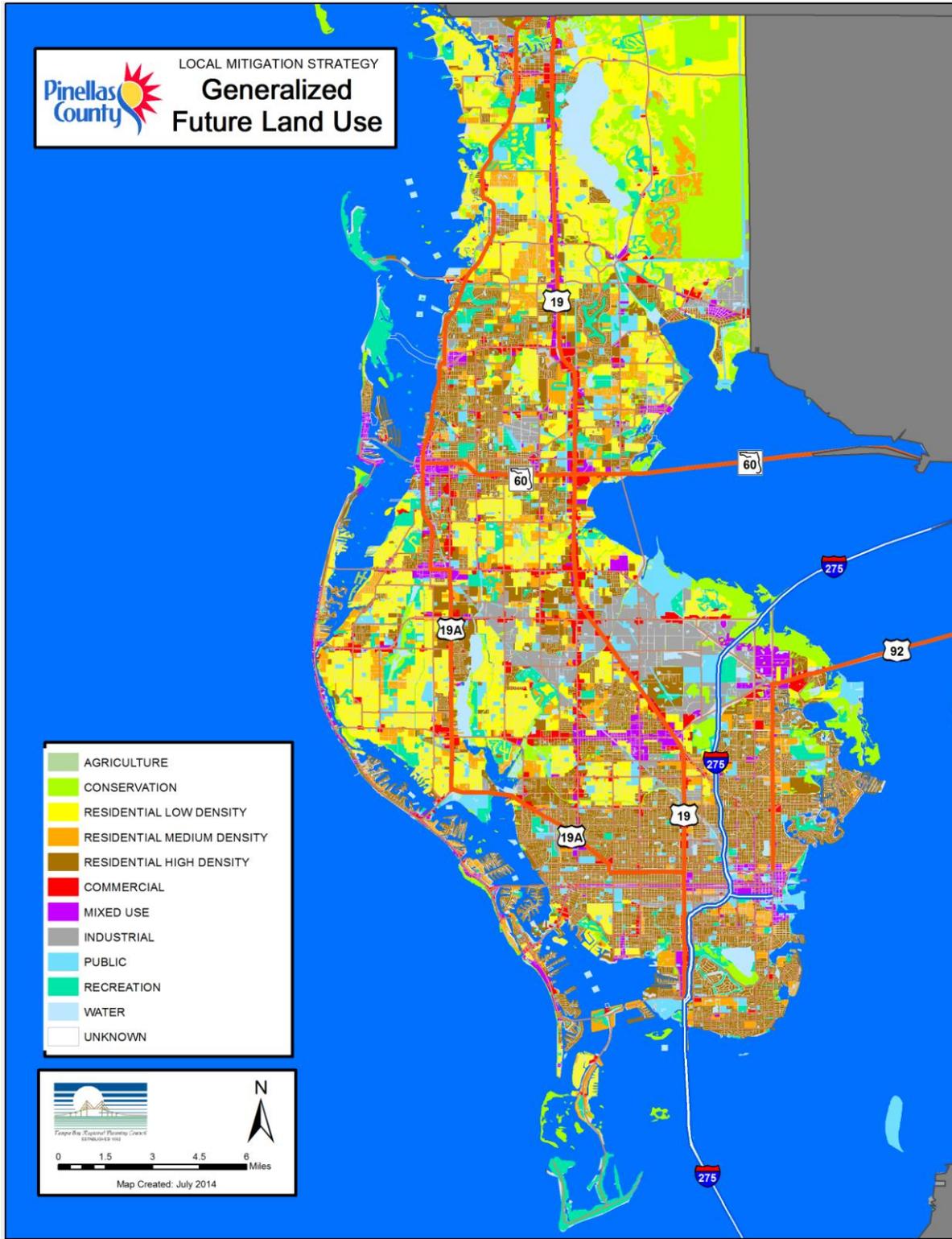
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- **Waterways**

Pinellas County is a peninsula bounded by Tampa Bay on the east and south, and the Gulf of Mexico on the west. The Intracoastal Waterway runs the length of the county on its western side, between the mainland and the barrier islands. There is one port located in Pinellas County. The Port of St. Petersburg is located on Bayboro Harbor in Downtown St. Petersburg, and can accommodate shallow draft ships. Deep draft ships must use Port Tampa Bay in Hillsborough County or Port Manatee in Manatee County. Port Tampa Bay is the largest port in Florida in terms of physical area and annual cargo tonnage.

# Pinellas County Local Mitigation Strategy

Map 1- 6: Future Land Use



# Pinellas County Local Mitigation Strategy

## Natural Hazards Analysis

Pinellas County utilized the State Enhanced Hazard Mitigation Plan (August 2013) to identify the major natural hazards facing the state and further focused on those which had the potential for a major impact to Pinellas County and its municipalities.

**Table 1- 4: Hazards Facing Pinellas County**

	Hazard	Methodology of Identification	Significant Concerns
1	Floods (including potential for dam failure and sea level rise)	<ul style="list-style-type: none"> <li>Review of past disaster declarations</li> <li>Review of Federal Flood Insurance Rate Maps (FIRMs)</li> <li>Input from state and local floodplain managers.</li> <li>Identification of NFIP repetitive loss properties in the state</li> <li>Research (universities, NOAA, ICCP)</li> </ul>	<ul style="list-style-type: none"> <li>Florida/ Pinellas County is affected by flooding nearly every year.</li> <li>Floods have caused extensive damage and loss of life in the past.</li> <li>Sea Level Rise could affect coastal structures/ infrastructure and have a detrimental impact on economy and environment</li> </ul>
2	Coastal Storms & Hurricanes	<ul style="list-style-type: none"> <li>Review of past disaster declarations.</li> <li>Review of National Climatic Data Center (NCDC) Severe Storms Database.</li> <li>National Oceanographic and Atmospheric Administration (NOAA) climatology data</li> </ul>	<ul style="list-style-type: none"> <li>Hurricanes and coastal storms affect Florida every year.</li> <li>Hurricanes have caused extensive damage and loss of life across the state for the last 50 years.</li> <li>12 of the last 15 Federal Major Disaster Declarations in Florida were for hurricanes/tropical storms</li> </ul>
3	Severe Storms & Tornadoes	<ul style="list-style-type: none"> <li>Review of past disaster declarations.</li> <li>Review of National Climatic Data Center (NCDC) Severe Storms Database.</li> <li>National Weather Service input and data.</li> </ul>	<ul style="list-style-type: none"> <li>Florida experiences a tornado nearly every year.</li> <li>Tornadoes have caused extensive damage and loss of life to county residents.</li> </ul>
4	Wildfire	<ul style="list-style-type: none"> <li>Florida Division of Forestry statistics and input.</li> <li>USDA Forest Service Fire, fuel, and WUI mapping.</li> <li>Input from FL DEM about wildfires and the EOC activations.</li> <li>Public input including newspapers and media.</li> </ul>	<ul style="list-style-type: none"> <li>Florida experiences wildfires every year.</li> <li>Development in much of the state is occurring at the Wildland-Urban Interface (WUI).</li> <li>Cyclical drought patterns result in increases of brush and other dry materials. This increases the overall risk for significant fires</li> <li>Because Pinellas County is highly urbanized, the risk of wildfire is diminished.</li> </ul>

## Pinellas County Local Mitigation Strategy

	Hazard	Methodology of Identification	Significant Concerns
5	Drought & Extreme Heat	<ul style="list-style-type: none"> <li>• National Weather Service data</li> <li>• National Oceanographic and Atmospheric Association (NOAA) paleoclimatology data.</li> <li>• The US Drought Monitor</li> <li>• Keetch Byram Drought Index (KBDI)</li> <li>• Agricultural community throughout the state.</li> </ul>	<ul style="list-style-type: none"> <li>• There has been at least one severe and widespread drought in Florida in every decade since 1900</li> <li>• Drought has a severe economic impact on the state due to the large amounts of citrus, agriculture and livestock.</li> <li>• In Pinellas, drought could impact potable water resources; extreme heat has a significant impact to the certain more vulnerable segments of the population (elderly, very young, etc.)</li> </ul>
6	Winter Storms and Freezes	<ul style="list-style-type: none"> <li>• Review of past disaster declarations.</li> <li>• Review of NCDC Severe Storms Database.</li> <li>• National Weather Service input and data.</li> </ul>	<ul style="list-style-type: none"> <li>• Florida is affected by winter storms cyclically</li> <li>• Significant freezes during the 1980s negatively impacted the state's citrus industry</li> <li>• Six (6) Federal Major Disaster Declarations since 1971</li> <li>• The population is unprepared for cold weather with many having inadequate heating capabilities.</li> </ul>
7	Erosion	<ul style="list-style-type: none"> <li>• Coordination with the Florida Department of Environmental Protection – Bureau of Beaches and Coastal systems.</li> <li>• SHMPAT interview and input.</li> <li>• <i>Evaluation of Erosion Hazards</i>, the report from the Heinz Center that was presented to FEMA in April 2000.</li> </ul>	<ul style="list-style-type: none"> <li>• Beach erosion causes significant negative economic impacts for the state due to property damages, loss of actual beach front real estate and effects on tourism</li> <li>• 59% of Florida beaches are currently experiencing erosion</li> </ul>
8	Sinkholes, Landslides and Seismic Events	<ul style="list-style-type: none"> <li>• Coordination with the Florida Geographical Survey</li> <li>• The Florida Sinkhole Database</li> <li>• Coordination with the Florida Department of Transportation</li> <li>• Input from the Central United States Earthquake Consortium</li> </ul>	<ul style="list-style-type: none"> <li>• Sinkholes are a common feature of Florida's landscape</li> <li>• Continued development in areas at high risk for sinkholes increases the threat to life and property</li> <li>• Sinkholes impact roads and other components of the state's physical infrastructure</li> <li>• Localized lowering of groundwater table can trigger sinkholes as can extended flooding (Tropical Storm Debby)</li> <li>• Earthquakes (seismic events) have never been reported in Pinellas County and risk is considered negligible. Earthquakes were not addressed in the Pinellas County LMS.</li> </ul>

## Pinellas County Local Mitigation Strategy

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	Hazard	Methodology of Identification	Significant Concerns
9	Tsunamis	<ul style="list-style-type: none"> <li>• Input from the NOAA Center for Tsunami Research</li> <li>• Coordination with the Florida Division of Emergency Management</li> <li>• Input from the United States Geological Survey</li> </ul>	<ul style="list-style-type: none"> <li>• Tsunamis are events that occur in coastal locations adjacent to large bodies of water. Almost all perimeters of Florida's boundaries are made up of large bodies of water, although the west central coast has a much lower risk than the east coast or panhandle.</li> <li>• <b>No tsunamis have ever been reported along the Pinellas Coast. According to the NWS/NOAA, risk to our barrier islands is consider negligible and are not addressed in the Pinellas County LMS.</b></li> </ul>

Source: State of Florida Enhanced Hazard Mitigation Plan, 2013

# Pinellas County Local Mitigation Strategy

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## FLOODING

Flood or flooding refers to the general or temporary conditions of partial or complete inundation of normally dry land areas from the overflow of inland or tidal water and of surface water runoff from any source. Floodplains are defined as any land areas susceptible to being inundated by water from any flooding source.



Although storm surge presents the potential for loss of life, a study conducted from 1970 to 1999 by the National Hurricane Center found that freshwater flooding accounted for more than half (59%) of the tropical cyclone deaths in the United States. FEMA estimates that about 41 percent of Florida is flood prone, which is the highest percentage of all 50 states. Because of the potential for flood damage, Florida has the most flood insurance policies required by the National Flood Insurance Program than any other state. More information about the number of policies in Florida by community and Repetitive Loss Properties can be found in Appendix 13: Managing Repetitive Loss Properties.

In Florida, several variations of flooding occur due to the effects of severe thunderstorms, hurricanes, seasonal rain, and other weather-related conditions. The loss of life, personal property, crops, business facilities, utilities, and transportation are major impacts of flooding. Floodwaters present an additional hazard as a public health problem when they inundate drinking water facilities, chemical and waste storage facilities, wastewater treatment facilities, and solid waste disposal sites.

### a. History

Fresh water flooding problems due to rainfall are evident in many sections of Pinellas County. Prolonged periods of rainfall have shown increased potential for causing damage to property and evacuation of residents due to flooding. This problem becomes more severe if the heavy rainfall occurs at the same time as the astronomical high tide, which prevents much of the rainwater from flowing through the drainage system into the Gulf of Mexico or Tampa Bay. Pinellas County has experienced a number of damaging floods in recent history. The most significant are:

- June 1974: During the period of June 22 through June 30, 1974, Pinellas County received between 20 and 30 inches of rain. Damage to public and private property totaled more than \$20 million.
- May 1979: Flooding occurred when 10-18 inches of rain fell in Pinellas County on May 8, 1979. The massive rain event led to three deaths in St. Petersburg. One woman drowned when her truck was swept down a flooded street. Another woman and her 12 year old daughter were sucked into a drainage ditch. About 200 people were evacuated from their homes in Tyrone and St. Petersburg. 17.6 inches of rain fell in St. Petersburg during a 14 hour period. Shore Acres received 12.4 inches, while Seminole received 10.78 inches, and Tyrone received 8.7 inches. Several roads and bridges were washed out. (*The Evening Independent*, 8/9/1979 and the National Weather Service)

## Pinellas County Local Mitigation Strategy

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- September 1979: During the months of August and September 1979, Central Florida, including Pinellas County, experienced the most significant period of rainfall in over three decades. In some areas, the two-month rainfall total was more than 40 inches.
- September 1988: After a week of light to moderate rains, flooding began to occur county-wide. Areas of Pinellas Park, Clearwater and Dunedin were hardest hit. 13.25 inches of rain were recorded.
- September 1997: Thirty-hour rainfall totals of 8 to 14 inches caused flooding of roads, highways, homes, commercial buildings, low-lying areas and rivers over much of Pinellas and Hillsborough Counties. In St. Petersburg, a 13 year old female was swept into a storm drain while playing in floodwaters at a city park on 36th Avenue N. and Eighth Street at 7 pm EST. She was dragged into raging waters underground for 2 blocks before she emerged and was rescued by firefighters. In St. Petersburg, floodwaters carried a 23 year-old woman twelve blocks underground in a drain before she was dumped into a retention pond with only minor injuries. Another woman was playing at Booker Creek under a wooden bridge with two children when she lost her footing and was carried off by the fast moving flood waters. The heaviest rainfall and subsequent flooding occurred over the cities of Gulfport, Pinellas Park and St. Petersburg in southern Pinellas County. (National Climatic Data Center Storm Events and the National Weather Service)
- February 2006: The combination of tropical moisture flowing into a line of thunderstorms and an approaching upper level disturbance allowed a train of intense thunderstorms to repeatedly cross over parts of the Tampa Bay area on February 3, 2006. Between 8 and 11 inches of rain fell in roughly a five-hour period in a five-mile wide stripe extending from Madeira Beach northeast through Pinellas Park, then across Old Tampa Bay to west Tampa, including Tampa International Airport. The area of heaviest rain was so concentrated that downtown St. Petersburg, less than 10 miles away recorded less than an inch of rain during the same period. The torrential rains caused flash flooding in the areas where more than eight inches fell. The flash flooding prompted the mayor of St. Petersburg to term the event a "hundred year flood." In Lealman, an entire mobile home community was evacuated, and at least 69 of the homes were flooded. A partial roof collapse was reported at a big box store in St. Petersburg. Water pouring into the store washed out several cash register stands and injured one employee as he was washed into the parking lot. Another roof collapsed at Treasure Island. Hundreds of vehicles were stranded by the flood waters. Total property damage was estimated at \$2.0 million. Rainfall amounts measured in Pinellas County include: Pinellas Park (Upper Highlands Canal): 11.17 inches. Saint Petersburg/Clearwater International Airport: 8.20 inches Seminole: 7.01 inches Largo: 6.44 inches; Clearwater: 5.81 inches.

Nine (9) flooding events as a result of heavy rain were reported since the last update (between 06/01/2009 and 06/30/2014). Two of these events resulted in property damage (7/1/2009 and 6/6/2013) and one resulted in one death (6/24/2012).

- In July of 2009, a trough of low pressure was dissipating across the area with high pressure ridging across southern Florida. This kept west to southwest winds in place across the local area and allowed for numerous thunderstorms with heavy rains and a tornado. Heavy rains flooded roads in Tarpon Springs. One home on the 600 block of South Grosse Avenue was

## Pinellas County Local Mitigation Strategy

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damaged as debris piled up in a nearby storm drain and caused flooding of three inches of water into the home and \$20,000 in damage.

- In June of 2012, Tropical Storm Debby lingered for several days over the northeastern Gulf of Mexico and caused high winds and heavy rain before making landfall near Steinhatchee, FL on the 26th. A tropical storm warning was in effect for Levy, Citrus, Hernando, Pasco, Pinellas, Hillsborough, Manatee, and Sarasota counties from 10 AM EDT on June 25th through 8 PM EDT on June 26th. With the outer bands of Tropical Storm Debby, 11 confirmed tornadoes occurred on the 24th. Strong sustained winds prompted the closure of the Sunshine Skyway Bridge. Heavy rain across the area caused flooding on several area rivers, the most serious of which was on the Anclote River at Elfers. Additionally, coastal flooding from onshore winds caused 3-5 feet of storm surge between Suwannee River and Bonita Beach, flooding streets and homes and eroding beaches.

In Pinellas County, widespread frequent wind gusts of 39 mph or stronger were reported on the 24th, the highest of which was a 56 mph wind gust at Saint Petersburg Albert Whitted Airport on the morning of the 24th. Rainfall of at least 9 inches was reported across the entire county, with the highest storm total rain total of 15.26 inches near the Palm Harbor CoCoRaHS site. A total of 1,671 applications for individual assistance were filed, totaling \$900 thousand. This value is a gross underestimate of the total damage, but was the best number available at the time. The tide gauge at Clearwater Beach measured a peak tide of 5.43 feet MLLW on the afternoon of the 24th. Subtracting the predicted astronomical tide, the calculated highest storm surge was 3.10 feet on the evening of the 24th. The tide gauge at Saint Petersburg measured a peak tide of 4.87 feet MLLW on the evening of the 25th. Subtracting the predicted astronomical tide, the highest storm surge was calculated as 3.56 feet late on the evening of the 25th. Significant street flooding was reported in Tarpon Springs and Saint Petersburg. Along Dodecanese Boulevard in Tarpon Springs, street flooding was up to the foundations of several businesses. In Treasure Island, Gulf Boulevard between 107 St. South and Saint John's Pass was flooded with cars stranded. In Clearwater, waves were splashing over the seawalls. In Gulfport, water rose up to the bumpers of cars and flooded streets. Damage to public beaches from erosion was estimated at \$3M.

Heavy rain caused minor flooding in Indian Rocks Beach. A 71 year old man died after suffering a heart attack while standing in less than a foot of water in his front yard and could not remove himself from the water. The medical examiner determined that the cause of death was drowning, with heart disease as a contributing factor.

Two other events occurred in 2013

On July 3, 2013, easterly winds and deep moisture allowed for a sea breeze collision just along the west coast of Florida, producing scattered to numerous thunderstorms. Some of the storms produced damaging thunderstorm wind gusts, lightning strikes, and heavy rain. Largo Police Department reported Belcher Road was closed from Ulmerton Road to 142nd Avenue with an estimated 2 feet of water on the road. Additionally, an estimated 3 feet of water covered Floral Drive and 36th Street Southeast. No damage, death or injury reported.

On September 1, 2013, deep moisture allowed for sea breeze thunderstorms to develop in the afternoon. Some of these storms produced heavy rain and damaging lightning. Broadcast media relayed a report of street flooding up to the bumpers of cars in Clearwater near East Bay Drive and U.S. 19. No damage, death or injury reported.

# Pinellas County Local Mitigation Strategy

**Table 1- 6: History of Flooding in Pinellas County**

Reporting Jurisdiction	County	ST	Date	Event	Death	Injury	Prop Dam	Crop Dam
<a href="#">ST. PETERSBURG</a>	PINELLAS CO.	FL	01/01/1996	Flood	0	0	0.00K	0.00K
<a href="#">ST. PETERSBURG</a>	PINELLAS CO.	FL	02/02/1996	Flood	0	0	0.00K	0.00K
<a href="#">TARPON SPRINGS</a>	PINELLAS CO.	FL	04/30/1996	Flood	0	0	0.00K	0.00K
<a href="#">PINELLAS PARK</a>	PINELLAS CO.	FL	06/24/1996	Flood	0	0	0.00K	0.00K
<a href="#">TARPON SPRINGS</a>	PINELLAS CO.	FL	08/05/1996	Flood	0	0	5.00K	0.00K
<a href="#">CLEARWATER</a>	PINELLAS CO.	FL	08/06/1996	Flood	0	0	20.00K	0.00K
<a href="#">CLEARWATER</a>	PINELLAS CO.	FL	08/12/1996	Flood	0	0	0.00K	0.00K
<a href="#">TREASURE IS</a>	PINELLAS CO.	FL	04/26/1997	Flood	0	0	3.00K	0.00K
<a href="#">TARPON SPGS</a>	PINELLAS CO.	FL	06/24/1997	Flood	0	0	50.00K	0.00K
<a href="#">ST PETERSBURG</a>	PINELLAS CO.	FL	08/13/1997	Flood	0	0	50.00K	0.00K
<a href="#">ST PETERSBURG</a>	PINELLAS CO.	FL	09/26/1997	Flood	0	0	0.00K	0.00K
<a href="#">CLEARWATER</a>	PINELLAS CO.	FL	10/31/1997	Flood	0	0	10.00K	0.00K
<a href="#">LARGO</a>	PINELLAS CO.	FL	12/27/1997	Flood	0	0	400.00K	0.00K
<a href="#">COUNTYWIDE</a>	PINELLAS CO.	FL	02/02/1998	Flood	0	0	5.00K	0.00K
<a href="#">COUNTYWIDE</a>	PINELLAS CO.	FL	02/16/1998	Flood	0	0	10.00K	0.00K
<a href="#">COUNTYWIDE</a>	PINELLAS CO.	FL	02/19/1998	Flood	0	0	30.00K	0.00K
<a href="#">DUNEDIN</a>	PINELLAS CO.	FL	02/28/1998	Flood	0	0	20.00K	0.00K
<a href="#">CLEARWATER</a>	PINELLAS CO.	FL	07/10/1998	Flood	0	0	50.00K	0.00K
<a href="#">CLEARWATER</a>	PINELLAS CO.	FL	07/20/1998	Flood	0	0	15.00K	0.00K
<a href="#">SEMINOLE</a>	PINELLAS CO.	FL	08/22/1998	Flood	0	0	10.00K	0.00K
<a href="#">PINELLAS PARK</a>	PINELLAS CO.	FL	07/01/1999	Flood	0	0	50.00K	0.00K
<a href="#">CLEARWATER</a>	PINELLAS CO.	FL	09/06/1999	Flood	0	0	50.00K	0.00K
<a href="#">LARGO</a>	PINELLAS CO.	FL	09/07/1999	Flood	0	0	50.00K	0.00K
<a href="#">TARPON SPGS</a>	PINELLAS CO.	FL	06/26/2000	Flood	0	0	0.00K	0.00K
<a href="#">TARPON SPGS</a>	PINELLAS CO.	FL	08/12/2000	Flood	0	0	50.00K	0.00K
<a href="#">PINELLAS (ZONE)</a>	PINELLAS (ZONE)	FL	07/23/2001	Flood	0	0	100.00K	0.00K
<a href="#">TREASURE IS</a>	PINELLAS CO.	FL	06/08/2002	Flood	0	1	0.00K	0.00K
<a href="#">PINELLAS PARK</a>	PINELLAS CO.	FL	09/06/2002	Flood	0	0	0.00K	0.00K
<a href="#">PINELLAS PARK</a>	PINELLAS CO.	FL	12/13/2002	Flood	0	0	0.00K	0.00K
<a href="#">ST PETERSBURG</a>	PINELLAS CO.	FL	12/24/2002	Flood	0	0	25.00K	0.00K
<a href="#">ST PETERSBURG</a>	PINELLAS CO.	FL	12/31/2002	Flood	0	0	0.00K	0.00K
<b>Total for Flood:</b>					0	1	1.003M	0.00K

## Pinellas County Local Mitigation Strategy

Reporting Jurisdiction	County	ST	Date	Event	Death	Injury	Prop Dam	Crop Dam
<a href="#">PINELLAS PARK</a>	PINELLAS CO.	FL	09/26/1997	Flash Flood	0	0	0.00K	0.00K
<a href="#">COUNTYWIDE</a>	PINELLAS CO.	FL	12/13/1997	Flash Flood	0	0	500.00K	0.00K
<a href="#">SAFETY HARBOR</a>	PINELLAS CO.	FL	07/10/1998	Flash Flood	0	0	200.00K	0.00K
<a href="#">PASS A GRILLE BEACH</a>	PINELLAS CO.	FL	07/15/2000	Flash Flood	0	0	1.00K	0.00K
<a href="#">PINELLAS PARK</a>	PINELLAS CO.	FL	09/17/2000	Flash Flood	0	0	150.00K	0.00K
<a href="#">PASS A GRILLE BEACH</a>	PINELLAS CO.	FL	09/14/2001	Flash Flood	0	0	350.00K	0.00K
<a href="#">ST PETERSBURG BEACH</a>	PINELLAS CO.	FL	04/26/2003	Flash Flood	0	0	30.00K	0.00K
<a href="#">PINELLAS PARK</a>	PINELLAS CO.	FL	06/19/2003	Flash Flood	0	0	0.00K	0.00K
<a href="#">MADEIRA BEACH</a>	PINELLAS CO.	FL	02/03/2006	Flash Flood	0	0	2.000M	0.00K
<b>Total for Flash Flood:</b>					0	0	3.231M	0.00K

Source: [www.ncdc.noaa.gov/stormevents](http://www.ncdc.noaa.gov/stormevents)

**Table 1- 5: History of Heavy Rains in Pinellas County**

Reporting Jurisdiction	County	ST	Date	Event	Death	Injury	Prop Dam	Crop Dam
<a href="#">ST. PETERSBURG</a>	PINELLAS CO.	FL	04/30/1996	Heavy Rain	0	0	0.00K	0.00K
<a href="#">SEMINOLE</a>	PINELLAS CO.	FL	04/26/1997	Heavy Rain	0	0	0.00K	0.00K
<a href="#">ST PETERSBURG</a>	PINELLAS CO.	FL	06/23/1998	Heavy Rain	0	0	150.00K	0.00K
<a href="#">ST PETE CLEARWATER I</a>	PINELLAS CO.	FL	02/25/2004	Heavy Rain	0	0	0.00K	0.00K
<a href="#">TARPON SPGS</a>	PINELLAS CO.	FL	09/04/2004	Heavy Rain	0	0	0.00K	0.00K
<a href="#">ST PETERSBURG</a>	PINELLAS CO.	FL	06/28/2005	Heavy Rain	0	0	40.00K	0.00K
<a href="#">TARPON SPGS</a>	PINELLAS CO.	FL	06/10/2006	Heavy Rain	0	0	0.00K	0.00K

## Pinellas County Local Mitigation Strategy

Reporting Jurisdiction	County	ST	Date	Event	Death	Injury	Prop Dam	Crop Dam
<a href="#">LARGO</a>	PINELLAS CO.	FL	06/01/2007	Heavy Rain	0	0	0.00K	0.00K
<a href="#">EVANS PINES</a>	BREVARD (ZONE)	FL	04/06/2008	Heavy Rain	0	0	0.00K	0.00K
<a href="#">ST PETE A WHITTED AR</a>	PINELLAS CO.	FL	07/06/2008	Heavy Rain	0	0	0.00K	0.00K
<a href="#">CLEARWATER</a>	PINELLAS CO.	FL	07/12/2008	Heavy Rain	0	0	0.00K	0.00K
<a href="#">BELLEAIR BEACH</a>	PINELLAS CO.	FL	07/12/2008	Heavy Rain	0	0	0.00K	0.00K
<a href="#">LARGO</a>	PINELLAS CO.	FL	07/12/2008	Heavy Rain	0	0	0.00K	0.00K
<a href="#">SAINT PETERSBURG</a>	PINELLAS CO.	FL	08/05/2008	Heavy Rain	0	0	0.00K	0.00K
<a href="#">TARPON SPRINGS</a>	PINELLAS CO.	FL	07/01/2009	Heavy Rain	0	0	20.00K	0.00K
<a href="#">GULFPORT</a>	PINELLAS CO.	FL	08/08/2010	Heavy Rain	0	0	0.00K	0.00K
<a href="#">INDIAN ROCKS BEACH</a>	PINELLAS CO.	FL	09/01/2011	Heavy Rain	0	0	0.00K	0.00K
<a href="#">ULMERTON</a>	PINELLAS CO.	FL	09/01/2011	Heavy Rain	0	0	0.00K	0.00K
<a href="#">BELLEAIR</a>	PINELLAS CO.	FL	06/24/2012	Heavy Rain	0	0	0.00K	0.00K
<a href="#">INDIAN ROCKS BEACH</a>	PINELLAS CO.	FL	06/24/2012	Heavy Rain	1	0	0.00K	0.00K
<a href="#">COACHMAN</a>	PINELLAS CO.	FL	06/06/2013	Heavy Rain	0	0	5.00K	0.00K
<a href="#">CLEARWATER</a>	PINELLAS CO.	FL	07/03/2013	Heavy Rain	0	0	0.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	FL	09/01/2013	Heavy Rain	0	0	0.00K	0.00K
<a href="#">BELMONT</a>	PINELLAS CO.	FL	09/27/2014	Heavy Rain	0	0	0.00K	0.00K
<a href="#">SAINT PETERSBURG PORTS SITE</a>	PINELLAS CO.	FL	09/27/2014	Heavy Rain	0	0	0.00K	0.00K
<a href="#">SOUTH PASADENA</a>	PINELLAS CO.	FL	09/27/2014	Heavy Rain	0	0	0.00K	0.00K
<a href="#">GULFPORT</a>	PINELLAS CO.	FL	09/27/2014	Heavy Rain	0	0	0.00K	0.00K
<b>Totals:</b>					1	0	215.00K	0.00K

Source: <http://www.ncdc.noaa.gov/stormevents/>

# Pinellas County Local Mitigation Strategy

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## b. Probability

Serious flooding (Listed as Flood, Flash Flood and Heavy Rain) has occurred 51 times in the past 30 years, with two incidents, May 8, 1979, and Tropical Storm Debby (2012) resulting in Presidential Disaster Declarations. Although the drainage system has been greatly improved as a result of the past flooding, there is potential for the situation to occur again during periods of higher than normal rainfall. Based on past history, Pinellas County can expect heavy rainfall to cause flooding 1.7 times a year. Therefore, the probability for major flooding is considered to be high during any given year.

## c. Vulnerability

With the high probability of fresh water flooding and the continued development throughout Pinellas County, both on low ground and high ground, the vulnerability of population and property must also be considered as high. Historically, the older sections of Pinellas Park, Dunedin, St. Petersburg, and Clearwater have shown a vulnerability to freshwater type flooding.

Please refer to Map 1-7 to view the compilation of the National Flood Insurance Program (NFIP) digital Flood Insurance Rate Maps (FIRMs) and the 100- and 500-year flood zones.

Flooding can also cause public health impacts resulting from flood water contamination of water supply, stormwater runoff, and debris. With the heat and humidity, flood damaged structures are also vulnerable to mold and the associated health hazards.

**Table 1- 6: Population at Risk for FEMA FIRM Zones for Pinellas County, Year 2010**

Zone	Total	Minority	Over 65	Disabled	Poverty	Language Isolation	Single Parent
100 Yr	235,780	22,452	51,568	80,684	17,475	2,392	12,157
500 Yr	104,074	14,619	24,600	40,326	8,380	305	6,403
Velocity	27,455	525	11,838	10,914	1,673	419	984
Outside	559,301	93,238	121,335	237,963	63,032	5,474	37,118
<b>Total</b>	<b>926,610</b>	<b>130,834</b>	<b>209,342</b>	<b>369,887</b>	<b>90,560</b>	<b>8,591</b>	<b>56,664</b>

Source: FEMA Flood Zones (2014); DOR (2014)

The vulnerability of coastal and inland flooding was quantified using the 2014 Department of Revenue (DOR) Property Appraiser files for each jurisdiction in Pinellas County including the unincorporated area. These tables are located in **Attachment 1-1**. Below is a table that sums the vulnerability county-wide. Approximately one-half of the total properties, building and land values are located within the Velocity, 100- or 500-year flood plain.

# Pinellas County Local Mitigation Strategy

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**Table 1- 7: Pinellas County Flood Vulnerability  
(Municipalities and unincorporated areas combined)**

<b>FLOOD ZONE</b>	<b>NUMBER OF PROPERTIES</b>	<b>BUILDING VALUE (\$Million)</b>	<b>LAND VALUE (\$Million)</b>	<b>EXTRA FEATURE VALUE (\$Million)</b>	<b>MARKET VALUE (\$Million)</b>
<b>100Yr</b>	129,083	10,901.86	9,848.29	808.73	29,359.91
<b>500Yr</b>	33,489	2,962.25	1,386.74	173.05	5,431.82
<b>Velocity</b>	16,045	923.61	1,692.29	77.93	6,447.85
<b>Outside</b>	255,403	24,778.03	10,859.91	1,287.41	40,869.84
<b>TOTAL</b>	434,236	40,007.46	23,883.16	2,376.56	82,707.12

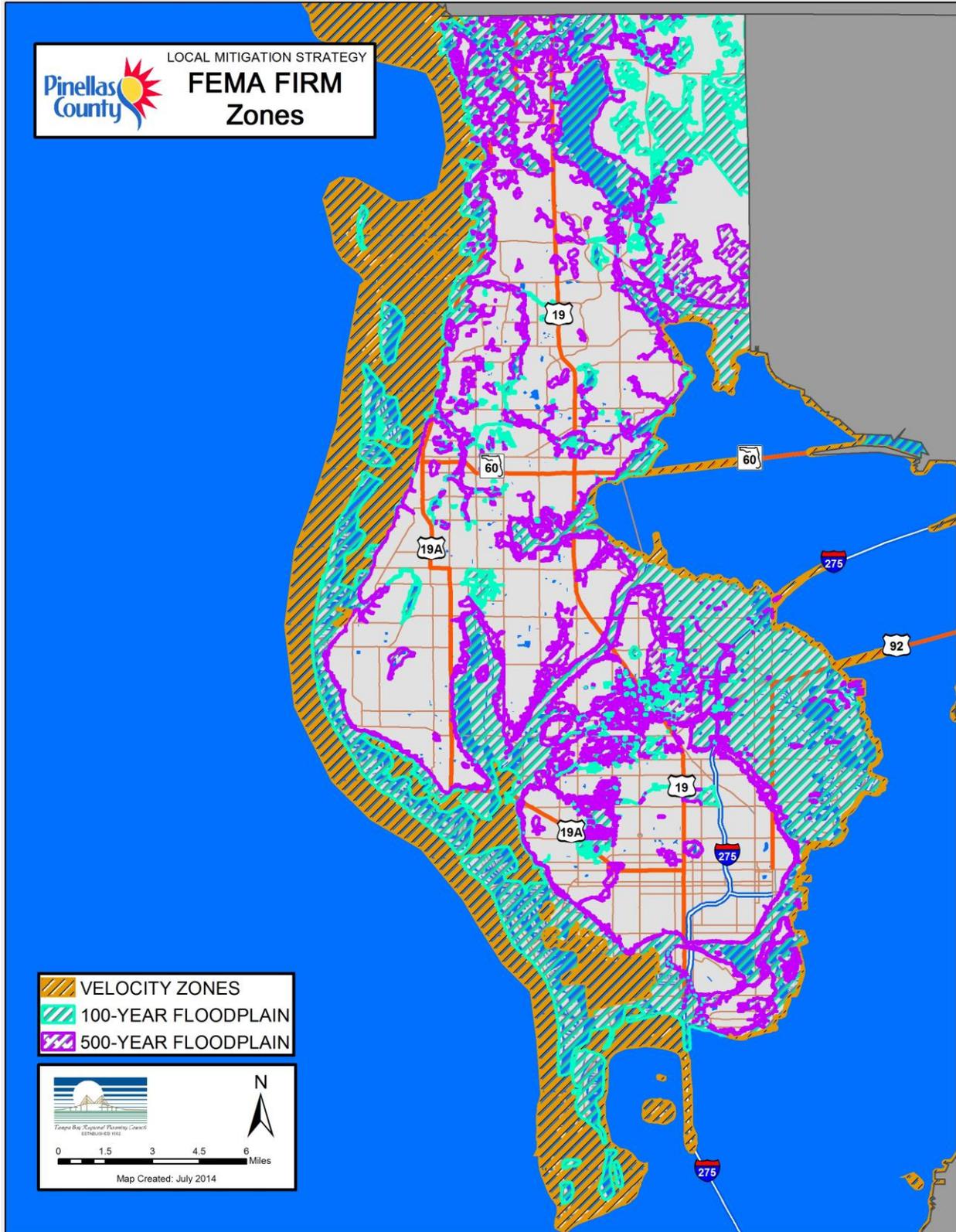
Source: FEMA Flood Zones (2014); DOR (2014)

#### **d. Maximum Threat/ Extent**

The maximum threat to Pinellas County of flooding would be a May 8, 1979 type of storm, which deposited 10 to 18 inches of rainfall across the county during a 12-hour period resulting in 4-6 feet above ground flooding. This event would flood pre-FIRM non-elevated structures in the Special Flood Areas (especially in the areas of repetitive loss) affecting more than 2000 families, hundreds of businesses and approximately \$3M in public infrastructure damage.

# Pinellas County Local Mitigation Strategy

Map 1- 7: FEMA Flood Zones



# Pinellas County Local Mitigation Strategy

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## COASTAL FLOODING, TROPICAL STORMS AND HURRICANES

Coastal flooding is usually the result of a severe weather system such as a severe thunderstorm, hurricane, or tropical storm with high winds. Water driven ashore by the wind, known as a storm surge, is the main cause of coastal flooding.



The damaging effects to structures in the beach areas are caused by a combination of higher levels of storm surge, winds, waves, rains, erosion, and battering by debris. Sea walls, jetties, and the beach areas are affected by coastal flooding, and the loss over a period of time.

In Pinellas County, coastal flooding caused by storm surge from tropical storms/ hurricanes has historically resulted in the greatest property damage and coastal erosion. In general terms, a hurricane is a cyclone. A cyclone is any closed circulation developing around a low-pressure center in which the wind rotates counterclockwise in the Northern Hemisphere (or clockwise in the Southern Hemisphere) and whose diameter averages 10 to 30 miles across. A tropical cyclone refers to any such circulation that develops over tropical waters. They act as a safety-valve that limits the build-up of heat and energy in tropical regions by maintaining the atmospheric heat and moisture balance between the tropics and the pole ward latitudes.

As a developing center moves over warm water, pressure drops (measured in millibars or inches of Mercury) in the center of the storm. As the pressure drops, the system becomes better organized and the winds begin to rotate around the low pressure, pulling the warm and moist ocean air. It is this cycle that causes the wind (and rain) associated with a tropical cyclone. If all of the conditions are right (warm ocean water and favorable high altitude winds), the system could build to a point where it has winds in excess of 155 miles per hour and could become catastrophic if it makes landfall in populated areas. The following are descriptions of the three general levels of development for tropical cyclones:

- **Tropical depression:** The formative stages of a tropical cyclone in which the maximum sustained (1-min mean) surface wind is < 38 mph.
- **Tropical storm:** A warm core tropical cyclone in which the maximum sustained surface wind (1-min mean) ranges from 39–73 mph.
- **Hurricane:** A warm core tropical cyclone in which the maximum sustained surface wind (1-min mean) is at least 74 mph.

Table 1- 8 displays the Saffir-Simpson Hurricane Wind Scale that is used to define and describe the intensity of hurricanes.

# Pinellas County Local Mitigation Strategy

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**Table 1- 8: Saffir-Simpson Hurricane Wind Scale**

<b>Category</b>	<b>Millibars</b>	<b>Inches of Mercury</b>	<b>Winds (MPH)</b>
<b>1</b>	<b>&gt; 980</b>	<b>28.94</b>	<b>74-95</b>
<b>2</b>	<b>965-979</b>	<b>28.91-28.5</b>	<b>96-110</b>
<b>3</b>	<b>945-964</b>	<b>28.47-27.91</b>	<b>111-129</b>
<b>4</b>	<b>920-944</b>	<b>27.88-27.17</b>	<b>130-156</b>
<b>5</b>	<b>&lt; 920</b>	<b>&lt; 27.17</b>	<b>&gt; 157</b>

## Hurricane Hazards

The three major hazards produced by a hurricane are the storm surge, high winds and rainfall.

### Storm Surge

Of the hurricane hazards, storm surge typically poses the greatest threat to lives and property located within surge-prone areas. The more intense the hurricane, and the closer to perpendicular its track is, in relation to the coastline, the higher the storm surge and resulting destruction will be. Also impacting on the height of storm surge is the depth of the water along a threatened coastline. Because of the high shoaling factor (shallow water and gradual slope of the Gulf bottom) off the central west coast of Florida, Pinellas County will receive higher surges than those indicated in the generalized Saffir/Simpson Hurricane Scale.

Map 1-8 presents the storm surge vulnerability of the county.

### High Winds

High winds will render segments of the population vulnerable to the passing hurricane. Throughout Pinellas County, the almost 100,000 mobile and manufactured homes will be unable to withstand hurricane force winds. High winds will also have an impact on the timing of the evacuation order, since they arrive at the coastline several hours before the eye of the storm makes landfall. All evacuation activities must be completed prior to the arrival of sustained gale force winds (40 mph with significantly higher gusts).

Map 1-9 presents the wind vulnerability based on the adopted Florida Building Code.

### Rainfall

Since the structure of every hurricane is unique, there is no way to determine the rate and distribution of the expected six to twelve inches of rainfall generally accompanying the storm. However, it is known that the rainfall has only a minor influence on the storm surge water levels. Rainfall, in itself, will not normally require the emergency evacuation of large numbers of residents during the passage of a hurricane as does the storm surge. However, rain may cause the slowing of traffic; it may sever evacuation routes which could significantly reduce the number of hours available for the overall evacuation.

#### 1. History

Because of their relatively high frequency and potential to cause widespread casualties and property/infrastructure damage, hurricanes are the natural disasters that pose the greatest threat to Florida and Pinellas County. While the last direct hit to Pinellas County from a major hurricane

# Pinellas County Local Mitigation Strategy

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was in 1921, a number of tropical storms and hurricanes have affected the county throughout its history.

In the 1920's, a time characterized by economic prosperity and growth in the resort areas of Florida, the Tampa Bay area was just beginning to feel the effects of "Florida fever" when it experienced its worst hurricane in over seventy years in October of 1921. The hurricane of 1921 produced a storm surge of 10.5 feet which was the highest recorded since the hurricanes of 1848. Locally, it created both Longboat Pass (which now separates the City of Bradenton Beach and Longboat Key) and Hurricane Pass in Dunedin. Passage Key, located between Egmont Key and Anna Maria Island, before the storm, was the home to a fishing village and fresh water lake. Following the storm and continuing today, Passage Key is a sand bar with little vegetation and a National Bird Sanctuary. This was the last major hurricane (a category three on the Saffir-Simpson Hurricane Wind Scale when it hit the coast) to actually make landfall in Pinellas County.

Pinellas County has experienced the effects (wind damage, beach erosion, etc.) from a number of hurricanes since 1886. A total of seven hurricanes have affected Pinellas County within the last 25 years. They were Hurricanes Elena (1985), Opal (1995), Georges (1998), Gordon (2000), and Hurricanes Charley, Frances and Jeanne (2004). In addition there were tropical storms Josephine (2000), Gabrielle (2001), Faye (2008), Debby (2012) and Isaac (2012).

On Labor Day weekend 1985, Hurricane Elena threatened Pinellas County and approached within 80 miles of the coast. Evacuations in Louisiana, Mississippi, Alabama and Florida were of unprecedented proportions. Almost 1 million residents and visitors were affected in the initial evacuation orders in the Florida panhandle and coastal region of Alabama, Mississippi and Louisiana. Then, as the storm turned and the warnings shifted, 10 additional Florida counties including those in Tampa Bay were ordered to evacuate. The threat of Elena initiated an evacuation which forced over 500,000 to leave vulnerable areas in the Tampa Bay region and seek shelter. Many sought shelter in the homes of friends and relatives in inland areas of Florida and Georgia. Others went to hotels and motels - filling every room (and lobby) in the state particularly along the I-75 and I-4 corridors. More than 300,000 sought public shelter in the Tampa Bay Region alone - one of the largest evacuations and shelter operations in U.S. history. After stalling off the coast for two days, Hurricane Elena turned toward the Florida Panhandle again, forcing the evacuation of thousands of coastal residents just returning after the earlier round of evacuations, ultimately making landfall near Biloxi, Mississippi. Although it never made landfall, Pinellas County received approximately \$118 million in damages.

Hurricane Georges threatened Central and Southwest Florida in the end of September 1998. From September 21st through the 30th, Hurricane Georges left a trail of destruction in the Caribbean region and across the southern U.S. Gulf coast. As the Hurricane threatened the Keys and Southwest Florida the potential threat to Pinellas County continued to develop. On Wednesday September 23<sup>rd</sup> the County activated the Citizens Information Center to answer the flood of calls from concerned citizens. On September 24<sup>th</sup> preparedness and response actions and planning accelerated. A final meeting of the Disaster Advisory Committee was held at 9:30 AM. The County EOC was partially activated at 11:00 AM. The Board of County Commissioners met in Emergency Session at 11:30 AM and declared a State of Local Emergency and issued a Mandatory A Level Evacuation, to be effective at 6 AM on September 25<sup>th</sup>. At 6 PM the National Weather Service issued a Flood Watch and at 11PM the National Hurricane Center issued A Tropical Storm Warning. On September 25<sup>th</sup> the State of Local Emergency became effective at 6 AM. County Offices and schools were closed and 55 Public Shelters were opened with a total capacity of 83,560 spaces. As the threat of Georges began to appear to lessen shelter operations were consolidated to relieve the load

# Pinellas County Local Mitigation Strategy

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on first responders and management staff. By noon on the 25<sup>th</sup> of September the President of the United States declared a State of Emergency for Florida. On September 26<sup>th</sup> the threat to West Central Florida continued to lessen. Tropical Storm Warnings and Tornado Watches for Pinellas County were canceled. The Mandatory A Level Evacuation Order was lifted and by noon the Shelters were closed and the EOC deactivated.

The 1990's went down in history as an extremely costly and deadly decade of hurricane activity. The last decade of the millennium brought Tampa Bay several flooding events including Tropical Storm Josephine (1996) and the 1998 evacuation from Hurricane Georges (which did not ultimately affect the region). Other areas of Florida and the Caribbean were not as lucky. Hurricane Andrew struck the east coast near Homestead on August 24, 1992 and Hurricane Opal struck the panhandle in 1995 - two costly storms. Hurricane Mitch (1998) made landfall in Honduras and killed tens of thousands.

While Hurricane Andrew did not directly strike the Tampa Bay region, it did however, affect the entire state in many ways. Only three other hurricanes in history, both category 5 storms - the Labor Day storm of 1935, Camille in 1969 - were stronger than Hurricane Andrew<sup>1</sup> when they made landfall in the United States. It struck South Florida with a storm surge of over 16 feet and winds which gusted over 175 mph. The scale of the disaster was enormous and the massive recovery that ultimately ensued was of epic proportions. The damages were staggering - surpassing \$50 billion - affecting emergency management policies and procedures, insurance industry and land development regulations (including the statewide building code).

On September 17, 2000 Hurricane Gordon moved northeast across the eastern Gulf of Mexico and brought 30 to 40 mph sustained winds and 50 to nearly 70 mph tropical storm force wind gusts to mainly coastal areas of Southwest and West Central Florida throughout the daylight hours of the 17<sup>th</sup>. Hurricane Gordon produced maximum storm tides above mean sea level of 4 to 5.5 feet along the Pinellas and Hillsborough county coastlines. In Pinellas County, nearly a foot of water covered coastal roads from St. Pete Beach to Clearwater. The Courtney Campbell Parkway, separating Pinellas and Hillsborough counties, was closed for approximately 4 hours due to storm surge flooding. Beach erosion was minor to moderate over Pinellas County. In Pinellas County, 51 single-family homes, 32 mobile homes, 27 multi-family homes and 24 businesses sustained minor wind or water damage. Estimated cost of the damage in Pinellas County was \$500,000 dollars.

Tropical Storm Gabrielle began to affect the Southwest Florida coast during the pre-dawn hours of September 14<sup>th</sup>, 2001 with sustained winds of 40 to 50 mph along the coasts of Sarasota, Manatee, Charlotte and Lee counties. By sunrise, high end tropical storm force wind gusts of 60 to 70 mph were common from the mouth of Tampa Bay south to Charlotte Harbor. Gabrielle continued to move northeast and made landfall, south of Venice, in Sarasota County, between 6:45 and 7:00 a.m. EST. In Pinellas and Hillsborough counties, northeast wind gusts of 50 to 65 mph were common across most of Tampa Bay and the southern portions of the counties. Storm tide values of up to three feet were common on the Pinellas county side (west) of Tampa Bay, from the Gandy Bridge south to Pinellas Point. Most wind damage and flooding were minor across Pinellas and Hillsborough counties. The most significant impact for Pinellas County was overhead power distribution lines brought down by falling tree limbs particularly in the City of St. Petersburg.

In 2004, the state of Florida was hit by an unprecedented four (4) hurricanes: Charley, Frances, Ivan, and Jeanne.

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<sup>1</sup> National Hurricane Center, NOAA

## Pinellas County Local Mitigation Strategy

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August 9 – 14, 2004: Hurricane Charley strengthened rapidly just before striking the southwestern coast of Florida as a Category 4 hurricane on the Saffir-Simpson Hurricane Scale. Charley was the strongest hurricane to hit the United States since Andrew in 1992 and, although small in size, it caused catastrophic wind damage in Charlotte County, Florida. Serious damage occurred well inland over the Florida peninsula. In the Tampa Bay Region, dead center for the 24 hour forecast track, evacuations were ordered in all four counties. Charley was directly responsible for ten deaths – primarily from flying debris and fallen trees. There were an additional 20 indirect deaths ([www.nhc.noaa.gov](http://www.nhc.noaa.gov))

August 25 – Sept. 8, 2004: Hurricane Frances was a Cape Verde-type hurricane that reached a peak intensity of category 4 on the Saffir-Simpson Hurricane Scale. It affected the Bahamas as a category 3 hurricane and the Florida east coast as a category 2 hurricane. The Tampa Bay Region experienced tropical storm and minimal hurricane force winds with some coastal and more extensive inland flooding caused by more than 10 inches of rainfall. Frances was directly responsible for seven deaths - five in Florida, one in the Bahamas, and one in Ohio. Three deaths were caused by wind, two by storm surge, one by freshwater flooding, and one by lightning. The hurricane was indirectly responsible for 42 deaths - 32 in Florida, 8 in Georgia, 1 in the Bahamas, and 1 in Ohio ([www.nhc.noaa.gov](http://www.nhc.noaa.gov)).

September 2 - 24, 2004: Hurricane Ivan was a classical, long-lived Cape Verde hurricane that reached Category 5 strength on the Saffir-Simpson Hurricane Scale (SSHS) three times. It was also the strongest hurricane on record that far south east of the Lesser Antilles. Ivan caused considerable damage and loss of life as it passed through the Caribbean Sea. Despite the unfavorable environmental conditions, the presence of cooler shelf water just offshore and eyewall replacement cycles, Ivan weakened only slowly and made landfall as a 105 kt hurricane (category 3 on the SSHS) on September 16<sup>th</sup>, just west of Gulf Shores, Alabama. Ivan caused extensive damage to coastal and inland areas of the United States. Portions of the Interstate 10 bridge system across Pensacola Bay, Florida were severely damaged in several locations as a result of severe wave action on top of the 10-15 ft storm surge. At one point, more than 1.8 million people were without power in nine states ([www.nhc.noaa.gov](http://www.nhc.noaa.gov))

September 13 – 28, 2004: Hurricane Jeanne produced heavy rain over Guadeloupe, Puerto Rico and the Dominican Republic and caused an estimated 3000 or more deaths in Haiti, from torrential rainfall flooding. Finally, Jeanne hit the northern Bahamas and then the central Florida east coast as a category three hurricane. Jeanne moved across central Florida while weakening and began to curve around the western periphery of the migratory ridge. The hurricane weakened to a tropical storm while centered about 30 mi north of Tampa September 26<sup>th</sup> and then weakened to a tropical depression about 24 hours later while moving northward across central Georgia accompanied by heavy rain. Winds were somewhat higher in the Tampa Bay Region for Hurricane Jeanne than Hurricane Frances resulting in wind damage and minimal coastal flooding. Areas still flooded from Frances (three weeks before) received additional flood waters ([www.nhc.noaa.gov](http://www.nhc.noaa.gov)).

The impact of the 2005 Atlantic hurricane season and the resulting death, injury, destruction, and population displacement were unprecedented in U.S. history. During 2005, 15 tropical storms became hurricanes. For the first time, four major hurricanes made landfall in the United States; three of those reached Category 5 intensity.

The worst effects were felt from Hurricanes Katrina and Rita. On August 29, Hurricane Katrina struck the U.S. Gulf Coast, causing severe damage from a two-story storm surge, powerful winds,

# Pinellas County Local Mitigation Strategy

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and heavy rains. Approximately 80% of New Orleans was flooded after the surge from the Gulf of Mexico forced breaks in a levee, releasing water from Lake Pontchartrain into the city. Katrina became the deadliest U.S. hurricane since 1928 and likely the costliest natural disaster on record in the United States. On September 24, response and recovery activities in the wake of Katrina were interrupted when Hurricane Rita struck the Gulf Coast. Rita rendered more homes uninhabitable and thousands more seeking shelter elsewhere. More than 200,000 persons were displaced by the hurricanes and dispersed to evacuee shelters in 18 states. The economic and health consequences of Hurricanes Katrina and Rita extended far beyond the Gulf region and ultimately affected states and communities throughout the United States. ([http://www.cdc.gov/mmwr/mguide\\_nd.html](http://www.cdc.gov/mmwr/mguide_nd.html))

While Pinellas County was NOT directly affected by hurricane Katrina, Rita or Wilma in 2005, those storms did have a significant impact on emergency management planning and operations throughout the country at the federal, state and local levels. Below is the NHC Historical Assessment of tropical storm and hurricane activity within 50 miles of the mouth of Tampa Bay.

Since 2005, Pinellas County has been affected by two tropical storm events. As described in the early section on coastal flooding, in 2008 Tropical Storm Fay resulted in approximately \$20,000 in property damage in Pinellas County primarily from heavy rainfall. As it zigzagged from water to land, it became the first storm in recorded history to make landfall in Florida four times. Thirty-six deaths were blamed on Fay. The storm also resulted in one of the most prolific tropical cyclone related tornado outbreaks on record. A total of 81 tornadoes touched down across five states, three of which were rated as EF2. Damage from Fay was heavy in Florida, estimated at \$560 million.

In June 2012, Tropical Storm Debby, a minor tropical storm flooded many parts of the state including Pinellas County. In St. Petersburg, a gust of 45 mph (72 km/h) was observed, while 1.88 inches (48 mm) of rain fell in a one-hour period. With the substantial loss of beaches, tourism in the region is expected to suffer significantly. Portions of Upham Beach in Pinellas County were completely eroded up to the seawall and other areas in that county had lost 20 to 30 ft (6.1 to 9.1 m) of sand. On Treasure Island, coastal dunes were eroded by 10 to 15 ft (3.0 to 4.6 m). In Pass-a-Grille, Debby's storm surge flooded coastal hotels with ankle-deep water as the dunes were washed away. Throughout St. Pete Beach, 30–40 homes were damaged by a tornado spawned by Debby.

**While there were two tropical storms affecting the county (TS Fay 2008; TS Debby 2012), there has been no hurricane activity since 2004.** Table 1-9 provides a summary of tropical storm and hurricane activity. Table 1-10 presents the hurricanes which have tracked within 100 miles of Pinellas County.

Pinellas County is a peninsula with a total of 588 miles of coastline, which makes it extremely vulnerable to coastal flooding. The County has experienced a number of damaging coastal floods caused by wind-driven water associated with an astronomical high tide.

- June 1972: Hurricane Agnes, although well out in the Gulf of Mexico, caused a wind-driven high tide of 5.6 feet, which struck Pinellas County on June 19, 1972. It caused an estimated \$12 million in damages to public and private property.
- June 1982: On June 18, 1982, Pinellas County was struck by severe coastal flooding from the “no-name” storm. The highest recorded winds from the storm were 49 mph and rainfall

# Pinellas County Local Mitigation Strategy

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amounts were between four to six inches. The estimated public and private property damage from the “no-name” storm were over \$16 million

- March 1993: The “Storm of the Century” was a very powerful winter storm which generated Category 1 “hurricane - like” storm surges. A tide 7.7 feet above normal levels was measured by a tide gauge at Clearwater Beach.
- July 2001: A slow moving and persistent low pressure system west of the mouth of Tampa Bay produced coastal flooding, very heavy rain, sustained winds of 20 to 30 mph with occasional higher gusts of up to 50 mph, along the West coast of Florida. In Pinellas County approximately four feet of coastal flooding caused an estimated \$1.7 million in property damage.

***Table 1- 9: Summary of Hurricanes and Tropical Storms***

<b>Hurricanes and Tropical Storms</b>	
Number of Years	135
Number of Hurricanes and Tropical Storms	100
Mean Number of Occurrences per Year	0.74
Mean Recurrence Interval	1.35 Years
<b>Summary of Hurricanes</b>	
Number of Years	135
Number of Hurricanes	30
Means Number of Occurrences per year	.22
Means Recurrence Interval	4.5 Years

# Pinellas County Local Mitigation Strategy

**Table 1- 10: Hurricanes Passing Within 100 NMi of Egmont Key**

1 Storm Index Number	2 Storm Name	3 Year	4 Month	5 Day	6 Storm Number for Year	7 Max Wind at Eye	8 Closest Point of Approach	9 Heading/ Speed at CPA
1	Not Named	1871	Aug	17	3	83 (72)	69 (ENE)	330/ 9.0
2	Not Named	1871	Aug	25	4	77 (57)	81 (NE )	307/ 9.9
3	Not Named	1871	Sep	6	6	70 (70)	87 (NNW)	061/ 8.1
4	Not Named	1872	Oct	23	5	50 (50)	15 (NNW)	058/15.5
5	Not Named	1873	Sep	23	4	50 (50)	9 (WNW)	033/13.1
6	Not Named	1873	Oct	7	5	100 (96)	70 (SE)	046/27.3
7	Not Named	1874	Sep	28	6	70 (70)	57 (NW)	037/19.6
8	Not Named	1878	Sep	9	5	90 (50)	14 (SSW)	296/ 4.5
9	Not Named	1879	Oct	27	7	60 (60)	69 (NNW)	057/26.0
10	Not Named	1880	Aug	30	4	70 (60)	63 (NNE)	294/ 4.8
11	Not Named	1880	Oct	8	9	70 (70)	59 (NW)	050/15.2
12	Not Named	1882	Oct	10	6	70 (70)	63 (WNW)	012/ 8.2
13	Not Named	1885	Oct	11	8	60 (60)	62 (WNW)	016/13.5
14	Not Named	1886	Jun	21	2	85 (85)	77 (W)	005/13.1
15	Not Named	1886	Jul	18	4	70 (70)	28 (WNW)	016/12.0
16	Not Named	1887	Oct	30	16	40 (40)	27 (NNW)	058/15.7
17	Not Named	1888	Aug	17	3	88 (77)	47 (SSW)	283/12.0
18	Not Named	1888	Sep	8	5	50 (38)	41 (NE)	320/ 8.0
19	Not Named	1888	Oct	10	7	95 (95)	75 (NW)	037/17.7
20	Not Named	1889	Jun	17	2	45 (45)	70 (NW)	045/13.2
21	Not Named	1891	Aug	25	3	46 (43)	92 (SSW)	282/10.1
22	Not Named	1891	Oct	9	8	45 (44)	30 (ESE)	032/ 9.7
23	Not Named	1892	Oct	24	9	45 (45)	1 (S)	075/13.8
24	Not Named	1894	Sep	25	4	90 (78)	55 (ESE)	014/13.3
25	Not Named	1896	Sep	29	4	110 (110)	55 (WNW)	023/28.5
26	Not Named	1896	Oct	9	5	50 (50)	79 (SSE)	058/14.9
27	Not Named	1897	Sep	21	3	60 (50)	49 (ESE)	027/11.1
28	Not Named	1897	Sep	29	4	40 (35)	60 (WSW)	075/ 6.5
29	Not Named	1898	Aug	2	1	55 (35)	25 (NNE)	302/14.6
30	Not Named	1899	Jul	31	2	85 (62)	36 (SW)	326/ 7.5
31	Not Named	1899	Oct	5	6	50 (50)	16 (NNW)	073/ 9.2
32	Not Named	1901	Aug	11	4	68 (48)	31 (SSW)	296/ 4.9
33	Not Named	1902	Jun	14	1	50 (50)	63 (W)	351/11.2
34	Not Named	1903	Sep	12	3	70 (51)	1 (NNE)	300/ 8.2
35	Not Named	1904	Oct	18	3	40 (35)	54 (SSE)	245/ 2.1
36	Not Named	1907	Sep	19	2	35 (35)	74 (SSW)	291/11.5
37	Not Named	1909	Jun	29	3	36 (35)	56 (NE)	311/ 5.9
38	Not Named	1910	Oct	18	5	98 (68)	46 (E)	360/ 8.0
39	Not Named	1911	Aug	10	1	70 (70)	62 (SW)	323/ 7.5
40	Not Named	1921	Oct	25	6	108 (105)	21 (NW)	051/12.1
41	Not Named	1925	Dec	1	2	65 (65)	28 (SE)	040/24.9
42	Not Named	1926	Sep	19	6	109 (105)	40 (SSW)	299/12.3
43	Not Named	1928	Aug	9	1	60 (40)	82 (NE)	312/ 6.4
44	Not Named	1928	Aug	13	2	55 (51)	25 (WSW)	332/ 9.2
45	Not Named	1928	Sep	17	4	105 (92)	62 (ENE)	330/11.1
46	Not Named	1929	Sep	29	2	95 (91)	44 (WSW)	326/ 9.6
47	Not Named	1930	Sep	9	2	35 (35)	19 (NW)	048/ 6.0
48	Not Named	1932	Aug	30	3	70 (60)	51 (SSW)	303/12.8
47	Not Named	1933	Jul	31	5	62 (42)	12 (S)	270/ 7.9

# Pinellas County Local Mitigation Strategy

1 Storm Index Number	2 Storm Name	3 Year	4 Month	5 Day	6 Storm Number for Year	7 Max Wind at Eye	8 Closest Point of Approach	9 Heading/ Speed at CPA
50	Not Named	1933	Aug	19	6	40 (40)	71 (W)	360/13.5
51	Not Named	1933	Sep	4	12	83 (51)	48 (NE)	308/ 6.6
52	Not Named	1934	Jul	23	3	40 (40)	82 (NNW)	247/15.0
53	Not Named	1935	Sep	4	2	100 (92)	25 (WSW)	332/ 8.8
54	Not Named	1936	Jun	15	1	40 (40)	99 (S)	096/15.4
55	Not Named	1936	Jul	30	5	67 (60)	49 (SW)	308/ 8.0
56	Not Named	1937	Jul	29	1	40 (40)	19 (NW)	040/13.4
57	Not Named	1939	Aug	12	2	62 (60)	51 (NNE)	298/10.9
58	Not Named	1940	Aug	3	2	38 (35)	55 (NNW)	246/10.8
59	Not Named	1941	Oct	6	5	98 (88)	25 (SW)	316/19.3
60	Not Named	1941	Oct	22	6	45 (20)	46 (NE)	221/ 4.8
61	Not Named	1944	Oct	19	11	110 ( 96)	27 (E)	009/16.2
62	Not Named	1945	Jun	24	1	93 ( 80)	66 (NWN)	063/10.9
63	Not Named	1945	Sep	5	7	35 ( 35)	16 (SW)	308/18.3
64	Not Named	1945	Sep	16	9	102 ( 88)	54 (ENE)	350/12.6
65	Not Named	1946	Oct	8	5	90 ( 65)	2 (E)	006/16.1
66	Not Named	1947	Sep	18	4	85 ( 82)	63 (SSW)	298/13.1
67	Not Named	1947	Sep	23	6	50 ( 50)	24 (W)	010/ 9.2
68	Not Named	1949	Aug	27	2	98 ( 65)	51 (NE)	314/10.8
69	Easy	1950	Sep	4	5	110 (110)	23 (W)	359/10.5
70	King	1950	Oct	18	11	73 ( 68)	84 (ENE)	340/17.2
71	Love	1950	Oct	21	13	65 ( 60)	70 (NW)	039/16.8
72	How	1951	Oct	2	8	60 ( 58)	55 (S)	082/14.4
73	Not Named	1953	Aug	29	3	45 ( 45)	96 (S)	081/14.5
74	Hazel	1953	Oct	9	12	60 ( 60)	59 (SE)	053/20.1
75	Judith	1959	Oct	18	11	53 ( 45)	57 (SSE)	070/14.5
76	Donna	1960	Sep	11	5	93 ( 76)	45 (E)	360/12.2
77	Alma	1966	Jun	9	1	98 ( 90)	34 (WSW)	331/17.5
78	Abby	1968	Jun	4	1	59 ( 55)	50 (ESE)	025/ 7.9
79	Gladys	1968	Oct	18	8	70 ( 70)	43 (NW)	047/ 7.3
80	Jenny	1969	Oct	5	13	40 ( 25)	22 (NNW)	245/14.0
81	Subtrop	1974	Jun	25	1	55 ( 47)	11 (NW)	050/19.9
82	Dennis	1981	Aug	18	4	35 ( 35)	94 (E)	005/ 7.6
83	Subtrop	1982	Jun	18	2	43 ( 37)	46 (NW)	043/22.6
84	Isidore	1984	Sep	28	10	45 ( 45)	48 (NE)	319/10.0
85	Bob	1985	Jul	23	2	40 ( 40)	61 (S)	093/ 5.1
86	Elena	1985	Sep	1	5	105 (100)	85 (NW)	229/ 2.6
87	Keith	1988	Nov	23	12	55 ( 55)	15 (SSE)	065/14.6
88	Marco	1990	Oct	11	13	55 ( 48)	3 (WSW)	348/ 8.2
89	Gordon	1994	Nov	16	7	48 ( 45)	73 (SE)	041/ 8.8
90	Erin	1995	Aug	2	5	63 ( 53)	48 (NNE)	287/13.8
91	Jerry	1995	Aug	24	10	35 ( 33)	67 (NNE)	297/ 8.1
92	Mitch	1998	Nov	5	13	55 ( 53)	92 (SSE)	057/19.0
93	Harvey	1999	Sep	21	8	50 ( 50)	88 (SSW)	118/11.1
94	Gordon	2000	Sep	17	11	66 ( 60)	60 (WNW)	022/ 9.9
95	Gabrielle	2001	Sep	14	8	60 ( 57)	25 (SE)	039/11.5
96	Erika	2003	Aug	14	8	37 ( 35)	78 (SSW)	280/21.7
97	Henri	2003	Aug	6	12	50 ( 28)	15 (NNW)	067/16.5
98	Charley	2004	Aug	13	3	125 ( 95)	48 (ESE)	019/21.2
99	Frances	2004	Sep	6	6	73 ( 55)	38 (NNE)	300/10.1
100	Jeanne	2004	Sep	26	10	88 ( 62)	45 (NE)	318/ 8.8

NOTES: Winds are in knots and distances are in nautical miles (nmi). Directions in column 8 refer to bearing of storm from site at the closest point of approach (CPA). Two winds are listed in column 7. First is the maximum wind anywhere within the 100 nmi scan radius. Second (in parens) is the maximum wind at CPA. Site location is 27.60N 82.76W.

# Pinellas County Local Mitigation Strategy

## 2. Probability

The frequency of occurrence of tidal water elevation, based on a study conducted by the Coastal and Oceanographic Engineering Laboratory and including storm surge from tropical storms and hurricanes is shown below:

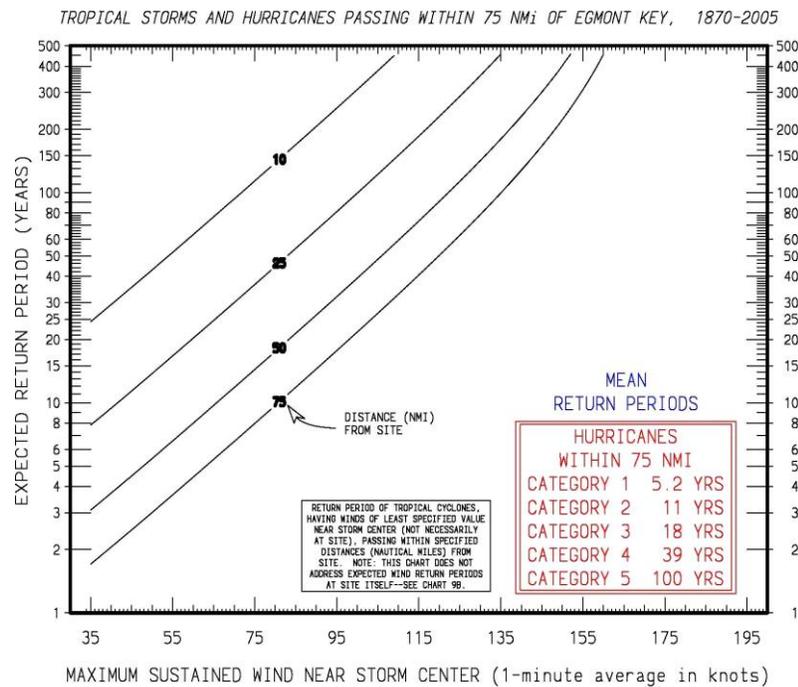
**Table 1- 11: Return Interval Probability of Flood Levels**

Water Level Elevation	
Above MSL	Frequency
3 feet or higher	Once in 3 - 5 years
4 feet or higher	Once in 20 years
5 feet of higher	Once in 25 - 30 years
6 feet or higher	Once in 30 - 50 years
7 feet or higher	Once in 60 - 90 years
8 feet or higher	Once in 90 - 100 years

Source: Coastal and Oceanographic Engineering Laboratory

The figure below tracks the hurricane return intervals for the Tampa Bay Region based on the historical impacts. Based on the history of hurricanes affecting the Tampa Bay area, Pinellas County can expect a hurricane to affect us at least once every 4.5 years. It is considered that the occurrence of a hurricane in the Tampa Bay area on an annual basis is high.

**Figure 1-2: Hurricane Return Intervals for the Tampa Bay Region**



# Pinellas County Local Mitigation Strategy

## 2. Vulnerability

Based on historical information, Pinellas County remains highly vulnerable to coastal flooding due to high tide on the barrier islands and in other low lying areas along the coastline identified on the NFIP Flood Insurance Rate Maps and local governments' repetitive loss areas.

The vulnerability of Pinellas County to potential hazards from tropical storms and hurricanes is analyzed prior to each storm. The population at risk and potential for property/economic damages is based on the specific characteristics of the threatening hurricane.

The principle tool for analyzing the expected hazards from potential hurricanes that may affect the Tampa Bay Region is the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) numerical storm surge model. The SLOSH model predicts the tidal surge heights that result from test data about hypothetical hurricanes with various combinations of pressure, size, forward speed, track and winds.

Map 1-8 presents the Storm Tide Limits as defined by the SLOSH Model for each category of hurricane (Saffir Simpson Hurricane Wind Scale) and provided in the Statewide Regional Evacuation Study (TBRPC, 2010). From these vulnerability assessments, Pinellas County Emergency Management identifies Evacuation Zones (A-E). Map 1-9 presents the Pinellas County Evacuation Zones (2014).

### ***Population and Structural Vulnerability in Hurricane Evacuation Levels***

According to the 2010 Statewide Regional Evacuation Study for Tampa Bay, there are an estimated 600,901 residents of Pinellas County (in 2015) that live in Evacuation Zones A through E. These zones are generally the evacuation areas in Pinellas County for a worst-case Category 5 hurricane. As a call for an evacuation of a particular zone is typically inclusive of the evacuation zones for lower intensity storms, the table below depicts the cumulative numbers of people who live in each zone (Zone B = Pop. A + Pop. B; Zone E = Pop. A + Pop. B + Pop. C + Pop. D + Pop. E). Each Evacuation Zone A, B, C, D, and E are roughly similar to the potential storm surge inundation areas for each category of hurricane 1 through 5, based on the Saffir-Simpson Hurricane Wind Scale.

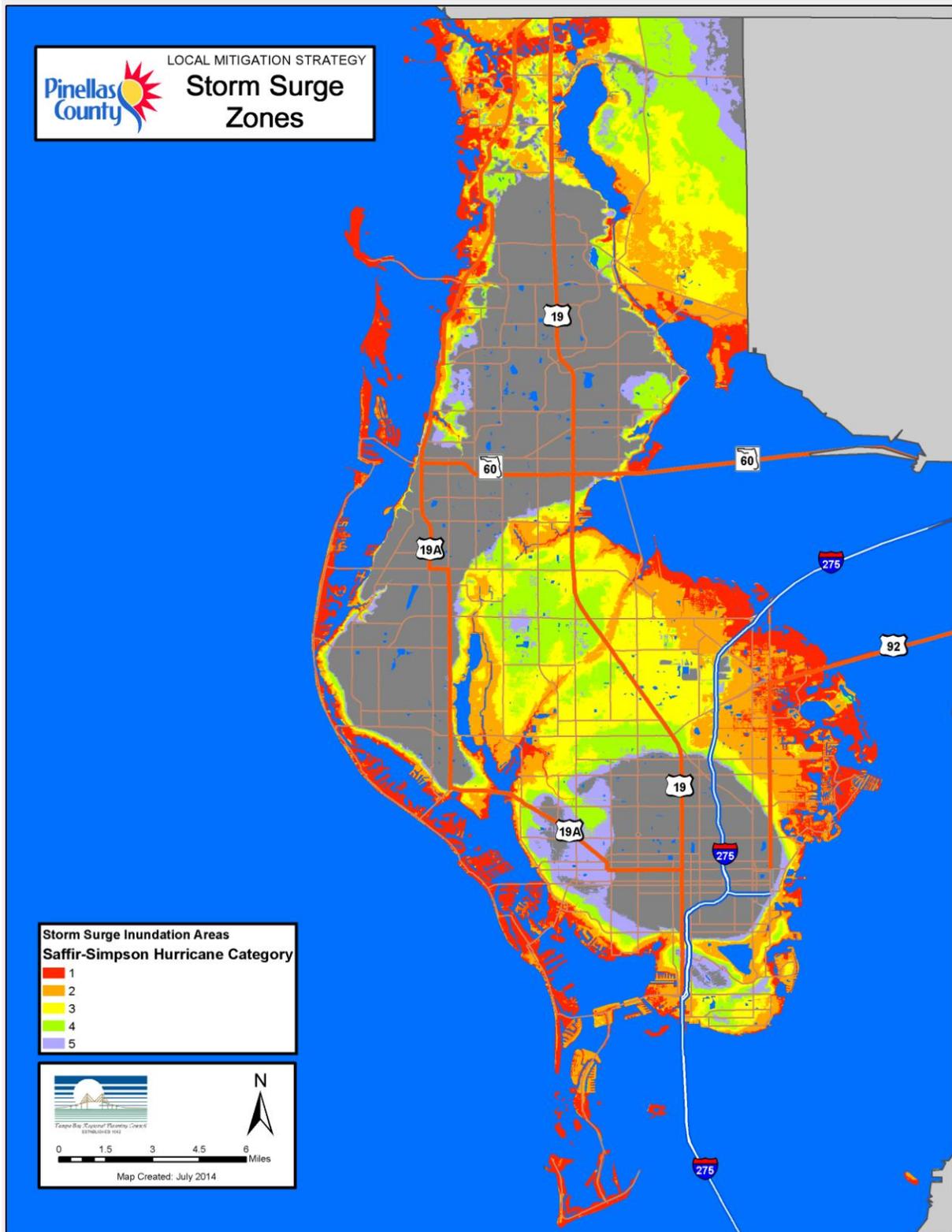
***Table 1- 12: Population Living in Storm Surge Evacuation Zones (2015)***

<i>Hurricane evacuation zones – numbers are cumulative</i>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
Site-built Homes	158,203	292,366	421,279	519,624	572,995
Mobile/Manufactured homes	2,789	9,196	17,531	26,345	27,906
Total Population	160,992	301,562	438,810	545,969	600,901

Source: Statewide Regional Evacuation Study for the Tampa Bay Region, 2010

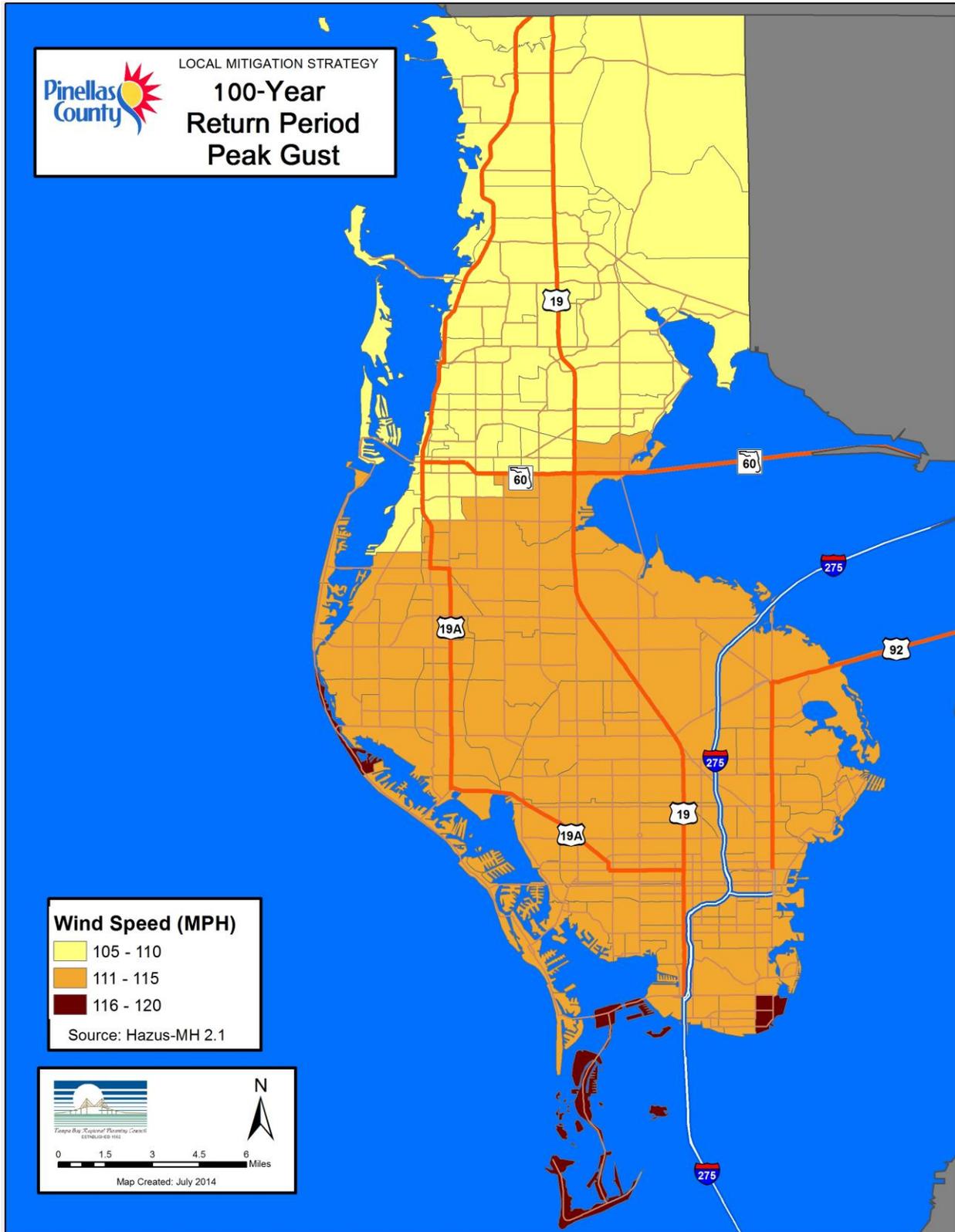
# Pinellas County Local Mitigation Strategy

*Map 1- 8: Pinellas County Storm Surge Zones*



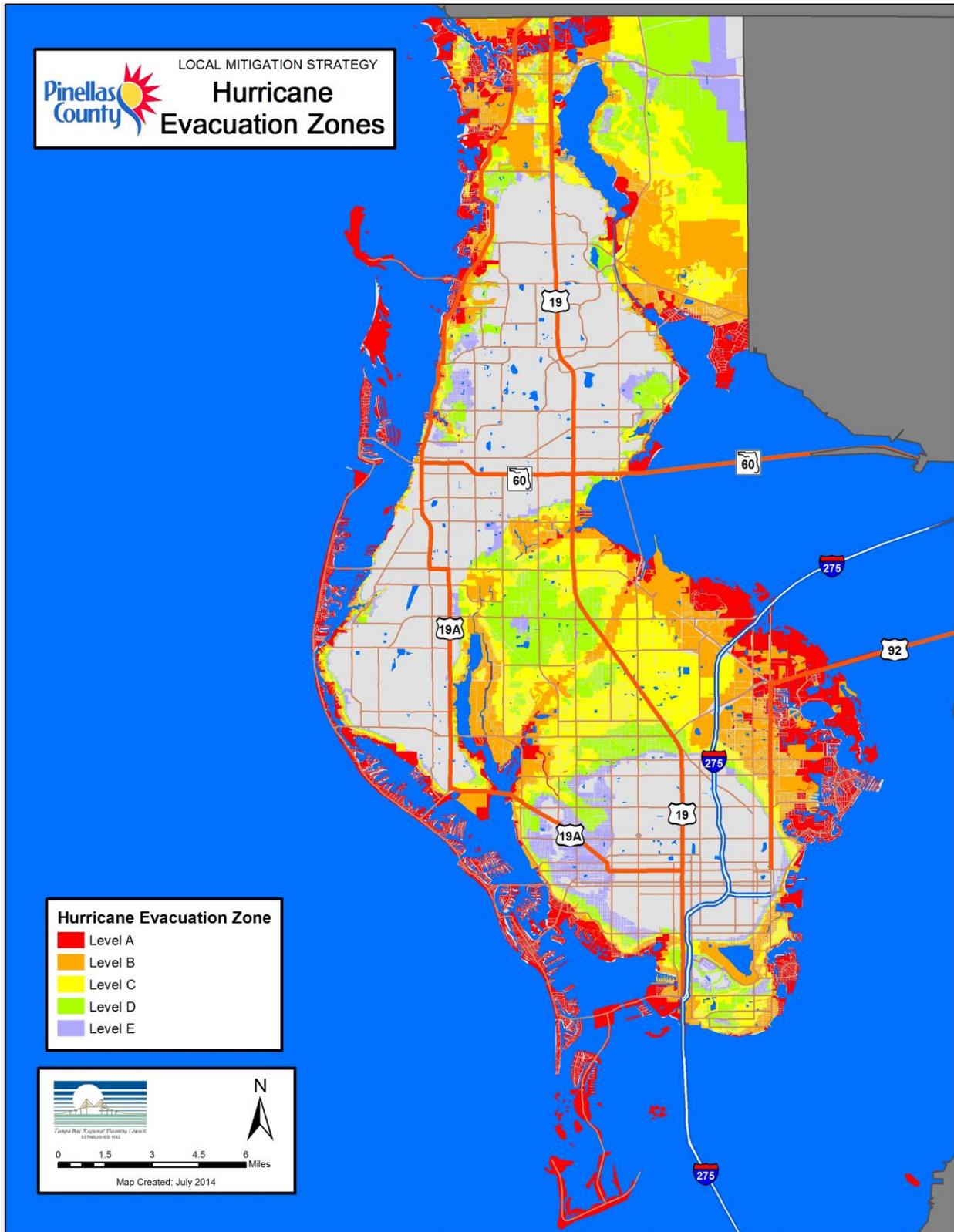
# Pinellas County Local Mitigation Strategy

*Map 1- 9: Pinellas County 100-Year Wind Vulnerability*



# Pinellas County Local Mitigation Strategy

Map 1- 10: Pinellas County Hurricane Evacuation Zones



## Pinellas County Local Mitigation Strategy

Based on the storm tide limits (SRES, 2010) and the 2014 Pinellas County DOR data, a vulnerability analysis was conducted to determine the potential exposure of properties in those areas. Attachment 1-2 provides the breakdown by jurisdiction. Table 1-13 provides a county-wide overview.

**Table 1- 13: Pinellas County Storm Surge Vulnerability**

(Municipalities and unincorporated areas combined)

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>A</b>	92,466	6,525.21	8,929.35	569.25	25,370.61
<b>B</b>	58,003	5,324.59	2,833.80	340.15	10,670.98
<b>C</b>	53,521	5,245.85	2,377.52	331.65	9,096.87
<b>D</b>	38,336	3,998.24	1,753.12	233.15	6,619.93
<b>E</b>	24,692	2,430.80	1,091.62	113.01	4,294.37
<b>NON-EVAC</b>	167,218	16,482.76	6,897.75	789.36	26,654.36
<b>TOTAL</b>	434,236	40,007.46	23,883.16	2,376.56	82,707.12

Source: Statewide Regional Evacuation Study for the Tampa Bay Region, 2010. Pinellas County DOR data, 2014

There are a number of Critical Facilities located in surge vulnerable areas (in addition to the countywide vulnerability to hurricane-force winds). The table below identifies the population-at-risk and number of facilities/beds which will be required to evacuation under the five evacuation levels.

**Table 1- 14: Surge-Vulnerable Facilities**

	A	B	C	D	E	Non-Evac	Total
<b>Population</b>	156,225	292,719	425,235	528,074	584,588	363,514	948,102
<b>Housing</b>							
Permanent Occupied Units	86,767	150,215	210,374	250,483	278,679	189,316	467,995
Mobile Home Units	44,466	44,466	44,466	44,466	44,466	0	44,466
Hotel/Motel Units	8,781	11,723	13,623	14,649	14,745	5,852	20,597
<b>Healthcare Facilities</b>							
<b>Hospitals</b>	1	0	3	5	6	12	18
ER Beds	18	35	35	82	82	257	339
Total Beds	300	1,204	1,204	1,623	1,623	2,872	4,495
<b>Skilled Nursing Facilities</b>	4	11	23	29	36	36	72
Resident Beds	1,127	2,122	3,384	4,407	5,260	2,910	8,170
<b>Assisted Living Facilities</b>	4	20	50	70	87	130	217
Resident Beds	470	944	2,393	3,297	3,804	4,232	8,036
<b>Ambulatory Surgical Centers</b>	0	2	6	7	9	16	25
Beds	0	21	78	95	109	319	428

## Pinellas County Local Mitigation Strategy

	A	B	C	D	E	Non-Evac	Total
<b>Adult Day Care Centers</b>	0	1	1	1	2	5	7
Clients	0	35	0	0	59	181	240
<b>Residential Treatment Facilities</b>	0	1	3	3	4	6	10
Resident Beds	0	8	34	34	47	94	141
<b>Facilities for DD</b>	0	1	2	2	4	2	6
Resident Beds	0	24	30	30	94	12	106
<b>Dialysis Centers</b>	0	1	2	4	4	12	16
Stations	0	12	32	70	70	225	295
<b>Government Facilities</b>							
Municipal Police Stations	6	6	9	11	12	5	17
Correction Facilities	0	1	1	1	1	0	1
SO Facilities	0	0	2	2	2	2	4
Fire Stations	12	22	29	36	39	24	63
Municipal EOCs	12	15	25	34	38	35	73
Risk Shelters	0	1	3	8	12	19	31
PC Radio Systems	2	4	4	4	5	5	10
<b>Educations Facilities</b>							
County Schools	5	17	37	58	72	60	132
Private Schools	6	9	17	25	29	44	73
Colleges/Universities	3	6	7	8	12	8	20
<b>Utilities</b>							
Telephone Facilities (Switching Station)	7	14	20	22	23	17	40
Power Facilities	1	5	6	7	7	5	12
Water Treatment Plants	0	0	0	0	1	0	1
Waste Disposal Facilities							
Waste Water Treatment Facilities	0	1	1	2	2	0	2
Critical Pumping Stations	3	6	9	10	11	4	15
Critical Lift Stations	5	5	5	6	6	0	6
<b>Transportation</b>							
Bridges	5	6	6	6	6	0	6
Airports	1	2	2	2	2	1	3

#### 4. Maximum Threat/ Extent

The maximum threat to Pinellas County with regard to coastal flooding and tropical storm/hurricanes is a hurricane-generated storm surge from a landfalling storm striking the coastline during an astronomical high tide.

A category 1 hurricane would place up to 158,000 persons at risk, as well as 60,000 dwelling units from a category 1 storm (up to 6' MSL). Estimated damages would be between \$120 and \$140

# Pinellas County Local Mitigation Strategy

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million dollars from coastal flooding. Hurricanes of greater intensity would have exponentially greater potential for property damage and a much larger population-at-risk.

The worst case scenario for Pinellas County is a Category 5 Hurricane heading northeast at less than 15 miles per hour that makes landfall at high tide along the barrier island communities of mid-Pinellas County. A storm surge of over 30 feet at some coastal locations would inundate large areas of the county, while sustained winds of over 155 miles per hour with even higher gusts would destroy thousands of homes and cause damage to hundreds of thousands more.

A more probable scenario is a Category 3 landfalling hurricane again making landfall north of the mouth of Tampa Bay maximizing the storm surge along Pinellas County's east coast in addition to the barrier islands and communities along the Gulf of Mexico. In **Attachment 1-4**, HAZUS<sup>2</sup> was used to provide an analysis for the 1921 Hurricane, a category 3 hurricane which made landfall in the northern coast of Pinellas County forcing 20+feet of storm surge into the mouth of Tampa Bay.

**Table 1- 15: Category 3 Hurricane Scenario Building-Related Economic Loss Estimates  
(Thousands of dollars)**

Category	Residential	Commercial	Industrial	Others	Total
<b>Property Damage</b>					
Building	1,439,546.46	154,509.99	34,973.32	20,913.60	1,649,943.38
Content	309,846.96	64,220.82	20,181.09	8,145.03	402,393.90
Inventory	0.00	1,736.70	4,274.89	206.55	6,218.14
<b>Subtotal</b>	<b>1,749,393.42</b>	<b>220,467.51</b>	<b>59,429.30</b>	<b>29,265.18</b>	<b>2,058,555.41</b>
<b>Business Interruption Loss</b>					
Income	1,309.38	20,686.55	616.45	2,252.13	24,864.52
Relocation	139,293.55	39,918.49	4,426.34	5,796.33	189,434.71
Rental	94,822.32	21,003.08	507.86	693.91	117,027.17
Wage	3,086.38	19,106.76	1,035.20	12,372.92	35,601.27
<b>Subtotal</b>	<b>238,511.64</b>	<b>100,714.88</b>	<b>6,585.85</b>	<b>21,115.29</b>	<b>366,927.67</b>
<b>Total</b>					<b>2,425,483.08</b>

Source: HAZUS, 2014

<sup>2</sup> HAZUS is a nationally applicable standardized methodology that contains models for estimating potential losses from floods, hurricanes, and earthquakes. HAZUS uses Geographic Information Systems (GIS) technology to estimate physical, economic and social impacts of disasters. It graphically illustrates the limits of identified high-risk locations. Users can then visualize the spatial relationships between populations and other more permanently fixed geographic assets or resources for the specific hazard being modeled, a crucial function in the pre-disaster planning process.

HAZUS is used for mitigation and recovery as well as preparedness and response. Planners, GIS specialists and emergency managers use HAZUS to determine losses and the most beneficial mitigation approaches to minimize them. HAZUS is used in the assessment step in the mitigation planning process, which is the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction and repeated damage. .

# Pinellas County Local Mitigation Strategy

In **Attachment 1-5**, a large catastrophic category 5 hurricane making landfall at Madeira Beach was analyzed as a worst case scenario with \$57 billion in structural damage. This analysis formed the basis of the *Tampa Bay Catastrophic Plan* in 2010.

**Table 1- 16: Category 5 Hurricane Scenario Combined Damage  
(Storm Surge and Wind)**

The following table summarizes the combined damage from wind and storm surge flooding.

Counties	Pre-Storm Building Stock Value (Millions of \$)	Total Structural Damage from Wind (Millions of \$)	Percent of Pre-Storm Building Stock Value Loss from Wind	Total Structural Damage from Storm Surge (Millions of \$)	Percent of Pre-Storm Building Stock Value Loss from Storm Surge	Total Combined Structural Damage (Millions of \$)	Total Combined Percent of Pre-Storm Building Stock Value Loss
Citrus	7,808	168	2.2%	278	3.6%	440	5.6%
Hardee	1,231	7	0.1%	0	0.0%	7	0.1%
Hernando	8,637	367	4.2%	132	1.5%	494	5.7%
Hillsborough	78,949	48,276	61.1%	10,893	13.8%	52,508	66.5%
Manatee	20,681	12,900	62.4%	2,620	12.7%	13,886	67.1%
Pasco	23,006	10,715	46.6%	1,789	7.8%	11,671	50.7%
<b>Pinellas</b>	<b>70,489</b>	<b>54,287</b>	<b>77.0%</b>	<b>12,824</b>	<b>18.2%</b>	<b>57,235</b>	<b>81.2%</b>
Polk	32,084	313	1.0%	0	0.0%	313	1.0%
Sumter	2,931	527	18.0%	0	0.0%	527	18.0%
<b>Total</b>	<b>244,585</b>	<b>127,553</b>	<b>52.2%</b>	<b>28,536</b>	<b>11.7%</b>	<b>141,207</b>	<b>57.7%</b>

# Pinellas County Local Mitigation Strategy

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## SEVERE STORMS AND LIGHTNING

Florida is considered the thunderstorm capital of the United States. A thunderstorm forms when moist, unstable air is lifted vertically into the atmosphere. The lifting of this air results in condensation and the release of latent heat. The process to initiate vertical lifting can be caused by:

- Unequal warming of the surface of the Earth.
- Orographic lifting due to topographic obstruction of airflow.
- Dynamic lifting because of the presence of a frontal zone.



Thunderstorms affect a relatively small area when compared to a hurricane. The typical thunderstorm is 15 miles in diameter and lasts an average of 30 minutes. Despite their small size, all thunderstorms are dangerous. Of the estimated 100,000 thunderstorms that occur each year in the United States, about 10 percent are classified as severe.

The National Weather Service (NWS) considers a thunderstorm severe if it produces hail at least one inch in diameter, winds of 58 mph or stronger, or a tornado. The three key elements of a thunderstorm are wind, water, and lightning. The Tampa region has the highest incidences of thunderstorms in the United States, with Florida being first in the United States for lightning strikes per square mile.

Florida also leads the nation in lightning-related deaths, and is among the top ten states prone to devastation from tornadoes—the thunderstorm’s most vicious offspring. Thunderstorms deliver most of the state’s rainfall. Their winds also help invigorate sluggish environments in ponds, lakes, and estuaries, and break up oil spills.

### 1. History

Pinellas County has an unusually high incidence of lightning strikes and thunderstorms causing death and injury.

Between 1991 (first reported in system) and 2014, there were 143 severe thunderstorms reported in Pinellas County with 52 storm days with reported losses - resulting in \$187 million in property damage and five reported events with (1) death or (6) injuries. (Source: NWS)



Lightning occurs mostly in the months of May through October. Between 1996 (first reported in system) and 2014, there were 103 reports of lightning causing \$10,219,000 in damage with 72 injuries and 4 deaths in Pinellas County. (Source: NWS)

## Pinellas County Local Mitigation Strategy

**Table 1- 17: Severe Thunderstorms Resulting in Property Damage, Injury or Death**

Location	Date	Time	Type	Magnitude	Death	Injuries	Property Damage	Crop Damage
<a href="#">PINELLAS CO.</a>	04/10/1991	09:00	Thunderstorm Wind	0 kts.	1	0	0.00K	0.00K
<a href="#">Indian Rocks</a>	01/16/1993	05:20	Thunderstorm Wind	0 kts.	0	0	50.00K	0.00K
<a href="#">St. Petersburg Beach</a>	01/16/1993	05:45	Thunderstorm Wind	0 kts.	0	0	5.00K	0.00K
<a href="#">Tarpon Springs</a>	03/13/1993	00:14	Thunderstorm Wind	0 kts.	0	0	50.00K	0.00K
<a href="#">St. Petersburg</a>	03/13/1993	00:38	Thunderstorm Wind	0 kts.	0	0	5.00K	0.00K
<a href="#">Largo<sup>3</sup></a>	05/28/1993	17:00	Thunderstorm Wind	0 kts.	0	0	500.00K	0.00K
<a href="#">St. Petersburg</a>	08/10/1993	16:30	Thunderstorm Wind	0 kts.	0	0	0.50K	0.00K
<a href="#">South Largo</a>	12/23/1993	04:45	Thunderstorm Wind	0 kts.	0	0	5.00K	0.00K
<a href="#">St Petersburg</a>	07/17/1994	14:50	Thunderstorm Wind	0 kts.	0	0	50.00K	0.00K
<a href="#">St Petersburg Bch</a>	07/26/1994	11:15	Thunderstorm Wind	0 kts.	0	0	0.50K	0.00K
<a href="#">PINELLAS CO.</a>	07/29/1994	12:20	Thunderstorm Wind	0 kts.	0	0	0.50K	0.00K
<a href="#">St. Petersburg</a>	01/14/1995	03:20	Thunderstorm Wind	0 kts.	0	0	2.00K	0.00K
<a href="#">St. Petersburg</a>	06/10/1995	18:30	Thunderstorm Wind	0 kts.	0	0	10.00K	0.00K
<a href="#">Clearwater</a>	07/13/1995	19:00	Thunderstorm Wind	0 kts.	0	0	1.00K	0.00K
<a href="#">Clearwater</a>	07/27/1995	16:22	Thunderstorm Wind	45 kts.	0	0	1.00K	0.00K
<a href="#">St Petersburg</a>	08/15/1995	17:15	Thunderstorm Wind	0 kts.	0	0	10.00K	0.00K
<a href="#">PINELLAS CO.</a>	10/04/1995	17:30	Thunderstorm Wind	50 kts.	0	0	2.50K	0.00K

<sup>3</sup> Strong downburst winds moved a four-ton air conditioner unit on the roof of a store about one foot. Several nearby mobile homes suffered roof and carport damage.

## Pinellas County Local Mitigation Strategy

Location	Date	Time	Type	Magnitude	Death	Injuries	Property Damage	Crop Damage
<a href="#">ST PETERSBURG</a>	08/05/1996	16:45	Thunderstorm Wind	52 kts.	0	0	5.00K	0.00K
<a href="#">ST PETERSBURG</a>	04/23/1997	10:20	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K
<a href="#">LARGO</a>	02/17/1998	03:48	Thunderstorm Wind	52 kts.	0	0	10.00K	0.00K
<a href="#">PINELLAS PARK</a>	06/23/1998	22:18	Thunderstorm Wind	57 kts.	0	0	5.00K	0.00K
<a href="#">LARGO</a>	01/02/1999	22:52	Thunderstorm Wind	52 kts.	0	0	20.00K	0.00K
<a href="#">ST PETERSBURG</a>	06/07/2000	14:55	Thunderstorm Wind	52 kts. E	0	0	10.00K	0.00K
<a href="#">CLEARWATER BEACH</a>	08/12/2000	13:00	Thunderstorm Wind	45 kts.	0	3	1.00K	0.00K
<a href="#">CLEARWATER</a>	04/25/2003	21:35	Thunderstorm Wind	50 kts. EG	0	0	40.00K	0.00K
<a href="#">ST PETERSBURG</a> <sup>4</sup>	04/25/2003	22:01	Thunderstorm Wind	60 kts. EG	0	1	65.00K	0.00K
<a href="#">CLEARWATER</a>	05/19/2003	13:55	Thunderstorm Wind	50 kts. EG	0	0	40.00K	0.00K
<a href="#">LARGO</a>	06/28/2003	21:54	Thunderstorm Wind	55 kts. MG	0	0	3.00K	0.00K
<a href="#">PINELLAS PARK</a>	07/04/2003	16:38	Thunderstorm Wind	50 kts. EG	0	0	15.00K	0.00K
<a href="#">ST PETERSBURG</a>	07/26/2003	16:40	Thunderstorm Wind	45 kts. EG	0	0	5.00K	0.00K
<a href="#">ST PETERSBURG BEACH</a>	11/19/2003	08:45	Thunderstorm Wind	40 kts. EG	0	0	15.00K	0.00K
<a href="#">ST PETERSBURG</a>	06/01/2006	15:15	Thunderstorm Wind	52 kts. EG	0	0	15.00K	0.00K
<a href="#">MADEIRA BEACH</a>	04/05/2008	19:55	Thunderstorm Wind	50 kts. EG	0	0	15.00K	0.00K
<a href="#">BELMONT</a>	12/11/2008	08:14	Thunderstorm Wind	43 kts. EG	0	0	5.00K	0.00K
<a href="#">SEMINOLE</a>	06/23/2009	22:25	Thunderstorm Wind	43 kts. EG	0	0	10.00K	0.00K
<a href="#">SAINT PETERSBURG</a>	06/23/2009	22:32	Thunderstorm Wind	39 kts. EG	0	0	10.00K	0.00K

<sup>4</sup>The canopy over the gas pumps at a local station overturned and a roof collapsed at a nearby apartment.

## Pinellas County Local Mitigation Strategy

Location	Date	Time	Type	Magnitude	Death	Injuries	Property Damage	Crop Damage
<a href="#">LEALMAN</a> <sup>5</sup>	06/23/2009	22:35	Thunderstorm Wind	52 kts. EG	0	0	80.00K	0.00K
<a href="#">SOUTH PASADENA</a>	08/07/2009	18:10	Thunderstorm Wind	43 kts. EG	0	0	7.50K	0.00K
<a href="#">SAINT PETERSBURG-CLEARWATER IN...</a>	08/21/2009	12:20	Thunderstorm Wind	54 kts. MG	0	0	10.00K	0.00K
<a href="#">SPG-ALBERT WHITTED AIRPORT</a>	02/05/2010	14:27	Thunderstorm Wind	52 kts. EG	0	0	6.50K	0.00K
<a href="#">PASS-A-GRILL BEACH</a>	02/05/2010	14:29	Thunderstorm Wind	52 kts. EG	0	0	0.50K	0.00K
<a href="#">LEALMAN</a>	01/25/2011	17:08	Thunderstorm Wind	78 kts. EG	0	1	32.00K	0.00K
<a href="#">REDINGTON SHORES</a>	03/31/2011	10:05	Thunderstorm Wind	61 kts. EG	0	0	25.00K	0.00K
<a href="#">BASKIN</a> <sup>6</sup>	03/31/2011	10:09	Thunderstorm Wind	56 kts. EG	0	0	250.00K	0.00K
<a href="#">MADEIRA BEACH</a>	03/31/2011	10:10	Thunderstorm Wind	56 kts. EG	0	0	25.00K	0.00K
<a href="#">BELLEAIR BEACH</a> <sup>7</sup>	03/31/2011	10:10	Thunderstorm Wind	52 kts. EG	0	0	150.00K	0.00K
<a href="#">SAINT PETERSBURG-CLEARWATER PIE</a> <sup>8</sup>	03/31/2011	10:22	Thunderstorm Wind	56 kts. EG	0	0	80.00K	0.00K
<a href="#">FEATHER SOUND</a>	03/31/2011	10:26	Thunderstorm Wind	56 kts. EG	0	0	5.00K	0.00K

<sup>5</sup> A microburst with winds of about 60mph occurred in a mobile home park along 62nd Avenue North in Lealman. Fifteen mobile homes incurred damage, with four homes sustaining major damage, mainly to carports and portions of the roof where the carport was attached. One tree and numerous limbs were also downed just to the northwest of the mobile home park along 27th Street North from 59th Avenue North to 62nd Avenue North.

<sup>6</sup> Thunderstorm winds gusts snapped small tree trunks, pushed over shallow rooted trees, and caused damage to around 150 homes and mobile homes over a one mile square area near Ulmerton Road.

<sup>7</sup> A 200 foot communication tower collapsed midway up the tower. Wind damage to trees at the surface suggested wind gusts at 60 MPH, while winds at the top of the tower were estimated at over 110 MPH. Downburst and tornadic wind damage occurred along an eleven mile path from Indian Rocks Beach to the Saint Petersburg/Clearwater International Airport.

<sup>8</sup> A small hanger was destroyed with debris damaging vehicles and small airplanes. The observation station on the north side of the airport recorded a wind gust of 55 MPH.

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Location	Date	Time	Type	Magnitude	Death	Injuries	Property Damage	Crop Damage
<a href="#">GULFPORT</a>	09/05/2011	18:50	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
<a href="#">PASADENA</a>	09/06/2011	07:38	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
<a href="#">GULFPORT</a>	09/06/2011	07:40	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
<a href="#">GULFPORT</a>	09/06/2011	07:40	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
<a href="#">MADEIRA BEACH</a>	09/07/2011	00:10	Thunderstorm Wind	30 kts. EG	0	0	20.00K	0.00K
<a href="#">TARPON SPRINGS</a>	03/04/2012	04:15	Thunderstorm Wind	45 kts. EG	0	0	5.00K	0.00K
<a href="#">LEALMAN</a> <sup>9</sup>	05/19/2012	22:48	Thunderstorm Wind	50 kts. EG	0	0	50.00K	0.00K
<a href="#">GULFPORT</a>	06/24/2012	10:45	Thunderstorm Wind	52 kts. EG	0	0	20.00K	0.00K
<a href="#">SAINT PETERSBURG BEACH</a>	06/24/2012	19:15	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
<a href="#">BELMONT</a> <sup>10</sup>	07/21/2012	18:44	Thunderstorm Wind	52 kts. EG	0	0	50.00K	0.00K
<a href="#">COACHMAN</a>	07/21/2012	18:45	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
<a href="#">BELMONT</a>	08/20/2012	16:05	Thunderstorm Wind	40 kts. EG	0	0	1.00K	0.00K
<a href="#">PINELLAS PARK</a>	06/21/2013	11:45	Thunderstorm Wind	39 kts. EG	0	0	3.00K	0.00K
<a href="#">PINELLAS CO.</a>	07/17/2013	15:15	Thunderstorm Wind	40 kts. EG	0	0	5.00K	0.00K
<a href="#">PINELLAS CO.</a>	07/17/2013	15:20	Thunderstorm Wind	40 kts. EG	0	0	1.00K	0.00K
<a href="#">PINELLAS CO.</a>	07/30/2013	18:18	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K

<sup>9</sup> The Lealman Fire Department reported damage to an older hotel on the 4800 block of 34th Street North. The corner of the roof was taken off and damaged five cars in the parking lot. Damage in the area was isolated to this building.

<sup>10</sup> Six homes were damaged at a mobile home park on Alt Keene Road in Largo, mostly with roof damage. Two of the homes had major damage and the other 4 sustained minor damage. There were also downed power lines in the area.

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Location	Date	Time	Type	Magnitude	Death	Injuries	Property Damage	Crop Damage
<a href="#">PINELLAS CO.</a>	08/21/2013	16:17	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
<a href="#">PINELLAS CO.</a>	09/05/2013	19:12	Thunderstorm Wind	55 kts. EG	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	09/15/2013	16:49	Thunderstorm Wind	40 kts. EG	0	0	2.00K	0.00K
<a href="#">LARGO</a>	03/06/2014	12:15	Thunderstorm Wind	39 kts. EG	0	0	5.00K	0.00K
<a href="#">PALM HARBOR</a>	03/29/2014	12:45	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
<b>Totals:</b>					1	6	1.862M	0.00K

Source: [www.ncdc.noaa.gov/stormevents](http://www.ncdc.noaa.gov/stormevents)

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**Table 1- 18: Lightning Events Resulting in Property Damage, Injury or Death**

Location	Date	Time	Type	Death	Injuries	Property Damage	Crop Damage
<a href="#">BASKIN</a>	07/01/2009	07:15	Lightning	0	1	0.00K	0.00K
<a href="#">KENNETH CITY</a>	08/07/2009	18:50	Lightning	0	0	10.00K	0.00K
<a href="#">COACHMAN</a>	08/07/2009	19:07	Lightning	0	0	10.00K	0.00K
<a href="#">SOUTH PASADENA</a>	08/07/2009	19:19	Lightning	0	0	10.00K	0.00K
<a href="#">OLDSMAR</a>	06/17/2010	13:30	Lightning	0	0	0.00K	0.50K
<a href="#">CLEARWATER</a> <sup>11</sup>	06/25/2010	20:07	Lightning	0	0	30.00K	0.00K
<a href="#">(PIE)ST PETE/CLRWATER</a>	07/13/2010	13:58	Lightning	0	1	0.00K	0.00K
<a href="#">ANCLOTE</a>	07/24/2010	17:06	Lightning	0	1	0.00K	0.00K
<a href="#">KENNETH CITY</a>	07/29/2010	12:29	Lightning	0	0	15.00K	0.00K
<a href="#">GULFPORT</a>	03/28/2011	17:35	Lightning	0	0	10.00K	0.00K
<a href="#">COACHMAN</a>	04/25/2011	17:43	Lightning	0	1	0.00K	0.00K
<a href="#">TREASURE ISLAND</a>	07/31/2011	12:30	Lightning	0	1	0.00K	0.00K
<a href="#">LEALMAN</a>	09/22/2011	15:06	Lightning	0	1	0.00K	0.00K
<a href="#">ANCLOTE</a> <sup>12</sup>	07/09/2012	12:30	Lightning	0	0	750.00K	0.00K
<a href="#">BELLEAIR SHORES</a>	05/28/2013	17:45	Lightning	1	0	0.00K	0.00K
<a href="#">HIGHPOINT</a>	06/24/2013	20:28	Lightning	0	0	1.00K	0.00K
<a href="#">CLEARWATER</a>	06/24/2013	20:39	Lightning	0	0	5.00K	0.00K
<a href="#">PINELLAS CO.</a>	07/17/2013	15:30	Lightning	0	0	30.00K	0.00K
<a href="#">PINELLAS CO.</a>	07/17/2013	15:30	Lightning	0	0	20.00K	0.00K
<a href="#">PINELLAS CO.</a>	08/07/2013	15:43	Lightning	0	1	0.00K	0.00K
<a href="#">PINELLAS CO.</a>	08/07/2013	19:30	Lightning	0	0	5.00K	0.00K
<a href="#">PINELLAS CO.</a>	08/09/2013	16:37	Lightning	0	0	5.00K	0.00K
<a href="#">PINELLAS CO.</a>	08/17/2013	00:03	Lightning	0	0	10.00K	0.00K
<a href="#">PINELLAS CO.</a>	08/21/2013	16:59	Lightning	0	0	1.00K	0.00K
<a href="#">PINELLAS CO.</a>	08/21/2013	17:07	Lightning	0	0	5.00K	0.00K
<a href="#">PINELLAS CO.</a>	09/04/2013	18:09	Lightning	0	0	5.00K	0.00K
<a href="#">PINELLAS CO.</a>	09/05/2013	17:50	Lightning	0	0	10.00K	0.00K

<sup>11</sup> Lightning struck a tree and caused it to fall on a house on Flora Road. There was significant damage to the house.

<sup>12</sup> A lightning strike sparked a fire at a 5,700 square foot home in Tarpon Springs. Over 30 fire crews were called to the scene and the fire took several hours to put out.

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Location	Date	Time	Type	Death	Injuries	Property Damage	Crop Damage
<a href="#">PINELLAS CO.</a>	09/05/2013	17:50	Lightning	0	0	10.00K	0.00K
<a href="#">PINELLAS CO.</a>	09/15/2013	18:31	Lightning	0	0	5.00K	0.00K
<a href="#">OAKHURST</a>	05/14/2014	15:18	Lightning	1	0	0.00K	0.00K
<b>Totals:</b>				2	7	947.00K	0.50K

Source: [www.ncdc.noaa.gov/stormevents](http://www.ncdc.noaa.gov/stormevents)

## 2. Probability

There is a relatively high probability that lightning strikes and thunderstorms will continue to occur in Pinellas County (countywide). However, the risk to the population is relatively low concerning injury and death. There were 52 thunderstorm wind events in Pinellas County reported to have caused property damage, injury and/or fatality between 6/01/59 and 6/30/2014 of a total of 143 events. The frequency of occurrence is 2.65 per year. Since 1996, there were 103 lightning events (5.7 X per year) – 57 reported that caused property damage and 48 with injuries (72) and/or fatalities (4).

## 3. Vulnerability

**The entire County is equally at risk to severe storms and lightning.** Because of the very frequent occurrences, Pinellas County has a high vulnerability to damaging winds and lightning strikes caused by thunderstorms. In reviewing the most damaging events listed in the tables above, damage is primarily caused by high winds felling trees which impact structures. In addition, mobile homes, roofs and aluminum buildings (such as hangars or warehouses) tend to be particularly vulnerable to high winds. Lightning impacts residents outdoors and has struck homes and businesses resulting in fires. Additionally, with the waters of Tampa Bay and the Gulf of Mexico surrounding Pinellas County, there is an added vulnerability to fisherman, swimmers, and boaters as well as other residents and visitors engaged in outdoor activities. In 2014 an indirect lightning strike injured 12 spectators as they were leaving a Tampa Bay Buccaneers football game at Raymond James Stadium in nearby Tampa (Hillsborough County) sending 7 to the hospital.

## 4. Maximum Threat/ Extent

The maximum threat is the potential for a line of severe thunderstorms, producing damaging wind gusts of up to 100 miles per hour and frequent lightning at a rate of 1,000 strikes per hour, to sweep through the entire county from west to east. Such a severe thunderstorm event would create numerous instances of property damage, injuries, and potentially fatalities as 100-mph wind gusts damage buildings directly and cause numerous trees and large limbs to fall on roofs, vehicles, and other structures. This situation would be exacerbated if a large outdoor sporting event, festival, or fair were taking place when the storm hit, exposing hundreds or thousands to the effects of wind-borne debris and numerous lightning strikes. The lightning strikes would also have the potential to start structure or wildland fires, if the accompanying rainfall is not intense enough to extinguish the blazes.

# Pinellas County Local Mitigation Strategy

## TORNADO

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud. A tornado's wind speed normally ranges from 40 to more than 300 mph. Waterspouts are weak tornadoes that form over warm water and are most common along the Gulf Coast and the southeastern states. Waterspouts occasionally move inland, becoming tornadoes and causing damage and injuries.



Florida has two tornado seasons. The summer tornado season runs from June until September and has the highest frequencies of storm generation, with usual intensities of EF0 or EF1 on the Enhanced Fujita Scale. This includes those tornadoes associated with land-falling tropical cyclones.

The deadly spring season, from February through April, is characterized by more powerful tornadoes because of the presence of the jet stream. When the jet stream digs south into Florida and is accompanied by a strong cold front and a strong squall line of thunderstorms, the jet stream's high-level winds of 100 to 200 mph often strengthen a thunderstorm into what meteorologists call a –supercell or –mesocyclone. These powerful storms can move at speeds of 30 to 50 mph, produce dangerous downburst winds, large hail, and usually the most deadly tornadoes. Unlike hurricanes, which produce wind speeds of similar values over relatively widespread areas (when compared to tornadoes), the maximum winds in tornadoes are often confined to extremely small areas and vary tremendously over very short distances, even within the funnel itself.

The Enhanced Fujita Tornado Scale, (or the –EF Scale), is the definitive scale for estimating wind speeds within tornadoes based upon the damage done to buildings and structures since 2007. The EF Scale is used extensively by the NWS in investigating tornadoes (all tornadoes are now assigned an EF Scale number), and by engineers in correlating damage to buildings and techniques with different wind speeds caused by tornadoes. Table 1-19 outlines the Fujita Scale, the derived EF Scale and the operational EF Scale. Though the Enhanced Fujita scale itself ranges up to EF28 for the damage indicators, the strongest tornadoes max out in the EF5 range (262 to 317 mph).

**Table 1- 19: Enhanced Fujita Tornado Scale**

F Number	<i>Derived EF Scale</i>			<i>Operational EF Scale</i>		
	Fastest 1/4-mile (mph)	3-Second Gust (mph)	EF Number	3-Second Gust (mph)	EF Number	3-Second Gust (mph)
0	40-72	45-78	0	65-85	0	65-85
1	73-112	79-117	1	86-109	1	86-110
2	113-157	118-161	2	110-137	2	111-135
3	158-207	162-209	3	138-167	3	136-165
4	208-260	210-261	4	168-199	4	166-200
5	261-318	262-317	5	200-234	5	Over 200

# Pinellas County Local Mitigation Strategy

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Tornadoes develop under three scenarios: (1) along a squall line ahead of an advancing cold front moving from the north; (2) in connection with thunderstorm squall lines during hot, humid weather; and (3) in the outer portion of a tropical cyclone. Because the temperature contrast between air masses is generally less pronounced in the state, tornadoes are typically less severe in Florida than in other parts of the country.

The most common and usually the least destructive tornadoes in Florida are warm season ones. The cool season tornadoes are sometimes very destructive; they account for a disproportional large share of the tornado fatalities in Florida. They are typically caused by large-scale weather disturbances and sometimes occur in groups of six or more along fast-moving squall lines. This type of tornado usually occurs around the perimeter of the leading edge of the storm and sometimes results in the outbreak of several tornadoes. They generally move in an easterly direction.

## 1. History

The tornado, potentially the most violent storm produced in nature, is a common occurrence in Florida and Pinellas County. In the past 30 years only two outbreaks of strong tornadoes have occurred in Pinellas County, one in May of 1979 and the other in October of 1992.

From 1951 to 2014, Pinellas County recorded 108 tornado incidents, some minor, but all causing varying degrees of property loss. One of the most severe incident occurred on May 4, 1978, when a tornado struck Highpoint Elementary School during a school day. Three children were killed, 15 hospitalized and another 84 injured, with property damages totaling \$4 million. The last major event occurred October 3, 1992, when tornadoes damaged and destroyed a subdivision of homes and a mobile home park in the City of Pinellas Park. Four were killed, 130 were injured; the property damages totaled \$37 million. On August 12, 2000, two waterspouts caused approximately \$35,000 total in property damage with no injuries.

Nine (9) events were reported between 06/01/2009 and 06/30/2014 resulting in \$1.06 million in property damage. In 2011, an EF1 tornado impacted Indian Rocks Beach and the St. Pete Clearwater Airport causing \$750,000 in damage. In June of 2012, two tornadoes impacted Indian Rocks Beach and St. Pete Beach (\$280,000 damage).

**Table 1- 20: Tornado Events Reported between 1950-2014**

Location	County/Zone	Date	Type	Mag	Death	Injury	Property Damage	Crop Damage
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	12/18/1951	Tornado	F1	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	05/30/1952	Tornado	F2	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	06/13/1952	Tornado	F1	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	06/29/1952	Tornado	F1	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	06/05/1953	Tornado	F0	0	0	0.03K	0.00K

## Pinellas County Local Mitigation Strategy

Location	County/Zone	Date	Type	Mag	Death	Injury	Property Damage	Crop Damage
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	06/18/1953	Tornado	F1	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	08/20/1954	Tornado	F1	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	05/05/1961	Tornado	F2	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	05/30/1963	Tornado	F1	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	08/13/1963	Tornado	F2	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	08/21/1963	Tornado	F2	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	08/22/1963	Tornado	F1	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	03/20/1964	Tornado	F1	0	1	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	08/21/1964	Tornado	F1	0	2	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	04/04/1966	Tornado	F4	3	80	25.000M	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	04/04/1966	Tornado	F2	0	0	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	04/28/1966	Tornado	F1	0	0	0.25K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	06/06/1966	Tornado	F1	0	1	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	09/05/1966	Tornado	F0	0	0	0.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	12/28/1967	Tornado	F2	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	01/23/1968	Tornado	F1	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	07/14/1968	Tornado	F1	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	07/14/1968	Tornado	F1	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	11/09/1968	Tornado	F1	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	11/11/1968	Tornado	F1	0	0	250.00K	0.00K

## Pinellas County Local Mitigation Strategy

Location	County/Zone	Date	Type	Mag	Death	Injury	Property Damage	Crop Damage
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	12/10/1969	Tornado	F2	0	1	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	01/02/1972	Tornado	F0	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	03/17/1973	Tornado	F1	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	06/02/1973	Tornado	F0	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	10/31/1973	Tornado	F2	0	9	2.500M	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	02/19/1974	Tornado	F1	0	2	2.500M	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	07/25/1974	Tornado	F0	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	05/26/1975	Tornado	F1	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	08/17/1975	Tornado	F0	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	09/11/1975	Tornado	F0	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	01/08/1976	Tornado	F0	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	04/08/1976	Tornado	F0	0	2	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	07/07/1976	Tornado	F0	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	08/12/1976	Tornado	F1	1	21	2.500M	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	05/04/1978	Tornado	F3	3	94	2.500M	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	06/08/1978	Tornado	F0	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	06/29/1978	Tornado	F0	0	2	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	05/08/1979	Tornado	F0	0	0	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	05/08/1979	Tornado	F0	0	0	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	09/01/1979	Tornado	F1	0	0	250.00K	0.00K

## Pinellas County Local Mitigation Strategy

Location	County/Zone	Date	Type	Mag	Death	Injury	Property Damage	Crop Damage
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	09/25/1979	Tornado	F1	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	10/05/1979	Tornado	F0	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	06/19/1981	Tornado	F0	0	1	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	07/15/1981	Tornado	F0	0	0	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	12/15/1981	Tornado	F2	0	5	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	03/06/1982	Tornado	F0	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	09/21/1982	Tornado	F1	0	0	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	02/02/1983	Tornado	F1	0	1	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	12/11/1983	Tornado	F2	0	0	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	03/15/1985	Tornado	F1	0	2	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	05/20/1986	Tornado	F0	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	06/03/1986	Tornado	F0	0	0	0.25K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	06/12/1986	Tornado	F0	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	06/18/1987	Tornado	F0	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	07/06/1987	Tornado	F0	0	0	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	07/15/1988	Tornado	F0	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	07/25/1988	Tornado	F0	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	08/14/1988	Tornado	F0	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	09/08/1988	Tornado	F0	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	11/22/1988	Tornado	F0	0	0	2.50K	0.00K

## Pinellas County Local Mitigation Strategy

Location	County/Zone	Date	Type	Mag	Death	Injury	Property Damage	Crop Damage
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	11/22/1988	Tornado	F0	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	12/11/1988	Tornado	F0	0	0	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	08/10/1989	Tornado	F0	0	0	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	06/07/1990	Tornado	F0	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	08/19/1990	Tornado	F0	0	0	0.25K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	01/19/1991	Tornado	F0	0	0	0.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	04/25/1991	Tornado	F0	0	0	0.25K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	04/25/1991	Tornado	F1	0	0	250.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	05/16/1991	Tornado	F0	0	0	0.25K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	05/16/1991	Tornado	F0	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	05/17/1991	Tornado	F0	0	0	0.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	07/20/1991	Tornado	F0	0	0	0.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	02/05/1992	Tornado	F0	0	0	0.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	02/05/1992	Tornado	F0	0	0	0.25K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	02/05/1992	Tornado	F0	0	0	0.25K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	06/17/1992	Tornado	F1	0	0	2.50K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	07/12/1992	Tornado	F2	0	6	2.500M	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	07/19/1992	Tornado	F1	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	07/20/1992	Tornado	F0	0	0	0.25K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	07/20/1992	Tornado	F0	0	0	0.25K	0.00K

## Pinellas County Local Mitigation Strategy

Location	County/Zone	Date	Type	Mag	Death	Injury	Property Damage	Crop Damage
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	07/22/1992	Tornado	F0	0	0	0.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	09/01/1992	Tornado	F0	0	0	0.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	10/03/1992	Tornado	F2	1	0	2.500M	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	10/03/1992	Tornado	F1	0	0	25.00K	0.00K
<a href="#">PINELLAS CO.</a>	PINELLAS CO.	10/03/1992	Tornado	F3	3	75	25.000M	0.00K
<a href="#">N St Petersburg</a>	PINELLAS CO.	01/16/1993	Tornado	F0	0	0	50.00K	0.00K
<a href="#">St. Petersburg</a>	PINELLAS CO.	08/09/1993	Tornado	F0	0	0	0.00K	0.00K
<a href="#">St. Petersburg</a>	PINELLAS CO.	08/09/1993	Tornado	F1	0	0	5.00K	0.00K
<a href="#">Crystal Beach</a>	PINELLAS CO.	07/11/1994	Tornado	F0	0	0	0.00K	0.00K
<a href="#">St. Pete.</a>	PINELLAS CO.	07/12/1995	Tornado	F1	0	1	200.00K	0.00K
<a href="#">ST PETERSBURG BEACH</a>	PINELLAS CO.	09/20/1996	Tornado	F0	0	0	30.00K	0.00K
<a href="#">CLEARWATER</a>	PINELLAS CO.	11/08/1996	Tornado	F0	0	0	5.00K	0.00K
<a href="#">CLEARWATER</a>	PINELLAS CO.	04/23/1997	Tornado	F0	0	0	0.00K	0.00K
<a href="#">INDIAN ROCKS BEACH</a>	PINELLAS CO.	10/27/1997	Tornado	F1	0	4	4.500M	0.00K
<a href="#">CLEARWATER</a>	PINELLAS CO.	10/27/1997	Tornado	F0	0	0	2.00K	0.00K
<a href="#">ST PETERSBURG</a>	PINELLAS CO.	07/10/1998	Tornado	F0	0	0	0.00K	0.00K
<a href="#">TARPON SPGS</a>	PINELLAS CO.	06/20/1999	Tornado	F0	0	0	2.00K	0.00K
<a href="#">LARGO</a>	PINELLAS CO.	07/15/1999	Tornado	F0	0	0	100.00K	0.00K
<a href="#">PALM HARBOR</a>	PINELLAS CO.	08/12/2000	Tornado	F0	0	0	500.00K	0.00K

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Location	County/Zone	Date	Type	Mag	Death	Injury	Property Damage	Crop Damage
<a href="#"><u>TIERRA VERDE</u></a>	PINELLAS CO.	07/14/2001	Tornado	F0	0	0	0.00K	0.00K
<a href="#"><u>CRYSTAL BEACH</u></a>	PINELLAS CO.	06/05/2002	Tornado	F0	0	0	0.00K	0.00K
<a href="#"><u>ST PETERSBURG BEACH</u></a> <sup>13</sup>	PINELLAS CO.	06/08/2002	Tornado	F0	0	0	500.00K	0.00K
<a href="#"><u>TREASURE IS</u></a>	PINELLAS CO.	07/11/2002	Tornado	F0	0	0	20.00K	0.00K
<a href="#"><u>LARGO</u></a>	PINELLAS CO.	07/12/2002	Tornado	F0	0	0	1.00K	0.00K
<a href="#"><u>ST PETERSBURG BEACH</u></a>	PINELLAS CO.	08/24/2004	Tornado	F0	0	0	5.00K	0.00K
<a href="#"><u>LARGO</u></a>	PINELLAS CO.	06/23/2005	Tornado	F0	0	0	0.00K	0.00K
<a href="#"><u>PINELLAS PARK</u></a>	PINELLAS CO.	07/09/2005	Tornado	F0	0	0	0.00K	0.00K
<a href="#"><u>LARGO</u></a> <sup>14</sup>	PINELLAS CO.	07/20/2005	Tornado	F0	0	0	437.00K	0.00K
<a href="#"><u>TARPON SPRINGS COMPS SITE</u></a>	PINELLAS CO.	04/14/2009	Tornado	EF0	0	0	35.00K	0.00K
<a href="#"><u>CLEARWATER</u></a>	PINELLAS CO.	05/22/2009	Tornado	EF0	0	0	0.00K	0.00K
<a href="#"><u>INDIAN ROCKS BEACH</u></a> <sup>15</sup>	PINELLAS CO.	03/31/2011	Tornado	EF1	0	0	750.00K	0.00K
<a href="#"><u>(PIE)ST PETE/CLRWATE</u></a>	PINELLAS CO.	03/31/2011	Tornado	EF1	0	0	5.00K	0.00K

<sup>13</sup> Damage survey showed path from Boca Ciega Isle to McPherson Bayou with damage to 40 homes, 10 of which were uninhabitable due to water damage. The tornado ripped off parts of roofs, crumbled pool cages, and toppled trees.

<sup>14</sup> The tornado, which touched down along Ulmerton Road just east of Seminole Boulevard, moved northwest for about 1/2 mile, caused damage at five mobile home parks. Much of the damage occurred at the Palm Hill Country Club mobile home park. In all, 51 mobile homes were damaged, 25 with heavy damage. No injuries or fatalities were reported. About 25,000 residents of the area lost power after the event.

<sup>15</sup> A waterspout moved onshore as a tornado and destroyed the second floor of a 3,600 square foot multiple occupancy home. Power lines and poles were snapped adjacent to the home. The tornado lifted before reaching the intercostal.

## Pinellas County Local Mitigation Strategy

Location	County/Zone	Date	Type	Mag	Death	Injury	Property Damage	Crop Damage
<a href="#"><u>INDIAN ROCKS BEACH</u></a>	PINELLAS CO.	06/24/2012	Tornado	EF1	0	0	130.00K	0.00K
<a href="#"><u>SAINT PETERSBURG BEACH</u></a>	PINELLAS CO.	06/24/2012	Tornado	EF1	0	0	150.00K	0.00K
<a href="#"><u>GULFPORT</u></a>	PINELLAS CO.	06/06/2013	Tornado	EF0	0	0	20.00K	0.00K
<a href="#"><u>FEATHER SOUND</u></a>	PINELLAS CO.	06/24/2013	Tornado	EF0	0	0	0.00K	0.00K
<a href="#"><u>SAINT PETERSBURG BEACH</u></a>	PINELLAS CO.	06/25/2013	Tornado	EF0	0	0	2.00K	0.00K
<a href="#"><u>SAFETY HARBOR</u></a>	PINELLAS CO.	07/01/2013	Tornado	EF0	0	0	10.00K	0.00K
<a href="#"><u>INDIAN ROCKS BEACH</u></a>	PINELLAS CO.	03/06/2014	Tornado	EF0	0	0	0.00K	0.00K
<b>Totals:</b>					<b>11</b>	<b>310</b>	<b>77.349M</b>	<b>0.00K</b>

Source: [www.ncdc.noaa.gov/stormevents](http://www.ncdc.noaa.gov/stormevents)

### 2. Probability

Tornado track data since 1950 from the National Weather Service was to determine the annual probability that a tornado would cause damage. Based on historical trend of the past 65 years, Pinellas County can expect to receive 2.03 tornado touchdowns per year with an annual loss of \$200,000. Thus, the occurrence of a tornado touchdown on an annual basis would be considered high. The expected tornado size would be approximately 100 yards wide, with a two to three mile path moving from the southwest to northeast. Most tornadoes are expected to touchdown for relatively short periods of time in a bounce- type pattern.

### 3. Vulnerability

Because of the high frequency and unpredictable pattern of tornadoes, **the entire County is equally at risk to tornadoes**. The damage potential is high because of the population density, and also due to the large number of mobile homes and manufactured housing units throughout the County. (Because of their construction, the estimated 45,000 mobile homes and manufactured housing units are especially vulnerable to the high winds of a tornado.) In addition to severe property damage, there is the threat of numerous casualties from a tornado event, as the tornado's (or tornadoes') winds directly damage and destroy buildings and vehicles with occupants inside. Tornadoes can create tons of flying windborne debris that can also damage/destroy structures and vehicles and can cause injuries and fatalities.

# Pinellas County Local Mitigation Strategy

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## **4. Maximum Threat/ Extent**

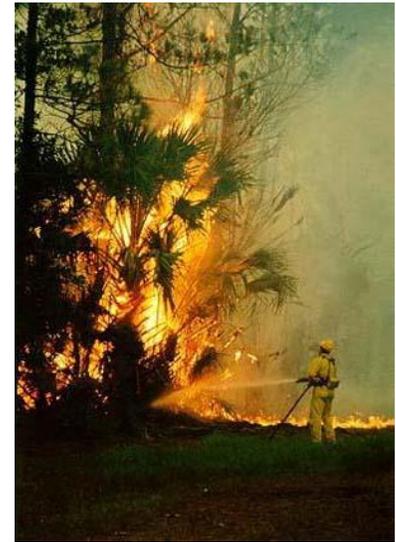
A worst case scenario involving a tornado incident in Pinellas County would call for multiple tornadoes with a rating of at least EF4 on the Enhanced Fujita Tornado Intensity Scale, beginning near the Gulf Coast (western edge), and moving on a southwest to northeast track, until exiting into the waters of Tampa Bay. This would be a similar to the series of tornadoes that moved through the southern part of the county on May 8, 1979 as well as October 3, 1992 tornadoes which impacted the central part of the county (Pinellas Park, Largo and Treasure Island). Damages could exceed \$50 million with a potential for serious injuries and loss of life.

# Pinellas County Local Mitigation Strategy

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## WILDFIRE

A wildfire is any fire occurring in wildlands (i.e., grasslands, forest, brush land, etc.) Wildfires have burned across the woodlands of Florida for centuries and are part of the natural management of much of Florida's ecosystems. Forest fires from natural causes such as lightning account for only a very small percentage of Florida's wildfires, whereas, man is by far the leading cause of wildfires. Forest land is continuously susceptible to destruction by wildfires.



The Urban/Wildland interface situation is largely the result of development in areas once considered wildlands and the desire of people to live in a more natural woodland setting. Natural landscaping, which allows natural vegetation to grow and accumulate near homes, is a hazardous trend which invites an invasion by wildfire. Wildfires near developed areas can threaten human life, structures and wildland resource values. Many subdivision layouts with numerous dead end streets and cul-de-sacs give rise to access and departure problems for fire-fighting equipment.

Urban/wildland interface areas can be classified into the following types:

- The **mixed interface** contains structures that are scattered throughout rural areas. Usually, there are isolated homes surrounded by larger or smaller areas of land.
- An **occluded interface** is characterized by isolated (either large or small) areas within an urban area. An example may be a city park surrounded by urban homes trying to preserve some contact with a natural setting.
- A **class interface** is where homes, especially those crowded onto smaller lots in new subdivisions, press along the wildland vegetation along a broad front. Vast adjacent wildland areas can propagate a massive flame front during a wildfire, and numerous homes are put at risk by a single fire.

### 1. History

Pinellas County is nearly "built out," meaning there are few large contiguous areas with vegetated land cover. However, sporadic wildfires do occur, mainly in the northeast part of the county. The East Lake area near the power line corridor is the most likely location for wildfires to occur. The County does conduct controlled burning in the entire northeast corner of the County and small burns at county parks and other properties throughout the year. The State also conducts annual controlled burns at state parks located within the county.

In March of 2000, the City of Clearwater experienced minor property damage (\$5000) from a small wildfire. Between May 23<sup>rd</sup> and May 25<sup>th</sup>, 2001, the County did experience smoke from fires in adjacent counties. In 2006 there were 16 reported wildfires affecting 306.4 acres in Pinellas County. Again, in the spring/summer of 2007, Pinellas County residents experienced smoke from fires across the state and in Georgia. Luckily there were no damages and no injuries.

Between 2006 and 2012, there were a total 33 wildfires affecting almost 540 acres. No wildfire-related injuries or property damage were reported over this time period, as the wildfires that occurred over this timeframe were relatively small, averaging just 16.3 acres. Pinellas County is the most densely populated county in Florida, and development patterns are such that firefighters can

# Pinellas County Local Mitigation Strategy

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reach nearly any location in the county within a short amount of time to quickly contain most wildfires and minimize their impacts on life and property.

**Table 1- 21: Reported Wildfires (2006-2012)**

Year	Number of Reported Wildfires	Acres Affected
2006	16	306.8
2007	1	.2
2008	1	3
2009	4	76
2010	3	53
2011	4	47.5
2012	4	53
Total	33	539.5

Sources: State Fire Marshal Annual Reports, 2006 - 2012

## 2. Probability

Based on an analysis of recent fire histories, Pinellas County can expect about 4.7 wildfires burning approximately 77.07 acres annually. This number will probably decrease as the remaining brush areas are developed.

## 3. Vulnerability

Webster’s dictionary defines risk as “The possibility of suffering harm or loss.” As one can see, there needs to be an “effect of an action” before one can incur a risk from an action. Traditionally, fire management personnel have used the term “risk” to refer to “what starts wildland fires.” Within the Florida Fire Risk Assessment (FRA) and the Southern Fire Risk Assessment (SWRA), the **Level of Concern** is the best measure of wildland fire risk. The Level of Concern is calculated from the likelihood of an acre burning, called the **Wildland Fire Susceptibility Index** (WFSI), and the expected effects of the fire (Fire Effects Index).

### The Level of Concern (LOC)

**LOC** is a value between 0 and 9. It is calculated as the Wildland Fire Susceptibility Index (WFSI) times the Fire Effects Index (FEI). It is one of the two primary outputs of the FRA and the SWRA and is a measure of wildfire risk. LOC can be used to complete a more detailed analysis at the local level and communicate wildland fire management concerns.

**LOC can be used to:** identify areas where mitigation options may be of value; allow agencies to work together and better define priorities; develop a refined analysis of a complex landscape and fire situations using GIS; and increase communication with local residents to address community priorities and needs.

The Wildland Fire Risk Assessment System (FRAS) combines indices of Wildland Fire Susceptibility and Fire Effects to generate a “Level of Concern” map. Data layers used to develop the Wildland Fire Susceptibility Index include: fuel and crown closure classifications and non-burnable areas from Landsat TM data, and topographic and fire weather data from existing data sets. The Fire Effects

# Pinellas County Local Mitigation Strategy

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Index uses data layers derived from a variety of existing data sets. These data included location of critical facilities, forest plantations, utility corridors, urban interface areas, roads, and firefighting resource locations; as well as, suppression cost--based on soil and fuel types.

The Levels of Concern (LOC) were computed by multiplying the Wildland Fire Susceptibility Indices by the Fire Effects Indices. The LOC values were then assigned to nine categories of risk and mapped for each Florida Division of Forestry District.

Another component of FRAS is the Fire Response Accessibility Index (FRAI). The FRAI is a relative measure of travel time from the nearest fire station to reach a particular mapped cell. Values are assigned into one of six categories of time ranging from class 1 (greater than 120 minutes) to class 6 (0-14 minutes). Accessibility is based on the location of roads and wildland firefighting resource dispatch stations. The Fire Response Accessibility Index is coupled with the Levels of Concern data on District maps. The fire behavior model, FlamMap is used in FRAS. FlamMap calculates the behavior of a fire occurring in each 30x30 meter cell under defined weather conditions given topographic, fuels, and crown closure data.

Pinellas County's vulnerability is ranked low to medium. While 14% of property is located in LOC 7, 8, and 9, less than .37% of the population and .4% of properties and property values reside in those more vulnerable locations. The highest risk is found primarily in the wildland/urban interface developments located at various sites throughout the county. Wildfires are usually kept small and extinguished quickly. The State Enhanced Hazard Mitigation Plan (2013) estimates the total value of structures at \$17,117,000,000 and the annual losses at \$281,000.

Attachment 1-3 provides a detailed breakdown by jurisdiction of wildfire risk and property within Levels of Concern.

**Table 1- 22: Pinellas County Wildfire Vulnerability  
(Municipalities and unincorporated areas combined)**

WILDFIRE LEVEL OF CONCERN	POPULATION AT RISK	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>0</b>	729,784	158,950	14,486.52	10,277.42	871.23	34,639.81
<b>1</b>	21,408	103,114	9,412.24	5,235.78	546.15	17,713.79
<b>2</b>	9,671	75,580	6,340.95	3,327.21	341.58	11,970.89
<b>3</b>	130,103	52,500	4,849.27	2,599.77	277.51	9,149.83
<b>4</b>	20,346	25,122	2,520.07	1,282.29	163.77	4,766.39
<b>5</b>	8,235	12,171	1,202.20	694.32	89.47	2,421.38
<b>6</b>	3,591	4,934	573.58	281.18	38.69	1,081.42
<b>7</b>	2,366	1,497	163.08	79.43	17.23	332.43
<b>8</b>	753	155	17.97	10.34	1.46	34.10
<b>9</b>	353	6	0.77	0.30	0.04	1.12
<b>TOTAL</b>	926,610	434,236	40,007.46	23,883.16	2,376.56	82,707.12

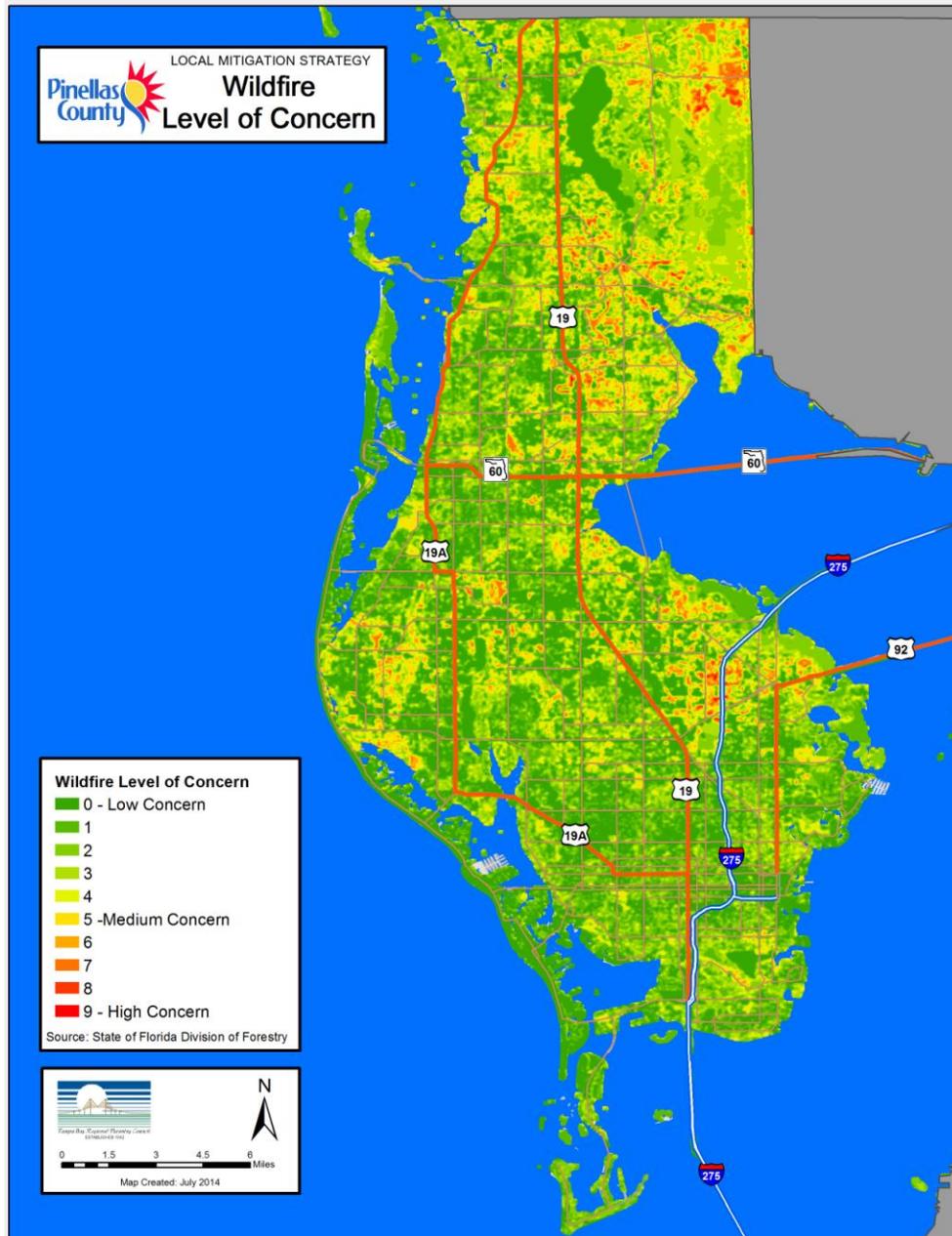
Source: Florida Division of Forestry, Pinellas County Property Appraiser (2014)

# Pinellas County Local Mitigation Strategy

## 4. Maximum Threat/ Extent

A worst case scenario would involve approximately 300 acres involved in a wildfire resulting from drought and high temperatures with damage to or the destruction of 200 homes, most likely in the wildland/urban interface setting (LOC 7,8,9). There would be the potential for health impacts (smoke and blaze), injury of residents and firefighters as well as structural and environmental impacts. Presumably, this is a factor of a densely populated area with dispersed parks, woodlands and recreational areas. This could result in approximately \$35 million in structural damages as well as environmental impacts to natural habitat.

**Map 1- 11: Wildfire Vulnerability of the Urban Interface in Pinellas County**



# Pinellas County Local Mitigation Strategy

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## DROUGHT & EXTREME HEAT

In the most general sense, drought originates from a deficiency of precipitation over an extended period of time, resulting in a water shortage for some activity, group, or environmental sector. Drought should be considered relative to some long-term average condition of balance between precipitation and —evapo-transpiration evaporation + transpiration) in a particular area, a condition often perceived as —normal. It is also related to the timing (i.e., principal season of occurrence, delays in the start of the rainy season, occurrence of rains in relation to principal crop growth stages) and the effectiveness (i.e., rainfall intensity, number of rainfall events) of the rains. Other climatic factors such as high temperature, high wind, and low relative humidity are often associated with it in many regions of the world and can significantly intensify its severity.



When drought begins, the agricultural sector is usually the first to be impacted because of its heavy dependence on stored soil water. Those who rely on surface water (i.e., reservoirs and lakes) and subsurface water (i.e., ground water), for example, are usually the last to be affected. A short-term drought that persists for three to six months may have little impact on these sectors, depending on the characteristics of the hydrologic system and water use requirements.

The Keetch-Byram Drought Index (KBDI) 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. The range of the index is determined by assuming that there are 8 inches of moisture in saturated soil that is readily available to the vegetation.

Extreme heat is defined as extended period of time where the temperature and relative humidity combine for a dangerous heat index. NOAA's heat alert procedures are based mainly on Heat Index Values. The "[Heat Index](#)", sometimes referred to as the "apparent temperature" and given in [degrees Fahrenheit](#), is a measure of how hot it really feels when [relative humidity](#) is added to the actual air temperature. To find the heat index, look at the [Heat Index Chart](#). As an example, if the air temperature is 96°F (found on the top of the table) and the relative humidity is 65% (found on the left of the table), the heat index-or how hot it really feels-is 121°F. This is at the intersection of the 96° column and the 65% row. **The National Weather Service will initiate alert procedures when the Heat Index is expected to exceed 105°- 110°F (depending on local climate) for at least two consecutive days.**<sup>16</sup>

Extreme heat can occur throughout the state but typically occurs in the summer between the months of June and September. This hazard is focused on the affects to the human population, while drought focuses more in agricultural interests. Extreme heat can ultimately cause death. Most heat disorders occur because the victim has been overexposed to heat or has over-exercised for his or her age and physical condition. Older adults, young children, and those who are sick or overweight are more likely to succumb to extreme heat.

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<sup>16</sup> <http://www.crh.noaa.gov/lmk/?n=noaaexcessiveheat>

# Pinellas County Local Mitigation Strategy

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Pinellas County has very little agriculture; therefore no economic losses from drought have been reported.

## 1. History

Since 1900, 9 drought cycles (typically of two year periods) have occurred in Florida. From 1950 to May 2009, there were 33 recorded instances of drought in Florida. Four major hydrologic droughts have affected Florida. Areas of the State most severely affected by these droughts were the Panhandle and South-Central peninsula from 1932-1935; the entire State from 1949-1957 and again from 1980-1982; and the peninsula from 1970-1977 (State Enhanced Mitigation Plan, 2013).

Long Term Drought 1998-2002 - Lower than normal precipitation caused a severe long-term statewide drought in Florida lasting from 1998 to 2002. Based on precipitation and stream flow records dating to the early 1900s, the drought was one of the worst ever to affect the State. In terms of severity, this drought was comparable to the drought of 1949-1957 in duration and had record-setting low flows in several basins. The drought was particularly severe over the 5-year period in the northwest, northeast, and southwest regions of Florida, where rainfall deficits ranged from 9-10 in. below normal (southwest Florida) to 38-40 in. below normal (northwest Florida). Within these regions, the drought caused record-low stream flows in several river basins, increased freshwater withdrawals, and created hazardous conditions ripe for wildfires, sinkhole development, and even the draining of lakes. South Florida was affected primarily in 2001, when the region experienced below-average stream flow conditions; however, cumulative rainfall in south Florida never fell below the 30-year normal.

Among the drought measures taken in 2001:

- Three of Florida's five water management districts (including the Southwest Florida Water Management District) imposed mandatory cutbacks, strictly limiting water use.
- Several municipalities hiked water-sewer rates, meaning even customers who cut back were paying more.
- Restaurants in South Florida were ordered to stop serving water, except to diners who asked.

Based on NWS Data, record number of days without rain for Pinellas County are noted below. There are some correlations with the state data but also reflect local short-term droughts that persisted for three to six months in 1933-34; 1940's; 1950 and 2001.

**Table 1- 23: Lack of Rainfall/ Major Occurrences of Drought**

St. Petersburg - Albert Whitted			
Lack of Rain			
Number of Days	Begin Date	End Date	Rain Total
61	4/1/2001	5/31/2001	0.00
62	3/31/2001	5/31/2001	0.02
63	9/30/1942	12/1/1942	0.03
64	9/29/1942	12/1/1942	0.13
69	12/1/1949	2/7/1950	0.14

Tarpon Springs			
Lack of Rain			
Number of Days	Begin Date	End Date	Rain Total
55	4/7/2001	5/31/2001	0.00
57	12/28/1949	2/22/1950	0.04
75	1/4/1911	3/19/1911	0.06
84	9/27/1940	12/19/1940	0.15
85	9/27/1940	12/20/1940	0.38

# Pinellas County Local Mitigation Strategy

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<b>St. Petersburg - Albert Whitted</b>			
<b>Lack of Rain</b>			
83	11/17/1949	2/7/1950	0.15
84	11/16/1949	2/17/1950	0.18
85	11/15/1949	2/7/1950	0.21
87	3/22/1945	6/16/1945	0.51
92	10/9/1946	1/8/1947	0.68
98	10/10/1946	1/15/1947	0.69
99	10/9/1946	1/15/1647	0.70
110	2/27/1945	6/16/1945	0.88
111	2/26/1945	6/16/1945	1.15

Source: NWS Ruskin, 2015

<b>Tarpon Springs</b>			
<b>Lack of Rain</b>			
88	9/7/1933	12/3/1933	0.57
89	11/26/1949	2/22/1950	0.61
91	9/7/1933	12/6/1933	0.72
93	10/5/1933	1/5/1934	0.78
95	10/5/1933	1/7/1934	0.81
97	9/24/1933	12/29/1933	0.82
114	9/7/1933	12/29/1933	0.87
118	9/7/1933	1/2/1934	0.92
121	9/7/1933	1/5/1934	0.95
123	9/7/1933	1/7/1934	0.98
124	9/6/1933	1/7/1934	1.44

Most summer seasons have micro-heat waves based on a geographic area of Florida. As indicated above, extreme heat and drought conditions may require water use restrictions which could cause distress. There can be an increase in heat-related illnesses. Infants and Children, Elderly and Special Needs populations, and pets may require more attention. There is an increased risk of dehydration especially for vulnerable populations and those who work outside. Overexertion required by job will increase risk of heat related illness.

The table below identifies the history of extended periods of maximum temperatures in Pinellas County. These include 1921; 1931-32; 1941-42: 1951; 1977, 1979, 1987, 1993, 1996 and 1997.

# Pinellas County Local Mitigation Strategy

**Table 1- 24: History of Extended Periods of Maximum Temperatures**

St. Petersburg - Albert Whitted Airport			
<b>Max T &gt;=90</b>			
	<b>Consecutive</b>	<b>Begin</b>	<b>End</b>
<b>Rank</b>	<b>Days</b>	<b>Date</b>	<b>Date</b>
1	46	6/9/1987	7/24/1987
2	45	8/3/1951	9/16/1951
3	37	7/27/1941	9/1/1941
4	36	7/6/1931	8/10/1931
5	34	6/30/1979	8/2/1979
5	34	6/30/1932	8/2/1932
<b>Max T &gt;=92</b>			
	<b>Consecutive</b>	<b>Begin</b>	<b>End</b>
<b>Rank</b>	<b>Days</b>	<b>Date</b>	<b>Date</b>
1	27	8/4/2007	8/30/2007
2	24	7/5/1932	7/28/1932
3	21	6/10/1977	6/30/1977
4	19	8/8/1951	8/26/1951
5	17	7/18/1931	8/3/1931
<b>Max T &gt;=95</b>			
	<b>Consecutive</b>	<b>Begin</b>	<b>End</b>
<b>Rank</b>	<b>Days</b>	<b>Date</b>	<b>Date</b>
1	6	7/10/1932	7/15/1932
2	5	6/25/2010	6/29/2010
2	5	7/9/1987	7/13/1987
2	5	6/15/1981	6/19/1981
2	5	6/12/1977	6/16/1977

Tarpon Springs			
<b>Max T &gt;=90</b>			
	<b>Consecutive</b>	<b>Begin</b>	<b>End</b>
<b>Rank</b>	<b>Days</b>	<b>Date</b>	<b>Date</b>
1	71	7/18/1997	9/26/1997
2	63	6/25/1942	8/26/1942
2	63	8/1/1921	10/2/1921
4	57	7/1/1993	8/26/1993
5	49	7/1/1932	8/18/1932
<b>Max T &gt;=92</b>			
	<b>Consecutive</b>	<b>Begin</b>	<b>End</b>
<b>Rank</b>	<b>Days</b>	<b>Date</b>	<b>Date</b>
1	44	7/2/1993	8/14/1993
2	34	7/8/1942	8/10/1942
3	31	7/11/1996	8/10/1996
4	28	8/14/1996	9/10/1996
4	28	7/3/1932	7/30/1932
<b>Max T &gt;=95</b>			
	<b>Consecutive</b>	<b>Begin</b>	<b>End</b>
<b>Rank</b>	<b>Days</b>	<b>Date</b>	<b>Date</b>
1	15	9/10/1997	9/24/1997
2	14	8/28/1996	9/10/1996
3	13	6/19/1931	7/1/1931
4	12	8/10/1997	8/21/1997
5	10	8/12/1995	8/21/1995

Source: NWS, 2015

## 2. Probability

Based on historical trends, the frequency of drought in Florida is every five to ten years. Fortunately, the geographic location of Florida places it at far less risk for drought than the western

# Pinellas County Local Mitigation Strategy

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states, because Florida remains humid, even with less than average rainfall. Thus, the occurrence of drought is considered to be low.

### 3. Vulnerability

Drought will negatively affect Pinellas County with a variety of impacts:

- Drought is often associated with periods of long and intense heat. Drought usually does not affect humans directly, but extreme heat can cause injury and even death, particularly with children, elderly citizens, and other special needs populations. Injuries and potential deaths are most likely to impact poor areas that lack air conditioning and immediate medical care.
- The largest impact of prolonged drought is the financial impact to farmers with crops and livestock. Pinellas County does not have much open wildland and very little agriculture. The wildland which does exist is located primarily in the northern areas of the County; Safety Harbor, East Lake, and Oldsmar. When such wildland becomes parched, it becomes more susceptible to wildfires.
- Drought and extreme heat have no real effect on houses, facilities, or infrastructure. Rationing water supplies would most likely be the worst-case scenario impact for drought. This could be significant for Pinellas County which is the most densely populated county in the state.
- Prolonged drought over a number of years could have long-term environmental impacts on the area, including species endangerment and damage to habitats.
- There is an increased sinkhole formation risk under drought conditions

Extreme heat, as defined by FEMA, is when temperatures remain ten degrees or more above the average high temperature for a region and last for several weeks. Extreme heat can ultimately cause death. Most heat disorders occur because the victim has been overexposed to heat or has over-exercised for his or her age and physical condition. Older adults, young children, and those who are sick or overweight are more likely to succumb to extreme heat.

- Low impact to government; although prolonged drought periods may require the suspension of some services.
- Moderate impact to energy consumption and may produce power disruptions.
- Low impact to property, facilities and infrastructure. Heat sensitive components may be compromised.
- Low impact to the delivery of services. Non-essential services may be suspended (park and recreational area watering, public property watering).
- A reduction in ground water supplies creates a situation conducive to sinkholes and wildfires.

**All jurisdictions within the county are equally affected by extreme heat and drought.**

### 4. Maximum Threat/ Extent

A prolonged drought and extreme heat resulting in very low water levels can result in the need for water rationing to address water demand and shortages. An extended drought of more than 2 years such as the period of 1933-34 or 1942-45 coupled with a period of extreme heat (air temperature 95°+ and heat index values over 108°) for more than a week will result in potable water shortages, increased heat disorders affecting vulnerable populations, potential energy/ power disruptions, the potential for increased sinkholes and wildfires in the urban interface.

# Pinellas County Local Mitigation Strategy

## WINTER STORMS AND FREEZES

Severe winter weather includes extreme cold, snowfall, ice storms, winter storms, and/or strong winds, and affects every state in the continental United States. Areas where such weather is uncommon, such as Florida, are typically affected more by severe winter (**sustained temperatures below freezing**) weather than regions that experience this weather more frequently.

### 1. History

Pinellas County is subject to frost and/or freezing temperatures from November through March each year. Since 1962, there have been 16 freezes that have affected Pinellas County. The month and year are shown on Table 1-23. The January 1977 freeze resulted in a Presidential Declaration for the State of Florida.

There have been five (5) events reported between 2000 and 2014. However, no property damage, injuries or deaths were reported. Pinellas County did not suffer damages to crops and had less than 100 acres of harvested farmland in 2007.

In 2010, Pinellas County had below freezing temperatures for 2 to 3 hours. The ASOS station at the Albert Whitted Airport recorded a low of 33 degrees, breaking the previous low of 34 degrees set in 1977. The lowest temperature across the county of 26 degrees was recorded in Palm Harbor.

A 77-year-old man, his 72-year-old wife, and their 41-year-old daughter were hospitalized from being sickened by carbon monoxide after using a charcoal barbecue grill to heat their home for 12 hours due to the power going out from a blown transformer. The low temperature recorded at the Albert Whitted Airport was 35 degrees and the high temperature was 42 degrees, which set a new record low maximum temperature record. The previous record low maximum temperature was 48 degrees set in 1970.

**Table 1- 25: Pinellas County Freezes**

Year	Month
1962	December
1970	November
1977	January
1981	January
1982	January
1985	January
1985	December
1986	January
1989	February
2000	December
2001	January
2003	January
2005	January
2008	January
2010	January
2012	January

**Source: NWS, NOAA**

In 2012, a strong cold front moved through the Florida Peninsula on January 2nd with high pressure and cold air advection behind the front dropping temperatures to well below freezing. The coldest temperatures were felt on the morning of January 4th with slightly warmer but still sub-freezing temperatures on January 5th. Pinellas County recorded sub-freezing temperatures for around 4 hours at the COOP site at Tarpon Springs in the northern part of the county where temperature fell to 28 degrees.

### 2. Probability

Freezes have occurred in Pinellas County 16 times during the last 42 years. Therefore, the County can expect a freeze once every three years. The probability of a freeze is considered as high; however, the vulnerability is considered low (State Enhanced Hazard Mitigation Plan, 2013).

During the 2013 revision process, data indicated that the likelihood and probability of future occurrences of severe winter storms in Florida tended to result more in flooding and tornadoes than in snow and ice.

# Pinellas County Local Mitigation Strategy

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Based on all the historical evidence, it is anticipated that a moderate freeze may be expected in Florida every one to two years. Severe freezes may be expected on average once every five years based on historic FEMA-declared disasters.

### **3. Vulnerability**

**The entire county is equally at risk to winter storms and freezes.** Pinellas County is primarily an urban County with almost no acreage devoted to agriculture. However, the population most vulnerable to freeze is the elderly population or those medically-dependent upon power. In addition if the storm produces coastal flooding as seen in the 1993 Winter Storm, coastal residents could be at higher risk. Past freezes have caused power outages in several areas. This has required the electrical power companies to institute rolling “brown-outs”, and have required the opening of shelters.

### **4. Maximum Threat/ Extent**

The maximum threat for Pinellas County would be a sustained period of low temperatures below 30 degrees in December or January. The main threat would be impacts due to power outages. Selected segments of the population would be considered at-risk including the elderly, very young, disabled and poor. In addition, it should be noted that driving in sleet or icy conditions is very hazardous due to the inexperience of most drivers in the region.

# Pinellas County Local Mitigation Strategy

## COASTAL EROSION

Coastal erosion is the wearing away of land or the removal of beach or dune sediments by wave action, tidal currents, wave currents, or drainage; the wearing away of land by the action of natural forces; on a beach, the carrying away of beach material by wave action, tidal currents, littoral currents or by deflation. Waves generated by storms cause coastal erosion, which may take the form of long-term losses of sediment and rocks, or merely in the temporary redistribution of coastal sediments. The study of erosion and sediment redistribution is called –coastal morphodynamics, which can be described also as the dynamic interaction between shoreline, seabed, and water.



A critical erosion area is a segment of the 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, recreational interests, wildlife habitat, or important cultural resources are threatened or lost. For erosion to be considered critical there must be a threat to or loss of one of four special interests: upland development, recreation, wildlife habitat, or important cultural resources (FDEP, 2002).

### 1. History

Pinellas County is a peninsula on the Florida Peninsula and has a total of 587.77 miles of coastline. Pinellas County also has 35 miles of fine sand beaches. The tourism industry is the largest industry in the county, with a median hotel occupation rate of about 73%, year round. Additionally, densely populated barrier islands run almost the entire length on the county's Gulf Coast. Coastal erosion events occur on an annual basis, including many small events and an occasional large impact event.

The State Enhanced Hazard Mitigation Plan (2013) references the specific areas of coastal erosion and has identified 6 critical areas (21.1 miles at risk) and 2 non-critical areas (4.4 miles at risk). The critical areas include the following:

**Table 1- 26: Pinellas County Coastal Erosion**

Erosion Location	Critical Miles	Longitude	Latitude
Sand Key	11.3	-82.833742	27.94987
Long Island	4.1	-82.754508	27.737671
Treasure Island	3.5	-82.783062	27.781477
Honeymoon Island	1.4	-82.835123	28.071314
Clearwater Beach Island	0.5	-82.830346	27.968866
Mullet Key	0.3	-82.737104	27.62359

The projects described in the section below were designed to prevent future erosion at inlets and critically eroded beaches in Pinellas County. The information in this section was summarized based on an FDEP report (FDEP, 2008). The general locations of the projects discussed in this section are displayed in Map 1-12.

# Pinellas County Local Mitigation Strategy

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**Honeymoon Island, Pinellas County:** This is a 1.4-mile segment of critically eroded beach on the southern gulf shoreline of Honeymoon Island at Honeymoon Island State Park. In 1969, over 1 million cubic yards of sand and limestone was placed along the gulf shoreline of Honeymoon Island using material from a near-shore borrow area. A groin field was constructed near the south end of the beach fill. In 1989, beach nourishment was conducted using sand from an upland source. Feasibility studies completed in 1999 and 2005 recommended beach nourishment and a terminal structure. Maintenance dredging of the Hurricane Pass navigation channel was also conducted in 2000 with the placement of approximately 12,500 cubic yards of beach quality material.

Phase 1 of the non-Federal Honeymoon Island Beach Restoration Project was completed in 2007. The project design consisted of debris removal and a beach berm to a design elevation. The strategy for the 1.4-mile segment of critically eroded beach includes maintaining the project through monitoring and nourishment using sand from bypassing and offshore sources and identifying offshore sand sources (FDEP, 2008). Phase 2 was the design and construction of the project. The construction was scheduled to occur in late 2012 (Moore and Squires, 2012).

**Hurricane Pass, Pinellas County:** Hurricane Pass is a natural inlet where a navigation channel was dredged in 1989. A feasibility study of navigation improvements was completed in 1999. This study recommended maintenance dredging and placement of the dredged sand on Honeymoon Island. Maintenance dredging of the navigation channel was conducted in 2000 with the excavation of beach quality material that was placed on the beach on Honeymoon Island. More beach quality sand from the ebb tidal shoal was placed on Honeymoon Island in 2007. The inlet is dredged periodically by Pinellas County, and the dredged material is placed as nourished sand on Honeymoon Island or Dunedin Causeway.

**Clearwater Beach Island, Pinellas County:** This is a 0.5-mile segment of critically eroded inlet shoreline beach on Clearwater Beach Island adjacent to Clearwater Pass. Most of this area has been armored with concrete bulkheads. In 1986, private property owners along the inlet shoreline constructed five rubble mound groins to stabilize the inlet beach. Groin construction has stabilized pocket beaches, and private interests maintain the pocket beaches for recreational purposes. Monitoring is the only strategy for this eroded beach.

**Clearwater Pass, Pinellas County:** Clearwater Pass is a stabilized inlet maintained by USACE. Dredging of the navigation channel was completed in 1961 and material from maintenance dredging of the navigation channel was disposed in the gulf and harbor. In 1973 and 1977, beach compatible dredged material was placed on the Sand Key shoreline south of the pass. Between 1981 and mid-1984, nearly 1 million cubic yards of beach compatible dredged material was placed on the Sand Key shoreline using sand from a navigation improvement project. Since 1985, the entrance channel has not required dredging to maintain design channel depths. In 1994, maintenance dredging of the Gulf Intracoastal Waterway produced approximately 7,000 cubic yards of sand that was truck hauled to Sand Key Park. In 2012, between 30,000 and 70,000 cubic yards of sand was removed from Federal channels. The dredged sand was used to nourish North Clearwater Beach.

**Sand Key, Pinellas County:** This is an 11.3-mile segment of critically eroded beach on the Gulf shoreline of Sand Key. Beach restoration and nourishment have been conducted throughout this area, except at the Town of Belleair Shore, Redington Beach, and Madeira Beach, where a groin field was constructed by local interests in the late 1950s.

# Pinellas County Local Mitigation Strategy

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**The Federal “Pinellas County Beach Erosion Control Project”** authorizes beach restoration and nourishment of Clearwater Beach Island, Sand Key, and Treasure Island, and nourishment of Long Key with Pinellas County as the local sponsor. The Federal authorization provides that various island segments can be constructed together or as separate projects. The Sand Key segment was restored in four construction phases between 1988 and 1998. In response to the 2004 hurricane season, nourishment of the entire Sand Key segment of the Pinellas County Beach Erosion Control Project was accelerated with construction completed in August of 2006. In 2012, the U.S. Army Corps of Engineers completed the 2012 Sand Key Nourishment Project, which involved the dredging of Sand Key.

**Johns Pass, Pinellas County:** Johns Pass is a stabilized inlet with a Federal navigation channel maintained by USACE. Maintenance dredging of the entrance channel is conducted every 5 to 10 years as needed and bypassed to the Treasure Island beaches. The ebb shoal has been used as a sand source for several nourishment projects. The management strategy listed below is based in part upon a 1993 inlet management study. A terminal structure was built in 2000 on the south side of the Pass to stabilize the Treasure Island project and minimize sediment transport into the Pass. Maintenance dredging of the entrance of the channel is conducted every 5-10 years, as needed. USACE is in charge of these activities in cooperation with Pinellas County.

**Treasure Island, Pinellas County:** This is a 3.5-mile segment of critically eroded beach on Treasure Island. The Treasure Island segment of the Federal Pinellas County Beach Erosion Control Project was restored in 1969 with Pinellas County as the local sponsor. The project design consists of a beach berm at design elevation at elevation +6 feet National Geodetic Vertical Datum to protect the existing dune and upland development. Nourishment along short segments of shoreline has been conducted every 3 to 5 years using sand from Blind Pass, Pass-A-Grille, an offshore borrow area and the Egmont Channel Shoal, in addition to the bypassing of maintenance dredged material from Johns Pass. Nourishment has created a wide beach along the central gulf shoreline. The construction of a groin near DEP Monument R141 in 1976 and the extension of the jetty on the north side of Blind Pass during 1983 stabilized the southern segment of gulf shoreline. In response to the 2004 to 2005 hurricane seasons, nourishment of the Treasure Island segment of the Federal Pinellas County Beach Erosion Control Project was accelerated and construction was completed in September 2006 using sand excavated from the Egmont Channel Shoal. Nourishment of Treasure Island beaches was completed in 2010. The project used material from John’s Pass to fill Sunshine Beach and Sunset Beach located on Treasure Island.

**Blind Pass, Pinellas County:** Blind Pass is a stabilized inlet without a maintained navigation channel. The channel and ebb shoal have been dredged every 4 to 5 years by USACE as a sand source for nourishment on Treasure Island and Long Key. In 1983, the terminal jetty on the north side of Blind Pass (DEP Monument R143) was extended seaward. In 1986, an attached breakwater was constructed as an extension to the south jetty. In 2006, the south jetty was sand tightened by placing additional armor stone to close the existing gap between the jetty and the detached breakwater. Blind Pass closed completely and was formally reopened after an extensive dredging project in July 2009. The inlet is dredged periodically to nourish the downdrift beach. The most recent dredging was performed in 2012.

**Long Key, Pinellas County:** There is a 4.1-mile segment of critically eroded beach on Long Key. Nourishment is conducted at Upham Beach on the northern gulf shoreline and Pass-A-Grille Beach on the southern gulf shoreline. Shore protection structures have been built at the north and south ends of the island. Nourishment of the northern gulf shoreline of the Long Key segment of the Pinellas County Beach Erosion Control Project has been conducted at least every 5 years since 1980

# Pinellas County Local Mitigation Strategy

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using sand from Blind Pass, Pass-A-Grille, and Egmont Channel Shoal with Pinellas County as the local sponsor. Nourishment of the Long Key segment of the Federal Pinellas County Beach Erosion Control Project was accelerated with construction completed in September of 2006. Nourishment of Long Key beaches was completed in 2010. The project used material from Blind Pass to fill Upham Beach on the north end of Long Key.

**Pass-A-Grille, Pinellas County:** Pass-A-Grille is a natural inlet that has a Federal navigation channel through it. Navigation improvements to the authorized channel were completed in 1966. Dredged material from Pass-a-Grille Pass was placed on Long Key in 1986. Dredging of the Pass-a-Grille ebb shoal was conducted in 2004 with the sand used to nourish Upham Beach, Sunset Beach, and Pass-a-Grille Beach. Maintenance dredging has not been required to maintain navigable depths. There have been no additional activities since 2004. USACE is responsible for this inlet in cooperation with Pinellas County.

**Mullet Key, Pinellas County:** There is a 1.1-mile segment of critically eroded beach at the south end of Mullet Key. Mullet Key is managed by Pinellas County as Ft. De Soto Park. In 1973, a Federal beach erosion control project was constructed at Mullet Key that consisted of beach restoration along the gulf shoreline using sand obtained from the Egmont Channel. The project included construction of a groin and revetment at the southwest point of the island. In 1977, beach nourishment was conducted along the project area and along the bay shoreline using sand from channel deepening in Tampa Harbor. The Federal project was de-authorized in 1990. In conjunction with the 2006 maintenance dredging of Tampa Harbor, USACE placed sand and rehabilitated the groin at the southwest point of the island. There have been no additional activities at this site since 2006. In cooperation with Pinellas County, USACE is responsible for maintaining the beach with suitable and available material from navigational dredging and monitoring.

## **Tropical Storm Debby (2012)**

Since 2010, one significant storm event, Tropical Storm Debby June 24-26 in 2012, occurred resulting in severe beach and dune erosion to Pinellas beaches at: Honeymoon Island State Park, sections of Sand Key, Sunshine and Sunset beaches on Treasure Island, and Upham and Pass-a-Grille beaches on Long Key.

The University of South Florida's (USF's) Coastal Research Lab staff documented sand volume and dry beach changes due to Tropical Storm (TS) Debby<sup>17</sup>. Table 1- 25 provides volume changes to the dune and dry beach as well as the approximate loss of dry feet in terms of linear distance seaward from the mean high tide line. For example, Pass-a-Grille lost a total of 22,900 cubic yards of sand and 25.6 feet of dry beach width as a result of TS Debby.

Sunshine Beach and Sunset Beach on Treasure Island received U.S. Army Corps of Engineers (USACE) Flood Control and Coastal Emergencies (FCCE) supplemental appropriations funding to cover the sand losses on those two beaches from TS Debby. Those two beaches were repaired by a USACE nourishment project in 2014 with costs shared by the USACE, FDEP, and Pinellas County. The FCCE funding for the construction to replace sand loss from TS Debby on those two beaches totaled approximately \$1.55 million. The beach at Honeymoon Island State Park also lost sand due to TS Debby. The sand volume loss was calculated to be 19,817 cubic yards at a construction cost of \$239,480 as approved by FEMA to replace the lost sand.

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<sup>17</sup> Volume and Shoreline Changes along Pinellas County Beaches during Tropical Storm Debby, Ping Wang and Tiffany M. Roberts, Coastal Research Laboratory, University of South Florida  
July 24, 2012

# Pinellas County Local Mitigation Strategy

**Table 1- 27: Volume Changes Measured along the Long Key, Treasure Island and Sand Key after Tropical Storm Debby<sup>18</sup>**

Location	Nourished/ Not Nourished	Volume Changes				MHT line Change Ft.
		Dune	Dry Beach	Overall Loss	Overall Gain	
		Cubic Yds.	Cubic Yds.	Cubic Yds.	Cubic Yds.	
<b>Long Key Barrier Island</b>						
Pass-A-Grille Beach	Nourished in 2004	1,500	-22,100	-36,500	22,900	-25.6
Middle Long Key	Not nourished	6,400	-31,500	-64,000	82,600	-15.1
Upham Beach	Nourished in 2010; T-Groins	270	-5100	-12,900	20,400	-10.8
<b>Total Long Key</b>		<b>8,170</b>	<b>-58,700</b>	<b>-113,400</b>	<b>125,900</b>	
<b>Treasure Island Barrier</b>						
Sunset Beach	Nourished in 2010	-7,700	-12,000	-43,400	22,600	-21.3
Middle Treasure Island	Not nourished	11,000	-13,000	-50,100	63,600	-10.2
Sunshine Beach	Nourished in 2010		-2,100			
<b>Total Treasure Island</b>		<b>3,300</b>	<b>-27,100</b>	<b>-93,500</b>	<b>86,200</b>	
<b>Sand Key Barrier Island</b>						
Madeira Beach	Not Nourished in 2006	700	-22,500	-29,600	35,000	-18.4
Redington Beach	Not Nourished in 2006	-4,300	-19,200	-38,600	48,800	-18.4
North Redington Beach	Nourished in 2006	-500	-21800	-59400	41,000	-33.8
Indian Shores	Nourished in 2006	-6,300	-32,200	-98,400	100,000	-34.4
Headland	Nourished in 2006	-5,500	-15,800	-58,400	61,400	-28.2
Indian Rocks Beach	Nourished in 2006	-12,100	-15,300	-86,900	100,800	-10.2
Belleair Shore	Not Nourished in 2006	-2,800	6,800	-29,900	38,600	10.5
North Sand Key	Nourished in 2006 and 2014/15	-5,600	2,500	-22,800	20,000	
<b>Total Sand Key</b>		<b>-36,400</b>	<b>-117,500</b>	<b>-424,000</b>	<b>445,600</b>	

<sup>18</sup> Volume and Shoreline Changes along Pinellas County Beaches during Tropical Storm Debby, Ping Wang and Tiffany M. Roberts, Coastal Research Laboratory, University of South Florida  
July 24, 2012

# Pinellas County Local Mitigation Strategy

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## 2. Probability

Based on historical trends, coastal erosion occurs several times each year with an average erosion rate of  $-0.8 \pm 0.9$  meters per year. (*National Assessment of Shoreline Change: Part 1 Historical Shoreline Changes and Associated Coastal Land Loss along the US Gulf of Mexico*, pg 27, USGS 2004) This rate is considered “low” because of the relatively low wave energy along the Gulf coast. The Bureau of Beaches and Coastal Systems develops and publishes annually the *Critically Eroded Beaches Report*. The data from this report is gathered from a set of monitoring locations along the coast throughout the state. Data is collected from each of these stations, and then compiled into a GIS database for modeling and analysis. The continual reporting and analysis is combined with the historical data for detailed records about the status of the state’s beaches. Erosion is a constantly changing issue as development continues on the beaches and in the inlets. It can also be instantly changed by a large storm or a hurricane.

**Note that the beach segments in Pinellas County with the highest loss of volume and dry beach width from TS Debby do not necessarily relate to the beaches subject to the highest annual mean erosion rates.** Some of the wider beaches prior to TS Debby passing through the area had much more sand volume and dry beach width to lose, and thus, resulted in some of the higher losses. Conversely, many beaches that chronically erode quickly had very little sand to lose since much sand had already eroded away prior to the arrival of TS Debby. The estimated mean annual erosion rates of the hotspot beaches that need nourishment every 4-6 years are:

- Sunshine Beach on Treasure Island (R127 to R128; 2006-2014) 24.0 ft /yr
- Sunset Beach on Treasure Island (R135 to R141; 2006-2014) 12.8 ft /yr
- Upham Beach (1974-79) on Long Key (LK2A to LK5; 2006-2014) 58.1 ft /yr
- Sand Key (R58 to R66; 2006-2010) 17.1 ft/yr
- Sand Key (R72 to R79; 2006-2010) 5.9 ft/yr
- Sand Key (R80 to R85A; 2006-2010) 8.5 ft/yr
- Honeymoon Island State Park 10.0 ft/yr

Over the last several years, the northern beach has lost 70-80 feet of the shore-parallel portion of the parking lot due to erosion resulting in 65 parking spaces being reallocated. The State Park also had to move more than one bathroom building away from the shoreline due to erosion.

Pinellas County has a very proactive Coastal Management Program with nourishments occurring periodically as part of the federal Pinellas County Shore Protection Project at Sand Key (since 1988), Treasure Island (since 1969), and Long Key (since 1980) as well cooperative efforts between Pinellas and FDEP’s Division of Recreation and Parks to nourish the beach at Honeymoon Island State Park that began in 1989. The total cost of the Coastal Management Program considering all three funding sources (federal, state, and local) has averaged about \$10 million each year over the last 10-15 years. The Coastal Management Program overall has provided exceptional upland infrastructure and private property storm protection over a large fraction of the Pinellas shoreline.

Nevertheless, the entire shoreline designated at “Critically Eroded Beach” by FDEP meets their definition especially with regard to a threat or loss of upland development, recreation, and wildlife habitat. In summary, the beach with the greatest potential for threats as described above is Upham Beach, followed by Honeymoon Island, and then Sunset Beach on Treasure Island. The installation of structural solutions using T-groin structures to slow erosion at Upham Beach and Honeymoon Island are expected to significantly lessen the severity of erosion. The project at Upham is expected

# Pinellas County Local Mitigation Strategy

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to be completed within the next couple of years if funding comes through, and the Honeymoon Island Project is scheduled to be complete by summer 2015.

### **3. Vulnerability**

Almost the entire length of Pinellas County on the Gulf Coast is lined with fine, white sandy beaches. These beaches, a main tourism attraction, are highly vulnerable to erosion from coastal events as well as inland coastal exposures along the county coastline. These events typically have caused considerable loss of the beachfront and widespread damage to structures that line those beaches.

Erosion will negatively affect the County with a variety of impacts:

- The County's beaches are eroded away at varying levels at all times and especially by strong storms and hurricanes.
- Erosion can lead to property damage to residential and commercial structures on or near the beach, as well as critical infrastructure and public properties.
- Beach erosion can impact transportation facilities such as causeway approaches, marinas and waterways such as inlets. Historically, erosion has significantly impacted roadways (and infrastructure) on barrier islands.
- Eroded beaches impact the level of tourism, and this lowers the overall economy of the coastal areas (particularly the barrier island communities) and the State.

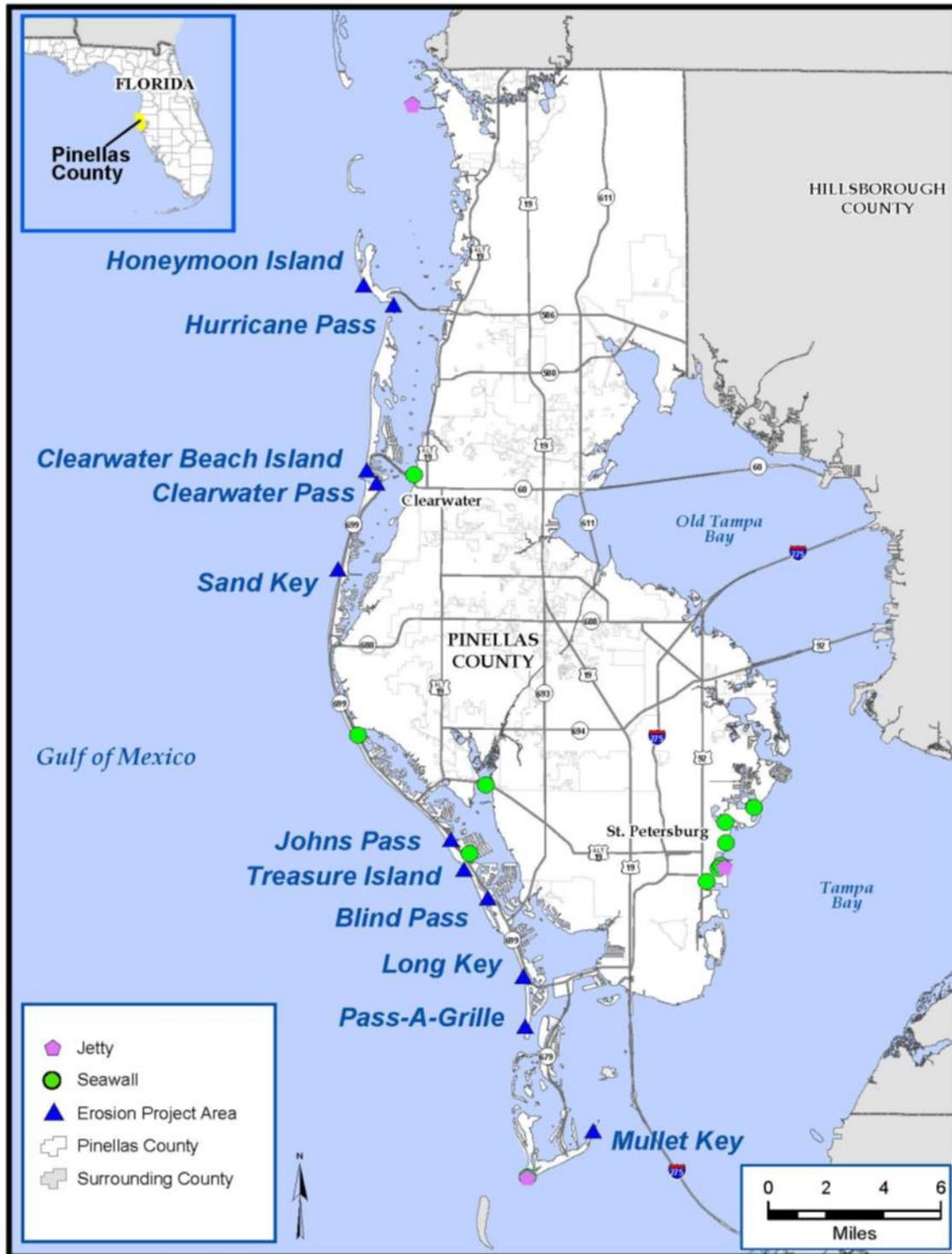
Thus, the vulnerability of Pinellas County to a coastal erosion event is high.

### **4. Maximum Threat/ Extent**

A worst-case scenario would be a pounding of the coastline from a slow-moving category 3, 4, or 5 hurricane on a parallel line to the beaches resulting in a loss of more than 60' of shoreline. Past events such as Hurricane Elena (1985) have caused almost complete loss of the beachfront at certain locations and has had a major economic impact on Pinellas County's tourism industry, including a disruption of the collection of tourism development tax, which is approximately \$1.3 million per month. Hurricane Elena which never made landfall and remained at least 90 miles offshore resulted in \$120M (1985) in property damage and public assistance.

# Pinellas County Local Mitigation Strategy

**Map 1- 12: Pinellas County Selected Coastal Structures and Erosion Project Locations**



Source: FEMA, *Discovery Report: Pinellas County, Florida, 2013*

# Pinellas County Local Mitigation Strategy

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## SINKHOLES

Sinkholes are common where the rock below the land surface is limestone, carbonate rock, salt beds, or rocks that can naturally be dissolved by ground water circulating through them. As the rock dissolves, spaces and caverns develop underground. Sinkholes are dramatic because the land usually stays intact on the surface until the underground spaces get too big. If there is not enough support for the land above the spaces, then a sudden collapse of the land surface can occur. These collapses can be small or they can be large, and they can occur under a house or road.

A significant number of sinkholes tend to occur in the years that follow a drought. When an area has a long-term lack of rain and water levels decrease, there is usually a correlated link to an increase in incidences of sinkholes being reported. Historically, years where dry weather has been followed by wet weather have resulted in some of the greatest increases in sinkhole occurrences.

### 1. History

Sinkholes, a common occurrence in many parts of Florida, have a history of occurring in Pinellas County. A geological survey conducted for the Pinellas County General Plan (1979) indicates that the central and northern portions of the County are more prone to sinkhole development due to the heavy limestone composition of the substrate in the area.

Sinkholes in Pinellas County have generally developed rather slowly and are fairly shallow and small in diameter. According to an earlier document (1991), in Pinellas County, the 95<sup>th</sup> percentile for sinkhole lengths is approximately thirty feet. (Ninety five percent of all the sinkholes are smaller than this.) The geometric mean is 9.43 width, 10.09' length and 6.22' depth.

The Florida Geological Survey maintains a database of sinkholes and subsidence incidents reported throughout the state. As of October 2014, this database currently has 81 entries for Pinellas County.

The most significant sinkhole event in the FGS dataset occurred in November 2013, when a 90' long, 53' wide, 55' deep sinkhole severely damaged two single family homes in Dunedin. According to a *St. Petersburg Times* report dated November 15, 2013, there were no injuries reported even though both homes were occupied at the time that the sinkhole occurred. No injuries were reported with this event, and no property damage value was reported.

Another significant sinkhole occurred on October 24, 1983 in Palm Harbor. According to the *St. Petersburg Times*, the sinkhole caused the partial collapse of a concrete block office building used by W.F. Madsen and Company, an insurance adjustment firm. No injuries were reported with this event, and no property damage value was reported.

Only a small percentage of sinkhole reports are determined to be actual sinkholes. Most are subsidence events, resulting from clay shrinkage or fill deterioration. However, most occurrences of subsidence are incorrectly identified as sinkholes.

Map 1-13 presents the general location of documented sinkhole and subsidence incidents between 1975 and 2014.

### 2. Probability

There is a high probability that sinkholes will develop in the sinkhole-prone areas of the County. Historically, the annual probability of sinkholes would be approximately 2 per year. However,

# Pinellas County Local Mitigation Strategy

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based on historic loss, there is a low probability that these sinkholes will be large enough to cause extensive damage or casualties.

### **3. Vulnerability**

Based on historical and geological information, Pinellas County is moderately vulnerable to sinkhole occurrences. Most sinkhole or other subsidence events in Pinellas County do not cause injury or property damage. Of the 81 events in Pinellas County from 1975 to 2014 listed in the Florida Geological Survey dataset (FGS, 2014), 26 were reported to have caused property damage. Much of the property damage caused by these sinkholes and subsidence events was relatively minor, including damage or destruction of a shed, a carport, part of a seawall, and several instances where small portions of roadways sustained minor damage. Of the sinkhole or other subsidence events that were reported to have caused property damage, the majority were between 12' and 20' long and wide and 5 to 10' deep. Future sinkholes of this size have the potential to cause similar types of property damage to those listed above, though a similar sinkhole that occurs directly beneath a building or roadway could cause injury from falling debris or partial structure collapse.

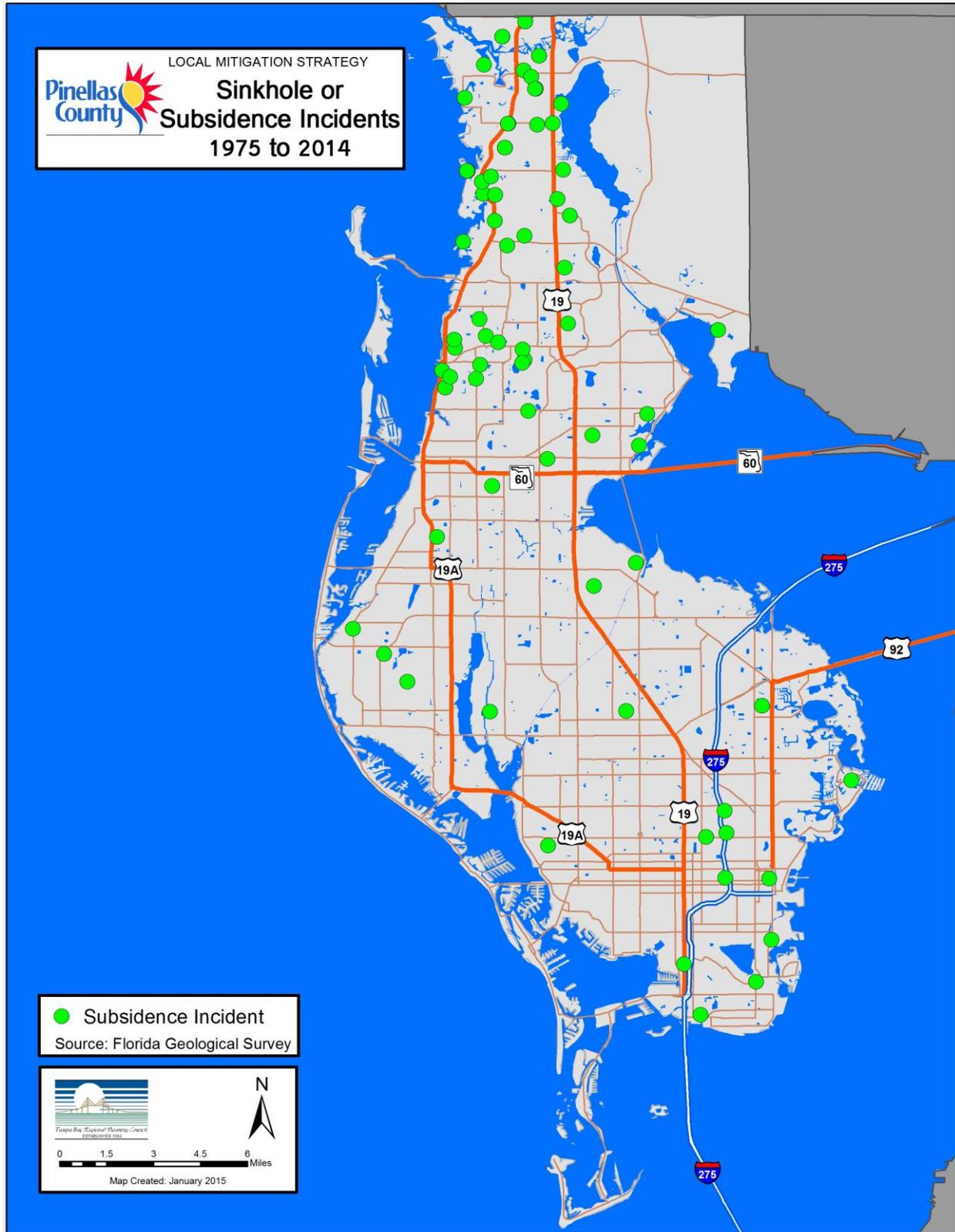
The most significant sinkhole event listed in the FGS dataset for Pinellas County occurred in November 2013, when a 90' x 53' sinkhole severely damaged two single family homes in Dunedin. According to a *St. Petersburg Times* report dated November 15, 2013, there were no injuries reported even though both homes were occupied at the time that the 55' deep sinkhole occurred and caused the partial collapse of both homes. That event occurred relatively slowly, over a period of a couple of hours. However, a similar-sized sinkhole that collapses more quickly could cause injuries or loss of life under certain circumstances, such if a home's occupants are sleeping, or if a larger multifamily structure were affected. A quick-collapse sinkhole of this size that happens to occur under a roadway could also cause injuries or deaths to occupants of vehicles that are stopped on the road (at a stoplight or because of traffic congestion) or that unknowingly drive into the depression in low-visibility conditions before the road is closed to traffic.

### **4. Maximum Threat/ Extent**

The maximum threat would be a sinkhole of unprecedented size, similar to the one that developed in Winter Park, Florida, in 1981, occurring in downtown Clearwater in the vicinity of Gulf-to-Bay Blvd. and North Ft. Harrison Ave., during a work day. With a depth of 100 feet, a sinkhole of this size would cause an enormous amount of property damage and possible fatalities and injuries to the area work force. Based on historic events, a more realistic threat would indicate the maximum characteristics would be 100' wide, 60' length and 60' depth. In a populated downtown area, this would still result in the loss of infrastructure (roadways, utilities) and multiple buildings in a 1-block area and millions of dollars in property damage. Secondary impacts would be the subsequent loss of property value in and around the area including adjacent neighborhoods, increased insurance premiums and potential for disinvestment.

# Pinellas County Local Mitigation Strategy

**Map 1- 13: Sinkhole and Subsidence Incidents**



# Pinellas County Local Mitigation Strategy

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## Emerging Hazards with Climate Change

Climate change affects our environment and natural resources, and may impact our way of life. For example:

- Warmer temperatures increase the frequency, intensity, and duration of heat waves, which can pose [health risks](#), particularly for young children and the elderly.
- Rising sea levels threaten coastal economies and ecosystems.
- Increased stormwater flooding of low lying areas resulting from sea level rise.
- Changes in the patterns and amount of rainfall, as well as changes in the timing and amount of stream flow, can increase the risk of wildfires, affect water quality and drinking water availability.
- Changing [ecosystems](#) influence geographic ranges of many plant and animal species and the timing of their lifecycle events, such as migration and reproduction.
- Increases in the frequency and intensity of extreme weather events, such as heat waves, droughts, and floods, can increase losses to property, cause costly disruptions to society, and reduce the availability and affordability of insurance.

*Climate change refers to any significant change in the measures of climate lasting for an extended period of time. In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among other effects, that occur over several decades or longer. (EPA)*

## SEA LEVEL RISE AND COASTAL HAZARDS

Climate change could affect coastal areas in a variety of ways. Coasts are sensitive to sea level rise, changes in the frequency and intensity of storms, increases in precipitation, and warmer ocean temperatures.

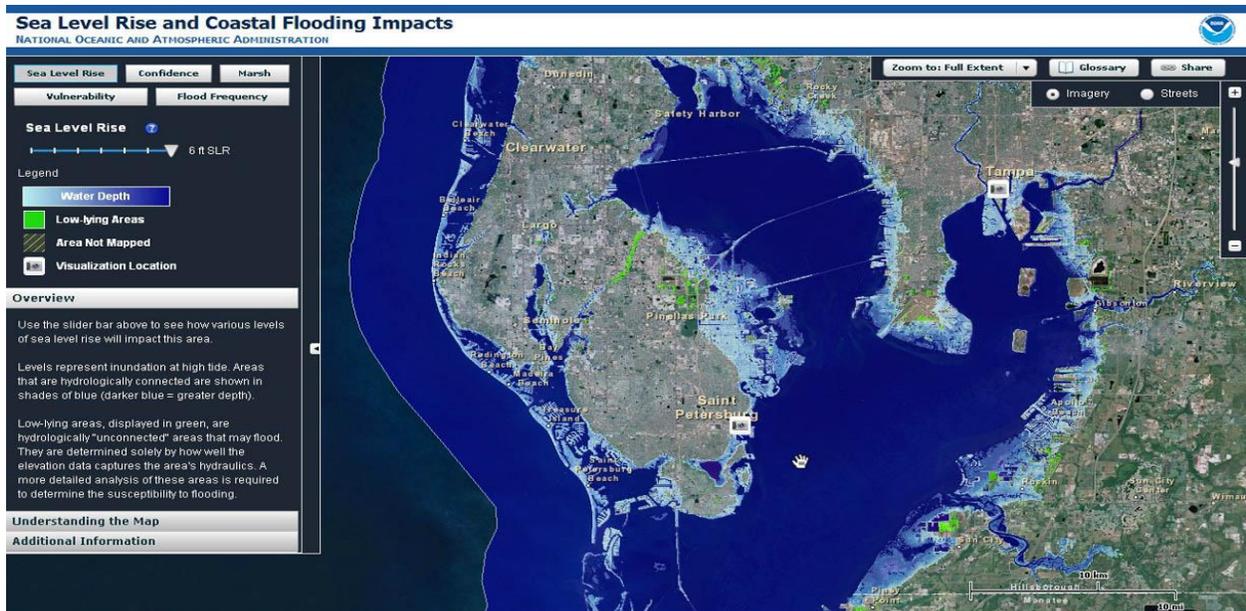
In the Southeast, sea level has risen steadily over the last 100 years at a rate of 8.5 inches per century. As average global ocean temperatures increase, ocean water expands and sea levels rise. The Intergovernmental Panel on Climate Change (IPCC, 2013) estimates that sea level will rise from 10-39 inches by 2100. For comparison, the latest (2014) National Climate Assessment states that the sea level rise of 1 to 4 feet is projected by 2100. Pinellas County is working with the technical experts to determine the best way to demonstrate their recommended scenarios, which have a range of increases in sea level rise based on the different scenarios.

The National Oceanic and Atmospheric Administration (NOAA) has developed a [tool](#) to visualize the potential impacts of sea level rise on coastal communities. The viewer is currently operational for Mississippi, Alabama, Texas, and Florida, with additional coastal counties to be added in the near future.

# Pinellas County Local Mitigation Strategy

Figure I- 3: Screen Capture of NOAA's Sea Level Risk and Coastal Flooding Impacts Viewer

Source: [NOAA \(2012\)](#)



We can prepare for some of the likely climate change impacts to reduce their effect on ecosystem and human well-being. Making such preparations is known as **adaptation**. Examples of adaptation include strengthening water conservation programs, upgrading stormwater systems, developing early warning systems for extreme heat events, and preparing for stronger storms through better emergency preparation and response strategies. (Source: EPA, <http://www.epa.gov/climatechange/science/overview.html>)

## ADAPTATION PLANNING STRATEGIES

(Source: <http://www.floridajobs.org/community-planning-and-development/>)

Adaptation to sea level rise is the steps a community takes to become more resilient to the impacts of rising seas over a period of time. The three main strategies a community may use to adapt to sea level rise are:

1. **Protection** - Protection strategies involve "hard" and "soft" structurally defensive measures to mitigate the impacts of rising seas, such as shoreline armoring or beach renourishment, in order to decrease vulnerability yet allow structures and infrastructure in the area to remain unaltered. Protection strategies may be targeted for areas of a community that are location-dependent cannot be significantly changed structurally (i.e., downtown centers, areas of historical significance, water-dependent uses, etc.).
2. **Accommodation** - Accommodation strategies do not act as a barrier, but rather alter the design through measures such as elevation or stormwater improvements, to allow the structure or infrastructure system to stay in place. Adaptation measures do not preventing flooding or inundation of the property but do protect the structure. Accommodation

# Pinellas County Local Mitigation Strategy

strategies may be suitable for location-dependent structure that could be changed to accommodate water, without compromising the use (i.e., bridge elevation, residential home elevation, downtown stormwater improvements, etc.).

3. **Retreat/Relocate** - Retreat strategies involve the actual removal of existing development and possible relocation to other areas and the prevention of future development in these high risk areas. Retreat options usually involve the acquisition of vulnerable land for public ownership, but may also include other strategies such as transfer of development rights, purchase of development rights, rolling easements, conservation easements, etc.

Research and planning initiatives are ongoing at the global, national, state, regional and local levels to address potential impacts from climate change. The focus is on resiliency and the ability to mitigate impact, protect investments and ensure our ability to recover from natural hazards and processes. Below are examples of these current initiatives.

## FLORIDA COMMUNITY RESILIENCY INITIATIVE: PLANNING FOR ADAPTATION

In 2012 the Florida Department of Economic Opportunity kicked-off a five-year project to integrate adaptation to potential sea level rise into current planning mechanisms including the local comprehensive plan, local hazard mitigation plan and post-disaster redevelopment plan. This effort is steered by a Focus Group of statewide experts on adaptation and coastal vulnerability as well as stakeholders in the coastal area. First the Department will research similar efforts in other states as well as how the "adaptation action area" may be implemented at the local level. Next adaptation planning will be piloted in at least two communities. Finally all lessons learned will be compiled and disseminated statewide. The Department has received additional funding to work with the City of Ft. Lauderdale as they integrate Adaptation Action Areas into their local comprehensive plan.

## ONE BAY: RESILIENT COMMUNITIES

ONE BAY began in 2007 as a visioning exercise with more than 300 people spreading 50,000 LEGOs over large-scale maps in an effort to imagine the future growth of the Tampa Bay region. Input from this "Reality Check" and additional community-based exercises was analyzed to develop three alternative growth scenarios for the Tampa Bay region. The scenarios were presented to citizens as a tool to help refine public discourse and generate consensus around a set of guiding principles. The following principles emerged as result of this collaborative public engagement strategy:

Support environmentally sustainable growth, protection of water resources, and energy conservation.



Encourage compact and mixed-use development.



Create jobs through sustainable economic development practices and fostering quality communities.



Promote transit and transit-oriented development.



Support increased diversity in housing options for families and individuals.



Encourage preservation of open space and agricultural land.



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The ONE BAY Vision provides guidance for local governments looking toward future urbanization within their individual jurisdictions. As a ONE BAY partner, the Tampa Bay Regional Planning Council has established a technical Working Group of public and private practitioners in the four-county region in order to maintain a broad coalition of support for, promote a deeper understanding of and ensure the practical application of the principles of ONE BAY. Since 2008, these developers, urban designers, planners, business leaders, community organizers and private citizens have used the Working Group as an open forum to discuss strategies for improving the built environment, natural environment and mobility in the Tampa Bay region. The ONE BAY Working Group also acts as catalyst for building new partnerships throughout the region. Historically, the Working Group has served as a strategic taskforce addressing the most pressing issues facing the region. For example, with the formation of the Tampa Bay Area Regional Transit Authority and the potential to bring new public transit projects online, the Working Group previously focused its efforts on creating the tools, strategies and policies necessary to support transit-oriented development and position the region for success should these projects come to fruition. With the prospect of these and other major transportation improvement projects being constructed in coastal areas in Tampa Bay, combined with recent attention to flood insurance reforms and coastal flooding hazards, the TBRPC believes that coastal resiliency planning and regional sea level rise coordination are timely issues that deserve a dedicated regional forum such as the one offered by the ONE BAY Working Group.

In 2011, TBRPC joined the USF Patel College for Global Sustainability and other regional partners to bring awareness Tampa Bay Region's vulnerability issues and highlight the challenges associated with developing resiliency solutions. The Resilient Tampa Bay workshop brought together over 200 participants representing government, academia, business interests and community groups to discuss the issues related to the Tampa Bay region's vulnerability to hurricanes, extreme rainfall events and sea level rise. This workshop represented an early step in the long-term process of improving resiliency in the Tampa Bay Region. Some of the outcomes of the Resilient Tampa Bay effort included:

- Recognition of the need for a regional approach to improve the resiliency of Tampa Bay area communities
- Consensus among workshop participants that a regional resiliency strategy should include a component to inform and educate citizens, stakeholders and decision makers about the vulnerabilities of the Tampa Bay region
- Identification of effective information-building and outreach strategies such as data gathering and analysis, establishment of benchmarks and tracking of metrics, and development of visualization tools to communicate complex information
- Recognition that a regional partnership, such as the ONE BAY regional visioning effort, as an appropriate vehicle to promote the importance of and provide outreach regarding regional resiliency

To address these needs and provide cohesion among the ad hoc efforts related to sea level rise and coastal hazards currently underway in the region, the Tampa Bay Regional Planning Council initiated a resiliency planning effort using the ONE BAY framework and Working Group. In 2014, TBRPC received a NOAA Coastal Resilience Networks grant in support of this effort to establish a common approach to understanding, communicating and planning for coastal hazards. In addition to the professionals already engaged in the efforts of the Working Group, the Tampa Bay Regional Planning Council will bring emergency managers, academics, scientists, resource managers and decision-makers together to learn about vulnerability to sea level rise and climate-induced changes

# Pinellas County Local Mitigation Strategy

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to hurricanes and precipitation regimes. The Working Group will strive to improve the quality of life in the region by ensuring that our natural, built and socio-economic environments can effectively adapt to and recover from these types coastal hazards. Through this initiative, the Tampa Bay Regional Planning Council will:

- Enhance the existing ONE BAY Working Group to convene an in-person network of practitioners for information sharing related to sea level rise and other coastal resilience issues.
- Participate in the development of and promote a regionally determined, science-based consensus on a common sea level rise projection scenario for planning purposes and policy development consistency.
- Identify, develop and enhance existing decision-support tools such as GIS models, risk/vulnerability assessments, model ordinances, Best Management Practices, etc.
- Provide technical assistance for adaptation planning; incorporating sea level rise and other coastal hazards into comprehensive plans, land development regulations, local mitigation strategies, business continuity plans, etc.
- Create a website that inventories existing Tampa Bay-specific research, programmatic efforts and decision support tools and identifies relevant information gaps.

The Tampa Bay region has much invested in developing its ONE BAY Vision. Forward-looking regional leaders have identified the importance of not only developing a vision for the future of the region, but also in implementing the guiding principles to make the ONE BAY Vision a reality. While our proximity to the water is a driving force behind what makes the Tampa Bay Region a great place to live, work and play, it is not without significant risks. In order for the ONE BAY Vision to manifest and endure the test of time, it is crucial that the region's continued development occur with the explicit intent of being resilient to coastal hazards. Our land use plans, land development regulations, local mitigation strategies and other relevant decision support systems must be governed by consensus and the best available science. The ONE BAY: Resilient Communities Working Group represents the next logical step in implementing the ONE BAY Vision and ensuring that the region possesses the resilience necessary to continue to thrive for years to come.

In 2014, TBRPC received a NOAA Resiliency Grant which will enhance the region's ability to establish a common approach to understanding, communicating and planning for coastal hazards represents the next logical step in implementing the ONE BAY Vision and ensuring that the region possesses the resilience necessary to continue to thrive for years to come.

There also needs to be a discussion of local government planning and initiatives to implement policies in local comprehensive plans that recognize and address the issues associated with climate change and sea level rise.

## RECOMMENDATIONS

The climate of the Southeast United States and Pinellas County is likely to change in the next decades. While the extent of these changes is subject of intense debate, it is important to prepare for the range of potential challenges posed by climate change by becoming a more efficient society, reducing greenhouse gas emissions, identifying vulnerable sectors of society, and developing adaptation strategies. (<http://climatecenter.fsu.edu/> )

Along these lines, the Local Mitigation Strategy will be updated over the next 5 years with, at a minimum, consideration given to how best:

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- To analyze and determine the vulnerability of our communities to a changing climate;
- To include climate change into areas of risk, where applicable;
- To include products from work with the MPO regarding transportation infrastructure resiliency;
- To include any regional sea-level increase data that may also be recommended by the Regional Climate Adaptation Working Group (facilitated by Pinellas County UF/IFAS Extension), One Bay Disaster Resiliency Group and consideration of the inclusion of sea level risk impacts in local Floodplain Management Plans;
- To include modifications to ensure recognition and the implementation of CRS programs within the county;
- To include recognition to consequence management and other emergency management programs and certifications, as appropriate; and
- To include updates to vulnerable populations and county areas.

These recommendations are reflected in a new Goal for the LMS (Appendix 4) and in the Mitigation Initiatives (Appendix 9).

## Federally Declared Disasters in Pinellas County

Because of its subtropical location and long coastline, Pinellas County (including its municipalities) is vulnerable to tropical cyclones, which include tropical storms and hurricanes. However, different areas of the County vary in degree of vulnerability, especially to high winds and storm surge from tropical cyclones. Flooding in Pinellas County results primarily from heavy rainfall and tidal surge caused by tropical storms and hurricanes (FEMA, 2009). Table 1-27 lists the federally declared disasters in Pinellas County as summarized in the FEMA Disaster Declarations Summary <https://explore.data.gov/Other/FEMA-Disaster-Declarations-Summary/uihf-be6u> (FEMA, 2012).

**Table 1- 28: Disaster Declaration in Pinellas County**

Date	Type	Title
November 1968	Hurricane	Hurricane Gladys
June 1972	Coastal Storm	Tropical Storm Agnes
May 1979	Severe Storm(s)	Severe Storms, Tornadoes and Flooding

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Date	Type	Title
September 1985	Hurricane	Hurricane Elena
October 1992	Severe Storm(s)	Severe Storms, Tornadoes and Flooding
March 1993	Tornado	Tornadoes, Flooding, High Winds, Tides and Freezing
October 1996	Severe Storm(s)	Tropical Storm Josephine
January 1998	Severe Storm(s)	Severe Storms, High Winds, Tornadoes and Flooding
September 1998	Hurricane	Hurricane Georges
October 1999	Hurricane	Tropical Storm Irene
August 2004	Hurricane	Tropical Storm Bonnie and Hurricane Charley
September 2004	Hurricane	Hurricane Frances
September 2004 Hurricane	Hurricane	Hurricane Jeanne
August 2008	Severe Storm(s)	Tropical Storm Fay
July 2012	Severe Storm(s)	Tropical Storm Debby

Source: Data based on FEMA Declared Disasters dated December 2012 (FEMA, 2012)

## Technological Hazards Affecting Pinellas County

Technological hazards are those that are caused by tools, machines, and substances that are used every day. The major technological hazards that will be discussed in this section are hazardous materials and radiological accidents, as well as a brief discussion of pipeline vulnerability and oil spills.



### AIRCRAFT INCIDENTS

#### 1. History

St. Petersburg-Clearwater International Airport and its tenants currently employ a total of 1600 people on site. As of the end of 2003, its annual economic impact was estimated to be \$783 million. In 2003 a total of 997,761 domestic and international passengers and 18,471 tons of air cargo traveled through the airport. An estimated 212,714 aircraft operations (take off and landings) occurred at the facility. From May 1994 to present, there have been eight accidents resulting in three deaths and eight injuries to crew and passengers.

Albert Whitted Municipal Airport is a general aviation facility. It supports general, specialized and charter aviation. User agencies include BayFlite medical air transport, Florida Highway Patrol air services, and a local banner towing company. In 2003 the airport averaged 100,000 aircraft operations which included 2,500 charter flights. Since 1995, there have been three aircraft accidents involving landings in the water of Tampa Bay. There have been no fatalities during this same time.

Clearwater Airpark is a general aviation airport with mostly piston airplanes, two corporate airplanes and one helicopter. They do an average of 60,000 operations annually. In 1988, an airplane crashed into the side of a house near the airport; the pilot died. In 1997, a student pilot ran an airplane into a ditch; there were no injuries. In 2002 a twin engine aircraft crashed in a residential area while on final approach. Of the three people on board, two were fatalities. In January of 2004 two single engine aircraft collided near the airport. One was approaching the facility while the other was departing. One of the aircraft crashed in a field adjacent to a recreation facility killing the pilot. The other aircraft was able to make a safe landing at the airport. In 2014 a small aircraft crashed into the median of McMullen-Booth Road killing 2 of the 3 passengers. No reported damages on the ground.

#### 2. Probability

The probability of minor aircraft accidents in Pinellas County is high and of major accidents, low.

#### 3. Vulnerability

Although the entire County must be considered vulnerable, the areas with the highest vulnerability are along the designated flight paths of the three airports in Pinellas County and Tampa International Airport in Hillsborough County. A greater vulnerability exists on the flight paths for the St. Petersburg-Clearwater International Airport and Tampa International, simply because of the high volume of large passenger and cargo aircraft that utilize each facility.

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## 4. Maximum Threat/ Extent

The crash of a large passenger aircraft into a densely populated area in either St. Petersburg or Pinellas Park represents the maximum threat in the southern portion of the County. In the north, the same situation exists if a large aircraft would crash in Safety Harbor, or striking the Countryside High School, during a school day. In either case, the crash would threaten 50 to 100 homes and 200-400 people. The crash of a large aircraft into Countryside High School would place over 2,700 staff and students at risk. In this situation, it is expected that fatalities and injuries would be extremely high.

## RAILROAD / WATERWAY INCIDENTS

### 1. History

CSX Transportation (CSXT) is the only operator of a railroad system in Pinellas County, which is only freight. There is one set of tracks with 97 crossings, of which 63 have gates. The Federal Railroad Administration reports that there were four railroad incidents on CSXT facilities in the last 20 years. Two were minor accidents at railroad crossings and two were a track defect causing a minor derailment. The last incident occurred at the Tampa Port. There were no injuries or fatalities in any cases.

The following are significant historical waterway accidents in the waterways in/near Pinellas County:

- January 28, 1980: USCGC *Blackthorn*, a 180-foot seagoing buoy tender, and the tanker SS *Capricorn* collided near the Sunshine Skyway Bridge. The *Blackthorn* capsized and sank, killing 23 of her crew.
- May 9, 1980: The freighter MV *Summit Venture* collided with a support column of the Sunshine Skyway in a thunderstorm, causing a section of the bridge to collapse. Six cars, a truck, and a passenger bus fell into the water, killing 35 people.
- August 10, 1993: Two fuel barges and a phosphate freighter collided near the entrance to Tampa Bay, causing a spill of about 330,000 gallons of heavy fuel oil and 32,000 gallons of jet fuel, diesel, and gasoline.

### 2. Probability

The probability of a rail or waterway accident is generally low. CSXT operates trains daily but usually at very low speeds. With 97 crossings, there is always a risk of an accident. A large derailment is very unlikely; however some railcars do carry hazardous materials such as chlorine and ammonia. There is a significant amount of waterway traffic through the Skyway into Tampa Bay. The probability of either occurrence is approximately 1 in 7 years.

### 3. Vulnerability

If an accident should occur, it would most likely affect the area immediately surrounding the accident scene. Traffic congestion would be the largest impact. A hazardous material leak from a tank car may affect a larger area but it is also considered localized. The waterway hazard also carries the significant risk of environmental impacts (spills of fuel or potentially hazardous materials).

### 4. Maximum Threat/ Extent

An incident such as the MV *Summit Venture* in 1980 which struck the Skyway Bridge represents a serious threat impacting the transportation infrastructure (highway and port) and economy as well

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as injuries and loss of life. A derailment of a rail car carrying hazardous materials could also pose a significant threat to local neighborhoods and major transportation facilities.

## HAZARDOUS MATERIALS (FIXED FACILITY)

Hazardous Materials (HazMat) refers generally to hazardous substances, petroleum, natural gas, synthetic gas, and acutely toxic chemicals. The term Extremely Hazardous Substance (EHS) is used in Title III of the Superfund Amendments and Reauthorization Act of 1986 to refer to those chemicals that could cause serious health effects following short-term exposure from accidental releases.

With the passage of the Federal Emergency Planning and Community Right-To-Know Act (EPCRA) in 1986, the division began implementation of a statewide Hazardous Materials Emergency Planning Program. For the first time, passage of the EPCRA allowed emergency planners, responders, and the public access to facility-specific information regarding the identification, location, and quantity of particular hazardous materials at fixed sites.

The law requires facilities with threshold quantities of federally mandated substances to report annually to state and local emergency officials. In addition, facilities must immediately notify officials of any releases of harmful chemicals that have the potential to result in offsite consequences. This information is utilized to prepare emergency plans for hazardous materials incidents, to allow responders to receive training based on specific known threats, and to inform and educate the public regarding the chemicals present in their communities. Florida has more than 4,500 fixed facility locations that report the presence of an EHS in federally mandated threshold amounts.

### 1. History

One hundred and twenty sites in the county produce, store, or use extremely hazardous substances in reportable quantities. The Pinellas County Hazardous Materials Response Team responded to 450 incidents in 2002 and 419 in 2003. The majority of these releases are small, affecting only the building of origin and, in a few instances, immediately adjacent buildings.

### 2. Probability

The probability of a release or spill is high. Chlorine is the most abundant extremely hazardous substance stored and used in Pinellas County. In recent years, the number of facilities with extremely hazardous materials has significantly dropped as many users of chlorine have converted to less toxic materials. Approximately half of both Clearwater and St. Petersburg facilities (Waste Treatment Plants, community pools, etc.) have converted from chlorine.

### 3. Vulnerability

Vulnerability to a release or spill is moderate, depending on the amount and type of material, and the location of the release. The Pinellas County Hazardous Materials Response Team has 105 members trained to the technician level, 25-35 of whom are on duty at any time. The Haz Mat Team's capabilities are instrumental in minimizing the effects of spills and/or releases on the citizens of the County. Map 1-14 presents the location of 302 facilities, those businesses which store extremely hazardous materials.

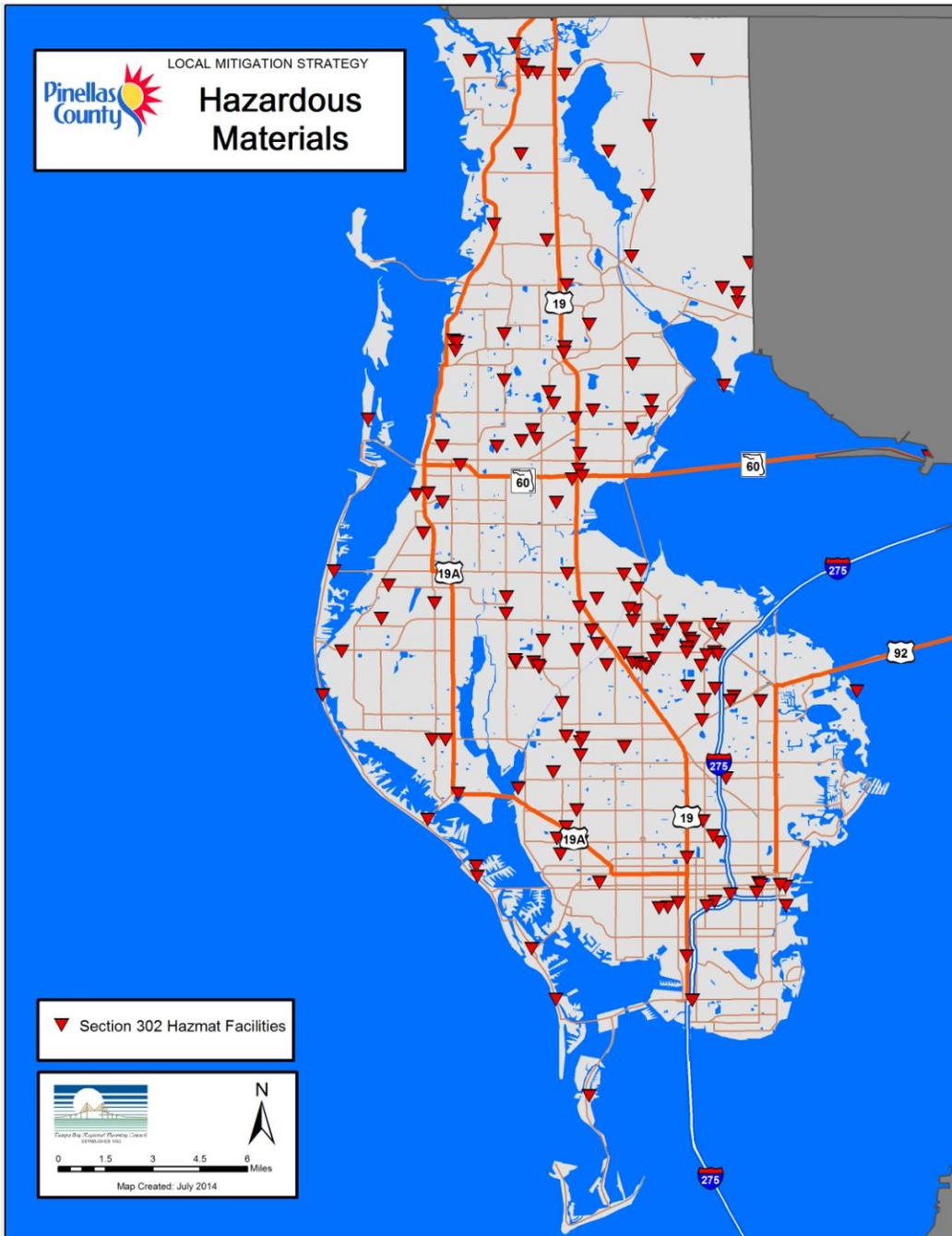
### 4. Maximum Threat/ Extent

The largest threat is from Brenntag Mid-South, a facility that stores approximately 1.25 million pounds of chlorine (maximum) on site. The chlorine is repackaged at the facility into containers of

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various sizes, contributing to the possibility for a leak or other release to occur. The facility is located in the center of the County. A release of the worst case would be the failure of one of the largest containers, on a day with high humidity, little to no wind, and during tourist season. This would be an 180,000 pound (one rail car) release at 1.0 miles per hour wind speed, atmospheric stability class D that would generate a vulnerability zone of at least a 10 mile radius from the site. The potential number of citizens affected by this incident could be well over 500,000 persons, depending on time of day and year.

**Map 1- 14: Extremely Hazardous Material Storage Locations (302 Facilities)**



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## HAZARDOUS MATERIALS (TRANSPORTATION)

- 1. History:** Spills or releases from road transport vehicles are common. Maritime accidents have occurred, but are rare. There have been no rail incidents in the last 10 years.
- 2. Probability:** The probability of a hazardous materials transportation incident is moderate. The event most likely to occur is a road transport vehicle accident, conceivably a tanker truck.
- 3. Vulnerability:** Five major roadway corridors service the County from the north, east, and south. Marine delivery routes border the county on the east, south, and west. One main railroad corridor services the county. Thus the county is vulnerable to a transportation accident.
- 4. Maximum Threat/ Extent:** Rail deliveries of chlorine to Clearwater pose the largest threat. The threat would exactly duplicate the **Hazardous Materials (fixed facility)** scenario above, except that the location would be unknown. This incident could occur at any point along the rail delivery corridor throughout the northern half of the county.

## POWER FAILURE

- 1. History:** Pinellas County receives its power from the Anclote River and Weedon Island Power Plants located in the County (Duke Energy) and, in the northern area from Tampa Big Bend Plant (TECO Energy). To date, the County has never experienced a total loss of power. However, in December 1989, as a result of severely cold temperatures, the demand for power exceeded availability. The power company rationed the power by conducting “rolling brown-outs.” This procedure alternated the power supply temporarily to parts of the County on a grid by grid basis.
- 2. Probability:** There is a low probability that a total power failure will occur in Pinellas County; although, if it were to happen, the impact would be extremely high. Since the County is so densely populated, and there is a high number of elderly who are electrically dependent, an extended period without power would have a significant impact. In addition, telecommunications is dependent upon power, so an extended outage would have a substantial economic impact.
- 3. Vulnerability:** The power corridors span approximately 100 miles above ground from the power plants to Pinellas County. This main transmission lines that serve the County are vulnerable to being damaged or destroyed by wildfire, tornado, aircraft crash, acts of terror, and extremely hot or cold temperatures. There is also growing concern from cyber security threats. This was identified in the State of Florida THIRA, 2014.
- 4. Maximum Threat/ Extent:** A tornado, hurricane or wildfire destroying a large segment of the power corridor is the maximum threat likely to affect both Pinellas County’s power source and distribution systems. If the outage lasts more than a few days, it would affect critical infrastructure including water/waste water systems, health care facilities, communications and transportation.

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## CIVIL DISTURBANCE

Civil disturbances are public crises that occur with or without warning and that may adversely affect significant portions of the population. These disturbances may be the actions of any number of persons causing disruption of the populace.

**1. History:** Political demonstrations occur in Pinellas County often but usually with few consequences. Between 2003-2004, the City of Pinellas Park was the center of a controversial right-to-die case that saw several peaceful demonstrations. Other recent demonstrations have occurred at political rallies, religious events, and military support locations, protesting the war on terrorism. These demonstrations tend to be very localized with little or no community impacts.

Civil disturbances occur infrequently but have been quite large in the past. The City of St. Petersburg was wracked by two but related civil disturbances in late 1996. Several hundred people in southern St. Petersburg took to the streets to protest a controversial police shooting that killed a young man, damaging property and threatening first responders for seven hours on Oct 25, 1996. Tensions remained high into November 1996 when the police officer involved in the shooting was exonerated. Hundreds of people again rioted for three days setting businesses on fire and shooting at fire department personnel responding to those fires. St. Petersburg sustained more than \$3.1 million in property damage and expended \$1.2 million in response costs. The police arrested 78 adults and 2 juveniles. Twenty-three first responders received minor injuries.

**2. Probability:** The potential for civil disturbance is always present especially in the urbanized areas of the county. Since 1996, however, Pinellas law enforcement and community agencies have instituted several successful programs that have opened communication lines preventing conflicts to escalate between conflicting parties. Social, political, and economic factors are very dynamic and must be monitored to gauge the threat of civil unrest.

**3. Vulnerability:** Pinellas County's economy and its businesses are the most vulnerable to civil unrest. Demonstrations tend to be localized in small areas but history has shown that damage and expenses can cost \$ millions. First responders are more likely to be injured when responding to civil disturbances.

**4. Maximum Threat/ Extent:** An occurrence such as what happened in 1996 in St. Petersburg remains a threat as the country saw in 2014 in Missouri. Our local communities and law enforcement have incorporated many of the lessons learned from our experiences as well as those in other areas; however, circumstances have and can become highly volatile if underlying issues are not addressed.

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## COASTAL OIL SPILL

Given Florida's dependence on tourism and the related sales tax revenue an oil spill that affected any of Florida's many natural treasures could be catastrophic. The Florida impacts of the 2010 BP Deepwater Horizon blowout were mostly limited and contained, but the predictions at the time of potential impacts were severe. Moody's Analytics released a report which stated, should a significant amount of oil wash onto Florida's shores, the economic impact from tourism-related tax revenue and job losses could rival that of the ongoing recession and —simulate a double dip recession<sup>11</sup>. In addition to economic impacts, an oil spill in Florida or off its shores could have severe consequences for wildlife, ecosystems, and the ecology.



**1. History:** Pinellas County is surrounded by water with hundreds of commercial and private marine vessels traveling its waterways daily. The Port of Tampa resides to the east of the county and is one of the busiest in the Gulf of Mexico, making the probability of a major spill more likely to occur. The last major incident occurred in 1993 when three ships collided at the entrance to Tampa Bay causing a major fire and oil spill, which affected the southern third of the county significantly.

More than 330,000 gallons of No. 6 oil were spilled following a three vessel collision. In July 1993 the U.S. Coast Guard responded to the worst hazardous materials incident in recent history involving the motor vessel OCELOT. In September 1995, the USCG also responded to a 5000-gallon diesel spill in the east Tampa Bay requiring multiple clean-up contractors. The spill would later prove to be the nation's fifth most resource intensive oil spill that year at a cost of \$500,000. Small fuel spills occur in the waters surrounding Pinellas on a daily basis. Most are due to overfilling boat fuel tanks and a few due to boat sinking. Law enforcement agencies routinely receive reports of illegal oil dumping from the public.

**2. Probability:** It is difficult to determine when the next major oil spill will occur. History indicates that they are usually the result of accidents and collisions. Pinellas County Environmental Management, Sheriff's Office, and the U.S. Coast Guard have programs in place for safe water navigation and marina management that are successful. Despite these programs, an oil spill is most likely going to be the result of carelessness or negligence. Little or no spill warning is also likely.

**3. Vulnerability:** Because Pinellas County is a peninsula almost completely surrounded by water, its vulnerability to coastal pollutants and spills is moderately high. The coastal resources are prime attractions for visitors and tourists. Approximately 14,000 acres of Pinellas County's 31,000 acres of open space is considered environmentally sensitive, which the majority is along some sort of waterway. As such, their damage or loss can cause significant impact to the economic vitality of the county and its municipalities.

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## MASS MIGRATION

There is little history of mass migration into the county. Although Pinellas is located along the west Florida coast, it is too far for most makeshift or small boats to reach it from Cuba, Caribbean islands, or Central America. Any illegal immigrants entering the county are likely to come into south Florida and filter up or a few may come as stowaway on commercial boats and aircraft.

## NUCLEAR POWER PLANT

There are no nuclear power plants in Pinellas County. The nearest plant is the Crystal River Power Plant located in Crystal River (Citrus County). This plant has been closed; although there is some material stored at the site. This risk of a catastrophic release of radioactive material at the plant is extremely low. Even if one were to occur, the prevailing winds would tend to blow most of the radioactive isotopes towards the east. Pinellas County is located outside the plant's 50-mile ingestion pathway.

## TERRORISM

Terrorism is defined in the Code of Federal Regulations as —the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives. It is the use of force or violence against persons or property in violation of the criminal laws of the United States for purposes of intimidation, coercion, or ransom.

If a terrorist incident occurs in a city or county, communities may receive assistance from both state and federal agencies under the existing Integrated Emergency Management System. The Department of Homeland Security is the lead federal agency for supporting state and local response to the consequences of terrorist attacks. Terrorism is often categorized as —domestic or —international. The following descriptions explain the difference:

- Domestic terrorism involves groups or individuals whose terrorist activities are directed at elements of the U.S. government or population without foreign direction.
- International terrorism involves groups or individuals whose terrorist activities are foreign-based and/or directed by countries or groups outside the United States or whose activities transcend national boundaries.

**1. History:** There has never been a known terrorist incident in Pinellas County, although a young despondent individual did fly a plane from St. Pete Clearwater Airport into a large building in Tampa following the tragic events of September 11, 2001. Pinellas County does host large events and supports security initiatives for major events in the region such as the Super Bowl (2011) and Republican National Convention (2012).

**2. Probability:** The probability of a terrorism incident in the County is low to moderate.

**3. Vulnerability:** Vulnerability to an incident of terrorism is moderate. The County recently has conducted and been involved in numerous large scale multi-jurisdictional terrorism exercises. Joint planning efforts with a number of response agencies are currently under way. It is expected that resultant changes in a number of procedures will ultimately minimize the potential effects of a terror incident, should one occur. According to the Regional Domestic Security Task Force, the



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sector most at risk is Commercial Facilities. The threat category contributing the most risk is IED (Incendiary Explosive Device).

**4. Maximum Threat/ Extent:** Considering the large population concentration in the County, the likelihood of affecting a large number of persons is great. The threat increases with the large influx of tourists during the winter months. Annually, approximately 5 million persons visited the County.

## OTHER: SPECIAL EVENTS

**1. History:** There are several major special events that occur in Pinellas County each year. Some of the larger events include the Epiphany in Tarpon Springs, Grand Prix in St. Petersburg, and Jazz concerts in Coachman Park, Clearwater. Attendances can range from a few thousand to several dozens of thousands. History shows that there are seldom problems that are out of the norm at these events. Medical emergencies from food poisoning, dehydration, alcohol consumption, and falls tend to be the most problematic of occurrences.

*Table 1- 29: Special Events in Pinellas County*

Venue	Capacity	Location
Tropicana Field	45,000	St. Petersburg
Brighthouse Field	8,500	Clearwater
Bobby Mattick Training Center	3,417	Dunedin
Eckerd Performing Arts	2,184	Clearwater
Tradewind Island Resort & Convention Center	2,000	St. Pete Beach

**2. Probability:** There are so many events with large crowds in confined areas; the impact of any emergency can be quite high. The chances of a large impact at any given event, however, are low due to the extensive planning and security measures that are in place.

**3. Vulnerability:** The participants of a special event are most vulnerable to medical emergencies. Many events occur during hot, humid days. Events with alcohol sales are most vulnerable. The crowds are also vulnerable to fires or hazardous material releases. Even civil unrest can pose problems at controversial events such as a political rally.

**4. Maximum Threat/ Extent:** A terrorist attack (domestic and international), airline crash or fire at a major sporting event represents the greatest threat affecting thousands of attendees. Mass casualty exercises occur annually in the region to ensure readiness of responders and health care professionals.

## OTHER: WATER SUPPLY

**1. History:** Most of Pinellas County receives its potable water from a regional water supply system, Tampa Bay Water, which draws from sources in Pinellas, Pasco, and Hillsborough Counties. Water is transmitted to the County through 84", 36" and 48" transmission mains. The cities of Dunedin and Belleair have their own water supply and transmission systems, which do not require dependence on sources outside of the County. Clearwater and Tarpon Springs also have their own resources to a lesser extent, although they continue to rely on Pinellas County Utilities to provide potable water. The County and cities have agreements to exchange water on an emergency basis. To date, Pinellas County's water source has never been totally severed. However scheduled and

# Pinellas County Local Mitigation Strategy

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unscheduled repairs have occurred. Normally when repairs are scheduled, interconnections with municipal systems can be used as a backup to minimize the impact on the availability of water and water pressure.

**2. Probability:** There is a low probability that total failure in the water system will occur in Pinellas County. Interconnections between municipal, regional, and county transmission lines help to maintain the availability of potable water, albeit at a reduced rate. Many prudent actions have been taken to protect the integrity of the system, such as multiple generators being connected to the system to ensure the power source is not interrupted.

**3. Vulnerability:** Pinellas County is extremely vulnerable since almost all (96%) current sources are from outside the County's control and the daily demand is extremely high.

**4. Maximum Threat/ Extent:** The maximum threat that is likely to occur to Pinellas County's water source is the intentional contamination of the water supply. However, such an act of terrorism would require great planning and access to tremendous resources and would be very difficult to execute effectively.

## OTHER: EPIDEMIC/DISEASE OUTBREAK

### 1. History:

There is little history of epidemic or zoonoses cases in Pinellas County. However, the usual suspect diseases associated with a densely populated community such as Hepatitis A-C and Salmonellas occur frequently. Influenza cases have been high in the last few years and public health official expect them to remain high. There have been 11 cases of West Nile Virus in the last ten years. Rabies in raccoon populations can be problematic at times. The recent outbreak of Ebola in Africa (2014) has many residents concerned given the number of international visitors to the county.

An epidemic or pandemic is likely to be a prolonged and widespread outbreak that could require changes in many areas of society, such as schools, work, transportation and other public services. The Pinellas Emergency Management and Health Departments have placed a higher priority on planning for public health emergencies as newer disease threats such as SARS, Avian Influenza, and bio-terrorism have emerged.

Disease among the plant kingdom is low but there are newer diseases and some recurring diseases such as Citrus Canker that agriculture specialists are monitoring annually. Sudden Oak Death (SOD) is one of those diseases that is threatening Florida's oak trees. Florida receives many of its plant nursery stock from California where SOD is widespread devastating its oak tree populations. The rapid spread of Sudden Oak Death Disease across so many native plant species is unprecedented, and continues to amaze plant pathologists.

**2. Probability:** The probability of any disease outbreak that affects the large Pinellas population still remains low. However, each specific disease has its own set of risk factors and probabilities that influence the overall risks. These factors include world traffic patterns of people and animals, virulence, surveillance systems, and early detection systems. For example, Avian Influenza cases are expected to reach Pinellas within the next few years. Public health officials expect the initial cases to be confined to bird-to-bird contact, which may not constitute an outbreak. However, the public's fears of bird-to-human and ultimately, human-to-human contact, would continue to rise due to media attention.

# Pinellas County Local Mitigation Strategy

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**3. Vulnerability:** Overall, Pinellas' vulnerability to disease outbreak is low to moderate depending on the type of disease. The most vulnerable populations are the elderly and very young. Pinellas County has one of the largest concentrations of people over the age of 55 in the state. They tend to live in close proximity with each other in mobile home, deed restricted, and condominium communities. However, the county is also becoming younger as more families with younger children are moving into the area. The county is seeing more schools and daycare centers opening each year.

Pinellas County has an excellent healthcare system, which must be factored into the risk analysis. It has a very extensive disease surveillance system consisting of partners such as sentinel physicians, all the hospitals, area county health departments, public and private laboratories, Department of Agriculture and Consumer Services, Centers for Disease Control and Prevention, and the World Health Organization. This extensive early detection system reduces the population's vulnerability by allowing the healthcare community to react faster to a public health emergency.

**4. Maximum Threat/ Extent:** The maximum threat would be a virus which could start in another part of the globe and be carried to the US through air travel. If that virus mutates to one transmitted to humans through respiratory system, it could start a pandemic.

## The Hazards Vulnerability Analysis Matrix

The Hazards Vulnerability Analysis Matrix below provides an overview of the probability, impact, frequency and distribution of natural hazards within the County. The table following specifically identifies each jurisdiction and its vulnerability to specific hazards. In Pinellas County, the primary difference in vulnerability relates to coastal vs. inland flooding. The table below color-codes the jurisdictions by location. Yellow indicates a barrier island community; blue denotes jurisdictions on the mainland with significant coastal areas and more inland communities subject only to inland flooding are coded green.

## Pinellas County Local Mitigation Strategy

**Table 1- 30: Pinellas County Natural Hazards Vulnerability Analysis Matrix**

Hazard - Natural	Event /Days	Probability	Total Property Damage	Impact	Frequency	Notes	Distribution
Flood/ Flash Flood	51 times in 30 years	High 1.7 times per year	\$4.233M (avg.\$83,000)	Minor to Moderate	2X year	Refer to FEMA FIRM Maps/ Repetitive Loss Areas	Impact tends to be localized <sup>1</sup> Risk is heightened in coastal areas and floodplains countywide.
Tropical Storms/ Hurricanes							
Tropical Storms (Plus Storm Surge)	70 events in 135 years	High 52%	\$93.28M (avg. \$1.33M)	Moderate	1-2 years		Storm Surge – See zones <sup>2</sup> ; coastal communities at higher risk. Winds - Countywide
Hurricanes (Cat. 1, 2)	27 events in 135 years	Moderate 20%	\$10M - \$1B	High	5 years		Storm Surge – See zones; coastal communities at higher risk. Winds - Countywide
Hurricanes (Cat. 3, 4, 5)	3 events in 135 years	Low 2%	\$2.5B - \$50B	Catastrophic	50 years	1921 last direct hit of major hurricane	Storm Surge – See zones; coastal communities at higher risk. Winds - Countywide
Severe Storms							
Thunderstorm winds	143 events/ 52 with property damage in 55 years	High 260%	\$1.88 M (avg. \$36,900)	Minor to Moderate	2.5X year (1X year with damage)	1 death/ 6 injuries	County-wide

<sup>1</sup> See Maps which illustrate the NFIP Special Flood Risk Areas and Repetitive Loss Properties for specific area vulnerability.

<sup>2</sup> See Maps which illustrate storm tide risk; Coastal communities would receive velocity wave action in addition to Stillwater storm surge.

## Pinellas County Local Mitigation Strategy

Hazard - Natural	Event /Days	Probability	Total Property Damage	Impact	Frequency	Notes	Distribution
Lightning	103 events in 69 years	High 200%	\$10,219,000 (avg. \$148,101)	Moderate	2X year	4 deaths/ 72 injuries	County-wide
Hail <sup>3</sup>	93 events in 56 years	High 200%	\$350,000 (avg. \$3,763)	Minor	2X year	0 deaths; 0 injuries	County-wide
Tornado	109 in 63 years	High 58%	\$77.349M (avg. \$709,174)	High \$77.349 M (avg \$814k)	1.5 per year (most minor)	11 deaths; 311 injuries	County-wide
Wildfire	33 in 15 years	High 220%	\$5,000 total In last 6 years	Minor to Moderate	2X year	0 deaths; 0 injuries	Areas / LOC 7,8,9
Drought	30 events in 100 years	Moderate (30%)	No property loss reported	Minor	5-10 years	Primary threat to water source and habitat loss	County-wide
Extreme Heat	33 events in 100 years	Moderate (33%)	No property loss reported	Minor	5-10 years	Health impacts due to dehydration, exposure, and power disruption; potential water supply impacts	County-wide
Winter Storms/ Freezes	16 in 42 years	Moderate (38%)	\$1M in crop loss; No property loss reported	Minor	3 years	Health impacts to poor and elderly; potential power disruption	County-wide

<sup>3</sup> Source: [www.ncdc.noaa.gov/stormevents](http://www.ncdc.noaa.gov/stormevents)

# Pinellas County Local Mitigation Strategy

**Table 1- 31: Multi-Jurisdictional Hazard Analysis Matrix**

Natural and Manmade Hazards	Unincorporated	Belleair	Belleair Beach	Belleair Bluffs	Belleair Shore	Clearwater	Clearwater Beach	Dunedin	Gulfport	Indian Rocks Beach	Indian Shores	Kenneth City	Largo	Madeira Beach	No Redington Bch	Oldsmar	Pinellas Park	Redington Beach	Redington Shores	Safety Harbor	St. Petersburg	St. Pete Beach	Seminole	South Pasadena	Tarpon Springs	Treasure island
Flooding – Rainfall	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Coastal Flooding	M	M	H	M	H	M	H	M	M	H	H	N	N	H	H	M	L	H	H	M	M	H	M	M	H	H
Minor Hurricane/ Tropical Storm	M	M	H	M	H	M	H	M	M	H	H	M	M	H	H	M	M	H	H	M	M	H	M	M	M	H
Major Hurricane	H	M	H	M	H	M	H	H	H	H	H	M	M	H	H	H	M	H	H	H	H	H	M	H	H	H
Thunderstorms & Lightning	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
Hailstorm	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
Coastal Erosion	M	L	H	N	H	M	H	M	M	H	H	N	N	H	H	M	N	H	H	M	M	H	L	M	H	H
Drought	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Extreme Heat	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
Severe Winter Storm	L	L	M	L	M	L	M	L	L	M	M	L	L	M	M	L	L	M	M	L	L	M	L	L	L	M
Tornado	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M

# Pinellas County Local Mitigation Strategy

Natural and Manmade Hazards	Unincorporated	Belleair	Belleair Beach	Belleair Bluffs	Belleair Shore	Clearwater	Clearwater Beach	Dunedin	Gulfport	Indian Rocks Beach	Indian Shores	Kenneth City	Largo	Madeira Beach	No Redington Bch	Oldsmar	Pinellas Park	Redington Beach	Redington Shores	Safety Harbor	St. Petersburg	St. Pete Beach	Seminole	South Pasadena	Tarpon Springs	Treasure island
Freezes	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
Sinkholes	M	L	L	L	L	M	L	M	L	L	L	L	M	L	L	M	M	L	L	M	M	L	M	L	L	L
Haz Mat/ transportation	M	L	L	L	L	M	L	M	M	L	L	M	M	L	L	M	H	L	L	M	M	L	M	M	M	L
Haz Mat Open Water spills	M	L	M	L	M	L	M	L	L	M	M	L	L	M	M	M	L	M	M	M	M	M	L	M	M	M
Terrorism	L	N	N	N	N	M	M	L	L	L	L	N	M	L	M	L	L	L	L	L	M	M	L	L	L	M
Utility Failure	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L

□ Barrier Island Communities are significantly more vulnerable to severe storms, coastal flooding, erosion, and tropical systems. No sinkholes reported. Less risk of hazardous material transportation incidents with less freight traffic and no rail. Higher risk to open water oil or hazardous material spills.

□ Jurisdictions with significant coastal areas are also vulnerable to coastal flooding, severe storms, erosion and tropical systems; however, they are not as vulnerable to velocity wave action

□ All inland communities have some chance of flooding from rainfall and severe storms; and the entire county is vulnerable to high winds.

**H** = High – Likely to experience threat, effect, or recurrence of event with moderate to high (or catastrophic) impacts.

**M** = Moderate – Average to better than average likelihood of experiencing threat, effect or recurrence of event with minor to moderate impacts.

**L** = Low – Below average likelihood of experiencing threat, effect or recurrence of event with minor to moderate impacts.

**N** = Very little or no likelihood threat will occur with minor impacts

For more detailed information of vulnerability to flooding, storm surge and wildfire by jurisdiction, please see Attachments 1-1, 1-2, and 1-3. For HAZUS analysis of a Category 3 and Category 5 Hurricane, please see Attachments 1-4 and 1-5, respectively.

# Pinellas County Local Mitigation Strategy

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## *Attachment 1- 1: Flood Vulnerability by Jurisdiction*

Pinellas County (municipalities and unincorporated areas combined)

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	129,083	10,901.86	9,848.29	808.73	29,359.91
<b>500Yr</b>	33,489	2,962.25	1,386.74	173.05	5,431.82
<b>Velocity</b>	16,045	923.61	1,692.29	77.93	6,447.85
<b>Outside</b>	255,403	24,778.03	10,859.91	1,287.41	40,869.84
<b>TOTAL</b>	434,236	40,007.46	23,883.16	2,376.56	82,707.12

Town of Belleair

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	230	41.93	46.09	3.36	118.98
<b>500Yr</b>	77	6.62	5.23	0.26	28.05
<b>Velocity</b>	289	48.49	47.19	3.66	154.16
<b>Outside</b>	1,861	248.81	187.95	15.93	533.99
<b>TOTAL</b>	2,457	345.85	286.45	23.21	835.19

City of Belleair Beach

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	825	159.81	271.76	14.70	446.28
<b>500Yr</b>	--	--	--	--	--
<b>Velocity</b>	472	3.88	7.40	0.23	131.83
<b>Outside</b>	--	--	--	--	--
<b>TOTAL</b>	1,297	163.70	279.15	14.94	578.11

# Pinellas County Local Mitigation Strategy

## City of Belleair Bluffs

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	--	--	--	--	--
<b>500Yr</b>	2	0.75	1.90	0.03	2.69
<b>Velocity</b>	92	0.00	1.52	0.17	13.02
<b>Outside</b>	1,229	96.14	66.35	4.93	216.32
<b>TOTAL</b>	1,323	96.89	69.77	5.13	232.03

## Town of Belleair Shore

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	8	7.79	12.07	0.28	20.14
<b>500Yr</b>	--	--	--	--	--
<b>Velocity</b>	54	27.22	86.40	1.56	115.18
<b>Outside</b>	--	--	--	--	--
<b>TOTAL</b>	62	35.01	98.47	1.84	135.32

## City of Clearwater

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	10,171	638.54	849.61	48.16	2,782.90
<b>500Yr</b>	1,304	119.52	52.04	5.40	211.22
<b>Velocity</b>	3,301	112.86	333.28	8.71	1,809.17
<b>Outside</b>	34,193	3,922.17	1,631.05	202.69	6,463.97
<b>TOTAL</b>	48,969	4,793.09	2,865.98	264.97	11,267.26

## City of Dunedin

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	2,432	184.09	173.60	16.34	439.86
<b>500Yr</b>	1,260	78.50	41.45	3.57	144.34
<b>Velocity</b>	2,008	48.40	132.80	6.04	436.57
<b>Outside</b>	12,033	1,060.79	497.78	58.34	1,828.35
<b>TOTAL</b>	17,733	1,371.79	845.62	84.28	2,849.12

# Pinellas County Local Mitigation Strategy

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## City of Gulfport

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	2,206	107.65	86.67	7.30	308.79
<b>500Yr</b>	155	11.37	8.18	0.48	20.03
<b>Velocity</b>	931	135.92	109.60	9.91	352.04
<b>Outside</b>	3,581	255.77	99.77	7.61	363.15
<b>TOTAL</b>	6,873	510.72	304.22	25.31	1,044.01

## City of Indian Rocks Beach

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	3,225	202.41	390.62	17.52	977.77
<b>500Yr</b>	--	--	--	--	--
<b>Velocity</b>	170	1.74	11.83	0.12	55.63
<b>Outside</b>	--	--	--	--	--
<b>TOTAL</b>	3,395	204.14	402.46	17.64	1,033.40

## Town of Indian Shores

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	1,564	15.03	33.69	1.51	326.40
<b>500Yr</b>	--	--	--	--	--
<b>Velocity</b>	1,200	15.13	63.38	0.90	468.78
<b>Outside</b>	--	--	--	--	--
<b>TOTAL</b>	2,764	30.17	97.07	2.41	795.18

## Town of Kenneth City

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	215	13.28	4.36	0.48	18.84
<b>500Yr</b>	630	26.90	8.63	0.87	41.80
<b>Outside</b>	1,210	81.67	29.72	3.87	131.85
<b>TOTAL</b>	2,055	121.85	42.71	5.22	192.48

# Pinellas County Local Mitigation Strategy

## City of Largo

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
100Yr	2,538	248.26	134.11	16.76	464.01
500Yr	1,041	134.22	78.60	10.88	237.27
Velocity	23	14.57	16.22	0.92	31.71
Outside	26,558	2,216.14	1,068.12	127.29	3,837.12
<b>TOTAL</b>	<b>30,160</b>	<b>2,613.18</b>	<b>1,297.04</b>	<b>155.85</b>	<b>4,570.11</b>

## City of Madeira Beach

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
100Yr	2,822	195.36	332.59	19.56	755.28
500Yr	--	--	--	--	--
Velocity	1,014	17.84	58.27	1.21	374.54
Outside	--	--	--	--	--
<b>TOTAL</b>	<b>3,836</b>	<b>213.19</b>	<b>390.86</b>	<b>20.78</b>	<b>1,129.82</b>

## Town of North Redington Beach

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
100Yr	840	67.03	115.65	7.08	283.57
500Yr	--	--	--	--	--
Velocity	457	11.93	9.82	0.25	205.55
Outside	--	--	--	--	--
<b>TOTAL</b>	<b>1,297</b>	<b>78.96</b>	<b>125.47</b>	<b>7.33</b>	<b>489.12</b>

## City of Oldsmar

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
100Yr	2,896	346.63	186.18	20.27	576.17
500Yr	2,364	289.38	128.78	16.38	497.90
Velocity	33	0.29	2.88	0.13	9.51
Outside	669	108.58	50.49	7.07	180.20
<b>TOTAL</b>	<b>5,962</b>	<b>744.88</b>	<b>368.32</b>	<b>43.85</b>	<b>1,263.77</b>

# Pinellas County Local Mitigation Strategy

## City of Pinellas Park

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	3,183	382.81	137.41	21.82	564.68
<b>500Yr</b>	7,575	682.25	245.05	32.87	1,051.87
<b>Velocity</b>	--	--	--	--	--
<b>Outside</b>	10,467	1,132.35	473.17	65.64	1,771.64
<b>TOTAL</b>	21,225	2,197.40	855.63	120.32	3,388.19

## Town of Redington Beach

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	734	78.26	140.94	6.76	231.08
<b>500Yr</b>	--	--	--	--	--
<b>Velocity</b>	362	36.90	82.61	1.67	201.66
<b>Outside</b>	--	--	--	--	--
<b>TOTAL</b>	1,096	115.16	223.56	8.43	432.75

## Town of Redington Shores

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	1,722	81.13	151.34	6.32	510.63
<b>500Yr</b>	--	--	--	--	--
<b>Velocity</b>	378	7.40	21.86	0.41	132.40
<b>Outside</b>	--	--	--	--	--
<b>TOTAL</b>	2,100	88.53	173.20	6.73	643.03

## City of Safety Harbor

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	552	66.23	57.02	5.71	135.99
<b>500Yr</b>	384	30.92	24.75	2.11	61.60
<b>Velocity</b>	29	1.29	2.34	0.54	4.18
<b>Outside</b>	6,805	828.48	394.18	49.00	1,385.08
<b>TOTAL</b>	7,770	926.94	478.29	57.35	1,586.84

# Pinellas County Local Mitigation Strategy

## City of Seminole

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	3,279	168.21	116.69	13.29	535.65
<b>500Yr</b>	248	25.67	17.44	1.63	54.03
<b>Velocity</b>	10	3.92	6.99	0.24	11.15
<b>Outside</b>	5,523	552.24	249.81	27.69	900.68
<b>TOTAL</b>	9,060	750.05	390.93	42.84	1,501.52

## City of South Pasadena

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	2,817	115.11	78.18	7.05	547.06
<b>500Yr</b>	--	--	--	--	--
<b>Velocity</b>	252	5.95	8.70	0.65	37.81
<b>Outside</b>	--	--	--	--	--
<b>TOTAL</b>	3,069	121.06	86.89	7.70	584.87

## City of St. Pete Beach

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	6,863	554.95	1,032.13	41.15	2,341.54
<b>500Yr</b>	--	--	--	--	--
<b>Velocity</b>	1,070	28.50	87.32	1.96	390.98
<b>Outside</b>	--	--	--	--	--
<b>TOTAL</b>	7,933	583.44	1,119.44	43.11	2,732.52

## City of St. Petersburg

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	40,814	4,132.39	3,088.15	258.71	9,238.39
<b>500Yr</b>	5,770	552.23	295.16	27.51	1,152.39
<b>Velocity</b>	754	64.24	108.21	7.15	309.87
<b>Outside</b>	59,335	5,596.30	2,432.62	199.69	9,010.09
<b>TOTAL</b>	106,673	10,345.16	5,924.14	493.06	19,710.74

# Pinellas County Local Mitigation Strategy

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## City of Tarpon Springs

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	5,259	431.29	261.21	34.25	851.16
<b>500Yr</b>	1,902	210.08	88.52	12.81	346.11
<b>Velocity</b>	693	76.44	57.62	5.95	184.23
<b>Outside</b>	4,916	441.26	183.32	22.09	716.39
<b>TOTAL</b>	12,770	1,159.07	590.68	75.09	2,097.89

## City of Treasure Island

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	4,669	289.62	533.92	28.72	1,305.15
<b>500Yr</b>	--	--	--	--	--
<b>Velocity</b>	1,289	55.59	165.64	2.72	466.43
<b>Outside</b>	--	--	--	--	--
<b>TOTAL</b>	5,958	345.21	699.56	31.44	1,771.58

## Unincorporated Pinellas County

FLOOD ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
<b>100Yr</b>	29,219	2,374.03	1,614.31	211.64	5,579.59
<b>500Yr</b>	10,777	793.84	391.02	58.26	1,582.54
<b>Velocity</b>	1,164	205.12	270.40	22.82	551.46
<b>Outside</b>	87,023	8,237.33	3,495.60	495.58	13,531.00
<b>TOTAL</b>	128,183	11,610.32	5,771.32	788.29	21,244.59

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# Pinellas County Local Mitigation Strategy

## *Attachment 1- 2: Storm Surge Vulnerability by Jurisdiction*

Pinellas County (municipalities and unincorporated areas combined)

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	92,466	6,525.21	8,929.35	569.25	25,370.61
B	58,003	5,324.59	2,833.80	340.15	10,670.98
C	53,521	5,245.85	2,377.52	331.65	9,096.87
D	38,336	3,998.24	1,753.12	233.15	6,619.93
E	24,692	2,430.80	1,091.62	113.01	4,294.37
NON-EVAC	167,218	16,482.76	6,897.75	789.36	26,654.36
<b>TOTAL</b>	<b>434,236</b>	<b>40,007.46</b>	<b>23,883.16</b>	<b>2,376.56</b>	<b>82,707.12</b>

Town of Belleair

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	162	71.19	74.39	5.47	151.05
B	563	8.44	11.82	0.98	152.08
C	95	21.81	13.12	1.07	47.38
D	16	7.11	6.02	0.21	13.34
E	13	2.38	2.96	0.10	5.45
NON-EVAC	1,608	234.91	177.74	15.47	465.33
<b>TOTAL</b>	<b>2,462</b>	<b>345.85</b>	<b>286.45</b>	<b>23.35</b>	<b>835.33</b>

City of Belleair Beach

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	1,297	163.70	279.15	14.94	578.11
B	--	--	--	--	--
C	--	--	--	--	--
D	--	--	--	--	--
E	--	--	--	--	--
NON-EVAC	--	--	--	--	--
<b>TOTAL</b>	<b>1,297</b>	<b>163.70</b>	<b>279.15</b>	<b>14.94</b>	<b>578.11</b>

# Pinellas County Local Mitigation Strategy

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## City of Belleair Bluffs

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	2	0.00	1.52	0.17	1.69
B	92	0.75	1.90	0.03	14.01
C	5	1.27	4.84	0.18	6.29
D	127	3.51	3.04	0.37	20.01
E	6	1.84	6.72	0.21	8.78
NON-EVAC	1,091	89.51	51.75	4.18	181.25
<b>TOTAL</b>	<b>1,323</b>	<b>96.89</b>	<b>69.77</b>	<b>5.13</b>	<b>232.03</b>

## Town of Belleair Shore

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	62	35.01	98.47	1.84	135.32
B	--	--	--	--	--
C	--	--	--	--	--
D	--	--	--	--	--
E	--	--	--	--	--
NON-EVAC	--	--	--	--	--
<b>TOTAL</b>	<b>62</b>	<b>35.01</b>	<b>98.47</b>	<b>1.84</b>	<b>135.32</b>

## City of Clearwater

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	10,140	559.17	1,114.23	55.99	4,082.23
B	2,110	86.20	62.60	4.48	315.08
C	1,329	113.72	62.73	6.70	224.20
D	1,128	84.88	36.06	3.02	140.55
E	1,610	118.68	50.30	6.45	188.60
NON-EVAC	32,142	3,805.85	1,498.94	186.15	6,148.69
<b>TOTAL</b>	<b>49,037</b>	<b>4,793.09</b>	<b>2,866.03</b>	<b>266.50</b>	<b>11,268.84</b>

## Pinellas County Local Mitigation Strategy

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### City of Dunedin

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	3,363	133.81	235.72	15.62	670.60
B	911	72.90	71.93	6.11	170.43
C	794	61.38	43.70	2.92	116.14
D	871	89.83	58.33	4.17	161.79
E	1,950	128.19	78.63	5.13	226.93
NON-EVAC	9,829	885.68	355.97	50.33	1,501.87
<b>TOTAL</b>	<b>17,738</b>	<b>1,371.79</b>	<b>845.62</b>	<b>84.40</b>	<b>2,849.23</b>

### City of Gulfport

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	2,798	208.93	170.23	15.90	584.79
B	405	28.00	21.92	1.06	50.98
C	706	50.14	34.86	1.62	103.53
D	660	63.39	25.67	2.08	91.14
E	1,442	93.18	32.22	3.09	128.48
NON-EVAC	938	67.00	18.87	1.54	87.40
<b>TOTAL</b>	<b>6,955</b>	<b>510.72</b>	<b>304.22</b>	<b>25.31</b>	<b>1,046.88</b>

### City of Indian Rocks Beach

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	3,390	204.06	402.27	17.64	1,032.32
B	--	--	--	--	--
C	--	--	--	--	--
D	--	--	--	--	--
E	--	--	--	--	--
NON-EVAC	--	--	--	--	--
<b>TOTAL</b>	<b>3,390</b>	<b>204.06</b>	<b>402.27</b>	<b>17.64</b>	<b>1,032.32</b>

## Pinellas County Local Mitigation Strategy

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### Town of Indian Shores

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	2,769	30.17	97.07	2.46	795.22
B	--	--	--	--	--
C	--	--	--	--	--
D	--	--	--	--	--
E	--	--	--	--	--
NON-EVAC	--	--	--	--	--
<b>TOTAL</b>	<b>2,769</b>	<b>30.17</b>	<b>97.07</b>	<b>2.46</b>	<b>795.22</b>

### Town of Kenneth City

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	2,798	208.93	170.23	15.90	584.79
B	405	28.00	21.92	1.06	50.98
C	706	50.14	34.86	1.62	103.53
D	660	63.39	25.67	2.08	91.14
E	1,442	93.18	32.22	3.09	128.48
NON-EVAC	938	67.00	18.87	1.54	87.40
<b>TOTAL</b>	<b>6,955</b>	<b>510.72</b>	<b>304.22</b>	<b>25.31</b>	<b>1,046.88</b>

### City of Largo

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	2,947	105.26	106.40	11.21	238.72
B	2,195	202.33	136.33	18.89	415.11
C	4,468	503.28	248.08	34.66	907.00
D	6,545	488.94	280.92	29.43	911.53
E	662	89.85	41.53	5.71	157.16
NON-EVAC	13,119	1,129.70	441.40	51.16	1,799.60
<b>TOTAL</b>	<b>30,162</b>	<b>2,606.33</b>	<b>1,295.86</b>	<b>155.74</b>	<b>4,561.97</b>

# Pinellas County Local Mitigation Strategy

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## City of Madeira Beach

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	3,839	213.19	390.86	20.84	1,129.88
B	--	--	--	--	--
C	--	--	--	--	--
D	--	--	--	--	--
E	--	--	--	--	--
NON-EVAC	--	--	--	--	--
<b>TOTAL</b>	<b>3,839</b>	<b>213.19</b>	<b>390.86</b>	<b>20.84</b>	<b>1,129.88</b>

## Town of North Redington Beach

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	1,297	78.96	125.47	7.33	489.12
B	--	--	--	--	--
C	--	--	--	--	--
D	--	--	--	--	--
E	--	--	--	--	--
NON-EVAC	--	--	--	--	--
<b>TOTAL</b>	<b>1,297</b>	<b>78.96</b>	<b>125.47</b>	<b>7.33</b>	<b>489.12</b>

## City of Oldsmar

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	1,526	105.03	78.39	6.69	204.07
B	2,682	402.97	188.83	22.11	645.51
C	1,704	230.57	95.93	14.57	402.23
D	--	--	--	--	--
E	--	--	--	--	--
NON-EVAC	--	--	--	--	--
<b>TOTAL</b>	<b>5,963</b>	<b>744.88</b>	<b>368.40</b>	<b>43.85</b>	<b>1,263.85</b>

# Pinellas County Local Mitigation Strategy

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## City of Pinellas Park

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	6	0.09	0.21	0.01	0.31
B	810	137.31	61.59	9.30	208.91
C	13,034	1,261.71	489.56	67.64	1,924.69
D	6,668	723.64	257.62	37.91	1,112.95
E	268	24.24	15.90	1.93	43.63
NON-EVAC	239	36.80	19.57	2.57	70.58
<b>TOTAL</b>	<b>21,226</b>	<b>2,197.40</b>	<b>855.63</b>	<b>120.32</b>	<b>3,388.19</b>

## Town of Redington Beach

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	1,096	115.16	223.56	8.43	432.75
B	--	--	--	--	--
C	--	--	--	--	--
D	--	--	--	--	--
E	--	--	--	--	--
NON-EVAC	--	--	--	--	--
<b>TOTAL</b>	<b>1,096</b>	<b>115.16</b>	<b>223.56</b>	<b>8.43</b>	<b>432.75</b>

## Town of Redington Shores

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	2,103	88.53	173.20	6.81	643.11
B	--	--	--	--	--
C	--	--	--	--	--
D	--	--	--	--	--
E	--	--	--	--	--
NON-EVAC	--	--	--	--	--
<b>TOTAL</b>	<b>2,103</b>	<b>88.53</b>	<b>173.20</b>	<b>6.81</b>	<b>643.11</b>

# Pinellas County Local Mitigation Strategy

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## City of Safety Harbor

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	238	19.57	28.92	3.65	52.14
B	686	58.16	47.80	4.13	117.92
C	485	34.04	33.75	2.16	73.07
D	1,823	181.29	98.57	9.32	328.53
E	1,057	152.08	44.58	5.91	237.19
NON-EVAC	3,421	479.32	219.82	32.12	767.03
<b>TOTAL</b>	<b>7,770</b>	<b>926.94</b>	<b>478.29</b>	<b>57.35</b>	<b>1,586.84</b>

## City of Seminole

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	618	29.38	30.00	3.16	93.02
B	2,983	147.37	88.81	10.74	448.75
C	330	22.88	14.95	1.42	52.40
D	50	8.90	5.76	0.78	15.71
E	102	13.44	6.96	0.70	27.53
NON-EVAC	4,893	526.03	224.78	25.92	841.37
<b>TOTAL</b>	<b>9,060</b>	<b>750.05</b>	<b>390.93</b>	<b>42.84</b>	<b>1,501.52</b>

## City of South Pasadena

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	2,993	103.51	83.12	7.39	555.18
B	64	1.17	1.20	0.08	7.72
C	1	0.09	0.12	0.00	0.21
D	--	--	--	--	--
E	--	--	--	--	--
NON-EVAC	--	--	--	--	--
<b>TOTAL</b>	<b>3,070</b>	<b>121.06</b>	<b>86.89</b>	<b>7.72</b>	<b>584.88</b>

# Pinellas County Local Mitigation Strategy

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## City of St. Pete Beach

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	7,943	583	1,119	44	2,733
B	--	--	--	--	--
C	--	--	--	--	--
D	--	--	--	--	--
E	--	--	--	--	--
NON-EVAC	--	--	--	--	--
<b>TOTAL</b>	7,943	583	1,119	44	2,733

## City of St. Petersburg

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	20,235	1,854.87	1,970.58	149.10	5,213.10
B	19,456	2,136.72	1,128.12	115.23	3,915.70
C	7,887	738.43	387.26	28.89	1,423.03
D	5,248	605.85	268.99	22.72	1,042.21
E	11,322	1,224.43	558.28	48.95	2,348.36
NON-EVAC	42,093	3,554.86	1,542.85	120.94	5,454.81
<b>TOTAL</b>	106,686	10,345.21	5,924.20	493.22	19,711.00

## City of Tarpon Springs

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	3,568	328.89	242.55	25.19	723.01
B	4,223	406.73	175.58	28.00	690.65
C	2,406	234.51	104.19	12.10	391.70
D	1,267	99.06	37.21	4.86	149.91
E	435	40.91	12.54	2.03	58.19
NON-EVAC	558	40.77	9.88	1.90	64.43
<b>TOTAL</b>	12,773	1,159.15	591.01	75.11	2,098.33

## Pinellas County Local Mitigation Strategy

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### City of Treasure Island

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	5,977	345.21	699.56	31.76	1,771.90
B	--	--	--	--	--
C	--	--	--	--	--
D	--	--	--	--	--
E	--	--	--	--	--
NON-EVAC	--	--	--	--	--
<b>TOTAL</b>	<b>5,977</b>	<b>345.21</b>	<b>699.56</b>	<b>31.76</b>	<b>1,771.90</b>

### Unincorporated Pinellas County

EVAC ZONE	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
A	14,402	1,151.29	1,200.22	114.81	3,136.65
B	20,823	1,635.54	835.37	119.02	3,518.13
C	20,277	1,972.03	844.42	157.72	3,425.02
D	13,904	1,637.78	673.57	118.11	2,626.67
E	4,745	475.38	217.45	30.16	757.61
NON-EVAC	53,682	4,695.11	1,962.48	244.32	7,689.80
<b>TOTAL</b>	<b>128,198</b>	<b>11,611.31</b>	<b>5,772.21</b>	<b>789.05</b>	<b>21,247.23</b>

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# Pinellas County Local Mitigation Strategy

## Attachment 1- 3: Pinellas County Wildfire Vulnerability by Jurisdiction

Pinellas County (municipalities and unincorporated areas combined)

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	158,950	14,486.52	10,277.42	871.23	34,639.81
1	103,114	9,412.24	5,235.78	546.15	17,713.79
2	75,580	6,340.95	3,327.21	341.58	11,970.89
3	52,500	4,849.27	2,599.77	277.51	9,149.83
4	25,122	2,520.07	1,282.29	163.77	4,766.39
5	12,171	1,202.20	694.32	89.47	2,421.38
6	4,934	573.58	281.18	38.69	1,081.42
7	1,497	163.08	79.43	17.23	332.43
8	155	17.97	10.34	1.46	34.10
9	6	0.77	0.30	0.04	1.12
<b>TOTAL</b>	<b>434,236</b>	<b>40,007.46</b>	<b>23,883.16</b>	<b>2,376.56</b>	<b>82,707.12</b>

Town of Belleair

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	762	85.60	67.98	6.02	218.31
1	739	108.76	92.66	6.10	247.29
2	489	74.61	64.39	3.98	180.07
3	393	62.27	46.97	3.25	152.22
4	65	14.07	12.10	3.82	32.98
5	9	0.55	2.35	0.04	4.31
6	--	--	--	--	--
7	--	--	--	--	--
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>2,457</b>	<b>345.85</b>	<b>286.45</b>	<b>23.21</b>	<b>835.19</b>

# Pinellas County Local Mitigation Strategy

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## City of Belleair Beach

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	0	1,094	128.53	209.05	11.13
1	1	190	31.15	62.17	3.37
2	2	10	3.21	6.57	0.35
3	3	2	0.52	0.81	0.05
4	--	--	--	--	--
5	1	0.28	0.57	0.05	0.89
6	--	--	--	--	--
7	--	--	--	--	--
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>1,297</b>	<b>163.70</b>	<b>279.15</b>	<b>14.94</b>	<b>578.11</b>

## City of Belleair Bluffs

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	807	60.70	36.00	2.80	128.93
1	403	18.70	10.34	0.96	57.58
2	88	10.71	11.01	0.84	25.78
3	25	6.79	12.42	0.54	19.74
4	--	--	--	--	--
5	--	--	--	--	--
6	--	--	--	--	--
7	--	--	--	--	--
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>2,620</b>	<b>260.59</b>	<b>348.93</b>	<b>20.07</b>	<b>810.13</b>

# Pinellas County Local Mitigation Strategy

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## Town of Belleair Shore

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	62	35.01	98.47	1.84	135.32
1	--	--	--	--	--
2	--	--	--	--	--
3	--	--	--	--	--
4	--	--	--	--	--
5	--	--	--	--	--
6	--	--	--	--	--
7	--	--	--	--	--
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	62	35.01	98.47	1.84	135.32

## City of Clearwater

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	19,223	1,980.05	1,365.27	114.57	5,903.30
1	10,609	1,038.75	648.27	57.89	2,096.11
2	7,741	609.03	312.70	30.24	1,134.43
3	5,729	584.01	278.49	27.50	1,020.67
4	2,785	296.02	132.30	16.32	537.65
5	1,606	121.91	71.42	8.00	279.59
6	952	134.15	44.50	6.04	233.97
7	293	24.55	11.03	4.06	53.78
8	31	4.61	2.00	0.35	7.74
9	--	--	--	--	--
<b>TOTAL</b>	48,969	4,793.09	2,865.98	264.97	11,267.26

# Pinellas County Local Mitigation Strategy

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## City of Dunedin

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	6,014	454.59	278.36	29.46	965.11
1	5,164	349.62	194.54	20.43	692.55
2	3,519	244.51	182.08	16.63	541.17
3	1,932	189.81	109.84	9.26	365.79
4	800	94.45	65.29	4.81	211.55
5	277	35.65	14.27	3.39	66.78
6	26	3.16	1.23	0.31	6.15
7	1	0.00	0.02	0.00	0.02
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>17,733</b>	<b>1,371.79</b>	<b>845.62</b>	<b>84.28</b>	<b>2,849.12</b>

## City of Gulfport

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	2,269	145.92	104.00	9.59	372.23
1	2,054	177.43	92.23	7.82	317.63
2	1,648	121.27	67.75	4.77	224.40
3	789	60.48	36.84	2.40	110.73
4	103	5.49	2.95	0.19	16.15
5	10	0.13	0.44	0.54	2.86
6	--	--	--	--	--
7	--	--	--	--	--
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>6,873</b>	<b>510.72</b>	<b>304.22</b>	<b>25.31</b>	<b>6,873</b>

# Pinellas County Local Mitigation Strategy

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## City of Indian Rocks Beach

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	2,393	146.60	295.10	11.47	784.76
1	474	36.73	71.00	3.92	132.83
2	293	15.97	26.22	1.70	68.73
3	207	3.75	7.94	0.45	41.36
4	20	0.53	0.63	0.06	3.55
5	2	0.10	0.38	0.00	0.48
6	2	0.13	0.35	0.02	0.49
7	4	0.34	0.83	0.03	1.19
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>3,395</b>	<b>204.14</b>	<b>402.46</b>	<b>17.64</b>	<b>1,033.40</b>

## Town of Indian Shores

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	0	1,892	20.60	78.71	1.62
1	1	354	7.10	8.91	0.42
2	2	336	1.72	3.13	0.19
3	3	143	0.34	5.44	0.14
4	4	39	0.41	0.88	0.05
5	--	--	--	--	--
6	--	--	--	--	--
7	--	--	--	--	--
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>2,764</b>	<b>30.17</b>	<b>97.07</b>	<b>2.41</b>	<b>795.18</b>

# Pinellas County Local Mitigation Strategy

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## Town of Kenneth City

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	1,172	79.94	28.55	3.57	118.48
1	696	29.68	9.20	1.02	52.98
2	158	9.24	3.30	0.45	16.19
3	28	2.89	1.40	0.18	4.47
4	1	0.10	0.26	0.00	0.36
5	--	--	--	--	--
6	--	--	--	--	--
7	--	--	--	--	--
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>2,055</b>	<b>121.85</b>	<b>42.71</b>	<b>5.22</b>	<b>192.48</b>

## City of Largo

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	12,281	934.27	602.60	69.48	1,715.83
1	7,325	730.96	300.05	35.54	1,176.19
2	4,761	399.18	150.41	19.19	655.92
3	2,973	308.74	123.55	16.74	513.74
4	1,699	146.50	65.57	6.90	279.79
5	727	62.50	34.83	3.67	138.18
6	246	20.37	12.59	2.73	54.15
7	148	10.67	7.44	1.60	36.30
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>30,160</b>	<b>2,613.18</b>	<b>1,297.04</b>	<b>155.85</b>	<b>4,570.11</b>

# Pinellas County Local Mitigation Strategy

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## City of Madeira Beach

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	3,308	158.99	290.47	14.31	949.22
1	487	47.39	80.59	5.71	153.22
2	40	4.38	8.86	0.55	13.79
3	1	2.44	10.94	0.21	13.59
4	--	--	--	--	--
5	--	--	--	--	--
6	--	--	--	--	--
7	--	--	--	--	--
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>3,836</b>	<b>213.19</b>	<b>390.86</b>	<b>20.78</b>	<b>1,129.82</b>

## Town of North Redington Beach

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	1,093	53.49	81.16	4.16	391.24
1	92	11.88	21.43	1.52	43.59
2	66	9.11	16.10	1.16	32.11
3	19	2.23	3.12	0.19	9.85
4	16	0.81	1.71	0.13	6.58
5	6	0.20	0.35	0.03	2.77
6	5	1.24	1.60	0.15	2.98
7	5	1.24	1.60	0.15	2.98
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>1,297</b>	<b>78.96</b>	<b>125.47</b>	<b>7.33</b>	<b>489.12</b>

# Pinellas County Local Mitigation Strategy

## City of Oldsmar

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	1,201	120.44	64.33	6.87	201.00
1	869	114.40	59.13	7.87	195.98
2	854	100.80	50.06	5.24	171.99
3	980	163.77	66.58	9.37	273.86
4	785	89.53	53.64	5.59	158.38
5	682	71.58	38.92	3.69	133.38
6	375	51.07	23.72	3.12	81.51
7	156	25.50	8.94	1.55	36.32
8	54	7.02	2.70	0.52	10.23
9	6	0.77	0.30	0.04	1.12
<b>TOTAL</b>	<b>5,962</b>	<b>744.88</b>	<b>368.32</b>	<b>43.85</b>	<b>1,263.77</b>

## City of Pinellas Park

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	8,294	853.35	384.96	50.45	1,352.62
1	5,291	527.24	188.13	27.03	785.29
2	3,673	340.30	106.40	16.14	502.49
3	2,421	207.64	74.04	11.01	331.31
4	1,167	157.03	50.97	8.30	239.08
5	313	76.22	32.50	3.88	119.14
6	46	11.05	9.24	0.90	21.70
7	19	24.56	9.39	2.60	36.54
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>21,225</b>	<b>2,197.40</b>	<b>855.63</b>	<b>120.32</b>	<b>3,388.19</b>

## Pinellas County Local Mitigation Strategy

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### Town of Redington Beach

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	897	85.14	165.90	5.23	340.58
1	156	23.00	42.85	2.36	69.49
2	33	5.57	11.14	0.70	17.41
3	9	1.45	3.24	0.14	4.83
4	1	0.00	0.43	0.00	0.43
5	--	--	--	--	--
6	--	--	--	--	--
7	--	--	--	--	--
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>1,096</b>	<b>115.16</b>	<b>223.56</b>	<b>8.43</b>	<b>432.75</b>

### Town of Redington Shores

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	1,837	70.69	136.18	4.81	550.80
1	208	12.08	23.39	1.18	72.13
2	27	3.05	7.44	0.40	10.89
3	20	1.79	4.32	0.21	6.32
4	5	0.58	1.16	0.09	1.83
5	--	--	--	--	--
6	2	0.22	0.46	0.02	0.70
7	1	0.11	0.23	0.03	0.37
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>2,100</b>	<b>88.53</b>	<b>173.20</b>	<b>6.73</b>	<b>643.03</b>

# Pinellas County Local Mitigation Strategy

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## City of Safety Harbor

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	522	92.31	45.64	5.65	144.18
1	1,124	223.26	78.70	10.23	313.63
2	1,398	154.32	86.52	10.74	266.32
3	1,610	167.08	99.94	11.16	301.38
4	1,593	151.34	92.97	9.73	293.07
5	1,187	107.41	57.05	7.39	210.06
6	318	29.14	16.44	2.29	54.93
7	18	2.08	1.03	0.15	3.26
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>7,770</b>	<b>926.94</b>	<b>478.29</b>	<b>57.35</b>	<b>1,586.84</b>

## City of Seminole

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	3,676	319.74	164.40	19.19	616.09
1	2,391	177.53	82.66	8.92	352.34
2	1,758	127.81	74.61	6.77	291.71
3	730	53.22	30.02	4.10	113.71
4	273	44.87	23.04	2.28	73.09
5	203	23.16	13.59	1.32	47.99
6	28	3.72	2.61	0.26	6.59
7	1	0.00	0.00	0.00	0.00
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>9,060</b>	<b>750.05</b>	<b>390.93</b>	<b>42.84</b>	<b>1,501.52</b>

# Pinellas County Local Mitigation Strategy

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## City of South Pasadena

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	1,669	98.30	71.90	6.49	350.27
1	1,135	15.40	12.87	0.88	177.41
2	259	7.17	1.86	0.32	56.74
3	4	0.19	0.25	0.01	0.44
4	--	--	--	--	--
5	--	--	--	--	--
6	--	--	--	--	--
7	--	--	--	--	--
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>3,069</b>	<b>121.06</b>	<b>86.89</b>	<b>7.70</b>	<b>584.87</b>

## City of St. Pete Beach

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	6,715	492.21	938.30	33.43	2,305.11
1	1,094	82.81	161.80	8.51	383.68
2	119	7.84	17.92	1.07	41.63
3	3	0.40	0.99	0.08	1.47
4	--	--	--	--	--
5	2	0.18	0.43	0.02	0.63
6	--	--	--	--	--
7	--	--	--	--	--
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>7,933</b>	<b>583.44</b>	<b>1,119.44</b>	<b>43.11</b>	<b>2,732.52</b>

# Pinellas County Local Mitigation Strategy

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## City of St. Petersburg

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	37,173	4,331.78	2,242.83	215.67	8,237.03
1	31,037	2,686.25	1,574.01	124.66	4,989.86
2	21,936	1,777.15	1,065.72	75.97	3,397.29
3	11,551	1,023.75	728.77	50.61	2,037.07
4	3,279	295.69	219.28	17.05	652.39
5	1,041	124.92	48.57	5.70	218.95
6	439	73.95	33.88	2.14	124.37
7	221	31.69	11.11	1.26	53.83
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>7,933</b>	<b>583.44</b>	<b>1,119.44</b>	<b>43.11</b>	<b>2,732.52</b>

## City of Tarpon Springs

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	2,984	319.39	147.49	17.77	509.12
1	2,825	309.09	122.03	18.42	503.43
2	3,226	257.18	153.85	18.09	512.07
3	2,892	210.24	117.97	15.80	425.30
4	690	56.65	37.03	4.43	122.10
5	143	5.93	9.17	0.47	22.03
6	11	0.68	3.47	0.13	4.28
7	--	--	--	--	--
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>12,771</b>	<b>1,159.15</b>	<b>591.01</b>	<b>75.10</b>	<b>2,098.31</b>

# Pinellas County Local Mitigation Strategy

## City of Treasure Island

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	4,973	300.28	600.64	25.66	1,500.51
1	558	40.74	86.76	4.97	173.20
2	322	1.46	3.76	0.19	63.03
3	78	1.84	1.74	0.13	21.13
4	23	0.24	5.54	0.45	11.89
5	4	0.65	1.13	0.04	1.82
6	--	--	--	--	--
7	--	--	--	--	--
8	--	--	--	--	--
9	--	--	--	--	--
<b>TOTAL</b>	<b>5,958</b>	<b>345.21</b>	<b>699.56</b>	<b>31.44</b>	<b>1,771.58</b>

## Unincorporated Pinellas County

WILDFIRE LEVEL OF CONCERN	NUMBER OF PROPERTIES	BUILDING VALUE (\$Million)	LAND VALUE (\$Million)	EXTRA FEATURE VALUE (\$Million)	MARKET VALUE (\$Million)
0	36,639	3,118.62	1,779.12	200.00	5,760.40
1	27,839	2,612.29	1,212.05	186.44	4,545.91
2	22,826	2,055.37	895.39	125.91	3,686.37
3	19,961	1,793.64	834.17	113.98	3,346.18
4	11,777	1,165.76	516.52	83.58	2,118.97
5	5,959	571.01	368.79	51.26	1,172.13
6	2,489	245.94	132.68	20.73	492.58
7	630	42.34	27.84	5.83	107.82
8	69	6.34	5.64	0.59	16.12
9	--	--	--	--	--
<b>TOTAL</b>	<b>128,189</b>	<b>11,611.31</b>	<b>5,772.21</b>	<b>788.32</b>	<b>21,246.49</b>

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**ATTACHMENT 1-4  
HAZUS ANALYSIS OF 1921 HURRICANE**

# Pinellas County Local Mitigation Strategy

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# SCENARIO INFORMATION FOR HYPOTHETICAL RECURRENCE OF THE HISTORIC TAMPA BAY HURRICANE OF 1921

## Introduction

On October 25, 1921, the Tampa Bay Hurricane of 1921 (also known as the Tarpon Springs Hurricane) struck the Pinellas County coast. The Tampa Bay Hurricane was the third hurricane, second major hurricane, and final storm of an inactive 1921

Atlantic hurricane season. The storm took a typical path for an October Atlantic hurricane, forming in the Caribbean, brushing past Cuba, strengthening in the warm waters of the Gulf of Mexico before making the turn northeast toward the west coast of Florida.



On the morning of the event, a small column on the front page of the Tampa Times was dedicated to warning the public of the impending disaster. The final statement given by Meteorologist W. J. Bennett at 11:30 on October 24, 1921 was that, “we are apparently in the apparent path of the storm, but in the past in practically identical circumstances, similar storms have always veered either to the north or the south of us, and probably this one will do likewise.”

It did not.

The devastating Category 3 hurricane made landfall at Tarpon Springs packing winds of 140 miles an hour. As it moved inland on a northeast heading, its counter-clockwise winds pushed a 10- to 12-foot wall of water into Tampa Bay, flooding the coastal areas of Pinellas and Hillsborough counties. Approximately 42 hours of rainfall preceded landfall, with rainfall totals over six inches region-wide, including 8.53 inches at the Tampa weather bureau and 11.7 inches at St. Leo in Pasco County. A total of ten people were killed in the hurricane overall but only three were recovered.

The hurricane destroyed the Passage Key fishing village in Manatee County known as the "Gateway to historic Tampa Bay" and created the well-known Hurricane Pass (Pinellas County) and Longboat Key Pass (Manatee and Sarasota counties). The hurricane's storm surge damaged a fishing pier in St. Petersburg and destroyed the casino in Gulfport. It leveled the historic Ballast Point Pavilion along with several other buildings in the historic district of Tampa. Agriculture sustained significant damage badly damaging what was then a thriving citrus crop in Pinellas County and throughout the state's midsection. The hurricane was also the most destructive storm of the season, causing around \$10 million in damages at the time (\$133 million in 2014 dollars).

Links for more information:

<http://www.srh.noaa.gov/images/tbw/paig/PresAmHurricane1921.pdf>

<http://www.aoml.noaa.gov/general/lib/lib1/nhclib/mwreviews/1921.pdf>

<http://www.baynews9.com/content/36/2009/10/22/536870.html>

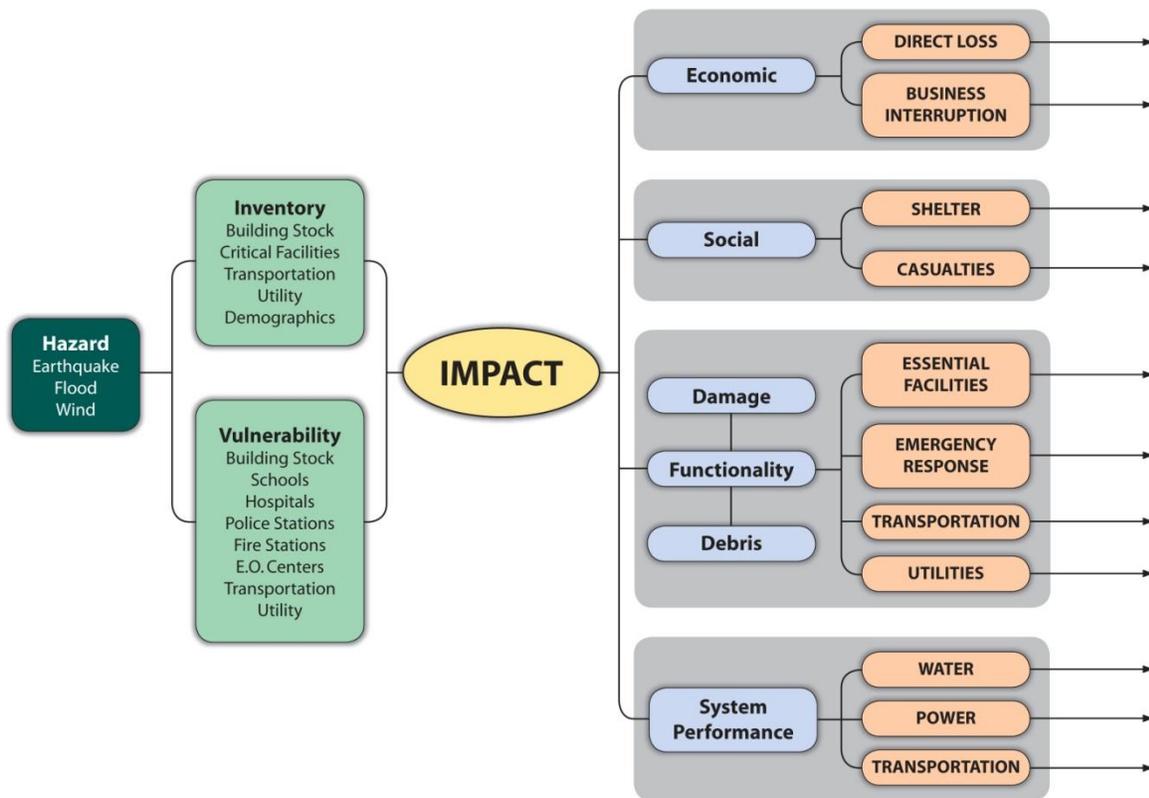
Acknowledgments: NOAA Monthly Weather Review 1921, The Tampa Morning Tribune, The St. Petersburg Times, The Tampa Daily Times, The Plant City Courier, and The Burgert Brothers Collection.

## DAMAGE SCENARIO DEVELOPMENT

Loss estimates for the Tampa Bay Hurricane of 1921 scenario in present-day conditions were developed using HAZUS-MH 2.1. HAZUS-MH 2.1 is a standardized loss estimation methodology developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS)<sup>1</sup>. The methodology is built upon an integrated GIS platform (see **Figure 2**) to conduct analysis at an aggregate level.

HAZUS-MH 2.1 includes a number of historical events for the purpose of simulating the effects of those storms on the present-day population and built environment. The Tampa Bay Hurricane of 1921 is included in the HAZUS MH 2.1 historical events database, and that data was used to model the effects of the 1921 hurricane winds and to estimate losses caused by those winds in present-day Pinellas County. The following pages include the output of the scenario model run from Hazus-MH 2.1.

**FIGURE 1. CONCEPTUAL MODEL OF HAZUS-MH METHODOLOGY**



<sup>1</sup> Loss estimates produced by software models such as HAZUS-MH 2.1 are to be used with a certain degree of caution. Uncertainty within these types of results can be introduced from a number of sources, including the use of national datasets to represent local conditions, simplifications within the model introduced to allow the model to have flexibility with Level 1 users, and errors introduced as part of the mathematical processing within the software code. As a planning tool however, the consistency and value of the results developed by HAZUS-MH cannot be understated.

# Hazus-MH: Hurricane Event Report

**Region Name:** Pinellas County

**Hurricane Scenario:** UN-NAMED-1921-6

**Print Date:** Wednesday, July 30, 2014

***Disclaimer:***

*Totals only reflect data for those census tracts/blocks included in the user's study region.*

*The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Hurricane. These results can be improved by using enhanced inventory data.*

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## General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The hurricane loss estimates provided in this report are based on a region that includes 1 county(ies) from the following state(s):

- Florida

**Note:**

Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 293.22 square miles and contains 208 census tracts. There are over 414 thousand households in the region and has a total population of 921,482 people (2000 Census Bureau data). The distribution of population by State and County is provided in Appendix B.

There are an estimated 425 thousand buildings in the region with a total building replacement value (excluding contents) of 70,489 million dollars (2006 dollars). Approximately 91% of the buildings (and 75% of the building value) are associated with residential housing.

## Building Inventory

### General Building Stock

Hazus estimates that there are 425,113 buildings in the region which have an aggregate total replacement value of 70,489 million (2006 dollars). Table 1 presents the relative distribution of the value with respect to the general occupancies. Appendix B provides a general distribution of the building value by State and County.

**Table 1: Building Exposure by Occupancy Type**

<b>Occupancy</b>	<b>Exposure (\$1000)</b>	<b>Percent of Tot</b>
Residential	53,168,498	75.4%
Commercial	11,848,166	16.8%
Industrial	3,253,570	4.6%
Agricultural	170,759	0.2%
Religious	1,133,952	1.6%
Government	493,738	0.7%
Education	420,706	0.6%
<b>Total</b>	<b>70,489,389</b>	<b>100.0%</b>

### Essential Facility Inventory

For essential facilities, there are 17 hospitals in the region with a total bed capacity of 4,325 beds. There are 277 schools, 32 fire stations, 20 police stations and 1 emergency operation facilities.

## Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

<b>Scenario Name:</b>	UN-NAMED-1921-6
<b>Type:</b>	Historic
<b>Max Peak Gust in Study Region:</b>	119 mph

## Building Damage

### General Building Stock Damage

Hazus estimates that about 27,789 buildings will be at least moderately damaged. This is over 7% of the total number of buildings in the region. There are an estimated 545 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 6 of the Hazus Hurricane technical manual. Table 2 below summarizes the expected damage by general occupancy for the buildings in the region. Table 3 summarizes the expected damage by general building type.

**Table 2: Expected Building Damage by Occupancy**

Occupancy	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	1,002	69.94	274	19.14	101	7.02	49	3.42	7	0.48
Commercial	17,558	70.14	4,500	17.98	2,550	10.19	417	1.67	7	0.03
Education	397	73.03	96	17.63	43	7.91	8	1.43	0	0.00
Government	421	74.30	96	16.94	43	7.52	7	1.23	0	0.00
Industrial	5,077	72.95	1,184	17.01	559	8.04	132	1.90	7	0.10
Religion	1,309	72.47	353	19.55	123	6.81	21	1.16	0	0.00
Residential	288,700	74.26	76,359	19.64	21,750	5.59	1,441	0.37	524	0.13
<b>Total</b>	<b>314,463</b>		<b>82,862</b>		<b>25,169</b>		<b>2,075</b>		<b>545</b>	

**Table 3: Expected Building Damage by Building Type**

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	13,591	68.99	3,600	18.27	2,220	11.27	290	1.47	0	0.00
Masonry	159,896	72.08	45,479	20.50	15,126	6.82	1,043	0.47	283	0.13
MH	49,070	98.33	508	1.02	241	0.48	9	0.02	74	0.15
Steel	12,531	69.66	2,942	16.35	2,131	11.84	378	2.10	8	0.05
Wood	84,108	72.72	26,262	22.71	4,665	4.03	467	0.40	153	0.13

**Essential Facility Damage**

Before the hurricane, the region had 4,325 hospital beds available for use. On the day of the hurricane, the model estimates that 0 hospital beds (only 0.00%) are available for use. After one week, 31.00% of the beds will be in service. By 30 days, 100.00% will be operational.

**Table 4: Expected Damage to Essential Facilities**

Classification	Total	# Facilities		
		Probability of at Least Moderate Damage > 50%	Probability of Complete Damage > 50%	Expected Loss of Use < 1 day
EOCs	1	0	0	1
Fire Stations	32	0	0	32
Hospitals	17	17	0	0
Police Stations	20	0	0	20
Schools	277	13	0	3

## Induced Hurricane Damage

### **Debris Generation**

Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 608,652 tons of debris will be generated. Of the total amount, 68,282 tons (11%) is Other Tree Debris. Of the remaining 540,370 tons, Brick/Wood comprises 67% of the total, Reinforced Concrete/Steel comprises of 1% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 14652 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 174,080 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

## Social Impact

### **Shelter Requirement**

Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 5,919 households to be displaced due to the hurricane. Of these, 1,552 people (out of a total population of 921,482) will seek temporary shelter in public shelters.

## Economic Loss

The total economic loss estimated for the hurricane is 2425.5 million dollars, which represents 3.44 % of the total replacement value of the region's buildings.

### Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 2,425 million dollars. 2% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 82% of the total loss. Table 4 below provides a summary of the losses associated with the building damage.

**Table 5: Building-Related Economic Loss Estimates**  
(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
<u>Property Damage</u>						
	Building	1,439,546.46	154,509.99	34,973.32	20,913.60	1,649,943.38
	Content	309,846.96	64,220.82	20,181.09	8,145.03	402,393.90
	Inventory	0.00	1,736.70	4,274.89	206.55	6,218.14
	<b>Subtotal</b>	<b>1,749,393.42</b>	<b>220,467.51</b>	<b>59,429.30</b>	<b>29,265.18</b>	<b>2,058,555.41</b>
<u>Business Interruption Loss</u>						
	Income	1,309.38	20,686.55	616.45	2,252.13	24,864.52
	Relocation	139,293.55	39,918.49	4,426.34	5,796.33	189,434.71
	Rental	94,822.32	21,003.08	507.86	693.91	117,027.17
	Wage	3,086.38	19,106.76	1,035.20	12,372.92	35,601.27
	<b>Subtotal</b>	<b>238,511.64</b>	<b>100,714.88</b>	<b>6,585.85</b>	<b>21,115.29</b>	<b>366,927.67</b>
<u>Total</u>						
	<b>Total</b>	<b>1,987,905.05</b>	<b>321,182.40</b>	<b>66,015.15</b>	<b>50,380.48</b>	<b>2,425,483.08</b>

**Appendix A: County Listing for the Region**

Florida

- Pinellas

**Appendix B: Regional Population and Building Value Data**

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
<b>Florida</b>				
Pinellas	921,482	53,168,498	17,320,891	70,489,389
<b>Total</b>	<b>921,482</b>	<b>53,168,498</b>	<b>17,320,891</b>	<b>70,489,389</b>
<b>Study Region Total</b>	<b>921,482</b>	<b>53,168,498</b>	<b>17,320,891</b>	<b>70,489,389</b>



**ATTACHMENT 1-5  
HAZUS ANALYSIS OF CATASTROPHIC HURRICANE  
Hurricane Phoenix (2010)**

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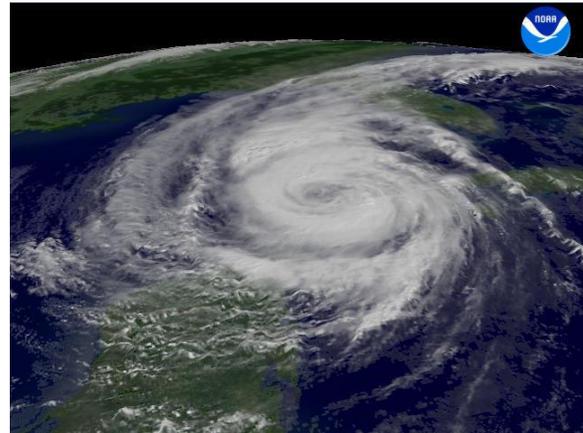
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## SCENARIO INFORMATION FOR CATASTROPHIC PLAN DEVELOPMENT



### INTRODUCTION

The Tampa Bay Regional Planning Council, along with our partners from government, business, and social services communities, is developing a plan to identify and address the multitude of issues that would arise should a catastrophic event occur in the Tampa Bay area. For this plan, the Tampa Bay area is defined as the following counties:

- Citrus
- Hardee
- Hernando
- Hillsborough
- Manatee
- Pasco
- Pinellas
- Polk
- Sumter

Hurricane Phoenix is a fictitious storm created to simulate the effects of a worst-case scenario. With input from Tampa Bay area emergency management agencies and the local office of the National Weather Service (NWS), a simulated storm was developed with a track and intensity that would devastate the entire Tampa Bay region. The NWS generated National Hurricane Center advisories, local hurricane statements, and data files that simulate the hurricane's location and intensity from its formation in the Caribbean Sea, through landfall in Pinellas County, to the hurricane's exit from the east coast of Florida into the Atlantic Ocean. The maps and information presented in this packet are based upon the data files developed for this simulated storm.

The simulated parameters of Hurricane Phoenix were input into HAZUS-MH, the risk assessment tool that uses the Federal Emergency Management Agency (FEMA) standard methodology to measure the effects of real and simulated hazard events like hurricane winds and flooding. As one might expect, a storm of the size and strength of Hurricane Phoenix would create almost unthinkable damage to the area's homes, businesses, infrastructure, overall economy, and social systems that are currently in place. The goal of this planning process is to develop strategies that will help the Tampa Bay region to recover and rebuild after such a devastating catastrophe.



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## SCENARIO TIMELINE FOR HURRICANE PHOENIX

- October 7 –** A tropical depression forms west of the Lesser Antilles, moving generally westward.
- October 9 –** The depression reaches tropical storm strength...named Tropical Storm Phoenix.
- October 10 –** Phoenix reaches hurricane intensity south of Jamaica...forecast to strengthen slightly as it moves generally west and west-northwest into the Yucatan Straits. The storm is forecast to be over open water in the central Gulf of Mexico in 5 days. The entire eastern Gulf coast from New Orleans to the Florida Keys is on the edge of the 5-day error cone (Forecast Map 1). Forecasters, as well as the public, have a wait-and-see attitude for a “minor” hurricane that hasn’t yet set its sights on particular location for landfall in the U.S.
- October 12 –** The Tampa Bay region’s hurricane preparation kicks into high gear as the forecast track turns more to the east with each National Hurricane Center (NHC) forecast/advisory.
- October 13 –** Hurricane Phoenix approaches the Yucatan Straits as a Category 2 storm. A Hurricane Watch is posted for a large stretch of the west central coast of Florida with the 11 am NHC advisory. The forecast track shows a recurving of the storm back to the north-northeast after it enters the Gulf of Mexico (Forecast Map 2). Phoenix is forecast to be Cat 5 storm approaching the west coast of Florida in two days. Tampa Bay is now at the center of the bull’s-eye for the hurricane’s forecast landfall.
- October 14 –** A Hurricane Warning replaces the Watch, starting with the 5 am NHC advisory. Phoenix has brushed the western tip of Cuba, and is moving north-northeast into the open waters of the Gulf of Mexico (Forecast Map 3). Sustained winds have reached 120 mph. Wind and waves gradually increase as the day progresses. Tropical-storm force winds reach coastal sections of Manatee and Pinellas Counties just before midnight, and spread inland through the wee hours of the morning of the 15<sup>th</sup>.
- October 15 - Morning:**  
At daybreak, Phoenix is a strong Category 4 hurricane with 150 mph sustained winds. The center of the storm is just over 100 miles southwest of Saint Pete Beach, moving toward the Tampa Bay area. Hurricane-force winds reach the coast around 8 am. Seas start the day a foot or two above the normal tide level, but rise 5-10 feet by mid-morning.
- October 15 - Midday:**  
Phoenix continues to intensify through the morning. By 11 am, sustained winds reach 160 mph as the wall of the 45-mile wide eye enters the mouth of Tampa Bay (Forecast Map 4). The center of the eye makes landfall at Indian Rocks Beach just before noon.

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## **Afternoon:**

Storm surge of 11-16 feet above normal tide levels has completely overtopped barrier islands from Longboat Key to Clearwater Beach. The storm continues to push a massive volume of water into Tampa Bay, and by early afternoon surge levels climb to at least 20 feet above normal at St. Petersburg, 23 feet at Oldsmar, 24 feet at Apollo Beach, and 26 feet above the normal tide level near Downtown Tampa. Storm surge pushes water from the bay up the Hillsborough, Alafia, Lower Manatee, Braden, and Manatee Rivers and the Tampa Bypass Canal, flooding areas well inland.

All three bridges that traverse Tampa Bay and the Courtney Campbell Causeway sustain either structural damage or have their approaches washed away by water and waves. For a time on the afternoon of the 15<sup>th</sup>, the parts of central St. Petersburg and mid-Pinellas County that are not inundated by storm surge become two islands, each surrounded by water on all sides.

The intense winds of Phoenix damage or destroy numerous buildings that are not inundated by storm surge flooding. Homes and businesses are flattened along a wide swath many miles inland following the hurricane's path. Structural damage is caused by wind alone, windborne debris, or trees that fall onto building roofs. Most windows are blown out of high-rise structures.

## **Evening:**

The hurricane holds a steady course to the northeast as it decimates the entire Tampa Bay area. The storm weakens slowly after landfall. By 5 pm, the center of Phoenix is located in eastern Hernando County. Sustained winds are still 130 mph. Hurricane-force winds continue in Tampa until around 7 pm. That's around 10 straight hours of sustained winds greater than 74 mph.

Phoenix accelerates to the northeast during the evening, exiting the east coast of Florida around midnight at St. Augustine. The storm has maintained hurricane strength throughout its track across the entire width of the Florida peninsula. Sustained winds are 105 mph as Phoenix enters the Atlantic.

**October 16 –** Search-and-rescue operation begin as soon as winds abate, with massive amounts of debris and roadway damage making ground-based travel nearly impossible and severely hampering attempts at recovery. Casualties are numerous. Survivors that are uninjured are dazed, some in shock at the amount of devastation that has occurred.

**Oct. 17-18 –** Search-and-rescue operations continue. Some outside help/resources begins to trickle into the region, but damage to the transportation infrastructure, and the fact that the storm cut a swath across the entire state, slow the influx of recovery personnel and supplies into the area. Most hospitals have sustained damage, and are overwhelmed by number of injured. Essential services are mostly non-existent. Civil unrest is possible as human needs (water, food, shelter) are scarce, local law enforcement resources have been damaged/destroyed, and outside resources are stymied by massive amounts of storm debris and damage to transportation infrastructure.

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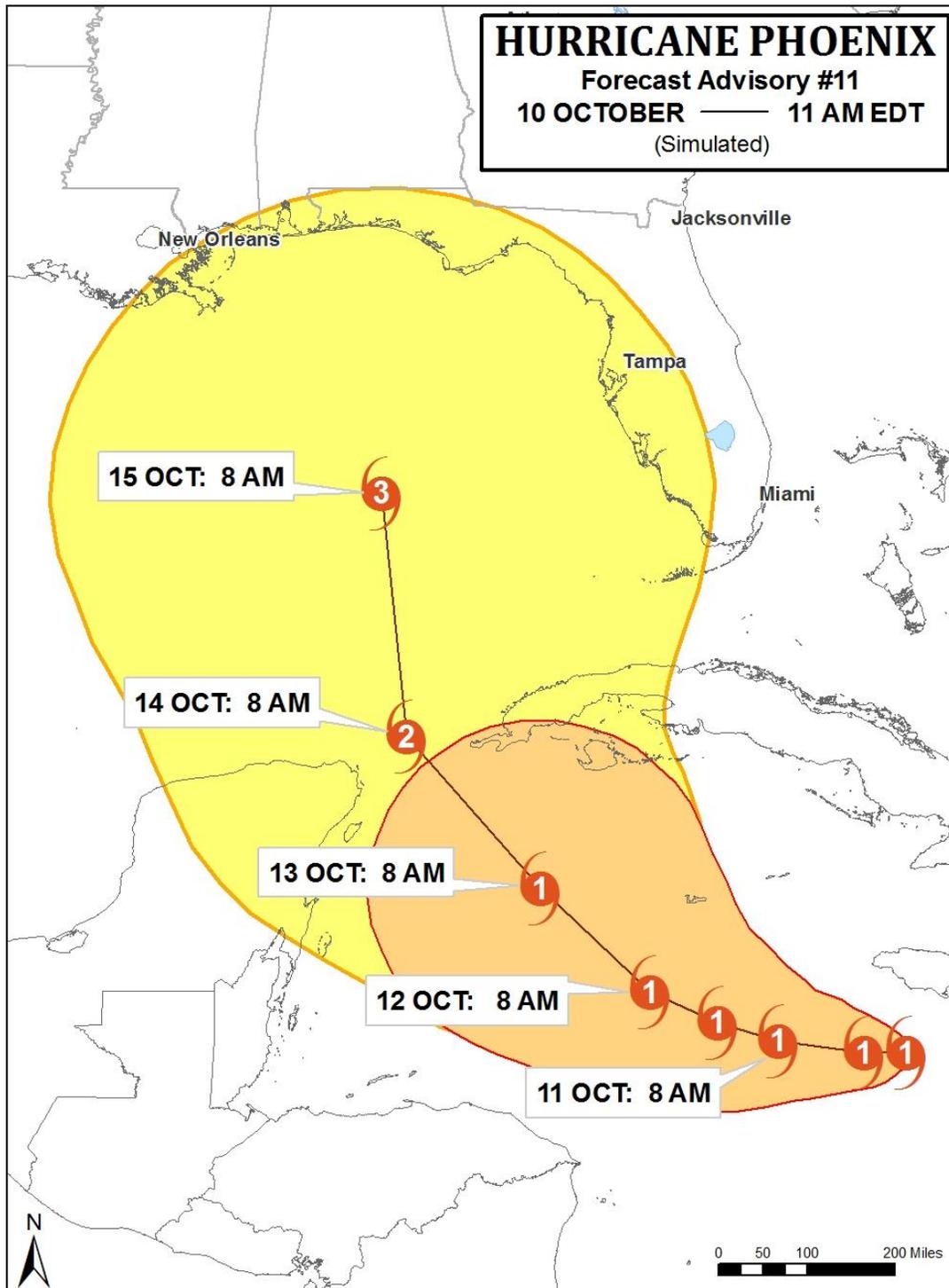
**Oct. 19-31** – Search-and-rescue operations are completed. Post-storm evacuation to host communities begins for survivors whose homes or neighborhoods were destroyed. Recovery personnel and supplies flow into the region more rapidly as temporary repairs to transportation infrastructure are performed. Where possible, emergency repairs are made to structures to make them suitable for habitation. Post-disaster damage assessment begins.

**Going forward** – Infrastructure needs are prioritized and repairs are made. Repair and reconstruction of homes and businesses move forward. The region’s economy, which has taken a tremendous blow immediately after the storm, begins to grow as post-disaster construction and other recovery industries begin to flourish. Demographics of the region possibly change as some of displaced population does not return, and others are drawn to the area by construction and other recovery jobs.



# Pinellas County Local Mitigation Strategy

Figure 1-5- 1: Forecast Map 1



# Pinellas County Local Mitigation Strategy

Figure 1-5- 2: Forecast Map 2

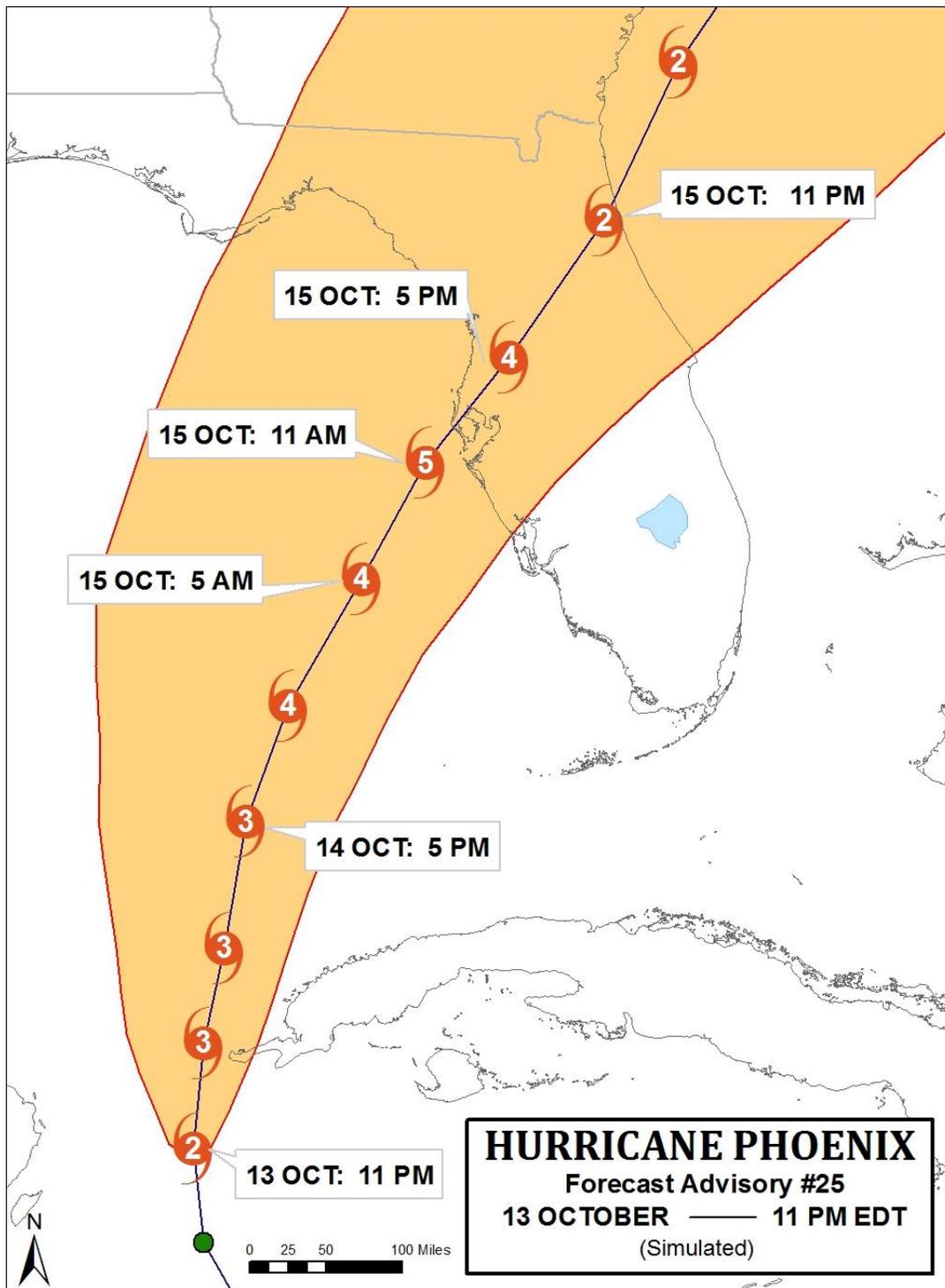
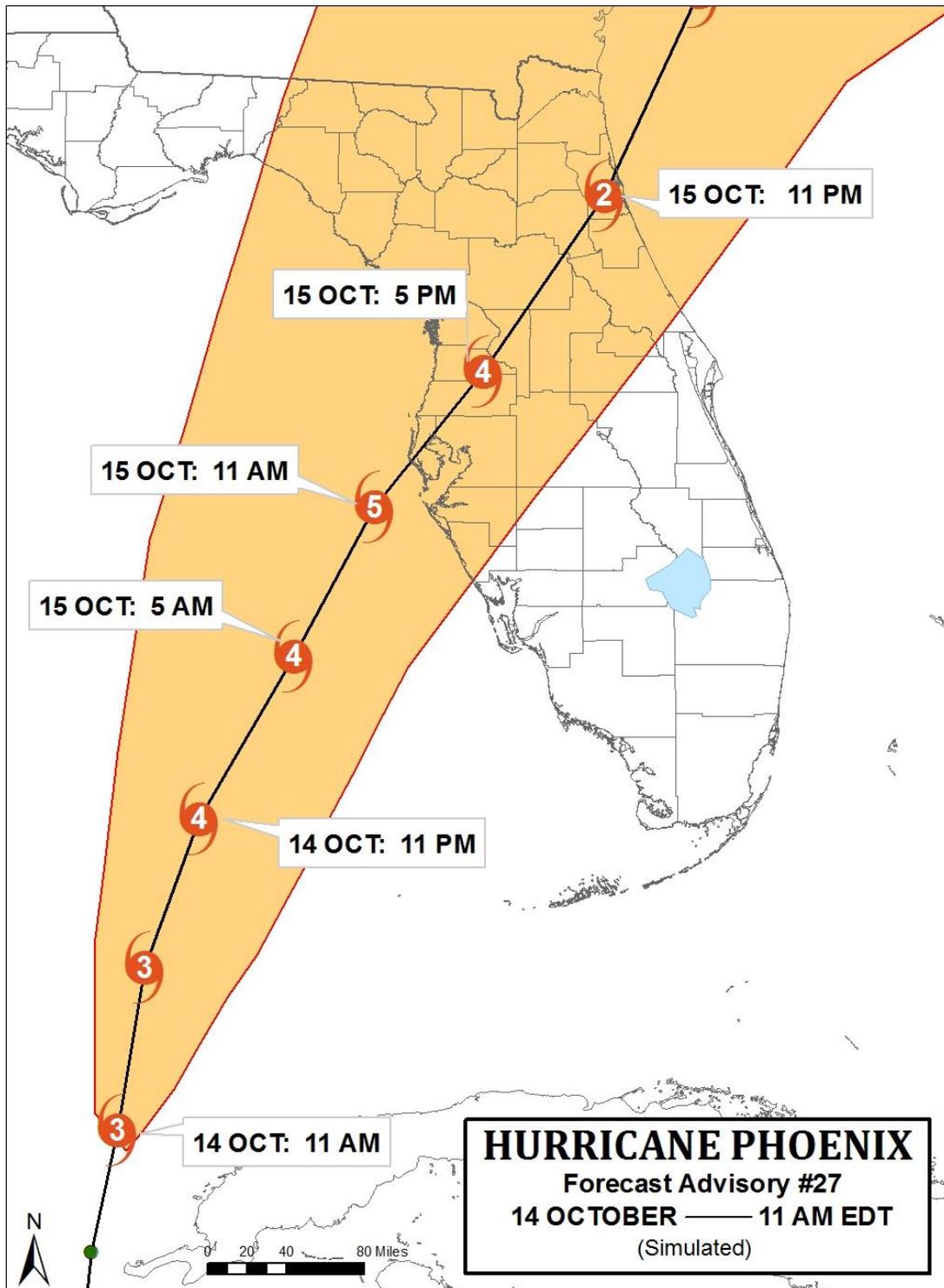
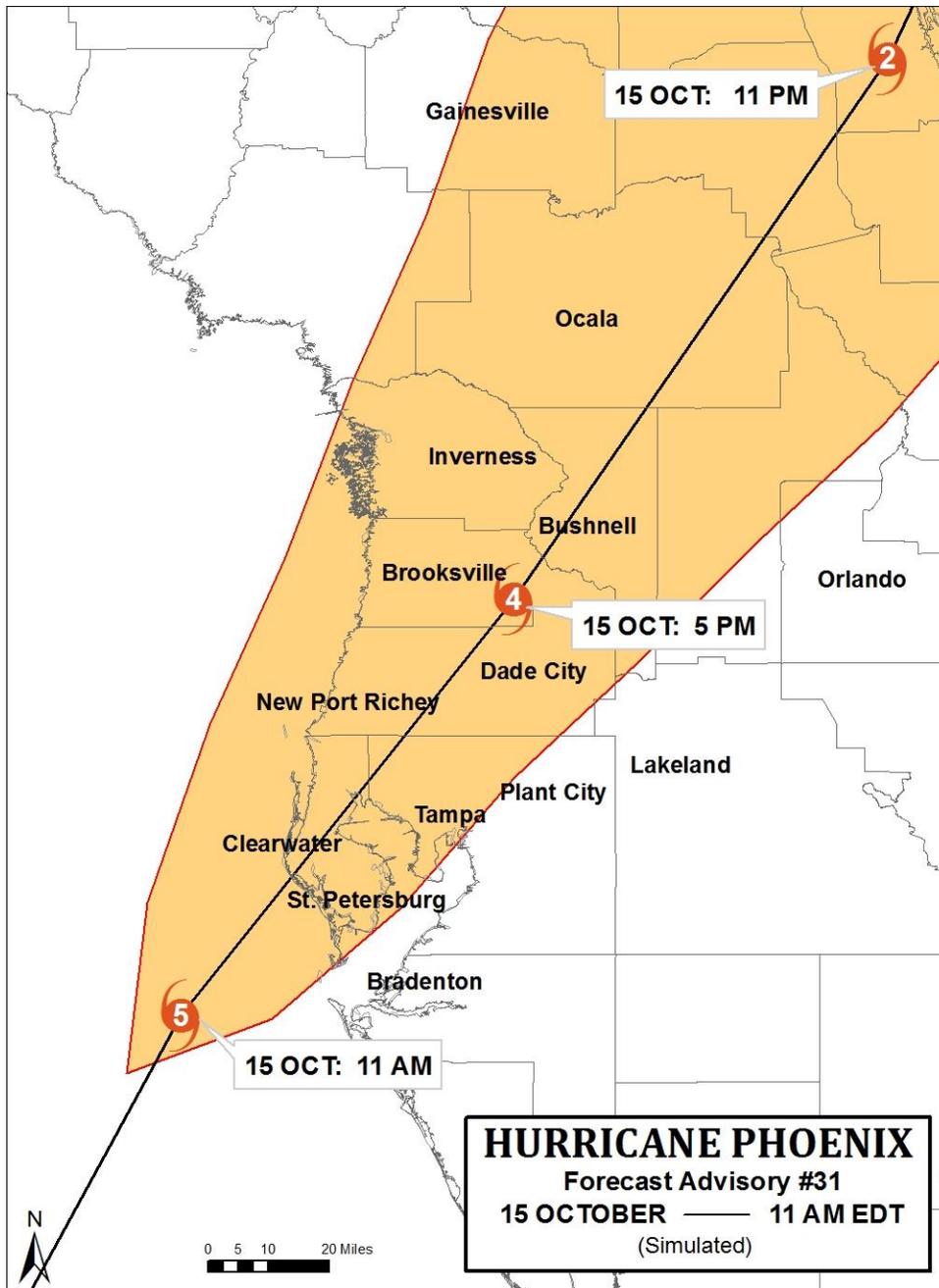


Figure 1-5- 3: Forecast Map 3



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Figure 1-5- 4: Forecast Map 4



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## DAMAGE SCENARIO DEVELOPMENT

The Catastrophic Scenario was developed by combining some of the more prevalent models for hurricanes. HAZUS-MH is a standardized loss estimation methodology developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS)<sup>1</sup>. The methodology is built upon an integrated GIS platform (see **Figure 2**) to conduct analysis at an aggregate level (i.e., not on a structure-by-structure basis). The HAZUS-MH risk assessment methodology is parametric, in that distinct hazard and inventory parameters (e.g., flood depths and building types) were modeled using the HAZUS-MH software to determine the impact of the coastal flood and severe winds on the built environment.<sup>2</sup>

In order to leverage recently collected topographic data and impacts from a single event, a custom SLOSH (Sea, Lake, and Overland Surge from Hurricanes) model run was created. The results of this model were imported as an input to HAZUS<sup>®</sup>MH MR4 Flood (Coastal) Module. HAZUS<sup>®</sup>MH MR4 (released August 2009) was used to model the coastal flood hazard at the county level based on the hypothetical storm scenario.<sup>3</sup>

SLOSH (Sea, Lake and Overland Surges from Hurricanes) is a computerized model run by the National Hurricane Center (NHC) to estimate storm surge heights and winds resulting from historical, hypothetical, or predicted hurricanes by taking into account pressure, size, forward speed, track, and winds. Graphical output from the model displays color coded storm surge heights (See **Figure 3**) for a particular area in feet above the model's reference level, the National Geodetic Vertical Datum (NGVD), which is the elevation reference for most maps.

The calculations are applied to a specific locale's shoreline, incorporating the unique bay and river configurations, water depths, bridges, roads and other physical features. If the model is being used to estimate storm surge from a predicted hurricane (as opposed to a hypothetical one), forecast data must be put in the model every 6 hours over a 72-hour period and updated as new forecasts become available.

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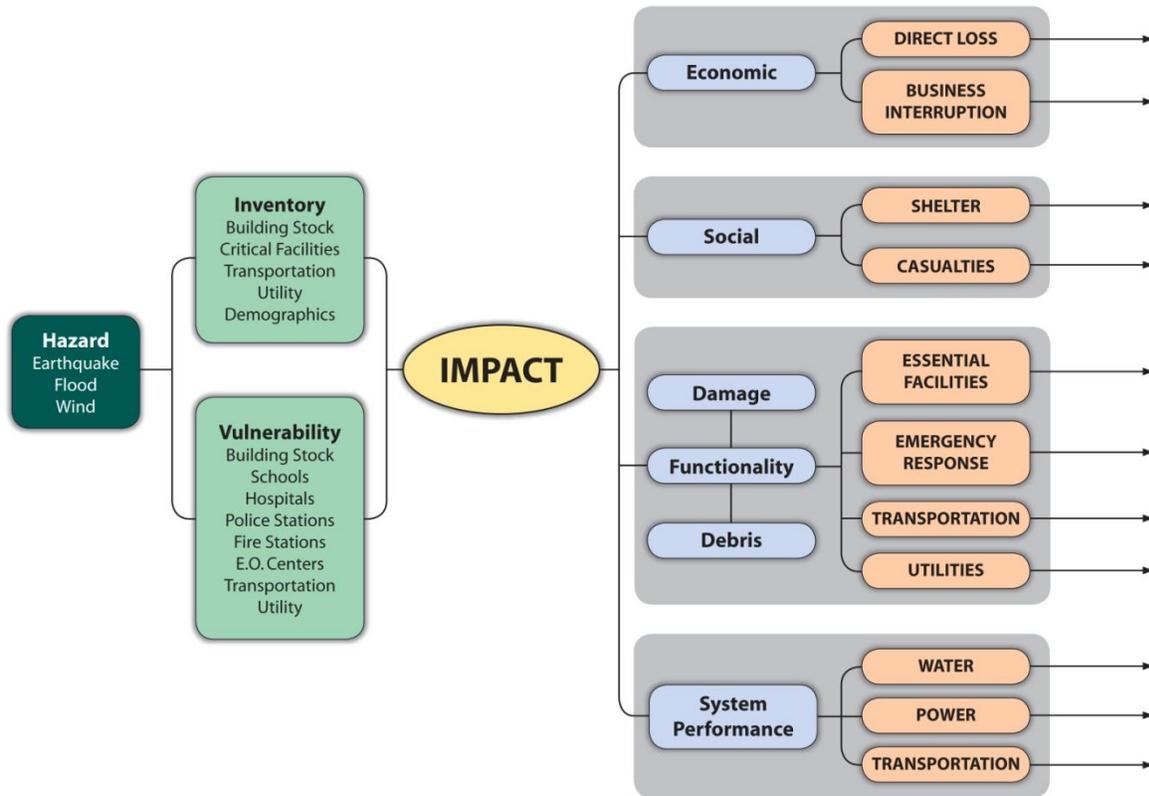
<sup>1</sup> Loss estimates produced by software models such as HAZUS-MH are to be used with a certain degree of caution. Uncertainty within these types of results can be introduced from a number of sources, including the use of national datasets to represent local conditions, simplifications within the model introduced to allow the model to have flexibility with Level 1 users, and errors introduced as part of the mathematical processing within the software code. As a planning tool however, the consistency and value of the results developed by HAZUS-MH cannot be understated.

<sup>2</sup> These products represent a hypothetical scenario intended to encourage discussion for the Tampa Bay Catastrophic Planning Project. Consequence projections are derived from the scenario using scientific methods based on research. They will continue to be updated and refined as new information from the Catastrophic Planning effort becomes available and specific planning needs are defined.

<sup>3</sup> This study represents a Level 2 HAZUS analysis in that it utilizes user-supplied flood depth grids. The effective date of the user-supplied SLOSH data is September 2009.

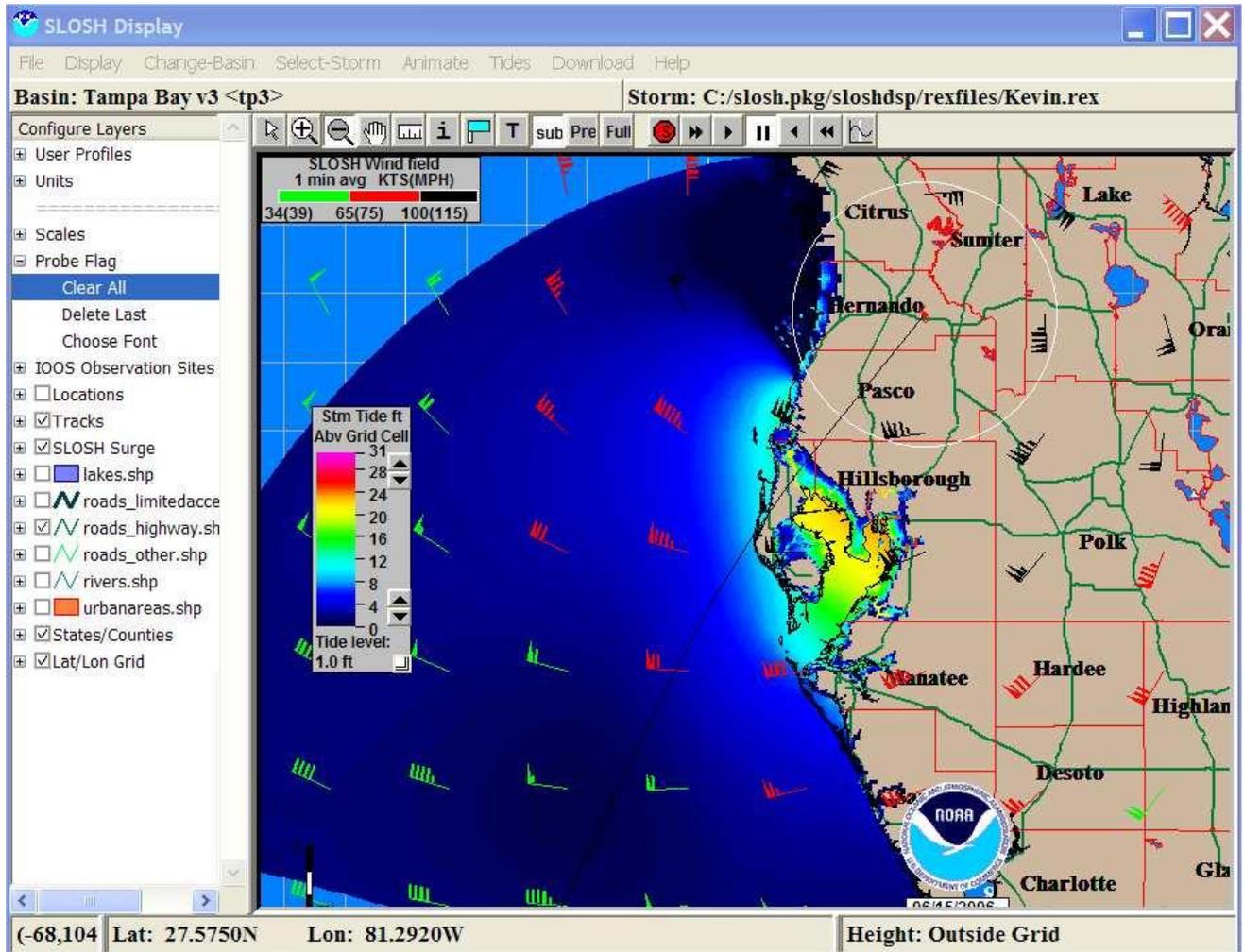
# Pinellas County Local Mitigation Strategy

Figure 1-5- 5: Conceptual Model of HAZUS-MH Methodology



# Pinellas County Local Mitigation Strategy

Figure 1-5- 6: Sample Frame from Catastrophic Storm Animation within SLOSH Display



## Pinellas County Local Mitigation Strategy

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While the HAZUS-MH flood model is generally based on depth damage functions, the hurricane wind model within HAZUS is based on a hazard-load-resistance-loss methodology. Per the *HAZUS-MH MR4 Technical Manual for the Multi-hazard Loss Estimation Methodology for the Hurricane Model*, “the approach is based on a hazard-load-resistance-damage-loss methodology developed from an individual risk framework. The basic model components (hazard model, load model, resistance models, etc.) are developed separately. Each model component is, wherever possible, separately validated using full scale data, model scale data, or experimental data. A major factor driving the use of a first principles-based hazard-load-resistance-loss model, rather than the simple wind speed dependent loss models traditionally used, is the ability for the approach to be extended to model the effects of code changes and mitigation strategies on reduction in damage and loss. Furthermore, since economic damage (loss) is modeled separately from physical damage to a building, estimates of both building damage and loss are separately modeled and predicted”.

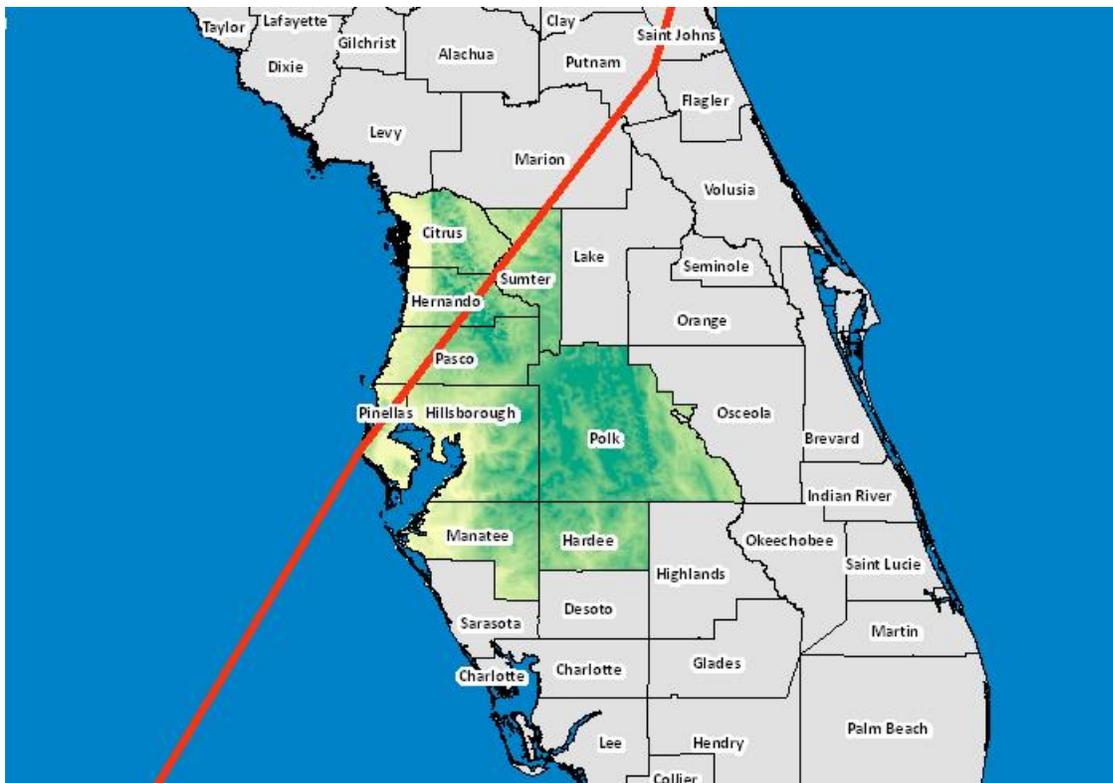
HAZUS-MH MR4 uses Census 2000 for demographic data; Census 2000 and Dun & Bradstreet 2006 for general building stock inventory; 2006 RS Means for building valuation; and 2006 Dun and Bradstreet for commercial data. Other details and supporting documentation regarding the sources and treatment of the default datasets used in this analysis are available in the *HAZUS-MH MR4 Technical Manuals for the Multi-hazard Loss Estimation Methodology for the Flood Model and for the Hurricane Model* available on [www.fema.gov](http://www.fema.gov).

# Pinellas County Local Mitigation Strategy

## CONSEQUENCES ANALYSIS

The goal of this scenario was to estimate the direct physical damages, social impacts, and direct economic losses that could result from the storm surge and wind of this catastrophic hurricane using recently developed user-supplied SLOSH data. For the purposes of this study, direct physical damages consist of estimated impacts to the county's general building stock (i.e., residential, commercial, industrial, and agricultural buildings), essential facilities (i.e., schools, fire stations, police stations, medical care facilities, and emergency operations centers as applicable), and agricultural products. Social impacts consist of estimated shelter requirements (in terms of households and individual persons displaced by the event). Economic losses consist of direct economic impacts (not indirect losses).

**Figure 1-5- 7: Regional Map with Path of Storm**



The hazard impacts depicted in this report intend to show regional estimates of consequences from surge and wind as generated from the HAZUS-MH Model. It is important to note that uncertainties are inherent in any loss estimation methodology, arising in part from incomplete scientific knowledge concerning natural hazards and their effects on the built environment. Uncertainties also result from approximations and simplifications that are necessary for a comprehensive analysis (such as abbreviated inventories, demographics, or economic parameters).

## Pinellas County Local Mitigation Strategy

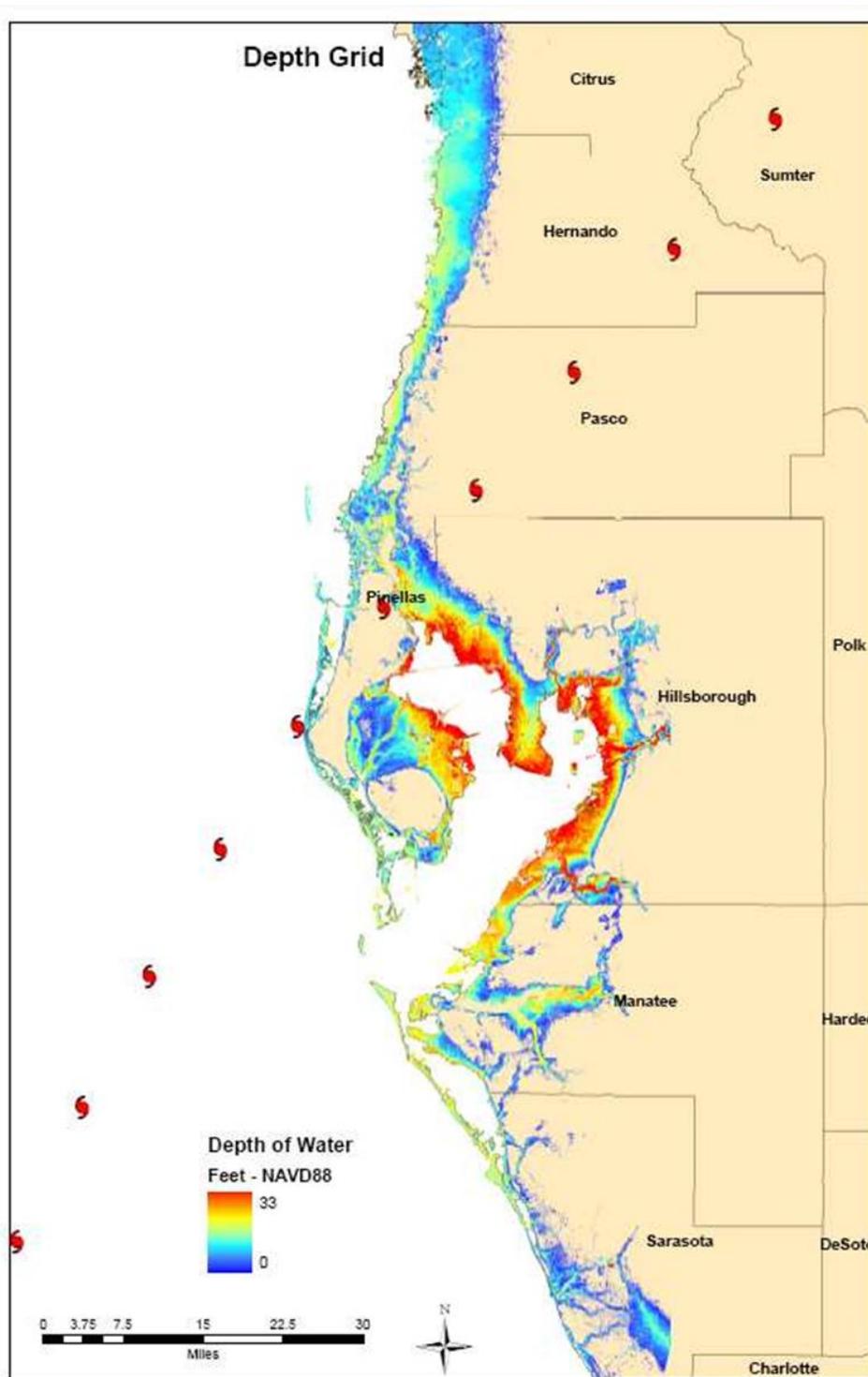
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**Figure 4** provides a graphical representation of the multi-county study region created and maximum flood depths created from the modeled catastrophic event. The multi-county region was composed of Citrus, Hardee, Hernando, Hillsborough, Manatee, Pasco, Pinellas, Polk, and Sumter counties. The counties of Hardee, Polk, and Sumter did not have storm surge analyses performed for them and thus their HAZUS' estimates of impacts are strictly from the wind model. Although modeling of inland flooding was not a part of this project, traditional areas of flooding such as lowlands, and FEMA 100- and 500-year flood hazard areas should also be considered when planning for catastrophic events.

As mentioned earlier in this report, the HAZUS wind model was also run to estimate regional impacts from the modeled event. The storm path and expected wind gusts are depicted in **Figure 5** and is intended to mimic Hurricane Katrina's intensity prior to landfall when the storm was still identified as a Category 5. The radius to maximum winds was made to vary between 25 and 40 miles in order to create ideal conditions for the modeled storm to push maximum water into Tampa Bay. The minimum central pressure was set to 918 mBars. The estimated impacts to the population and built environment are provided throughout the rest of this document.

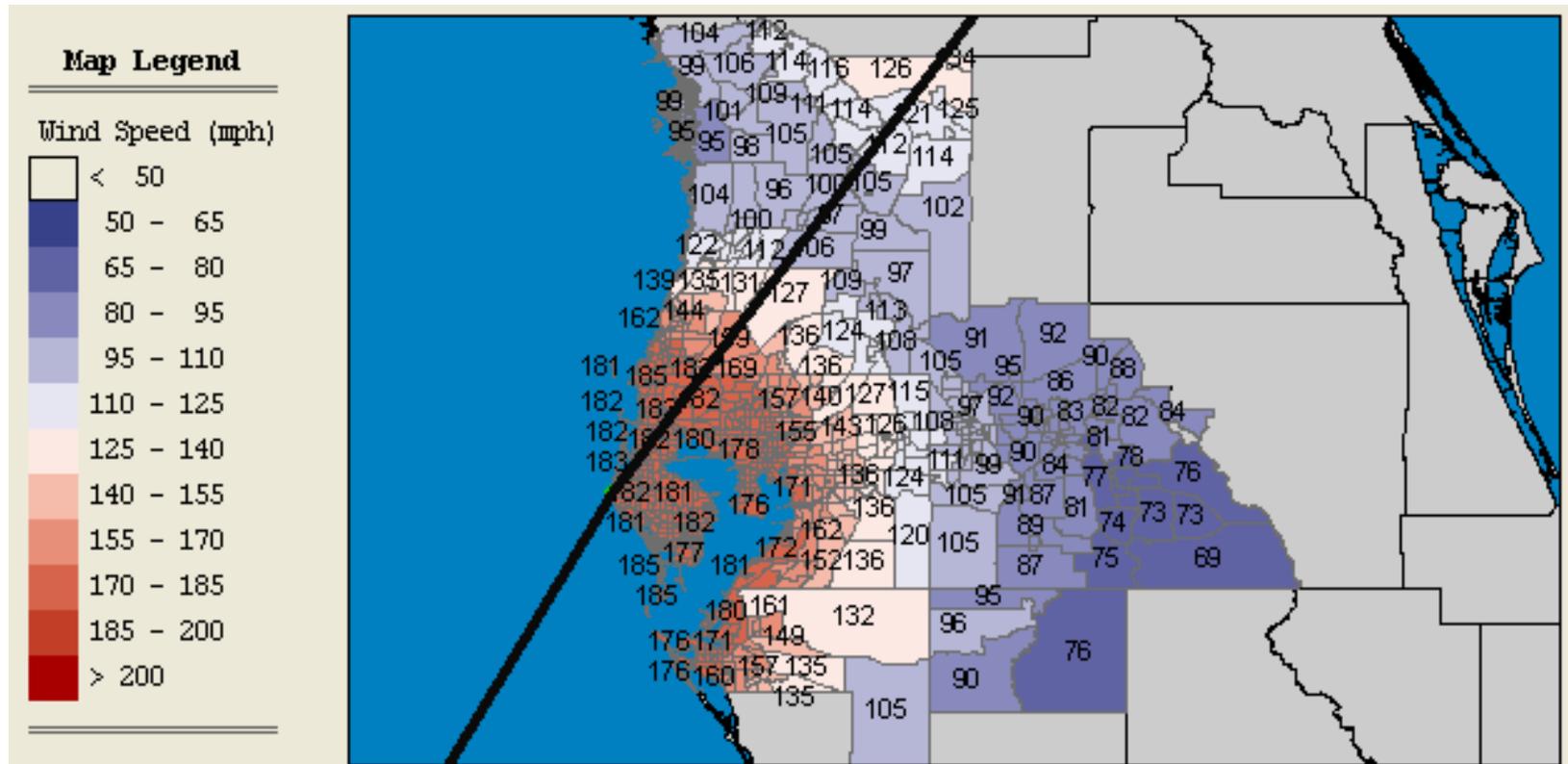
# Pinellas County Local Mitigation Strategy

Figure 1-5- 8: Regional Map with Storm Surge Flood Depths



# Pinellas County Local Mitigation Strategy

Figure 1-5- 9: Regional Map with Path of Storm and Maximum Winds (1-Second Gusts)



# Pinellas County Local Mitigation Strategy

## DIRECT PHYSICAL DAMAGES

### Wind Damage

The analysis conducted to determine direct physical damages to the general building stock was performed at the census tract level (outputs aggregated to the county level) and focuses on residential, commercial, industrial, and agricultural building occupancy types as defined by HAZUS-MH. **Table 1** shows damage probabilities for these selected occupancy types for the modeled, coastal event.



**Table 1-5- 1: Damaged Building County from Wind by Occupancy Type**

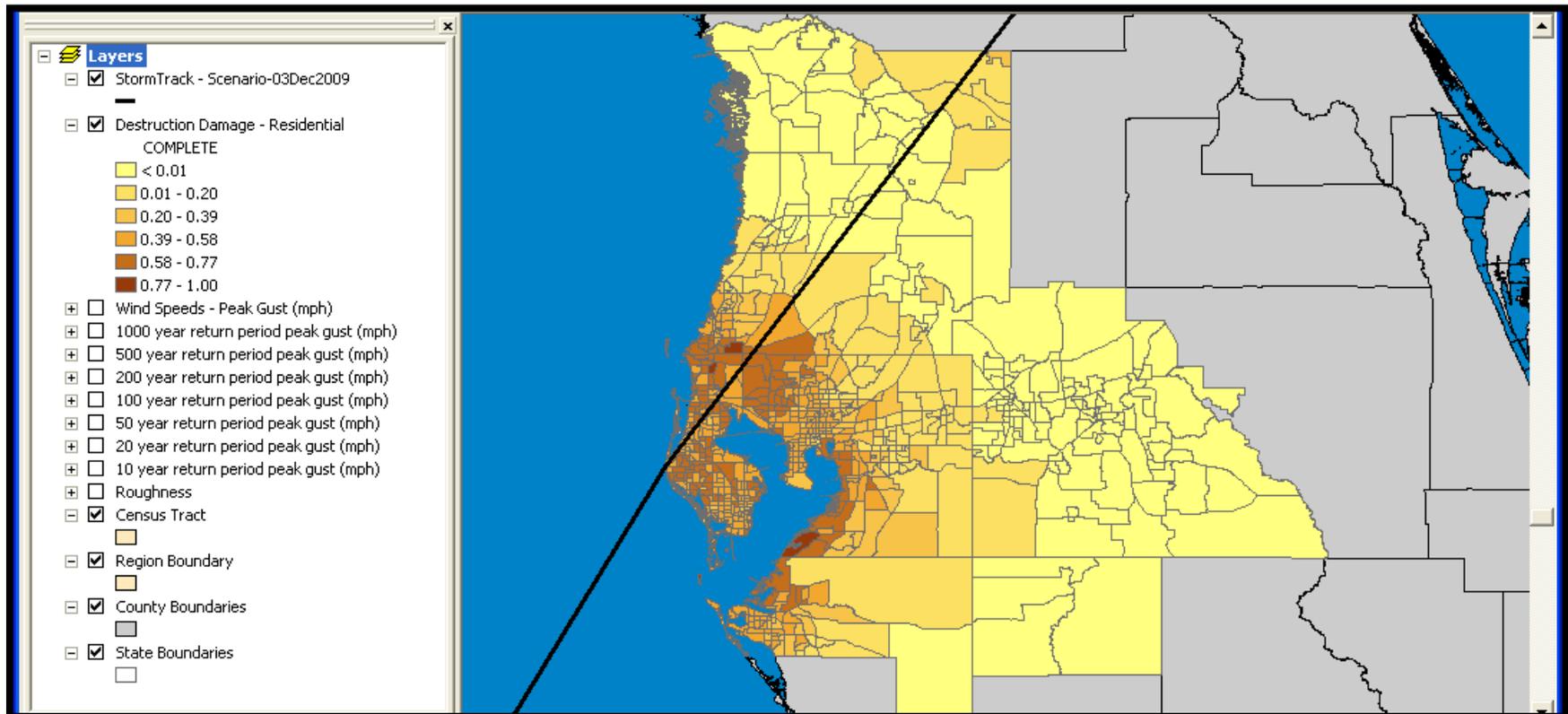
DAMAGED BUILDING COUNTS FROM WIND BY OCCUPANCY TYPE							
Occupancy Type	Total in 9-County Region	Number of Buildings in Each Damage Percentage Range					Total Damaged Per Type
		None	Minor	Moderate	Severe	Destruction	
Residential	1,438,227	360,345	121,365	165,169	320,831	470,528	1,077,882
Commercial	85,481	17,378	4,936	9,369	43,724	10,074	68,103
Industrial	24,577	5,403	1,453	2,335	13,748	1,638	19,174
Other	17,642	4,411	1,356	1,953	7,916	1,995	13,231
<b>TOTAL BUILDINGS</b>	<b>1,565,927</b>	<b>387,537</b>	<b>129,110</b>	<b>178,826</b>	<b>386,219</b>	<b>484,235</b>	<b>1,178,390</b>

**Figure 6** shows the distribution of those areas estimated to be completely destroyed by providing percentages of complete destruction by census tract for residential structures.

# Pinellas County Local Mitigation Strategy

Figure 1-5- 10: Residential Damage

(PERCENTAGE OF COMPLETE DAMAGE DESTRUCTION PER CENSUS TRACT)



# Pinellas County Local Mitigation Strategy

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## Storm Surge Damage

The analysis conducted to determine direct physical damages to the general building stock was performed at the census tract level (outputs aggregated to the county level) and focuses on residential, commercial, industrial, and agricultural building occupancy types as defined by HAZUS-MH. **Table 2** shows damage levels (minor, moderate, major) by county for the modeled, coastal event.

**Figure 4** shows the depths of inundation from storm surge in the coastal counties and indicates those areas estimated to be significantly impacted.

**Table 1-5- 2: Number of Buildings by Storm Surge Category**

NUMBER OF BUILDINGS BY STORM SURGE DAMAGE CATEGORY					
Counties	Total Structures	Number With Minor Damage	Number With Moderate Damage	Number with Severe Damage or Destroyed	Number With More Than Minor Damage
Citrus	71,711	1	3,012	1,301	4,313
Hernando	69,266	0	1,480	398	1,878
Hillsborough	405,461	67	42,678	38,252	80,930
Manatee	132,349	19	19,470	9,271	28,741
Pasco	183,387	7	11,653	6,626	18,279
Pinellas	425,113	70	85,265	36,979	122,244
<b>Total</b>	<b>1,287,287</b>	<b>164</b>	<b>163,558</b>	<b>92,827</b>	<b>256,385</b>

## Pinellas County Local Mitigation Strategy

**Table 1-5- 3: Combined Damage (Storm Surge and Wind)**

The following table summarizes the combined damage from wind and storm surge flooding.

Counties	Pre-Storm Building Stock Value (Millions of \$)	Total Structural Damage from Wind (Millions of \$)	Percent of Pre-Storm Building Stock Value Loss from Wind	Total Structural Damage from Storm Surge (Millions of \$)	Percent of Pre-Storm Building Stock Value Loss from Storm Surge	Total Combined Structural Damage (Millions of \$)	Total Combined Percent of Pre-Storm Building Stock Value Loss
Citrus	7,808	168	2.2%	278	3.6%	440	5.6%
Hardee	1,231	7	0.1%	0	0.0%	7	0.1%
Hernando	8,637	367	4.2%	132	1.5%	494	5.7%
Hillsborough	78,949	48,276	61.1%	10,893	13.8%	52,508	66.5%
Manatee	20,681	12,900	62.4%	2,620	12.7%	13,886	67.1%
Pasco	23,006	10,715	46.6%	1,789	7.8%	11,671	50.7%
Pinellas	70,489	54,287	77.0%	12,824	18.2%	57,235	81.2%
Polk	32,084	313	1.0%	0	0.0%	313	1.0%
Sumter	2,931	527	18.0%	0	0.0%	527	18.0%
<b>Total</b>	<b>244,585</b>	<b>127,553</b>	<b>52.2%</b>	<b>28,536</b>	<b>11.7%</b>	<b>141,207</b>	<b>57.7%</b>

# Pinellas County Local Mitigation Strategy

## DAMAGE TO ESSENTIAL FACILITIES

The analysis conducted for essential facilities focuses on schools, fire stations, police stations, medical care facilities, and emergency operations centers (EOCs), as identified by HAZUS-MH default inventories. It is important to note that default essential facilities data in the current version of HAZUS-MH may not be complete and represents best readily available data for use with this scenario.

**Tables 4 and 5** show expected damage from wind to essential facilities in terms of the capacity. For each essential facility type (with the exception of hospitals which HAZUS calculates bed availability in days after the event), HAZUS will estimate the percentage of facilities functional.

**Figure 8** provides an illustration of expected recovery for the hospital/medical sector in terms of loss of use (days).

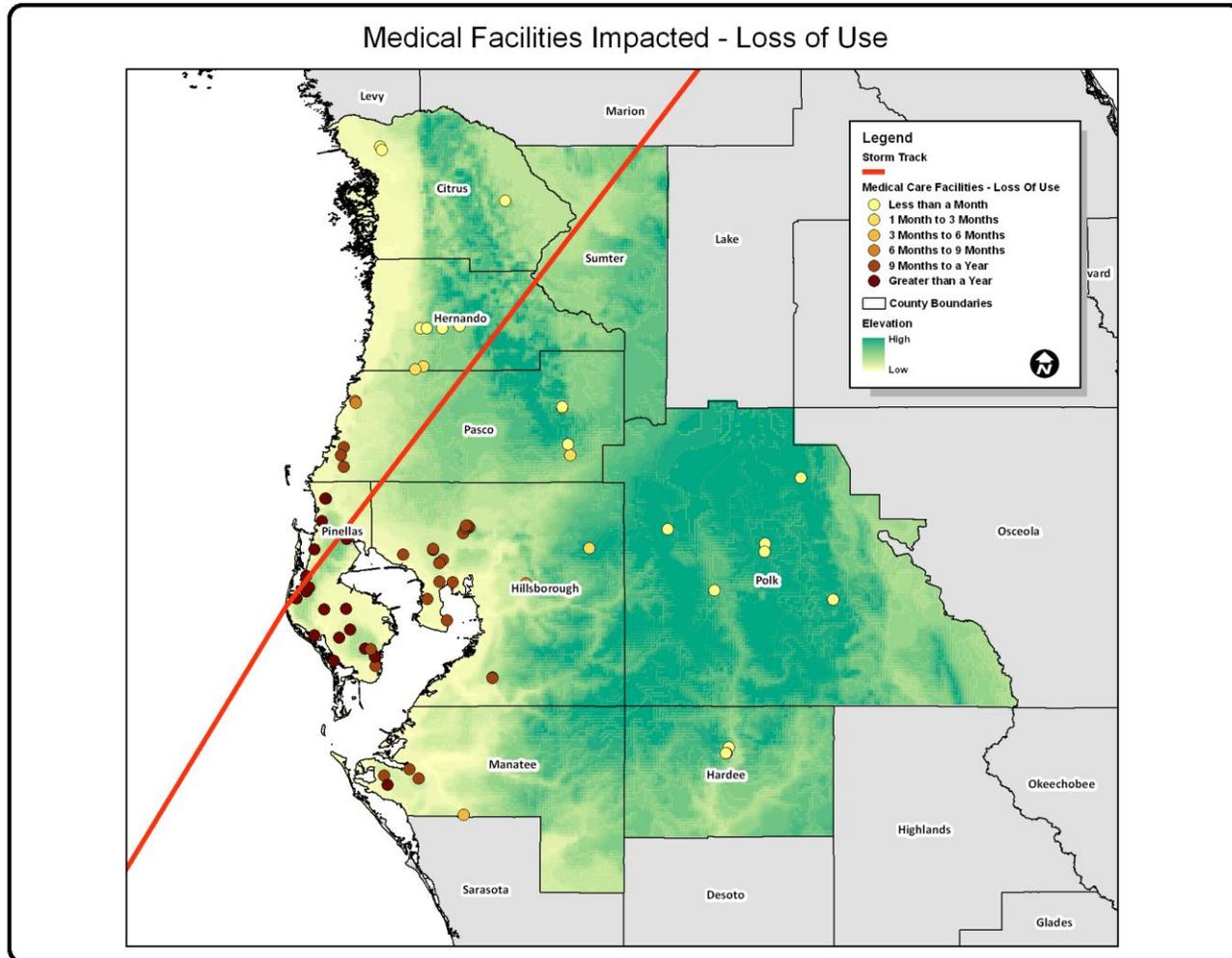


**Table 1-5- 4: Expected Damage to Essential Facilities from Wind**

EXPECTED DAMAGE TO ESSENTIAL FACILITIES FROM WIND		
Type of Facility	Total Number of Facilities	Percentage of Facilities Functional Within the Region
EOC	13	31%
Fire Station	356	13%
Hospital/Medical	80	See <b>Table 3</b> Below
Police Station	220	14%
School	1,026	10%
<b>TOTAL FACILITIES</b>	<b>1,695</b>	<b>Varies per Type</b>

# Pinellas County Local Mitigation Strategy

Figure 1-5- 11: Damage to Hospitals/Medical Facilities



# Pinellas County Local Mitigation Strategy

## DEBRIS CALCULATIONS

Debris calculations were performed using the HAZUS regional database.



**Table 1-5- 5: Debris Summary Report**

<b>TABLE 5 DEBRIS SUMMARY REPORT</b>				
<i>All values are in tons.</i>				
<b>County</b>	<b>Brick, Wood and Other</b>	<b>Reinf. Concrete and Steel</b>	<b>Eligible Tree Debris</b>	<b>Total</b>
Citrus	40,162	808	75,263	116,233
Hardee	1,550	8	7,388	8,946
Hernando	85,74	8 5,085	66,003	156,836
Hillsborough	11,271,935	1,399,417	894,284	13,565,636
Manatee	3,785,148	568,359	190,620	4,544,127
Pasco	3,272,094	472,985	298,409	4,043,488
Pinellas	15,529,750	2,161,617	737,575	18,428,942
Polk	64,127	958	90,387	155,472
Sumter	138,833	16,398	40,685	195,916
<b>Total</b>	<b>34,189,347</b>	<b>4,625,635</b>	<b>2,400,613</b>	<b>41,215,595</b>

Note: The U.S. Army Corps of Engineers estimates that Hurricane Andrew generated approximately 15 million cubic yards of debris and Hurricane Katrina generated more than 118 million cubic yards.

# Pinellas County Local Mitigation Strategy

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## CRITICAL INFRASTRUCTURE

### Transportation Facilities

- Interstate 75 (I-75), Interstate 275 (I-275), and Interstate 4 (I-4) are expected to be the primary routes used to transport goods and people into and out of the affected zone during a response and recovery effort within the nine-county West Central Florida area.
- Interstates and major highways generally have a wide right-of-way and trees about 50–100 feet away from the shoulders, so most of the debris on these roads would consist of poles, signs, and small vegetative debris.
- According to Florida Department of Transportation (FDOT) engineers, non-interstate/turnpike evacuation routes in the nine-county area are generally at-grade with the surrounding ground. As such, routes shown on maps depicting flooding due to storm surge can generally be assumed to be flooded if the adjacent land is inundated.
- Interstates are the Florida Department of Transportation's top priority for debris clearance; FDOT plans to reopen major roads within 8–24 hours after the hurricane has passed, provided all bridges are operating at full or near capacity.
- Significant impacts on the region's bridges - especially the approaches - are expected on all causeways including the Courtney Campbell Causeway, Howard Frankland Bridge, Gandy Bridge and the Skyway Bridge.
- Bridges and roads subject to additional flooding due to the storm will have to be inspected before reopening. This is of particular concern on the three causeways connecting Hillsborough and Pinellas County, the bridges connecting the barrier island communities as well as those connecting downtown with Harbor Island, Davis Island and the 22<sup>nd</sup> St. Bridge providing access to the Port of Tampa. Bridges over the Manatee River in Manatee and the Pithlachascotee River in Pasco will also require engineering survey.
- FDOT could impose a vehicle weight restriction or use a temporary bridge if the bridges are damaged. FDOT typically has 10,000 linear feet of such bridges available in non-emergency times.



### Other Transportation Notes

- Runaway barges and other large debris could be a threat to bridges during the storm, particularly those spanning the Intracoastal Waterway. Two moveable bridges over the Intracoastal Waterway were damaged in this way during Hurricane Wilma. As a result, these bridges had to be closed to motor-vehicle traffic.
- Train services in Tampa Bay, East Central Florida and Northeast Florida may not be available because of debris on the railways.

## Pinellas County Local Mitigation Strategy

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- The Florida Department of Transportation’s goal is to open (with at least one lane available for emergency vehicles) all State roads to traffic one day after the hurricane has passed.
- Hurricane Phoenix will destroy traffic control devices (lights, signs), resulting in dangerous uncontrolled intersections post-landfall.
- Many of the buses and other public transit vehicles left in the storm’s path will be destroyed and unavailable post-landfall.

### Ports

Florida’s sea- and airports are essential resources for providing goods and services to residents and critical economic engines that generate millions of dollars and thousands of jobs for local communities. The state contains two of the top twenty importing and four of the top twenty exporting seaports in the United States, and Tampa International Airport is one of the busiest in the world. As a result, ports will likely be vital to response and recovery efforts following a catastrophic hurricane in Tampa Bay.

### *Airports: Profiles*

The Tampa International Airport serves 21 passenger air carriers and nine cargo-only airlines. It manages over 18 million passengers per year and 108,000 tons of cargo, including 12,000 tons of mail per year. The estimated replacement cost of the airport’s land and facilities is \$2.3 billion.<sup>41</sup>

The St. Petersburg-Clearwater International Airport is located 10 miles east of Tampa International and serves as a charter destination for several air carriers, including a few from Canada. The airport provides over 3,000 jobs and contributes an economic benefit of \$400 million annually to the Tampa Bay area.

**Table 1-5- 6: Hurricane Phoenix Impacts on Major Airports**

<b>TABLE 6 HURRICANE PHOENIX IMPACTS ON MAJOR AIRPORTS</b>		
<b>Major Airports</b>	<b>Storm Category of Maximum Sustained Wind</b>	<b>Storm Surge Flooding Depth (ft) (Flooding over land)</b>
Tampa International	5/181	South end of Runway 36L is 15 ft deep, terminal building is 7 ft, NE corner of property is dry
St. Petersburg/Clearwater	5/180	NW end of Runway 22 is 17 feet, terminal is 10 ft
Sarasota Manatee Airport	5/160	Dry

### *Seaports: Profiles*

## Pinellas County Local Mitigation Strategy

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The Port of Tampa is the largest of the Florida ports, as measured by tonnage, and handles approximately 50 million tons of cargo per year. The Tampa Bay region is the largest metropolitan market in Florida, and it is the 10th largest consumer market in the U.S., with nearly 7 million people within 100 miles of the port. The port contributes to the creation of 96,000 jobs in the region and generates a regional annual economic impact of nearly \$8 billion. Tampa is also the closest full service U.S. port to the Panama Canal.

Port Manatee is among Florida’s largest deepwater seaports. The port oversees over 9.3 million tons of shipping, and is Fresh Del Monte Produce’s second largest U.S. port facility, used for importing Central American fruit and exporting fruit from Florida. It is also the Southeast’s leading forestry product import facility.

**Table 1-5- 7: Hurricane Phoenix Impacts on Major Ports**

HURRICANE PHOENIX IMPACTS ON MAJOR PORTS		
	Storm Category of Maximum Sustained Wind/ Peak Wind Gust	Storm Surge Flooding Depth (ft)
Port of Tampa	5/ 180	12 to 26 ft . . . Port Authority bldg is 17 ft.
Port Manatee	5 / 170	6-12 feet

***Note: Ports Preparation***

As with airplanes and airports, many ships leave seaports prior to the arrival of a hurricane. The Port of Tampa, for example, mandates that any ship larger than 500 gross tons be out of port by twenty-four hours prior to the onset of hurricane-force winds (confirm). All potential flying debris or sources of contamination should be removed from dockside areas. The Coast Guard is responsible for establishing “Safety Zones” around the port to prevent ships entering unsafe conditions as well as to prevent unlawful salvage or looting following the storm.

**Electricity Infrastructure**

***Generation Capacity***

The local power plants in the nine-county areas are located along the coast in areas vulnerable to storm surge. All facilities would have been impacted by the sustained 160-180 mph winds. Therefore; it is assumed all local generation operations would be suspended until the damage is assessed and repairs could be made. Once the distribution systems start coming back online, most generation would be purchased from outside of the affected region.

***Residential Impacts***

## Pinellas County Local Mitigation Strategy

- ☪ Weatherheads, which connect homes to the electrical lines, are often damaged and need to be repaired by an electrician.
- ☪ Approximately 5,000 weatherheads were damaged following Hurricane Wilma. This figure could easily exceed 50,000 for a storm like Phoenix.
- ☪ Electricians would be required from outside of the state to handle the demand after this type of emergency.
- ☪ Electrical repairs normally need county inspection before reconnection, but this requirement is sometimes waived.

### *Transmission Infrastructure*

- ☪ Distribution facility damage throughout the nine counties would be extensive.

**Table 1-5- 8: Estimated Number of Customers without Power**

NUMBER OF CUSTOMERS WITHOUT POWER							
County	Number of Customers (Residential and Commercial)	Total Structures Affected	Initial Power Outage	Number of Customers W/O Power 3-7 days	Number of Customers w/o Power 7-15 days	Number of Customers w/o Power 15-30 days	Number of Customers w/o Power 30-60 days <sup>4</sup>
Citrus	71,714	18,996	75%	18,996	4,382	5606	154
Hardee	10,968	822	10%	822	109	8	3
Hernando	69,266	25,278	98%	25,278	8,397	1,960	526
Hillsborough	405,461	388,798	90%	388,798	356,095	287,859	151,185
Manatee	132,349	129,637	20%	129,637	121,930	99,887	54,459
Pasco	183,387	150,589	98%	150,589	126,109	93,305	50,738
Pinellas	425,113	424,291	100%	424,291	418,725	382,165	224,994
Polk	240,300	25,079	30%	25,079	4,720	548	208
Sumter	27,373	14,906	99%	14,906	8,817	4,164	1,971
<b>Regional Total</b>	<b>1,565,931</b>	<b>1,178,393</b>		<b>1,178,393</b>	<b>1,049,284</b>	<b>870,456</b>	<b>484,238</b>

<sup>4</sup> Housing severely damaged. Can not accept power.

# Pinellas County Local Mitigation Strategy

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- Customers are approximately 88% residential, 11% commercial, and 1% industrial.
- Effect on Casualties:
  - Electrocution by downed power lines
  - Asphyxiation due to improper use of portable generators

## ***Recovery Time***

- Recovery time will be affected by the amount of outside assistance that Florida Power & Light can get from other utilities. Tampa Electric & Florida Progress will also likely be seeking assistance. Utilities along the Gulf Coast may need assistance (or be hesitant to give up their own crews) due to damage there as well.
- Order of Repairs:
  1. Feeder circuits serving critical infrastructure facilities (hospitals, 911 centers, Police/fire stations) would be restored first.
  2. Remaining feeder circuits would then be restored.
  3. Neighborhood restoration would then take place, ultimately resulting in individual service wires to each impacted home being repaired.

Note: In Hurricanes Charley, Frances, Jeanne, and Katrina, approximately 75–80% of South Florida customers were restored by Day 3, with all South Florida customers receiving full power within 8–13 days. For Wilma, approximately 40% were restored by Day 3, and approximately 60% by Day 5. All power was restored within 18 days. However, recovery time for Phoenix would likely be much longer than in these storms, lasting for weeks or months. Repairs to infrastructure or homes in inundated areas could not occur until the floodwaters have subsided.

## ***Nuclear Power Plant Recovery***

Nuclear Regulatory Commission (NRC) policy states that any nuclear power plant that will be affected by hurricane force winds must be shut down. Restart requires NRC permission that involves the following:

- Inspecting the power plant for damage
- Inspecting local infrastructure for its capability to support nuclear power output
- Inspecting the surrounding 10-mile radius for alert and evacuation capabilities

Note: Hurricane Andrew hit Turkey Point in 1992. The onsite damage included loss of all offsite power for more than five days, complete loss of communication systems, closing of the access road, and damage to the fire protection and security systems and warehouse facilities. However, onsite damage was limited to fire protection, security, and several non-safety-related systems and structures. There was no damage to the safety-related systems and no radioactive release to the environment. The units remained in stable condition and functioned as designed.

## ***Effects of Damage on Utility Employees***

Florida Power & Light, TECO Energy, and Progress Energy have measures in place to minimize the effect that damage to employees' homes will have on the recovery process. "Ramp up" of the repair

# Pinellas County Local Mitigation Strategy

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process may be a little slower due to evacuation of some employees. Experiences with damage from recent storms, like Wilma, may make this effect stronger than it has been in the past.

## **Telecommunications**

### ***Landline Telephone Service***

Loss of landline telephone service and jammed circuits will reduce the ability of residents to call for help or information.

### ***Cell Phone Infrastructure***

- Power outage will cause isolation and degradation.
  - Cell phone sites that operate on battery backup will lose power in about eight hours.
  - Sites with generator power will have power for several days as long as they are not flooded.
- The cell phone structure will be barely operational because of wind damage to microwave units and some flooding damage. Microwave units may be ripped off or be out of alignment.
- The cell phone system may be isolated from the cell phone infrastructure outside of the hurricane impact area.
- Individual geographical sections of the system will be isolated from each other so that customers will only be able to reach other customers within the same area.
- Floodwaters can damage circuits and replacements, and drown generator units.
- Repairs cannot be made in areas where water remains. The areas where water recedes will be eligible for immediate repairs and replacements.
- Because landline phone service will be limited, remnants of the cell phone system will be overloaded.

### ***Television***

- Most broadcast stations have at least one generator. For the most part, these stations have been able to continue broadcasting without interruption during past hurricanes.
- In three recent cases, stations switched to 24-hour weather coverage and did not broadcast with closed captioning, which is against FCC regulations.
- Most stations feel that a Category 5 strike could damage their antennae, and few or none have backup or portable antennae.
- Power loss would interrupt broadcasts of cable television and limit the ability of viewers to operate their televisions.

### ***Water and Waste Water Systems***

- Approximately 30% of water treatment facilities are located in the storm surge zone.
- Storm surge will inundate extant water systems, including wells and water mains, causing breakage and contamination. Loss of electricity will prevent water and sewage pumping in much of the Tampa Bay Area.

# Pinellas County Local Mitigation Strategy

- 9 All water for human and pet use will require boiling. Public health authorities will have to coordinate public notification of boil water notices. Considerable gastrointestinal illness may be observed if contaminated water is consumed.
- 9 Potable water production and distribution may be affected by the dike break, but also by commercial power outages, if generator power does not exist or is insufficient.

## SOCIAL IMPACTS

### Displaced Households

The analysis conducted to determine shelter requirements estimates that 840,000 households will be displaced due to the modeled storm. (Displacement includes households evacuated from within or very near to the impacted area and may not be a direct reflection of residential building damage within a particular census block.) Assuming a regional average of 2.32 persons per household, more than 58% of the individual persons within the region would be impacted (out of a total population of 3.3 million people). Approximately 220,000 of those would seek temporary shelter in public shelter facilities (see **Table 9**).



**Table 1-5- 9: Estimated Social Impacts**

ESTIMATED SOCIAL IMPACTS				
9-County Region	Population	Number of Households or Persons in Each Category		
		Households Displaced <sup>5</sup>	Individual Persons Displaced	Short Term Shelter (# People)
Citrus	118,055	287	666	75
Hardee	26,938	6	14	2
Hernando	130,802	951	2,206	244
Hillsborough	998,948	289,941	672,663	77,013
Manatee	264,002	88,228	204,689	22,573
Pasco	344,765	77,221	179,153	20,291
Pinellas	921,482	383,213	889,054	98,666
Polk	483,924	459	1,065	122
Sumter	53,345	3,088	7,164	725
<b>Total</b>	<b>3,342,261</b>	<b>843,394</b>	<b>1,956,674</b>	<b>219,711</b>

<sup>5</sup> The term, “Displaced household” refers to a dwelling that has been damaged to the extent that it becomes uninhabitable. This is not a permanent displacement, but one that would take weeks/months to rebuild the house back to habitability. The reason for the calculation is the type of shelter needed (i.e. short term, long term) and number of spaces needed at the shelter. Evacuated populations refers to those people leaving during the hurricane/flood/earthquake event, but able to return to their homes afterwards.

# Pinellas County Local Mitigation Strategy

## Animal Issues



- Between 60–70% of U.S. households have pets. The majority of pet owners consider their pets to be family members, feeling the same sense of responsibility for their safety as they do any other family member.
- Survey results from 2004 storms showed that 50–60% of residents in the affected area had pets and 30–40% said pets affected their evacuation decision.
- The *Pet Evacuation Transportation Standards Act of 2006* requires that State and local governments include household pets in emergency evacuation plans. The act authorizes the use of funds to “procure, construct, or renovate emergency shelter facilities and materials that will temporarily accommodate people with pets and service animals,” as well as provide “rescue, care, shelter, and essential needs...to such pets and animals.”

**Table 1-5- 10: Estimated Number of Pets in Displaced Households**

ESTIMATED NUMBER OF PETS					
9-County Region	Displaced Households	Estimated Number of Pets in Displaced Households			
		Households with Cats	Total Cats	Households with Dogs	Total Dogs
Citrus	287	98	234	112	190
Hardee	6	2	5	2	4
Hernando	951	323	776	371	631
Hillsborough	289,941	98,580	236,592	113,077	192,231
Manatee	88,228	29,998	71,994	34,409	58,495
Pasco	77,221	26,255	63,012	30,116	51,198
Pinellas	383,213	130,292	312,702	149,453	254,070
Polk	459	156	375	179	304
Sumter	3,088	1,050	2,520	1,204	2,047
<b>Total</b>	<b>843,394</b>	<b>286,754</b>	<b>688,210</b>	<b>328,924</b>	<b>559,170</b>

# Pinellas County Local Mitigation Strategy

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## VOLUNTEER AND DONATIONS MANAGEMENT

### Types of Volunteers

- Affiliated: Trained first responders (e.g., Red Cross, Salvation Army, United Way, Faith-based, etc.)
- Unaffiliated: Untrained volunteers who arrive hoping to help
  - Often require shelter and food



### Past Volunteer Figures

2004 Hurricane Season:

- Volunteer Florida handled 120,000 volunteers overall (both affiliated and unaffiliated)
- The American Red Cross:
  - Overall: 35,000 volunteers
  - Charley: 1,400 volunteers
  - Frances: 4,100 volunteers and staff
  - The American Red Cross had 1,900 initial volunteers and staff and 250 vehicles for Katrina.

### Past Donations

- Katrina, Rita, and Wilma: Over \$2 billion
  - Relief organizations received more clothing than they could manage.
  - September 11, 2001 terrorist attacks: \$2.2 billion

### Other Issues

- Wilma caused \$6.5 million in losses to Florida nonprofits, with at least 100 nonprofits affected

# Pinellas County Local Mitigation Strategy

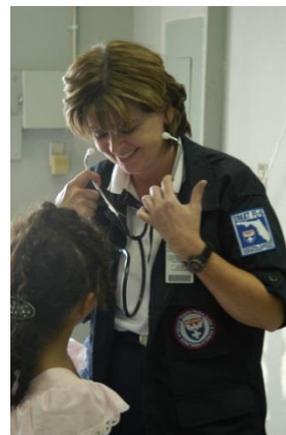
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## MEDICAL ISSUES

### *Casualties*<sup>6</sup>

The number of casualties was estimated based on the following assumptions:

- Non-evacuation of certain portions of the population-at-risk in storm surge vulnerable evacuation zones and mobile homes. Based on the 2006 behavioral surveys, up to 30% of the vulnerable population would not evacuate even with the threat of a catastrophic hurricane.
- Approximately 10% of the population on the barrier islands has indicated that they feel safe in a major storm.
- Post-storm deaths
  - Common hurricane-related causes of death include: drowning, electrocution, crushing, head trauma, and natural causes exacerbated by the storm (storm stress-induced heart attack).
  - Improper use of portable generators has led to excess morbidity and mortality following hurricanes. During the period of power outages related to the four major Florida hurricanes in 2004, 167 persons were treated for accidental carbon monoxide poisoning as a result of improper use of portable generators. Six deaths were reported.
- Approximately 1,957,000 people will be affected by this catastrophic storm scenario. Of these residents, approximately 1,957 (.001) could lose their lives as a direct result of the storm (primarily due to non-evacuation of storm surge vulnerable areas and mobile homes). An additional 200 additional people (.0001) could lose their lives following the storm.



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<sup>6</sup> Note: The number of directly attributable hurricane deaths from major hurricanes in the United States since 1989 ranges from a low of 5 for Hurricane Jeanne (2004, Category 3 at landfall in Florida) to a high of 1,817 for Hurricane Katrina (2005, Category 1 at landfall in Florida, Category 3 at landfall in Louisiana). The mean number of fatalities occurring in major storms since 1989 is 194.9; however, without Hurricane Katrina included, the mean number of deaths drops to 37.1.

# Pinellas County Local Mitigation Strategy

**Table 1-5- 11: Estimated Casualties**

TABLE 11: ESTIMATED CASUALTIES				
9-County Region	Total Population	Number of Households or Persons in Each Category		
		Affected Population	Estimated Direct Casualties	Estimated Casualties Post-Storm
Citrus	118,055	666	1	0
Hardee	26,938	14	0	0
Hernando	130,802	2,206	2	0
Hillsborough	998,948	672,663	673	67
Manatee	264,002	204,689	205	20
Pasco	344,765	179,153	179	18
Pinellas	921,482	889,054	889	89
Polk	483,924	1,065	1	0
Sumter	53,345	7,164	7	1
<b>Total</b>	<b>3,342,261</b>	<b>1,956,674</b>	<b>1,957</b>	<b>196</b>

## Injuries

- Injuries and illnesses observed in previous Florida hurricane events include blunt trauma, lacerations, muscle strains and pulls, insect and animal bites, puncture wounds, burns, infections, gastrointestinal illnesses, sunburns, exposure, psychosocial distress, and carbon monoxide exposure.

## Additional Medical Topics

### *Environmental Health*

- Storm surge can inundate extant water systems, including wells and water mains, causing breakage and contamination. Loss of electricity will prevent water and sewage pumping in much of Tampa Bay. All water for human and pet use will require boiling. Public health authorities will have to coordinate public notification of boil water notices. Excess gastrointestinal illnesses may be observed if contaminated water is consumed.
- While stressful and disturbing, the presence of corpses in floodwaters or in storm debris does not create a risk of infectious disease epidemics in flood- or storm-affected areas. However, according to the World Health Organization, should dead bodies enter the water

## Pinellas County Local Mitigation Strategy

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supply there is a small risk of contamination that could lead to gastrointestinal infections. Health officials must work with the media to educate the public on these issues.

### ***Medical Records***

- Loss of medical records resulting in patient treatment challenges is likely as a result of hurricane events.

### ***Prescription Drugs***

- Although access to traditional prescription drug outlets will be disrupted, access to prescription drugs will be provided by emergency response teams, mobile medical units, and private/voluntary organizations such as AmeriCares and others that focus on distributing prescription drugs and medical equipment following disasters.
- Drugs may have been lost in the event or left behind while evacuating. People will have difficulty refilling prescriptions and collecting the cost of replacing them from their insurance companies.
- Special needs patients on multiple medications may have difficulty recalling specific medications and doses. Lack of accessible medical records will make it difficult to look up medication information for patients. Medical intervention will be required to determine patients' prescription needs.

### ***Mental Health***

- Following all hurricane events, members of the affected population will experience some level of distress. While most people return to normal levels of psychological functioning, some will exhibit symptoms of Post Traumatic Stress Disorder, depression, or other illnesses. Psychosocial support will be one of the most lasting needs.

### ***Health Insurance Portability and Accountability Act***

- To facilitate patient treatment, Health Insurance Portability and Accountability Act elements will be suspended or modified as provided for within the act's policy. There may be confusion about what elements of the act must be maintained in an emergency.

### ***Medical Licensing***

- Planned and spontaneous medical volunteers, including doctors and nurses, will require reciprocal licensing. This will be an urgent need.

# Pinellas County Local Mitigation Strategy

## DIRECT ECONOMIC LOSSES

The analysis conducted to estimate direct economic losses includes (for the purposes of this study) direct damage to the building (contents and inventory losses are not factored into the analysis) for the residential, commercial, industrial, and agricultural occupancy types (see **Table 12**).



**Table 1-5- 12: Building Related Economic Loss Estimates**

<b>BUILDING-RELATED ECONOMIC LOSS ESTIMATES</b>						
<b>(Thousands Of Dollars)</b>						
<b>Category</b>	<b>Area</b>	<b>Residential</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Others</b>	<b>Total</b>
<b>Property Damage</b>						
	Building	98,469,000	20,812,000	4,503,000	3,776,000	127,560,000
	Content	44,382,400	18,748,000	4,945,600	3,187,000	71,263,000
	Inventory	00	399,500	907,800	42,900	1,350,100
	<b>Subtotal</b>	<b>142,851,400</b>	<b>39,959,500</b>	<b>10,356,400</b>	<b>7,005,900</b>	<b>200,173,100</b>
<b>Business Interruption loss</b>						
	Income	230,300	4,243,900	85,900	57,900	4,618,100
	Relocation	11,555,700	3,217,500	228,100	704,500	15,706,000
	Rental	4,857,800	2,182,100	52,800	100,300	7,193,000
	Wage	542,400	4,445,100	142,900	230,000	5,360,400
	<b>Subtotal</b>	<b>17,186,200</b>	<b>14,088,600</b>	<b>509,700</b>	<b>1,092,700</b>	<b>32877500</b>
<b>Total</b>		<b>160,037,500</b>	<b>54,048,000</b>	<b>10,866,100</b>	<b>8,098,500</b>	<b>233,050,073</b>

# Pinellas County Local Mitigation Strategy

**Table 1-5- 13: Direct Economic Impacts**

<b>DIRECT ECONOMIC IMPACTS</b>	
<b>Loss Type</b>	<b>Economic Loss (\$ Millions)</b>
Residential Buildings	\$142,851
Commercial Buildings	\$39,959
Other Buildings	\$17,362
Business Interruption	\$32,877
<b>TOTAL FOR ALL LOSSES</b>	<b>\$233,050</b>

- Regional economic losses from damages to the Port of Tampa and Port Manatee are not directly factored in, but can be assumed to have major impacts with delays of commodities and supplies that will only aggravate an already tense economic and physical environment.
- Short- and long-term impacts to the environment (and indirectly tourism) are not factored in to the physical model but may be exercised during the catastrophic planning event.

## SUMMARY

With close to \$250 billion in expected economic losses (physical structure damage and loss of use for commercial entities), the modeled storm will create unprecedented challenges for the Tampa Bay Area. This catastrophic scenario will force the emergency managers, first responders, and other professionals from all levels of government, the private sector and the faith-based and volunteer agencies as well as our citizens to consider many recovery and post-disaster options that might not have been feasible before but may be a necessity to respond to this event. Short-term housing, public safety, insurance mechanisms, financial mechanisms for logistics and responders (among other items) will need to be addressed in order to help the communities recover.



## Pinellas County Local Mitigation Strategy

### APPENDIX A – HAZUS CONSEQUENCES TABLES

<b>PRE-STORM STRUCTURE VALUE BY BUILDING TYPE</b>			
<b>Occupancy Type</b>	<b>Number of Structures</b>	<b>Structures Values (Millions)</b>	<b>Percent of Total</b>
Residential	1,438,227	\$182,816	91.8%
Commercial	85,481	\$43,372	5.5%
Industrial	24,579	\$9,640	1.6%
Agricultural	6,532	\$1,097	0.4%
Religion	7,112	\$4,496	0.5%
Government	1,853	\$1,559	0.1%
Education	2,143	\$2,835	0.1%
<b>Total</b>	<b>1,565,927</b>	<b>\$245,815</b>	<b>100.0%</b>

<b>HOUSEHOLDS AND POPULATION WITH HOMES DESTROYED</b>						
<b>County</b>	<b>Total Population</b>	<b>Total Residential Buildings (RBs)</b>	<b>Count of Residences Destroyed</b>	<b>Percent of Residences Destroyed</b>	<b>Estimated Population with Residence Destroyed</b>	<b>Percent Population with Residence Destroyed</b>
Citrus	118,055	66,449	149	0.22%	265	0.22%
Hardee	26,938	10,108	2	0.02%	5	0.02%
Hernando	130,802	63,239	511	0.81%	1,057	0.81%
Hillsborough	998,948	367,696	146,495	39.84%	397,994	39.84%
Manatee	264,002	122,257	53,301	43.60%	115,098	43.60%
Pasco	344,765	170,815	49,729	29.11%	100,371	29.11%
Pinellas	921,482	388,775	218,183	56.12%	517,142	56.12%
Polk	483,924	223,007	202	0.09%	438	0.09%
Sumter	53,345	25,881	1,956	7.56%	4,032	7.56%
<b>Regional Total</b>	<b>3,342,261</b>	<b>1,438,227</b>	<b>470,528</b>	<b>32.72%</b>	<b>1,136,402</b>	<b>34.00%</b>

## Pinellas County Local Mitigation Strategy

<b>PERCENT OF BUILDING STOCK BY WIND DAMAGE CATEGORY (ALL OCCUPANCY TYPES)</b>						
<b>County</b>	<b>Percent with No Damage</b>	<b>Percent with Minor Damage</b>	<b>Percent with Moderate Damage</b>	<b>Percent with Severe Damage</b>	<b>Percent Destroyed</b>	<b>Percent with Any Damage</b>
Citrus	74.06%	20.53%	5.37%	0.57%	0.22%	26.69%
Hardee	92.51%	6.50%	0.92%	0.05%	0.03%	7.49%
Hernando	63.51%	24.37%	9.29%	2.07%	0.76%	36.49%
Hillsborough	4.11%	8.07%	16.83%	33.71%	37.29%	95.89%
Manatee	2.05%	5.82%	16.66%	34.32%	41.15%	97.95%
Pasco	17.89%	13.35%	17.89%	23.21%	27.67%	82.12%
Pinellas	0.19%	1.31%	8.60%	36.97%	52.93%	99.81%
Polk	89.56%	8.47%	1.74%	0.14%	0.09%	10.44%
Sumter	45.54%	22.24%	17.00%	8.01%	7.20%	54.46%
<b>Regional Total</b>	<b>24.75%</b>	<b>8.24%</b>	<b>11.42%</b>	<b>24.66%</b>	<b>30.92%</b>	<b>75.25%</b>

## Pinellas County Local Mitigation Strategy

<b>NUMBER OF BUILDINGS BY WIND DAMAGE CATEGORY (ALL OCCUPANCY TYPES)</b>							
<b>County</b>	<b>Number of Structures in County</b>	<b>Total Structures Affected</b>	<b>Number of Structures with No Damage</b>	<b>Number of Structures with Minor Damage</b>	<b>Number of Structures with Moderate Damage</b>	<b>Number of Structures with Severe Damage</b>	<b>Number of Structures Destroyed</b>
Citrus	71,714	18,996	52,714	14,614	3,822	406	154
Hardee	10,968	822	10,146	713	101	5	3
Hernando	69,266	25,278	43,988	16,881	6,437	1,434	526
Hillsborough	405,461	388,798	16,664	32,702	68,236	136,674	151,185
Manatee	132,349	129,637	2,713	7,706	22,043	45,428	54,459
Pasco	183,387	150,589	32,802	24,479	32,804	42,567	50,738
Pinellas	425,113	424,291	822	5,566	36,560	157,171	224,994
Polk	240,300	25,079	215,220	20,359	4,172	340	208
Sumter	27,373	14,906	12,467	6,089	4,653	2,193	1,971
<b>Regional Total</b>	<b>1,565,931</b>	<b>1,178,393</b>	<b>387,536</b>	<b>129,109</b>	<b>178,828</b>	<b>386,218</b>	<b>484,238</b>

## Pinellas County Local Mitigation Strategy

<b>WIND DAMAGE TO RESIDENTIAL STRUCTURES</b>							
<b>County</b>	<b>Number of Residential Structures in County</b>	<b>Pre-Storm Residential Exposure (Millions)</b>	<b>Percent of Structures with No Damage</b>	<b>Percent of Structures with Minor Damage</b>	<b>Percent of Structures with Moderate Damage</b>	<b>Percent of Structures with Severe Damage</b>	<b>Percent of Structures Destroyed</b>
Citrus	66,449	\$6,008	73.87%	20.56%	4.93%	0.41%	0.22%
Hardee	10,108	\$931	85.40%	5.94%	0.77%	0.03%	0.02%
Hernando	63,239	\$6,649	63.89%	24.80%	8.77%	1.72%	0.81%
Hillsborough	367,696	\$55,882	4.19%	8.44%	17.15%	30.38%	39.84%
Manatee	122,257	\$16,075	1.99%	6.00%	16.90%	31.51%	43.76%
Pasco	170,815	\$17,932	18.12%	13.59%	17.89%	21.28%	29.11%
Pinellas	388,705	\$53,168	0.16%	1.34%	8.77%	33.63%	56.13%
Polk	223,007	\$23,798	89.79%	8.43%	1.59%	0.09%	0.09%
Sumter	25,881	\$2,374	45.81%	22.33%	16.72%	7.58%	7.56%
<b>Regional Total</b>	<b>1,438,157</b>	<b>\$181,855</b>	<b>25.05%</b>	<b>8.44%</b>	<b>11.48</b>	<b>22.31</b>	<b>32.72%</b>

## Pinellas County Local Mitigation Strategy

### WIND DAMAGE TO COMMERCIAL STRUCTURES

County	Number of Commercial Structures in County	Pre-Storm Commercial Exposure (Millions)	Percent of Structures with No Damage	Percent of Structures with Minor Damage	Percent of Structures with Moderate Damage	Percent of Structures with Severe Damage	Percent of Structures Destroyed
Citrus	3,484	1,276	68.77%	17.94%	10.99%	2.27%	0.03%
Hardee	488	166	90.57%	7.17%	2.05%	0.20%	0%
Hernando	3,902	1,386	58.53%	19.73%	15.86%	5.72%	0.13%
Hillsborough	25,862	16,624	3.22%	4.03%	13.72%	65.39%	13.64%
Manatee	6,510	3,022	2.67%	3.52%	13.99%	67.57%	12.26%
Pasco	8,249	3,547	14.47%	9.73%	18.22%	49.32%	8.27%
Pinellas	25,031	11,848	0.58%	1.01%	7.03%	71.19%	20.19%
Polk	11,043	5,188	86.39%	9.03%	3.87%	0.71%	0.01%
Sumter	912	315	40.57%	19.96%	22.81%	15.79%	0.77%
<b>Regional Total</b>	<b>85,481</b>	<b>\$43,372</b>	<b>20.33%</b>	<b>5.77%</b>	<b>10.96%</b>	<b>51.15%</b>	<b>11.79%</b>

## Pinellas County Local Mitigation Strategy

<b>WIND DAMAGE TO INDUSTRIAL STRUCTURES</b>							
<b>County</b>	<b>Number of Industrial Structures in County</b>	<b>Pre-Storm Industrial Exposure (Millions)</b>	<b>Percent of Structures with No Damage</b>	<b>Percent of Structures with Minor Damage</b>	<b>Percent of Structures with Moderate Damage</b>	<b>Percent of Structures with Severe Damage</b>	<b>Percent of Structures Destroyed</b>
Citrus	1,041	249	69.74%	17.48%	9.70%	2.98%	0.19%
Hardee	138	33	91.30%	6.52%	2.17%	0.72%	0%
Hernando	1,245	264	60.56%	19.04%	13.82%	6.35%	0.24%
Hillsborough	6,819	2,789	3.70%	4.19%	12.13%	72.56%	7.41%
Manatee	2,137	837	3.23%	3.42%	11.65%	74.59%	7.16%
Pasco	2,532	677	13.86%	9.08%	16.31%	55.49%	5.29%
Pinellas	6,959	3,254	0.68%	1.06%	5.58%	80.60%	12.07%
Polk	3,423	1,423	86.44%	8.94%	3.56%	0.96%	0.09%
Sarasota	3,495	997	33.56%	14.33%	20.20%	30.27%	1.60%
Sumter	285	115	41.75%	19.65%	21.05%	16.84%	1.05%
<b>Regional Total</b>	<b>24,579</b>	<b>\$9,640</b>	<b>21.98%</b>	<b>5.92%</b>	<b>11.48%</b>	<b>55.93%</b>	<b>6.68%</b>

## Pinellas County Local Mitigation Strategy

<b>NUMBER OF BUILDINGS BY STORM SURGE DAMAGE CATEGORY</b>					
<b>Counties</b>	<b>Total Structures</b>	<b>Number With Minor Damage</b>	<b>Number With Moderate Damage</b>	<b>Number with Severe Damage or Destroyed</b>	<b>Number With More Than Minor Damage</b>
Citrus	71,711	1	3,012	1,301	4,313
Hernando	69,266	0	1,480	398	1,878
Hillsborough	405,461	67	42,678	38,252	80,930
Manatee	132,349	19	19,470	9,271	28,741
Pasco	183,387	7	11,653	6,626	18,279
Pinellas	425,113	70	85,265	36,979	122,244
<b>Total</b>	<b>1,287,287</b>	<b>164</b>	<b>163,558</b>	<b>92,827</b>	<b>256,385</b>

<b>PERCENT OF BUILDING STOCK BY STORM SURGE DAMAGE CATEGORY</b>					
<b>Counties</b>	<b>Total Structures</b>	<b>Percent With Minor Damage</b>	<b>Percent With Moderate Damage</b>	<b>Percent with Severe Damage or Destroyed</b>	<b>Percent With More Than Minor Damage</b>
Citrus	71,711	0.0%	4.2%	1.8%	6.0%
Hernando	69,266	0.0%	2.1%	0.5%	2.6%
Hillsborough	405,461	0.0%	10.5%	9.4%	19.9%
Manatee	132,349	0.0%	14.7%	7.0%	21.7%
Pasco	183,387	0.0%	6.4%	3.6%	10.0%
Pinellas	425,113	0.0%	20.1%	8.6%	28.7%
<b>Total</b>	<b>1,287,287</b>	<b>0.0%</b>	<b>12.7%</b>	<b>7.2%</b>	<b>19.9%</b>

## Pinellas County Local Mitigation Strategy

### STORM SURGE DAMAGE TO RESIDENTIAL STRUCTURES

Counties	Total Residential Structures	Pre-Storm Residential Structures Value (millions of \$)	Percent With Minor Damage	Percent With Moderate Damage	Percent with Severe Damage or Destroyed	Percent With More Than Minor Damage
Citrus	66,447	6,008	0.0%	4.5%	2.0%	6.5%
Hernando	63,240	6,649	0.0%	2.3%	0.6%	2.9%
Hillsborough	367,713	55,881	0.0%	11.3%	10.3%	21.6%
Manatee	122,250	16,075	0.0%	15.2%	7.6%	22.8%
Pasco	170,807	17,932	0.0%	11.1%	3.9%	15.0%
Pinellas	388,766	53,168	0.0%	21.1%	9.5%	30.6%
<b>Total</b>	<b>1,179,223</b>	<b>155,713</b>	<b>0.0%</b>	<b>14.0%</b>	<b>7.8%</b>	<b>21.9%</b>

### STORM SURGE DAMAGE TO COMMERCIAL STRUCTURES

Counties	Total Commercial Structures	Pre-Storm Commercial Structures Value (millions of \$)	Percent With Minor Damage	Percent With Moderate Damage	Percent with Severe Damage or Destroyed	Percent With More Than Minor Damage
Citrus	3,484	1,276	0.0%	1.3%	0.0%	1.3%
Hernando	3,902	1,386	0.0%	0.0%	0.0%	0.0%
Hillsborough	25,862	16,624	0.1%	3.3%	1.3%	4.6%
Manatee	6,510	3,022	0.0%	1.8%	0.0%	1.8%
Pasco	8,249	3,547	0.0%	1.6%	0.0%	1.6%
Pinellas	25,031	11,848	0.2%	3.1%	1.0%	4.1%
<b>Total</b>	<b>73,038</b>	<b>37,703</b>	<b>0.1%</b>	<b>2.6%</b>	<b>0.8%</b>	<b>3.4%</b>

## Pinellas County Local Mitigation Strategy

### STORM SURGE DAMAGE TO INDUSTRIAL STRUCTURES

Counties	Total Industrial Structures	Pre-Storm Industrial Structures Value (millions of \$)	Percent With Minor Damage	Percent With Moderate Damage	Percent with Severe Damage or Destroyed	Percent With More Than Minor Damage
Citrus	1,041	249	0.0%	0.0%	0.0%	0.0%
Hernando	1,245	264	0.0%	0.0%	0.0%	0.0%
Hillsborough	6,819	2,789	0.0%	2.6%	0.5%	3.1%
Manatee	2,137	837	0.0%	0.5%	0.0%	0.5%
Pasco	2,532	677	0.0%	0.1%	0.1%	0.2%
Pinellas	6,959	3,254	0.1%	8.0%	0.6%	8.6%
Total	20,733	8,070	0.0%	3.6%	0.4%	4.0%

### STORM SURGE DAMAGE TO AGRICULTURAL, EDUCATIONAL, AND GOVERNMENTAL STRUCTURES

Counties	Total Agriculture, Govt. and Educational Structures	Pre-Storm Agriculture, Govt. and Educational Structures Value (Millions of \$)	Percent With Minor Damage	Percent With Moderate Damage	Percent with Severe Damage or Destroyed	Percent With More Than Minor Damage
Citrus	464	125	0.2%	0.4%	0.0%	0.0%
Hernando	601	174	0.0%	0.0%	0.0%	0.0%
Hillsborough	2,956	2,265	1.1%	6.0%	1.0%	7.0%
Manatee	813	361	0.6%	0.2%	0.0%	0.2%
Pasco	1,138	483	0.3%	0.6%	0.0%	0.6%
Pinellas	2,541	1,085	0.0%	1.7%	0.3%	2.0%
Total	8,513	4,493	0.5%	2.7%	0.4%	3.1%

## Pinellas County Local Mitigation Strategy

<b>PROPERTY DAMAGE DUE TO STORM SURGE</b>			
<b>Counties</b>	<b>Structural Damage (Millions of \$)</b>	<b>Contents and Inventory Damage (Millions of \$)</b>	<b>Total Property Damage (Millions of \$)</b>
Citrus	278	348	627
Hernando	132	116	248
Hillsborough	10,893	11,026	21,920
Manatee	2,620	2,456	5,076
Pasco	1,789	1,880	3,669
Pinellas	12,824	12,725	25,548
<b>Total</b>	<b>28,536</b>	<b>28,551</b>	<b>57,088</b>

<b>COMBINED DAMAGE</b>							
The following table summarizes the combined damage from wind and storm surge flooding.							
<b>Counties</b>	<b>Pre-Storm Building Stock Value (Millions of \$)</b>	<b>Total Structural Damage from Wind (Millions of \$)</b>	<b>Percent of Pre- Storm Building Stock Value Loss from Wind</b>	<b>Total Structural Damage from Storm Surge (Millions of \$)</b>	<b>Percent of Pre-Storm Building Stock Value Loss from Storm Surge</b>	<b>Total Combined Structural Damage (Millions of \$)</b>	<b>Total Combined Percent of Pre-Storm Building Stock Value Loss</b>
Citrus	7,808	168	2.2%	278	3.6%	440	5.6%
Hardee	1,231	7	0.1%	0	0.0%	7	0.1%
Hernando	8,637	367	4.2%	132	1.5%	494	5.7%
Hillsborough	78,949	48,276	61.1%	10,893	13.8%	52,508	66.5%
Manatee	20,681	12,900	62.4%	2,620	12.7%	13,886	67.1%
Pasco	23,006	10,715	46.6%	1,789	7.8%	11,671	50.7%
Pinellas	70,489	54,287	77.0%	12,824	18.2%	57,235	81.2%
Polk	32,084	313	1.0%	0	0.0%	313	1.0%
Sumter	2,931	527	18.0%	0	0.0%	527	18.0%
<b>Total</b>	<b>244,585</b>	<b>127,553</b>	<b>52.2%</b>	<b>28,536</b>	<b>11.7%</b>	<b>141,207</b>	<b>57.7%</b>

# Pinellas County Local Mitigation Strategy

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**APPENDIX 2**  
**WORKGROUP MEMBERS**

# Pinellas County Local Mitigation Strategy

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# Pinellas County Local Mitigation Strategy

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## APPENDIX 2: WORKGROUP MEMBERS

### Membership Requirements

Florida Administrative Rule 9G-22 stipulates membership of the local mitigation strategy workgroup with the following excerpt: *“The Workgroup shall include, at a minimum, representatives from various agencies of county government, representatives from all interested municipalities in the county, and representatives from interested private and civic organizations, Native American tribes or organizations, trade and commercial support groups, property owners associations, water management districts, regional planning councils, independent special districts, private sector and non-profit groups.”* In our membership rules, adjacent communities including Hillsborough, Manatee and Pasco Counties were also invited to participate.



### Meeting Notification

All agencies are invited to every meeting via e-mail notification at least 15 calendar days prior to the meeting. In addition committee members developed a presentation for the LMS and invited interested officials and citizens to participate.

- Gordon Beardslee & Renea Vincent, Pinellas County Planning Department provided a presentation/update on LMS to the Pinellas County Floodplain Work Group (10/01/14)
- Bob Bray provided an LMS Presentation to the Economic Development group
- Sally Bishop briefed the Board of County Administrators on the LMS
- An overview of the interrelationship of LMS and CRS was presented at a joint meeting of the Program for Public Information (PPI) and the LMS. (9/25/14)
- An overview of the interrelationship of the LMS and CRS was presented at the Regional CRS Meeting.
- Dayton Saltsman and Stephanie Waters made an LMS presentation to the City Clerks Meeting.
- Dayton developed a PowerPoint presentation which he presented to the Fire Chiefs Association.

### Voting Members

Each participating municipality in Pinellas County has one voting member. Additionally, the Pinellas County Planning Department and the Pinellas County Emergency Management Administration each have one vote, as a representative of the unincorporated areas of Pinellas County and the emergency management profession.

The participating cities, in alphabetical order, are: Belleair, Belleair Beach, Belleair Bluffs, Clearwater, Dunedin, Gulfport, Indian Rocks Beach, Indian Shores, Kenneth City, Largo, Madeira Beach, North Redington Beach, Oldsmar, Pinellas Park, Redington Beach, Redington Shores, Safety Harbor, Seminole, South Pasadena, St. Pete Beach, St. Petersburg, Tarpon Springs, and Treasure Island. The town council of the Town of Belleair Shore has elected not to participate as they do not have public property or infrastructure.

# Pinellas County Local Mitigation Strategy

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## Independent Special Districts

All special districts, not otherwise represented by a municipal entity are also invited to participate. These districts are: Lealman Fire Control District, Indian Rocks Special Fire Control District, Palm Harbor Special Fire Control District, and the East Lake Special Fire Control District, as well as the Mosquito Control District and the Southwest Florida Water Management District.

## County Government

The following Pinellas County government agencies participate in the LMS planning process:

- Pinellas County Planning Department (LMS Coordinator, CRS Coordinator, Environmental Services, Planning Director), Emergency Management Administration, Development Review Services, Economic Development, Communications, Solid Waste, Public Works, and Utilities.

## Native American Tribes or Organizations

No Native American tribes or organizations have been identified for the Pinellas County area.

## Community Partners

In addition to the members identified above, this list includes a number of trade and commercial support groups, representatives from interested private and civic organizations, the health care industry, colleges and university, interested non-profit groups, regional and state government.

The agencies, listed in no particular order, are invited via e-mail to attend meetings:

Local American Red Cross Chapter  
Area Agency on Aging  
Salvation Army  
Pinellas County Citizen Corp Council  
Recover Pinellas, Inc. (Our Long Term Recovery Organization)  
Tampa Bay COAD (Community Organizations Active in Disasters)  
Tampa Bay Chapter of the Association of Contingency Planners (ACP) - representing 70% of large corporations in the region.  
Tampa Bay Regional Planning Council  
Health Care Coalition – ESF8 Working Group  
Morton Plant Mease (BayCare) Healthcare  
Bayfront Hospital  
PARC  
Eckerd College  
Insurance Information Institute (iii)  
ISO Representative  
Mitigation Planners/ LMS Coordinators from Pasco, Hillsborough and Manatee counties  
Regional CRS Coordinators  
Pinellas School Board  
Tampa Bay Water

# Pinellas County Local Mitigation Strategy

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National Weather Service  
Juvenile Welfare Board  
Chambers of Commerce  
Convention and Visitors Bureau (CVB)  
UF Cooperative Extension Service (Sustainability Project/ Outreach)  
National Weather Service, Ruskin Office  
Condo Association  
Sunstar Ambulance

A listing of all participants in the 2015 LMS Update is provided in Attachment 2-1

## Public Meetings

The LMS Workgroup members are actively seeking additional participation through their professional networks. Interested citizens are also invited to the Local Mitigation Strategy Workgroup meeting, as the meetings are open to the public. The meeting calendar is provided in the table below and reflects the workgroup planning process throughout the development and the revision(s) of the LMS. Meeting agendas, attendance and minutes for 2014-2015 are provided in Attachment 2-2.

The agency representatives' acceptance of the invitation and agreement to become workgroup members initiated their obligation to the effort. The representatives pledged their time and available resources to develop a mitigation strategy that would protect life, property, and the environment as well as contribute to the economic well-being of the county. The implication of the Hazard Mitigation Planning and Hazard Mitigation Grant Program Interim Final Rule is that each of the jurisdictions represented on the workgroup must show participation in the planning process to qualify for HMGP, Pre-Disaster Mitigation Program (PDM) and Flood Mitigation Assistance Program (FMA) funding. The definition of participation as determined by the workgroup is the attendance by an agency representative to at least 50% of the meetings during the year. Each agency representative must sign in at each meeting. This data is used to document participation and is provided along with meeting notices, agendas, and minutes on the Pinellas County LMS Website ([www.pinellaslms.org](http://www.pinellaslms.org)).

When the plan is updated, workgroup members volunteer for various subcommittees who are assembled to revise various appendixes, attachments, or the basic plan itself. The subcommittees meet on their own schedule and submit their drafts to the entire workgroup at a regular LMS meeting for discussion and adoption. Typically, the draft is distributed in advance of the meeting for review by workgroup members.

# Pinellas County Local Mitigation Strategy

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**Table 2- 1: Pinellas County LMS Meeting Calendar**

**1998**

March 11, 1998  
March 25, 1998  
April 8, 1998  
April 22, 1998  
May 6, 1998  
June 24, 1998  
July 8, 1998  
July 22, 1998  
August 12, 1998  
September 16, 1998  
October 7, 1998  
October 21, 1998  
December 9, 1998

**1999**

January 13, 1999  
February 3, 1999  
February 17, 1999  
March 3, 1999  
March 31, 1999  
April 14, 1999  
April 21, 1999  
April 28, 1999  
June 30, 1999

**2000**

January 21, 2000  
February 9, 2000

**2001**

November 6, 2001  
November 27, 2001  
December 11, 2001

**2002**

January 8, 2002  
January 29, 2002  
March 12, 2002  
May 15, 2002  
June 18, 2002  
September 10, 2002  
October 8, 2002

November 12, 2002  
November 26, 2002

**2003**

February 11, 2003  
June 17, 2003  
July 15, 2003  
October 14, 2003  
October 28, 2003

**2004**

January 13, 2004  
April 13, 2004  
July 13, 2004  
October 12, 2004

**2006**

March 11, 1998  
March 25, 1998  
April 8, 1998  
April 22, 1998  
May 6, 1998  
June 24, 1998  
July 8, 1998  
July 22, 1998  
August 12, 1998  
September 16, 1998  
October 7, 1998  
October 21, 1998  
December 9, 1998

**2008**

January 28, 2008  
March 27, 2008  
June 26, 2008  
September 25, 2008  
October 26, 2008  
November 20, 2008  
December 18, 2008

**2009**

January 28, 2009  
February 19, 2009  
March 19, 2009

April 16, 2009  
May 21, 2009  
June 18, 2009  
July 16, 2009  
August 20, 2009  
September 17, 2009  
October 15, 2009  
November 19, 2009  
December 17, 2009

**2010**

October 21, 2010

**2011**

January 20, 2012  
July 21, 2011

**2012**

January 19, 2012  
April 19, 2012  
July 19, 2012  
October 18, 2012

**2013**

January 17, 2013  
April 25, 2013  
August 15, 2013

**2014**

January 16, 2014  
March 6, 2014  
April 24, 2014  
May 29, 2014  
June 27, 2014  
July 31, 2014  
August 20, 2014  
September 25, 2014  
October 30, 2014

**2015**

January 15, 2015

**Attachment 2- 1: Pinellas County Local Mitigation Strategy  
Working Committee Roster**

**Pinellas County  
Local Mitigation Strategy  
2018 Working Group Roster**

Agency/Organization	Name	E-Mail Address	Phone	Position Title
American Red Cross	Hendrickson, Mark	mark.hendrickson@redcross.org	727-744-0382	Business Consultant for COOP & Community Development Education
American Red Cross	Bueno, Jose C	Jose.Bueno@redcross.org	813-868-7673	Regional Preparedness Manager
Area Agency on Aging of Pin./Pasco	Martino, Jason	jason.martino@aaapp.org	727-570-9696	Emergency Coordinating Officer
Bay Area DKI	Ennest, Chris	CEnnest@bayareadki.com	813-224-2464	Account Manager
Bayfront Health St. Petersburg	Beckert, Bruce	bruce.beckert@hma.com	727-893-6967	Construction Coordinator
Bayfront Health St. Petersburg	Roger Fournier PI	roger.fournier@BayfrontHealth.com	727-893-6171	Director of Public Safety
Bayfront Health St. Petersburg	Baker, Glenn	Glenn.Baker@bayfronthhealth.com	727-893-6074	Emergency Management Coordinator
Belleair	Lauda, Gregg	glauda@townofbelleair	727-588-3760 x 215	
Belleair Beach	Rives, Lynn	lrives@cityofbelleairbeach.com	727-595-4646 x123	Interim City Manager/Community Services Director
Belleair Bluffs	Sullivan, Debra	dsullivan@belleairbluffs-fl.gov		City Clerk
Clearwater	Crandall, Ella	Ellen.Crandall@MyClearwater.com	727.562.4836	Senior Planner, Long Range Planning Division
Clearwater	Ehlers, Scott	scott.ehlers@myclearwater.com	727-562-4334 x3205 Cell: 727-224-7072	Emergency Manager
Clearwater	Kessler, Sarah	Sarah.Kessler@myclearwater.com	727-562-4897	Environmental Specialist CRS Coordinator
Dunedin	Parks, Jeff	jparks@dunedinfl.net	727-298-3094	Fire Chief
Dunedin	Joseph DiPasqua	jdipasqua@dunedinfl.net	727-298-3193	Assistant Director of Planning & Development
Dunedin	Marsh, Whitney	wmarsh@dunedinfl.net	727-298-3232	Stormwater Program Coordinator
Dunedin	Ferlita, Russell	rferlita@dunedinfl.net	727-298-3186	Section Engineer
East Lake Tarpon Fire Control District	Jamison, Tom	tjamison@elfr.org	727-784-8668	Fire Chief
Eckerd College	Mets, Lisa	metsla@eckerd.edu	727-864-8221	Vice President & Secretary of Eckerd College and Risk Manager
FDOT	Aborizk, Angela	angela.aborizk@dot.state.fl.us	813-615-8630	FPEM Emergency Operations Coordinator
FEMA - Region IV	Vigo, Gabriela	gabriela.vigo@fema.dhs.gov	229-225-4546	HMA Program Specialist, FL
FL Restaurant & Lodging Assoc.	Lynch, Dannette	dannette@fsla.org	727-642-3404	Regional Director Florida Restaurant & Lodging Association
Florida Emergency Management	Price, Jamie	Jamie.price@em.myflorida.com	Office: 850-413-9925 Cell: (850) 694-6620	Lead Mitigation Planner
Florida Emergency Management	Wallick, Michael	Michael.Wallick@em.myflorida.com	850-922-0325	Mitigation Planner
Gulfport	Taylor, Michael	mtaylor@mygulfport.us	727-893-1087	Principal Planner
Gulfport	Streicher, Clark	cstreicher@mygulfport.us	727-893-1020	Building Official
Hillsborough County Hazard Mitigation	Eugene Henry, AICP, CFM	Henrye@hillsboroughcounty.org	813-307-4541	Hazard Mitigation Manager/Hillsborough Co. LMS Coordinator
Indian Rocks Beach	Scharmen, Dean	dscharmen@irbcity.com	727-595-6889	Public Services Director
Indian Rocks Beach	Warren, Calvin	cwarren@irbcity.com	727-595-6889	Assistant Public Services Director
Indian Shores	Dhonau, Bonnie	bdhonau@myindianshores.com	727-474-7777	Town Administrator
Indian Shores	Tidwell, Michelle	mtidwell@myindianshores.com	727-474-7785	Building Department Permit Clerk
Kenneth City	Campbell, Mathew	campbellm@kennethcityfl.org	727-498-8948	City Manager
Kenneth City	Susan L. Scrogam CMC	scrogams@kennethcityfl.org	727-498-8948	Town Clerk
Largo	Joseph Pennino, MPP	jpennino@largo.com	(727) 587-6740 Ext. 2101	Deputy Fire Chief / EM Coordinator
Largo	Leong Sharp, Frances	Fleong@largo.com	727-587-6794 x7453 Cell: 813-679-5615	Planner II
Largo	Johnson, Cody	cjohnson@largo.com	Office: 727-587-6714 ext. 211	Chief of Special Operations
Largo	Curtis, Luke	lcurtis@largo.com	727-586-7488 ext 7211	Plans Examiner
Largo	Ann Rocke	arocke@largo.com	(727)587-6713 ext. 4425	Program Engineer

**Pinellas County  
Local Mitigation Strategy  
2018 Working Group Roster**

Agency/Organization	Name	E-Mail Address	Phone	Position Title
Maderia Beach	Orton, Michelle	morton@madeirabeachfl.gov	727-391-9951 Ext. 255	Planning and Zoning Director
Maderia Beach	Chief Derryl O'Neal	doneal@medeirabeachfl.gov	(727) 391-3400 x 248	Fire Chief
Morton Plant Mease Healthcare	Clark, Carol	carol.clark@baycare.org	727-825-1753	Manager Safety and Security Services
North Redington Beach	Lewis, Don	ceofficer@townofnorthredingtonbeach.com	727-391-4848	Code enforcement officer
North Redington Beach	Campbell, Mari	townclerk@townofnorthredingtonbeach.com	727-391-4848	Town Clerk
North Redington Beach	Schmader, Renee	deputyclerk@townofnorthredingtonbeach.com	727-391-4848	Deputy Town Clerk
Oldsmar	Dauphinais, Marie	mdauphinais@myoldsmar.com	813-749-1122	CFM Director Planning & Redevelopment
Oldsmar	Everitt, Steven	severitt@myoldsmar.com	813-749-1147	CFM Principal Planner
Oldsmar	O'Nale, Dean	donale@myoldsmar.com	813-433-3402 Cell	EFO Fire/EMS Chief
PARC	Nevitt, Missy	mnevitt@parc-fl.org	727-345-9111	Director of Operations, PARC
Pasco County	Eppig, Ian	ieppig@pascocountyfl.net	727-847-8137	Mitigation Coordinator
Pinellas County	Doherty, Heather	hdoherty@co.pinellas.fl.us	727-464-3471	Engineering Service Tech II/CFM
Pinellas County	Swank, Stacey	sswank@pinellascounty.org	727-464-7425	Business Development Manager – Marketing & Communications
Pinellas County	Bishop, Sally	sbishop@co.pinellas.fl.us	727-464-3813	Director
Pinellas County	Borries, Joe	jborries@co.pinellas.fl.us	727-464-3803	Emergency Operations Manager
Pinellas County	Becker, Gregory	gbecker@pinellascounty.org	727-464-3812	EM Coordinator
Pinellas County	Moore, Chris	cdmoore@pinellascounty.org	727-464-8226	Principal Planner
Pinellas County	Vincent, Renea	rvincent@pinellascounty.org	727-464-8200	Planning Director (LMS Chair)
Pinellas County	Young, Chris	cyoung@pinellascounty.org	727-464-8200	Program Planner
Pinellas County	Foster, Lisa	lfoster@pinellascounty.org	727-464-8962	Floodplain Coordinator
Pinellas County	Talhok, David	dtalhok@co.pinellas.fl.us	727-464-3780	Program Manager
Pinellas County	Harji, Rahim	rharji@pinellascounty.org	727-464-8962	Public Works Director
Pinellas County	Beim, Donna	dbeim@pinellascounty.org	727-582-2510	Radio Systems Administrator
Pinellas County	Dziedzic, Gary	gdziedzi@co.pinellas.fl.us	727-453-6979	Sr. Elec/Mech Tech
Pinellas County Juvenile Welfare Board	Biddleman, Marcie	mbiddleman@jwbpinellas.org	727-453-5611	Executive Director
Pinellas County Juvenile Welfare Board	Waldron, Shelba	swaldron@jwbpinellas.org	727-453-5696	Program Consultant
Pinellas County Schools	Dluzneski, Dan	dluzneskid@pcsb.org	727-547-7205	EM Coordinator
Pinellas Park	Taylor, Danny	dtaylor@Pinellas-Park.com	727-369-5613	Community Planning Director
Pinellas Park	Gademer, Kathy	kgademer@pinellas-park.com	(727) 369-5615	Principal Planner
Pinellas Park	Brett Schlatterer	bschlatterer@pinellas-park.com	727-369-5802	Deputy Fire Chief
Pinellas Park	Boisvert, Suzanne	SBoisvert@pinellas-park.com	727-541-0805 x3906	Emergency Management Planner
Redington Beach	Clarke, Missy	townclerk@townofredingtonbeach.com	727-391-3875	Town Clerk
Redington Beach	Gamble, Andrea	deputyclerk@townofredingtonbeach.com	727-391-3875	Deputy Town Clerk
Redington Shores	Andrews, Steven	bldgdept@townofredingtonshores.com	727-397-5538	Building Official
Redington Shores	Palmer, Mary	townclerk@townofredingtonshores.com	727-397-5538	Town Clerk
Safety Harbor	Stenmark, Marcie	Mstenmark@cityofsafetyharbor.com	727-724-1555 X 1702	Community Development Director
Safety Harbor	Elizabeth Ciesla	lciesla@cityofsafetyharbor.com	727-724-1555 x1703	Community Planner/GIS Analyst
Seminole	Ely, Mark	mely@myseminole.com	727-398-3108x106	Community Development Director
Seminole	Hockenbury, Jeremy	jhockenbury@myseminole.com	727-397-6383	Public Works Director
Seminole	Rodde, Mike	mrodde@myseminole.com	727-393-8711	Fire Marshall

**Pinellas County  
Local Mitigation Strategy  
2018 Working Group Roster**

Agency/Organization	Name	E-Mail Address	Phone	Position Title
Seminole	Dykens, Brad	bdykens@myseminole.com	727-393-8711 x210	Public Education Officer
South Pasadena	Schwartz, Neal	nschwartz@mysouthpasadena.com	727-871-9339	Building Planning Director
South Pasadena	Mixson, David	firechief@mysouthpasadena.com		Fire Chief/Emergency Manager
South Pasadena Fire	Dochinez, Ashley			
St. Anthony's Hospital	Nicely, John	john.nicely@baycare.org	727-825-1128	Director Facilities Management Systems
St. Pete Beach	Porter, Catherine	cporter@stpetebeach.org	727-363-9266	Planner II
St. Pete Beach	Cooper, Bruce	b.cooper@stpetebeach.org	727-363-9277	Building Official
St. Petersburg	Taylor, Noah	noah.taylor@stpete.org	727-893-7283	Community Rating System Coordinator
St. Petersburg	Keefe, Robyn	Robyn.Keefe@stpete.org	727-892-5255	Urban Planner II
St. Petersburg	Frey, Carlos	carlos.frey@stpete.org	727-892-5380	Engineering Manager
St. Petersburg	Bunton, Janelle	jenelle.bunton@stpete.org	727-551-3821	Public Information Officer
St. Petersburg	Adamides, Dean	dean.adamides@stpete.org	727-893-7683	Division Chief, FPDM
St. Petersburg	Boulding, Amber	amber.boulding@stpete.org	727-892-5200	EM Specialist
Sunstar	Eells, Brian	beells@sunstarems.com	727-582-2216	Director of Communications and Emergency Management
SWFWMD	Lloyd Roberts	Lloyd.Roberts@swfwmd.state.fl.us	352-796-7211 x4545	Senior P.E., Emergency Coordinating Officer
Tampa Bay Regional Planning Council	Smith, Brady	brady@tbrpc.org	727-570-5151 x42	Principal Planner
Tarpon Springs	Urwiller, Heather	hurwiller@ctsfl.us	727-942-5611	Zoning Director
Tarpon Springs	Drake, Josh	jdrake@tsfr.us	727-938-3737	Fire Lieutenant
Tarpon Springs	Russo, Vicki	vrusso@tsfl.us	727-942-5617	Building Development Supervisor
Tarpon Springs	Young, Scott	syong@tsfr.us	727-938-3737	Deputy Fire Chief
Tarpon Springs	Araya, Megan	mayara@ctsfl.us	727-942-5604	Development Services Coordinator
Tarpon Springs	Pat McNeese	pmcneese@ctsfl.us	727-938-3711, ext. 2255	Principal Planner
Tarpon Springs Housing Authority	Amon, Deb	deb.amon@tarponhousing.com	279-2814 FAX	Deputy Executive Director
Treasure Island	Cohen, Paula	pcohen@mytreasureisland.org	727-547-4575 x239	Community Improvement Director
Treasure Island	Koutsoftas, Michelle	mkoutsoftas@mytreasureisland.org	727-547-4575 ext. 230	Permit Tech
Treasure Island	Bray, Robert	rbray@mytreasureisland.org	727-547-4575 x 233	City Planner
Treasure Island	Mazzei, Neal	Nmazzei@safebuilt.com	727.202.6825	
UF/IFAS Extension	Madhosingh-Hector, Ramona	rmadhosingh-hector@co.pinellas.fl.us	727-582-2656	UF/IFAS Extension Agent, Urban Sustainability
UF/IFAS Extension	Carnahan, Libby	lcarnahan@co.pinellas.fl.us	727-453-6522	Florida Sea Grant Agent
University of South Florida	Day, Robert	robertday@usf.edu	(813) 974-1484	Emergency Management Coordinator
University of South Florida	Van Asten, Guy	vanasten@mail.usf.edu	727.873.4216	Safety & Compliance Officer

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## **Attachment 2- 2: LMS Meeting Agendas and Minutes**

1. Meeting 1/16/14
  - A. Agenda/Minutes
  - B. Attendees
2. Meeting 3/6/14
  - A. Agenda/Minutes
  - B. Attendees
3. Meeting 4/24/14
  - A. Agenda/Minutes
  - B. Attendees
4. Meeting 5/29/14
  - A. Agenda/Minutes
  - B. Attendees
5. Meeting 6/27/14
  - A. Agenda/Minutes
  - B. Attendees
6. Meeting 7/31/14
  - A. Agenda/Minutes
  - B. Attendees
7. Meeting 8/20/14
  - A. Agenda/Minutes
  - B. Attendees
8. Meeting 9/25/14
  - A. Agenda/Minutes
  - B. Attendees
9. Meeting 10/30 /14
  - A. Agenda/Minutes
  - B. Attendees
10. Meeting 1/15/15
  - A. Agenda/Minutes
  - B. Attendees

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**APPENDIX 3**  
**MITIGATION STRATEGY CONFLICT RESOLUTION**

# Pinellas County Local Mitigation Strategy

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## APPENDIX 3: MITIGATION STRATEGY CONFLICT RESOLUTION

At every point of the LMS process, the workgroup will be advised of the status and consulted on future actions. All Workgroup members are welcomed to participate in all meetings to help reach a consensus. Every effort will be made to reach a compromise before proceeding to the next step. Progression to the next step will only occur, if the workgroup deems it appropriate and necessary.



### Non-Contractual Issues

If any non-contractual issue is opposed by 50% or more of the voting workgroup, the item will be deferred and recorded for future planning and evaluation purposes.

For any issue that is opposed by less than 50% of the voting workgroup, resolution will be attempted utilizing the below steps:

- A separate meeting/conference call will be scheduled with those opposed to the issue. The meeting will focus on identifying the root cause(s) of the opposition and determine if a compromise is possible.
- If the first meeting/conference call is unsuccessful, a second attempt will be scheduled.

This meeting will include representatives from county administration and the managers from the municipalities involved. The meeting will focus on confirming whether or not compromise is possible.

- If a resolution appears possible, but further discussion is needed, a third meeting may be scheduled between a representative of the BCC and the mayors of the municipalities opposed.
- The last attempt at resolution will be a meeting with the entire BCC and the councils/commissions involved. This step will only be utilized when a very small minority of the workgroup remains opposed to an issue and more than 75% of the voting workgroup recommends taking it to this level.

Opposition to issues from non-governmental entities will be handled in a similar manner.

### Contractual Issues

If any contractual issue is opposed by any member of the workgroup, they will be provided a copy of the contract requirement.

If 50% of the voting workgroup requests interpretation of the contract language or intent, the State Contract Coordinator will be contacted to provide clarification.

## Pinellas County Local Mitigation Strategy

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The full workgroup will be provided the clarification. If 50% of the voting workgroup recommends additional attempts be made, the State Director of Emergency Management will be contacted.

Relief from contractual issues can only be approved by the State Division of Emergency Management.

**APPENDIX 4**  
**LOCAL MITIGATION STRATEGY GOALS AND OBJECTIVES**

# Pinellas County Local Mitigation Strategy

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## APPENDIX 4: LOCAL MITIGATION STRATEGY GOALS AND OBJECTIVES

### Overview

Based on the hazards and vulnerability analyses, the next step in the LMS planning process was the development of definitive, realistic goals and objectives.

With the update of the 2015 Local Mitigation Strategy, the Workgroup found the existing goals and objectives provided a clear strategy on where to expend additional funds; as well as addressed mitigation as a comprehensive, multi-jurisdictional program. While the jurisdictions want to be “ready” if mitigation funds are available, it is clear that the shared goal of resiliency requires a local commitment even in difficult economic times.

In addition to non-structural approaches (growth management) to mitigation, public education campaigns as well as the hardening of critical facilities and shelters; the concepts of community resiliency and intergovernmental and inter-agency coordination remain critical to the LMS.

The Workgroup focused on the hazard-specific goals to maintain the “all-hazards” approach. Additionally, objectives were reviewed and modified to achieve these goals.

The seven goals adopted for the LMS Plan are:

1. **Become a More Disaster Resilient Community.**
2. **Minimize Coastal Flooding Losses in the CHHA, Coastal Storm Area and Hurricane Vulnerability Zone.**
3. **Minimize Riverine or Inland Flooding Losses in the 25, 50, and 100-year Flood Zone.**
4. **Minimize Storm Wind Losses in the County.**
5. **Minimize Wildfire Losses in the Wildland Urban Interface Areas.**
6. **Minimize Losses from Hazardous Material Incidents.**
7. **Minimize Losses from Security Attacks.**

### Specific Measures

Mitigation tools and techniques fall into three broad categories: (1) **structural techniques** including design and construction; (2) **environmental interventions** and (3) **non-structural interventions**. Structural mitigation projects include strengthening of vulnerable structures and public facilities to withstand wind, fire and other forces, elevation of structures to protect them from flood damage, construction of storm water control facilities and drainage improvements. Environmental



# Pinellas County Local Mitigation Strategy

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intervention refers to actions that reduce the vulnerability of communities by armoring them against the elements. This term includes beach restoration and stabilization projects. Non- structural mitigation refers to policies for avoiding hazard impacts, applying zoning restrictions, land acquisition in the floodplain, promoting citizen awareness and public education initiatives.

Each goal identified objectives which fell into one of five (5) specific measures:

**A. Prevention:**

Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, building codes, capital improvement programs, open space, preservation and storm water management regulation.

**B. Property Protection:**

Actions that involve the modification of existing building or infrastructure to protect them from a hazard or removal from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, flood proofing, storm shutters, and impact-resistant glass.

**C. Public Education and Awareness:**

Actions to inform and educate citizens, elected officials and property owners about potential risks from hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.

**D. Natural Resource Protection:**

Actions that, in addition to minimizing hazard losses also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management and wetland restoration and preservation.

**E. Structural Projects:**

These are actions that involve the construction of structures to reduce the impact of a hazard. Such structures include storm water controls, floodwalls, seawalls, retaining walls and safe rooms.

The implementation of a mitigation program is a key component in the achievement of a “sustainable community”, one in which citizens, businesses and institutions are protected from the disruptions and impacts of disasters. In an urbanized metropolitan county such as Pinellas County, coordination among and between levels of government is critical to the success of the program.

The LMS established the goals and objectives listed on the following pages (Table 4-1) as a foundation of the countywide mitigation strategy in 2009. These were reviewed by the Goals and Objectives Subcommittee with only minor recommendations for change. These were approved by the LMS Committee at the July 2014 meeting.

# Pinellas County Local Mitigation Strategy

**Table 4- 1: Goals, Objectives and Action Items**

GOALS	ACTIVITY CLASS	OBJECTIVES	ACTIONS	IMPLEMENTATION DOCUMENTS	AGENCY/DEPTS.
GOAL 1: Become a more disaster resilient community.	A. Preventive Measures	Objective 1.1: Adopt comprehensive and consistent sets of goals, objectives, and policies in local government comprehensive plans which minimize risk and potential property damage through density restrictions, zoning, and land use regulations.	Local governments have adopted their Evaluation & Appraisal Report-based amendments of their respective comprehensive plans, according to Ch. 163, F.S. In addition, currently annual amendments update the Capital Improvement Elements of the Comprehensive Plans.	Local government comprehensive plans	Planning, Building/Dev. Review Services
	A. Preventive Measures	Objective 1.2: Adopt and enforce land development regulations (LDRs) including building codes and floodplain management regulations which provide for enhanced public safety and structural integrity of buildings and infrastructure in order to achieve mitigation goals.	Local governments shall adopt and enforce LDRs to implement their respective comprehensive plans. Amendments to LDRs are made accordingly as comprehensive plan amendments are adopted.	Local government codes of ordinances	Building/Dev. Review Services, Public Works, Planning
	A. Preventive Measures	Objective 1.3: Local governments, Non-governmental organizations (NGOs) and businesses should develop and maintain Continuity of Operations (COOP) Plans which minimize the impact of business interruption and protect vital records.	Local government departments prepare and update individual COOPs; promote Small Business Disaster Survival Kit Programs	Department emergency response plans, COOPS	Emergency Management, Real Estate Mgt., all local government departments and constitutional departments

## Pinellas County Local Mitigation Strategy

GOALS	ACTIVITY CLASS	OBJECTIVES	ACTIONS	IMPLEMENTATION DOCUMENTS	AGENCY/ DEPTS.
GOAL 1: Become a more disaster resilient community.	A. Preventive Measures	Objective 1.4: Continue to maintain and implement, as necessary, the Pinellas County <i>Post-Disaster Redevelopment Plan</i> annually.	In 2013 Pinellas County completed the most recent update to the <i>Post-Disaster Redevelopment Plan</i> . The County and the PDRP Working Group continue to coordinate with DEO regarding the implementation of the Post-Disaster Redevelopment Planning Program including emergency ordinances, Disaster Housing Strategy, Debris Management Plan, etc.	Local government comprehensive plans; CEMP, Local Government Disaster/Post-Disaster Redevelopment Guides; <i>Pinellas County Post-Disaster Redevelopment Guide</i> (2010)	Emergency Management and Planning are lead agencies, coordinating with other interested parties
	A. Preventive Measures	Objective 1.5: Conduct research to determine impacts from climate change to the county and work regionally to identify adaptive strategies to meet future challenges including sea level rise.	Pinellas County will work with federal, state and local entities to determine potential impacts to the county and its jurisdictions and will incorporate adaptive strategies in the next update of the LMS, as appropriate.	Local government comprehensive plans; CEMP, Local Government Disaster/Post-Disaster Redevelopment Guides; <i>Pinellas County Post-Disaster Redevelopment Guide</i> (2010)	Planning agencies at local, regional, state and federal levels; the National Estuary Program, Tampa Bay Regional Planning Council; Pinellas County UF/Cooperative Extension Office and others.

## Pinellas County Local Mitigation Strategy

B. Property Protection	Objective 1.5: Develop a local program in concert with federal and state programs to encourage and provide incentives to residents to make their homes more resistant to natural, technological, and human- caused disasters.	The Pinellas County and St. Petersburg Home Repair Loan Programs are examples of local programs which provide low interest loans for improvements such as roof bracing/replacement, impact resistant windows and doors, shutters, etc. In addition, local governments may sponsor flood mitigation programs for repetitive and severe repetitive loss properties via the Flood Mitigation Assistance Program; Support State Hurricane Preparedness Tax Holidays and Wind Retrofit Program	Housing programs, CIEs and budgets, HUD Programs, FMAP and Floodplain Management Programs; State action to allow for Hurricane Preparedness Tax Holidays; continuation of State Wind Retrofit Program	County Community Development Depts., City Housing Departments, DEO, FDEM
B. Property Protection	Objective 1.6: Identify, assess, prioritize and harden critical facilities and key critical infrastructure.	Each government through the updating of the CEMP and LMS assesses the status of critical facilities and infrastructure	CEMP (2013); Local Mitigation Strategy (2015)	Emergency Management, Fire Administration, Real Estate Mgt.

## Pinellas County Local Mitigation Strategy

GOALS	ACTIVITY CLASS	OBJECTIVES	ACTIONS	IMPLEMENTATION DOCUMENTS	AGENCY/ DEPTS.
GOAL 1: Become a more disaster resilient community.	B. Property Protection	Objective 1.7: Support environmental land acquisition programs which limit existing or future development potential from a hazard while protecting environmental lands and/or providing recreational opportunities.	Continue programs that acquire environmentally-sensitive lands and flood-prone properties in conjunction with stormwater management projects.	Pinellas County and local comprehensive plans, Pinellas County Capital Improvements Program	Environmental Management, Real Estate Management, Public Works, Planning
	C. Public Education & Awareness	Objective 1.8: Develop a public awareness and education campaign that informs citizens, officials, and businesses about: <ul style="list-style-type: none"> <li>• Potential risks</li> <li>• Mitigation alternatives, their costs and benefits</li> <li>• Incentives and funding assistance programs</li> </ul>	Continue CRS outreach efforts and education campaigns via flyers, newspaper articles, direct mailing to repetitive loss properties/areas, email subscriptions, local events, and speaker bureaus. Promote Family and Small Business Disaster Survival Kit Programs	Local Floodplain Management Plan (CRS), Hurricane Guides, website.	Emergency Management, Planning, Communications, Economic Development
	C. Public Education & Awareness	Objective 1.9: Incorporate mitigation and preparedness activities into Neighborhood Crime Watch and CERT programs.	Coordinate information activities with local CERT and law enforcement agencies during local neighborhood meetings.	CEMP, Floodplain Management Plan	Fire Administration, Emergency Management, Law Enforcement
	C. Public Education & Awareness	Objective 1.10: Provide hazard-specific training, such as awareness, ICS <sup>1</sup> , hazardous material handling, floodproofing, code-plus construction techniques (“Blueprint for Safety”), etc. to governmental employees, contractors and citizens to reduce our vulnerabilities.	Coordinate information activities with local CERT and law enforcement agencies during local neighborhood meetings. Identify and expand training opportunities for governmental employees.	CEMP, Floodplain Management Plan, LEPC, RDSTF 5-year Training Program	Fire Administration, Emergency Management, Law Enforcement Public Information Office
	D. Natural Resource Protection	Objective 1.10: Adopt and enforce land development regulations (LDRs) which provide for the protection of environmentally-sensitive lands, i.e., wetlands, coastal areas and upland habitats in order to achieve mitigation goals.	Continue environmental protection through methods such as upland buffers, density restrictions within the CHHA, PCCCL and Coastal Storm Area, minimization of impervious surfaces consistent with local plans and codes	Comprehensive Plan; Land development regulations, Gulf Beaches Coastal Construction Code	Building/Dev. Review Services, Planning Pinellas County Construction Licensing Board

<sup>1</sup> ICS – Incident Command Structure training compliant with National Incident Management System (NIMS)

## Pinellas County Local Mitigation Strategy

GOALS	ACTIVITY CLASS	OBJECTIVES	ACTIONS	IMPLEMENTATION DOCUMENTS	AGENCY/ DEPTS.
GOAL 1: Become a more disaster resilient community.	E. Structural Projects	Objective 1.11: Support the construction of structures that reduce the impact of hazards including storm water controls, floodwalls, seawalls, security and monitoring capabilities, and safe rooms.	Enforce land development codes regarding hardening shorelines (where appropriate) and developing more disaster resistant housing. Design improvements utilizing climate change and sea level rise for the life expectancy of the structure.	Land development regulations; Florida Building code; Gulf Beaches Coastal Construction Code	Public Works, Environmental Management, PCCCL
GOAL 2: Minimize Coastal Flooding Losses in the CHHA, Coastal Storm Area and Hurricane Vulnerability Zone.	A. Preventive Measures	Objective 2.1: Restrict permanent residential density increases, expenditure of public funds, and the location of critical facilities within the Coastal High Hazard Area (CHHA), the Coastal Storm Area (CSA) where applicable, and the Hurricane Vulnerability Zone (HVA).	Develop appropriate land development regulations to implement coastal protection policies.  Implement goals, objections, and policies in local comprehensive plans.	Comprehensive Plan; Land development regulations	Planning, Building/Dev. Review Services
	A. Preventive Measures	Objective 2.2: Enforce adopted building codes and floodplain management regulations.	Carry out obligations to participate in the National Flood Insurance Program and its associated CRS program.	Building code; land development regulations, comprehensive plan	Building/Dev. Review Services, Planning
	A. Preventive Measures	Objective 2.3: Develop a program which provides incentives to encourage code-plus <sup>2</sup> flood mitigation construction and design.	Investigate the feasibility of initiating freeboard requirements greater than 1 foot	Land development regulations	Building/Dev. Review Services
	B. Property Protection	Objective 2.4: Develop local programs in concert with federal and state programs that encourage and provide incentives to residents to elevate their homes or businesses in the CHHA, Coastal Storm Area, if appropriate, and Hurricane Vulnerability Zone.	Participate in Flood Mitigation Assistance Program through sponsorships of applications for grant funds	Floodplain Management Plan	Floodplain Management sections; Building/Dev. Review Services

<sup>2</sup> Code-plus refers to construction techniques, materials and standards which exceed the minimum standard required in the building code. Blueprint for Safety is a code-plus standard for wind resistance (see [www.blueprintforsafety.org](http://www.blueprintforsafety.org))

## Pinellas County Local Mitigation Strategy

GOALS	ACTIVITY CLASS	OBJECTIVES	ACTIONS	IMPLEMENTATION DOCUMENTS	AGENCY/ DEPTS.
GOAL 2: Minimize Coastal Flooding Losses in the CHHA, Coastal Storm Area and Hurricane Vulnerability Zone.	C. Public Education & Awareness	Objective 2.5: Provide residents with up-to-date information regarding their: <ul style="list-style-type: none"> <li>• Hurricane evacuation zone;</li> <li>• Flood zone;</li> <li>• Opportunities to participate in programs which can assist them with their mitigation efforts.</li> </ul>	Carry out public outreach regarding disaster preparations throughout the year through websites, speaker bureaus, email subscriptions, events, PCC-TV and other Public, Educational and Governmental Channels (PEGs), local and commercial TV, and radio, and CRS outreach activities.	CEMP, Floodplain Management Plan, Hurricane guides	Emergency Management, Planning, Communications, Building/Dev. Review Services, Public Information Office
	C. Public Education & Awareness	Objective 2.6: Provide vulnerable residents with up-to-date information to adequately plan for potential evacuation and disasters	Carry out annual public outreach disaster preparations through websites, speaker bureaus, email subscriptions, events, PCC-TV and other Public, Educational and Governmental Channels (PEGs), local and commercial TV and radio, and CRS outreach activities.	CEMP, Floodplain Management Plan, Hurricane guides	Emergency Management, Planning, Communications, Public Information Office
	D. Natural Resource Protection	Objective 2.7: Protect coastal resources through acquisition, density restrictions, and the provision of beach access, natural vegetation, and dune protection.	Carry out environmental lands acquisition program, coastal management programs, and applicable land development regulations; i.e. community sea oat planning activities, and community beach clean-up efforts.	Local capital improvements programs and departmental budgets	Public Works, Environmental Management, Parks and Recreation Departments, Public Information Office
	E. Structural Projects	Objective 2.8: Identify structural projects where appropriate that minimize coastal flooding loss but protect environmental resources.	Update Comprehensive Plan Capital Improvements Element; local capital improvements program, and LMS project lists. Design the structural improvement utilizing the information pertaining to climate change and sea level rise for the life expectancy of the structure.	Capital Improvements Element, Capital Improvements Program, Local Mitigation Strategy	Public Works, Environmental Management, Planning

## Pinellas County Local Mitigation Strategy

GOALS	ACTIVITY CLASS	OBJECTIVES	ACTIONS	IMPLEMENTATION DOCUMENTS	AGENCY/ DEPTS.
GOAL 3: Minimize Riverine or Inland Flooding Losses in the 25, 50, and 100-year Flood Zone.	A. Preventive Measures	Objective 3.1: Regulate residential density increases, expenditure of public funds and the location of critical facilities within the 25, 50, and 100-year flood zones.	Carry out local policies in comprehensive plans that deal with densities, critical facilities, and public expenditures within floodplains	Local comprehensive plans, land development regulations	Building/Dev. Review Services, Planning
	A. Preventive Measures	Objective 3.2: Enforce adopted building codes and floodplain management regulations.	Carry out obligations to participate in the National Flood Insurance Program and its associated CRS program.	Building code, Land development regulations	Building/Dev. Review Services
	A. Preventive Measures	Objective 3.3: Develop a program which provides incentives to encourage code-plus flood mitigation construction and design.	Investigate the feasibility of initiating freeboard requirements	Land development regulations	Building/Dev. Review Services
	B. Property Protection	Objective 3.4: Develop local programs in concert with federal and state programs to encourage and provide incentives to residents to floodproof or elevate their homes or businesses in the floodplain.	Participate in Flood Mitigation Assistance Program through sponsorships of resident applications for grant funds	Floodplain Management Programs, CRS	Planning Depts. Building/Dev. Review Services
	C. Public Education & Awareness	Objective 3.5: Provide residents with up-to-date information regarding their <ul style="list-style-type: none"> <li>• Flood zone;</li> <li>• Need and availability of flood insurance;</li> <li>• Opportunities to participate in programs which can assist them with their mitigation efforts.</li> </ul>	Carry out annual public outreach disaster preparations through websites, speaker bureaus, email subscriptions, events, PCC-TV and other Public, Educational and Governmental Channels (PEGs), local and commercial TV, and radio, and CRS outreach activities.	Floodplain Management Plans, CEMP, Hurricane guides	Emergency Management, Planning, Communications, Building/Dev. Review Services

## Pinellas County Local Mitigation Strategy

GOALS	ACTIVITY CLASS	OBJECTIVES	ACTIONS	IMPLEMENTATION DOCUMENTS	AGENCY/ DEPTS.
GOAL 3: Minimize Riverine or Inland Flooding Losses in the 25, 50, and 100-year Flood Zone	C. Public Education & Awareness	Objective 3.6: Provide vulnerable residents with up-to-date information to adequately plan for potential evacuation and disasters.	Carry out annual public outreach disaster preparations through websites, speaker bureaus, email subscriptions, events, PCC-TV and other Public, Educational and Governmental Channels (PEGs), local and commercial TV, and radio, individual mailings, and CRS outreach activities.	Floodplain Management Plans, CEMP, Hurricane guides	Emergency Management, Planning, Communications
	C. Public Education & Awareness	Objective 3.7: Educate the development community on Low Impact Development (LID) opportunities and transfer of density to avoid excessive development in the riverine areas.	Utilize websites, speaker bureaus, email subscriptions, events, PCC-TV and other Public, Educational and Governmental Channels (PEGs), local and commercial TV, and radio, individual mailings,	Brochures on Low Impact Development	Building/Dev. Review Services,
	D. Natural Resource Protection	Objective 3.8: Protect wetlands and watershed areas through acquisition, density restrictions, provision of recreational opportunities (where appropriate), and habitat restoration.	Continue programs that acquire environmentally-sensitive lands and flood-prone properties in conjunction with stormwater management projects.	Comprehensive Plans, Capital Improvements Programs	Building/Dev. Review Services, Environmental Management, Public Works, Real Estate Management
	E. Structural Projects	Objective 3.9: Identify structural projects where appropriate that minimize flood loss including stormwater projects, drainage projects, and retention areas.	Update Comprehensive Plan Capital Improvements Element, local capital improvements programs, CRS Floodplain Management Plan, and LMS project list	Capital Improvements Programs, Comprehensive Plans, LMS, Floodplain Management Plan	Public Works, Environmental Management, Planning

## Pinellas County Local Mitigation Strategy

GOALS	ACTIVITY CLASS	OBJECTIVES	ACTIONS	IMPLEMENTATION DOCUMENTS	AGENCY/ DEPTS.
GOAL 4: Minimize Storm Wind Losses in the County	A. Preventive Measures	Objective 4.1: Regulate the placement of manufactured housing/ mobile homes and strive to replace stock with other affordable housing alternatives, including hurricane resistant modular construction.	Coordinate with the building industry, Florida Manufactured Housing Association (FMHA) on policy directions and programs	Land development regulations, Comprehensive Plans	Building/Dev. Review Services
	A. Preventive Measures	Objective 4.2: Enforce adopted building codes, particularly with regards to window protection, garage doors, and roofs.	Carry out Florida Building Code. Work with local builders, builder associations, building official organizations and contractors	Building codes, Florida Product Approvals	Building/Dev. Review Services
GOAL 4: Minimize Storm Wind Losses in the County	A. Preventive Measures	Objective 4.3: Develop a program which provides incentives to encourage code-plus wind mitigation construction (Blueprint for Safety) and design (e.g, hip roofs).	Identify existing programs and non-profit partners to expand current efforts and assist homeowners in retrofitting their homes for wind; particularly window protection, bracing garage doors and anchoring roofs.	Housing Programs, Cooperative Extension Service, Florida Product Approvals	Habitat for Humanity; County Housing Dept. City of St. Petersburg, City of Clearwater, PC Community Development Dept
	A. Property Protection	Objective 4.4: Develop local programs in concert with federal and state programs to encourage and provide incentives/ assistance to residents to harden their homes or businesses.	Distribute information through public outreach outlets discussing how-to's in hardening structures. Provide testimonials; Support State Hurricane Preparedness Tax Holidays and Wind Retrofit Program.	CEMP, Hurricane guides, County All-Hazards Guides, Code enforcement; State action to allow for Hurricane Preparedness Tax Holidays; continuation of State Wind Retrofit Program	Emergency Management, Communications, DEO, FDEM, Public Information Office, Red Cross

## Pinellas County Local Mitigation Strategy

GOALS	ACTIVITY CLASS	OBJECTIVES	ACTIONS	IMPLEMENTATION DOCUMENTS	AGENCY/ DEPTS.
GOAL 4: Minimize Storm Wind Losses in the County	C. Public Education & Awareness	Objective 4.5: Provide residents with up-to-date information regarding their: <ul style="list-style-type: none"> <li>• Hurricane wind risks</li> <li>• Retrofit options, their costs and benefits (rebates, insurance discounts, etc.);</li> <li>• New construction</li> <li>• Opportunities to participate in programs which can assist them with their mitigation efforts.</li> </ul>	Carry out public outreach for disaster preparations through websites, speaker bureaus, email subscriptions, events, PCC-TV and other Public, Educational and Governmental Channels (PEGs), local and commercial TV and radio, and CRS outreach activities. Support State Hurricane Preparedness Tax Holidays and Wind Retrofit Program.	CEMP, Hurricane guides; State action to allow for Hurricane Preparedness Tax Holidays; continuation of State Wind Retrofit Program	Emergency Management, Communications, Planning
GOAL 4: Minimize Storm Wind Losses in the County	E. Structural Projects	Objective 4.8: Identify structural construction techniques that minimize wind loss damage to critical facilities (city halls, courthouse, and fire stations) and infrastructure (utilities, etc.).	Each government, through the updating of the CEMP and LMS, assess the status of critical facilities	CEMP, LMS, Florida Building Code, Florida Product Approvals	Emergency Management, Fire Administration, Building/Dev. Review Services
GOAL 5: Minimize Wildfire Losses in the Wildland Urban Interface areas	A. Preventive Measures	Objective 5.1: Enforce adopted building codes and “Firewise” policies (buffers, etc.) to minimize risk.	Assess existing codes in meeting updated “Firewise” guidelines	Land development regulations, Building codes	Building/Dev. Review Services

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GOALS	ACTIVITY CLASS	OBJECTIVES	ACTIONS	IMPLEMENTATION DOCUMENTS	AGENCY/ DEPTS.
	A. Preventive Measures	Objective 5.2: Conduct prescriptive burning programs in passive recreational areas and parks.	Carry out controlled burning, mechanical vegetative thinning and timber thinning policies of local preserve management plans.	Brooker Creek Preserve Management Plan	Environmental Management, Fire Administration
GOAL 5: Minimize Wildfire Losses in the Wildland Urban Interface areas	C. Public Education & Awareness	Objective 5.3: Provide residents with up-to-date information regarding their fire risk and Firewise strategies, as well as water conservation.	Carry out annual public outreach through websites, speaker bureaus, email subscriptions, events, PCC-TV and other Public, Educational and Governmental Channels (PEGs), local and commercial TV, and radio.	CEMP	Emergency Management, Environmental Management, Communications
	D. Natural Resource Protection	Objective 5.4: Protect wildland areas through prescribed burning, acquisition, provision of recreational opportunities (where appropriate), outdoor camping/fire restrictions, and habitat restoration.	Carry out controlled burning, mechanical vegetative thinning, timber thinning policies of local preserve management plans, and established park policies and regulations	Park policies and regulations, Environmental lands management plans	Environmental Management, Culture, Education & Leisure (CEL) Depts.
GOAL 6: Minimize Losses from Hazardous Material Incidents.	A. Preventive Measures	Objective 6.1: Restrict noxious industrial land uses and the storage of potentially hazardous materials to specific areas.	Coordinate oversight through the Local Emergency Planning Committee (LEPC) and fire safety inspections.	Land development regulations, comprehensive plans, fire safety codes, Tampa Bay Region Hazardous Materials Plan, CEMP	Fire Administration; LEPC, Code Enforcement agencies; Planning Dept.

## Pinellas County Local Mitigation Strategy

GOALS	ACTIVITY CLASS	OBJECTIVES	ACTIONS	IMPLEMENTATION DOCUMENTS	AGENCY/ DEPTS.
	A. Preventive Measures	Objective 6.2: Enforce adopted fire and safety regulations, EPCRA reporting requirements, and adequate oversight.	Coordinate oversight through the Local Emergency Planning Committee (LEPC)	Tampa Bay Region Hazardous Materials Plan, CEMP	Emergency Management, Fire Administration, LEPC
	A. Preventive Measures	Objective 6.3: Maintain the highest level of Hazardous Material Team response capabilities.	Continue to staff and train HazMat teams.	Tampa Bay Region Hazardous Materials Plan, CEMP	Fire Administration, LEPC
GOAL 6: Minimize Losses from Hazardous Material Incidents.	A. Preventive Measures	Coordinate traffic routes and roadway system with MPO	Coordinate with MPO to provide safe and effective/efficient routes in transporting hazardous materials	MPO Long Range Transportation Plan; Traffic Management Plans; Transportation Element of Comprehensive Plans	Pinellas County MPO; Planning Departments
GOAL 6: Minimize Losses from Hazardous Material Incidents	B. Property Protection	Objective 6.4: Implement local programs in concert with federal and state programs to encourage businesses and industries, including transporters, to address and mitigate any potential for release or spills.	Coordinate oversight through the Local Emergency Planning Committee (LEPC) and Regional Domestic Security Task Force (RDSTF)	Tampa Bay Region Hazardous Materials Plan, CEMP	Emergency Management, Fire Administration, LEPC, RDSTF
	C. Public Education & Awareness	Objective 6.5: Provide residents with up-to-date information regarding emergency response; i.e., warnings, shelter in place, and evacuation.	Carry out annual public outreach disaster preparations through websites, speakers' bureau, email subscriptions, events, PCC-TV and other Public, Educational and Governmental Channels (PEGs), local and commercial TV, and radio.	Tampa Bay Region Hazardous Materials Plan, CEMP	Emergency Management, Communications, Fire Administration, LEPC

## Pinellas County Local Mitigation Strategy

GOALS	ACTIVITY CLASS	OBJECTIVES	ACTIONS	IMPLEMENTATION DOCUMENTS	AGENCY/ DEPTS.
	C. Public Education & Awareness	Objective 6.6: Provide training to public works, parks/recreation and utility employees with Hazardous Materials Handling training as well as responders.	This training to be based at the first responder level, identification and proactive action to prevent/mitigate damages from hazardous material incidents.	CEMP, 5-Year Training and Implementation Program	Emergency Management, Fire Administration, RDSTF, LEPC
	D. Natural Resource Protection	Objective 6.6: Protect environmental resources from the impacts of potential spills or releases through prevention activities, preparedness planning and enhanced response capabilities and provision of adequate resources.	Continue to Implement and coordinate with industry programs that minimize the use of hazardous materials in industrial processing (such a Pollution Preventions & Resource Recovery (P2R2) program)	Tampa Bay Region Hazardous Materials Plan, CEMP	Fire Administration, Emergency Management, Environmental Management, LEPC
GOAL 7: Minimize Losses from Security Attacks	A. Preventive Measures	Objective 7.1: Adopt key recommendations for Crime Prevention Through Environmental Design (CPTED), Buffer Zone Protection, etc. including territorial protection, access management, surveillance, etc.	Incorporate design principles in livable communities initiatives and LDRs	Land development codes	Building/Dev. Review Services, law enforcement, fire depts.
GOAL 7: Minimize Losses from Security Attacks	A. Preventive Measures	Objective 7.2: Incorporate the use of site profiler for threat and vulnerability analysis of critical infrastructure and key assets.	Coordinate oversight through the Local Emergency Planning Committee (LEPC) and RDSTF	Tampa Bay Region Hazardous Materials Plan, CEMP	Emergency Management, Fire Administration, Law Enforcement, LEPC, RDSTF
	A. Preventive Measures	Objective 7.2: Local governments and businesses should develop and maintain Continuity of Operations (COOP) Plans which minimize the impact of business interruption and protect vital records.	Local government departments prepare and update individual COOPs; promote Small Business Disaster Survival Kit Programs	Department emergency response plans, COOPS	Emergency Management, Real Estate Mgt., all local government departments and constitutional departments

## Pinellas County Local Mitigation Strategy

GOALS	ACTIVITY CLASS	OBJECTIVES	ACTIONS	IMPLEMENTATION DOCUMENTS	AGENCY/ DEPTS.
GOAL 7: Minimize Losses from Security Attacks	B. Property Protection	Objective 7.3: Develop local programs in concert with federal and state programs to harden critical facilities and critical infrastructure and key assets and minimize vulnerabilities to attack.	Local governments and emergency management staff shall continue to participate in RDSTF regional critical infrastructure protection subcommittee.	Critical Infrastructure Protection Committee (CIPC) / RDSTF Government Documents	Emergency Management, Law Enforcement
	C. Public Education & Awareness	Objective 7.4: Provide residents with up-to-date information to adequately plan for potential evacuation or shelter in place.	Carry out annual public outreach disaster preparations through websites, speakers' bureau, email subscriptions, events, PCC-TV and other Public, Educational and Governmental Channels (PEGs), local and commercial TV, and radio.	CEMP, County and City Communications Departments, Civic Associations, Economic Development Agencies	Emergency Management, Communications Dept., law enforcement
	D. Natural Resource Protection	Objective 7.5: Develop programs to protect the region's water supply from deliberate sabotage	Security measures of Tampa Bay Water and local water treatment plants and distribution systems	RDSTF documents, Security protocols	Tampa Bay Water, Port Security, County and municipal utilities, Private utilities

**APPENDIX 5**  
**LOCAL PROGRAMS, POLICIES AND CAPABILITIES**

# Pinellas County Local Mitigation Strategy

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## APPENDIX 5: LOCAL PROGRAMS, POLICIES AND CAPABILITIES

### Overview

Based on the hazards and vulnerability analyses, the next step in the LMS planning process was the development of definitive, realistic goals and objectives (Appendix 4), followed by the examination of existing county and municipal policies, programs and capabilities.



Pinellas County and its municipalities currently have several existing programs and plans related to hazard mitigation and post-disaster redevelopment. The primary programs and plans include the Comprehensive Emergency Management Plan (CEMP), the (25) Local Government Comprehensive Plans and Local Land Development Regulations, the National Flood Insurance Program Floodplain Management Plans and Community Rating System (CRS) Plans (participating communities) and Stormwater Management Plans.

This appendix contains an analysis of the county-wide ability to carry out mitigation activities. This involves identifying strengths and weaknesses, and where weaknesses are identified, remedial actions will be identified in the form of recommended actions and assignments made to follow up. The first section in this analysis, deals with the legal structure that enables specific mitigation actions. The next section is an analysis of local and regional programs and policies that have either a direct or indirect impact on mitigation. Next is the analysis section where laws, rules, programs and policies identified in the previous sections are grouped in a tabular format under the type of hazard to which they best relate. In addition, the table references the goals and objectives implemented by the program or policy, the relation to local planning and any specific analysis undertaken, a discussion of the strengths, weaknesses and any remedial actions recommended or implemented.

A full description of current efforts is provided in the Attachment 5.1. In addition to a description of the analysis, the table serves to demonstrate the link between the project, the vulnerability and risk analysis, the goals and objectives and local planning.

Upon evaluation of the current policies, the Pinellas County LMS Working Group has found them effective in reducing the overall impacts of hazards in the County. Examples of these successes are found during post-disaster flooding assessments. It is generally revealed that structures and development built in compliance with locally adopted floodplain management provisions sustain little or no flood damage. Those structures that are found to have sustained substantial damage from water were built before the current regulations were adopted.

### Legislation and Rules

# Pinellas County Local Mitigation Strategy

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This section describes the appropriate legislation and rules that directly impact mitigation. Each agency has enabling legislation that directs its activities and this legislation will be reviewed and where appropriate analyzed for effectiveness and a part of the analysis of agency programs. As legislation is identified that has an impact, positive or negative, it will be added to this section. As a first step, the analysis focuses on legislation and rules dealing with Emergency Management and Growth and Development.

During the 2008 update of the LMS, the legislation section was reviewed by the Pinellas LMS Working Group and updated as required. Specific additions of legislation that have been added and/or updated are:

- Florida Administrative Code, Chapter 62B-33
- Florida Building Code
- House Bill 7121
- House Bill 1435

Of all of the mitigation measures and capabilities updated within the state hazard mitigation plan, the two key areas of change toward the state's hazard management capabilities are the updates to the Florida Building Code and the approval of House Bill 7121. The Florida Building Code continues to be refined and enhanced periodically and by nature thereby makes the state of Florida, its residents, and structures developed within Florida more equipped for the effects of natural disaster events. Additionally, it statutorily defers to locally adopted flood damage prevention ordinances to obtain floodplain compliance. As such, the code has both pre- and post-disaster activities that are conducted by state agencies and local governments.

The development and approval of House Bill 7121 allows the state to generate additional funding sources to conduct future projects that will produce more elaborate and detailed data on the State of Florida pertaining to floodplain areas, SLOSH, and flood prone areas. These updates to the state's hazard capabilities and their complete descriptions can be found on the following pages.

**A. Public Law 93-288, the Robert T. Stafford Act – State Hazard Mitigation Plan (322 Plan)** Section 322 of the Stafford Act requires states to develop a hazard mitigation plan. The Florida Hazard Mitigation Plan establishes a comprehensive program to effectively mobilize and coordinate the state's services and resources to make Florida's communities more resistant to the human and economic impacts of disasters. This plan serves as the state's operational and programmatic guidance to promote the national and state-based goals and objectives of the "National Mitigation Strategy," as coordinated by FEMA (State Enhanced Hazard Mitigation Plan, 2013).

**B. Chapter 161, Florida Statutes - Coastal Zone Protection**

Part III of Chapter 161, Florida Statutes, is known as the "Coastal Zone Protection Act of 1985." The Act recognizes that coastal areas play an important role in protecting the ecology and the public health, safety, and welfare of the citizens of the state; that in recent years the coastal areas have been subjected to increasing growth pressures; and that unless these pressures are controlled, the very features which make coastal areas economically, aesthetically, and ecologically rich will be destroyed. Coastal areas form the first line of defense for the mainland against both winter storms and hurricanes. The dunes of coastal areas perform valuable protective functions for public and private property, and placement of permanent structures in these protective areas may lead to increased risks to life and property and increased costs to the public. Coastal areas often protect lagoons, salt marshes, estuaries, bays, marine habitats, and the mainland from the direct action of

# Pinellas County Local Mitigation Strategy

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ocean waves or storm surges; absorb the forces of oceanic activity on their seaward sides and protect calmer waters and stable shores to their landward sides; and are dynamic geologic systems with topography that is subject to alteration by waves, storm surges, flooding, or littoral currents. There is a tremendous cost to the state for post- disaster redevelopment in the coastal areas and preventive measures should be taken on a continuing basis in order to reduce the harmful consequences of natural and manmade disasters or emergencies. This Act authorizes management of the most sensitive portion of the coastal zone through the imposition of strict construction standards in order to minimize damage to the natural environment, private property, and life. This statute is applicable in both pre- and post- disaster situations. (State Hazard Mitigation Plan, 2007)

## **C. Chapter 163, Florida Statutes - Local Comprehensive Planning**

Ch. 163 FS outlines the requirements and optional elements for a county's local comprehensive plan. Each of Florida's 470 local governments is to adopt a comprehensive plan to guide growth and development. The comprehensive planning process guides development and limits growth in high hazard areas, especially along the coast. Florida's growth management laws (F.S. 163.3178) require the state and local governments to have a comprehensive plan, which for coastal communities includes a coastal management element. The purpose of this element is to restrict development activities that damage or destroy coastal resources, and protect lives and property. The Legislature limits public expenditures in areas that are subject to destruction by natural disasters. All coastal management elements must have a component that outlines principles for hazard mitigation. They must consider the capability to safely evacuate the density of coastal population proposed in current and future land-use plan elements. Additionally, a designated high-hazard coastal area, which is a Category one evacuation zone, needs to be identified in the coastal element. This statute is applicable in both pre- and post-disaster situations. (State Enhanced Hazard Mitigation Plan, 2013)

## **D. Chapter 186, Florida Statutes – State and Regional Planning**

Chapter 186, Florida Statutes sets out the growth management portion of the state comprehensive plan. The legislature finds that “issues of public safety, education, health care, community and economic development and redevelopment, protection and conservation of natural and historic resources, transportation, and public facilities transcend the boundaries and responsibilities of individual units of government, and often no single unit of government can plan or implement policies to deal with these issues without affecting other units of government.” The state's planning process provides direction for the delivery of governmental services, a means for defining and achieving the specific goals of the state, and a method for evaluating the accomplishment of those goals. Included in the State Comprehensive Plan is a Growth Management portion. This section is strategic providing guidance for state, regional, and local actions necessary to implement the state comprehensive plan with regard to the physical growth and development of the state. This statute is applicable in both pre- and post-disaster situations. (State Enhanced Hazard Mitigation Plan, 2013)

## **E. Chapter 187, Florida Statutes - The State Comprehensive Plan**

State Comprehensive Plan provides long-range policy guidance for the orderly social, economic, and physical growth of the state. The Florida Legislature reviews it biennially, and implementation of its policies requires legislative action unless otherwise specifically authorized by the constitution or law. The State Comprehensive Plan is intended to be a direction-setting document. Its policies may be implemented only to the extent that financial resources are provided pursuant to legislative appropriation or grants or appropriations of any other public or private entities. The plan does not create regulatory authority or authorize the adoption of agency rules, criteria, or standards not otherwise authorized by law. The goals and policies contained in the State Comprehensive Plan shall be reasonably applied where they are economically and environmentally feasible, not contrary to the public interest, and consistent with the protection of private property rights. The plan shall be construed and applied as a whole, and no specific goal or policy in the plan shall be construed or

# Pinellas County Local Mitigation Strategy

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applied in isolation from the other goals and policies in the plan. This statute is applicable in both pre- and post-disaster situations. (State Enhanced Hazard Mitigation Plan, 2013)

## **F. Chapter 252, Florida Statutes (State Emergency Management Act) - Comprehensive Emergency Management Plan (CEMP)**

Chapter 252 Florida Statutes mandates the development of the Florida Comprehensive Emergency Management Plan (The Plan). The Plan establishes a framework through which the State of Florida prepares for; responds to; recovers from; and mitigates the impacts of a wide variety of disasters that could adversely affect the health, safety and/or general welfare of the residents of the state. The Plan provides guidance to state and local officials on procedures, organization, and responsibilities; and provides for an integrated and coordinated local, state and federal response. This is an operations-based plan that addresses evacuations; sheltering; post-disaster response and recovery; deployment of resources; communications, and; warning systems. The Plan calls for annual exercises to determine the ability of state and local governments to respond to emergencies. The Plan also defines the responsibilities of state agencies and volunteer organizations. The Plan describes the basic strategies, assumptions and mechanisms through which the state will mobilize resources and conduct activities to guide and support local emergency management efforts through preparedness, response, recovery, and mitigation. To facilitate effective operations, the Plan adopts a functional approach that groups the types of assistance to be provided into 17 Emergency Support Functions. Each Emergency Support Function is headed by a lead agency or organization, which has been selected based on its authorities, resources, and capabilities in that functional area. Additionally, the Plan contains a Mitigation Annex which details the state's pre- and post-disaster mitigation operations and related strategies. The Lead Agency appoints an Emergency Coordinating Officer to manage that function in the State Emergency Operations Center. The Emergency Coordinating Officers and members of the Division of Emergency Management form the State Emergency Response Team. The State Emergency Response Team serves as the primary operational mechanism through which state assistance to local governments is managed. State assistance will be provided to impacted counties under the authority of the State Coordinating Officer, on behalf of the governor, as head of the State Emergency Response Team. This statute is applicable in both pre- and post-disaster situations. (State Enhanced Hazard Mitigation Plan, 2013)

## **G. Chapter 252.38, Florida Statutes**

Directs the Division of Emergency Management (Division) to establish a statewide competitive grant application process for proposals to construct or improve county Emergency Operations Centers (EOC) and designated state alternate EOCs. Upon completion of the competitive grant application process, the division is further directed to prioritize properly submitted projects and submit a comprehensive funding proposal to the Legislative Budget Commission (LBC) for approval. This report provides the division's comprehensive funding proposal to construct or improve county EOCs to the LBC. Backed by statute (s. 252.38(3) (a) 3, Florida Statutes), all of Florida's counties are required to establish a primary (and one or more secondary) EOC to provide continuity of government and direction and control of emergency operations. However, neither the statute, nor any other law, rule, standard or code sets forth minimum survivability or workspace criteria for county EOCs. Therefore, the relative survivability, available workspace, features and prominence of the emergency management EOC-function over other day-to-day uses is quite variable. (State Enhanced Hazard Mitigation Plan, 2013)

## **H. Section 373.036, Florida Statutes – Flood Protection**

In cooperation with the water management districts, regional water supply authorities, and others, the Florida Department of Environmental Protection (DEP) shall develop the Florida water plan. The Florida water plan shall include, but not be limited to the programs and activities of the

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department related to water supply, water quality, flood protection and floodplain management, and natural systems. The Florida water plan is intended to help DEP, especially the Division of Water Resource Management and the six DEP regulatory districts, focus on the highest water resource protection priorities, organize its own water management responsibilities, and build water management partnerships. It identifies significant water resource management priorities facing the state and sets forth strategies and actions for addressing them. Most importantly, the water management districts bring crucial floodplain data to the map modernization process through flood insurance studies and flood insurance rate maps. In general, the water management districts have significant expertise and continually upgrade their capabilities with FEMA's funding assistance. (State Enhanced Hazard Mitigation Plan, 2013)

## **I. Chapter 380, Florida Statutes**

- 1) Part I of Chapter 380, Florida Statutes is known as "The Florida Environmental Land and Water Management Act of 1972." Its intent is to protect the natural resources and environment of Florida as provided in s. 7, Art. II of the State Constitution, ensure a water management system that will reverse the deterioration of water quality and provide optimum utilization of limited water resources, facilitate orderly and well-planned development, and protect the health, welfare, safety, and quality of life of the residents of this state. In order to accomplish these purposes, it was necessary for the state to establish land and water management policies to guide and coordinate local decisions relating to growth and development. Local governments implement these state land and water management policies through existing processes for the guidance of growth and development.
- 2) Part II is called the "Florida Coastal Management Act." For planning and developing coordinated projects and initiatives for coastal resource protection and management, the coastal zone is considered to be the geographical area encompassed by the 35 Florida coastal counties listed in the Final Environmental Impact Statement for the Florida Coastal Management Program and the adjoining territorial sea. Under authority of this statute, projects landward and seaward of the 35 coastal counties are reviewed for consistency with the Florida Coastal Management Program. The program coordinates state governmental activities related to the protection, preservation, and development of Florida's natural, cultural, and economic coastal resources. A network of 10 agencies implement the program. A 15-member Governor's Coastal Advisory Committee advises the governor and the Legislature on coastal management issues and program implementation.
- 3) Part III may be cited as the "Florida Communities Trust Act." This statute finds that the conservation of natural areas is vital to the state's economy and ecology. The creation of greenways; expansion of green spaces; enhancement of recreation areas; and protection and restoration of urban lakes, rivers, and watersheds in the urban areas of this state are necessary to link populated areas with natural areas, preserve unique cultural and heritage sites, provide land for recreational opportunities to enhance the health and well-being of the urban residents of the state and improve water quality. The Act recognizes that the primary responsibility for establishing well-planned land use rests at the local government level through the implementation of comprehensive plans. It also recognizes that many of the goals and objectives of these comprehensive plans will not be met through regulation, but require creative and innovative action to ensure their accomplishment. Therefore, the Florida Communities Trust is established as a non-regulatory agency that assists local governments in bringing local comprehensive plans into compliance and implementing the goals, objectives, and policies of the conservation, recreation and

# Pinellas County Local Mitigation Strategy

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open space, and coastal elements of local comprehensive plans, or in conserving natural resources and resolving land use conflicts by:

- a) Responding promptly and creatively to opportunities to correct undesirable development patterns, restore degraded natural areas, enhance resource values, restore deteriorated or deteriorating urban waterfronts, reserve lands for later purchase, participate in and promote the use of innovative land acquisition methods, and provide public access to surface waters.
- b) Providing financial and technical assistance to local governments, state agencies, and nonprofit organizations to carry out projects and activities and to develop programs authorized by this part.
- c) Involving local governments and private interests in voluntarily resolving land use conflicts and issues.
- d) Acquiring or disposing of real and personal property or any interest therein when necessary or appropriate to protect the natural environment, provide public access or public recreational facilities, preserve wildlife habitat areas, provide access for managing acquired lands, or otherwise carry out the purposes of the Act. This statute is applicable in both pre- and post-disaster situations. (State Enhanced Hazard Mitigation Plan, 2013)

## **J. Chapter 590, Florida Statutes**

Chapter 590, Florida statutes states that “the division has the primary responsibility for prevention, detection, and suppression of wildfires wherever they may occur. The division shall provide leadership and direction in the evaluation, coordination, allocation of resources, and monitoring of wildfire management and protection. The division shall promote natural resource management and fuel reduction through the use of prescribed fire and other fuel reduction measures.” (State Enhanced Hazard Mitigation Plan, 2013)

## **K. House Bill 7121**

House Bill 7121 - Disaster Preparedness Response and Recovery states, "The Legislature finds that hurricane evacuation planning is a critical task that must be completed in the most effective and efficient manner possible. Appropriated funds may be used to update current regional evacuation plans and shall incorporate current transportation networks, behavioral studies, and vulnerability studies. In addition, funds may be used to perform computer-modeling analysis on the effects of storm-surge events." House Bill 7121 provides legislative findings with respect to the need for improvements in the state's infrastructure in response to the hurricane seasons of 2004 and 2005; provides criteria for an appropriation to fund the construction or renovation of county emergency operation centers and designates alternate state emergency operation centers; provides criteria for an appropriation for retrofitting public hurricane evacuation shelters.

Florida Division of Emergency Management (FDEM) has initiated an effort that will ultimately result in the update of the Regional Evacuation Studies (RES) for the state. This process will require updates to the coastal surge modeling tools with more current and accurate elevation data, i.e. LiDAR. Under House Bill 7121, the Division of Emergency Management received funding to update all 11 regional evacuation studies. As part of the process, new coastal LIDAR data will be gathered under separate contract and provided to update coastal surge/flood modeling tools including SLOSH. The SLOSH model processing will be conducted by the National Weather Service. FDEM is currently under contract with the Regional Planning Councils to begin the evacuation study project and the Division of Emergency Management will be coordinating this project. The first phase of the project will include demographic and land use analysis, hazards and behavioral analysis, shelter analysis and finally an evaluation of the transportation networks in each region, which will lead into the initiation

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and completion of vulnerability and transportation analysis components scheduled for later in the project cycle. (State Enhanced Hazard Mitigation Plan, 2013)

## **L. Rule 9B-74 - The Florida Building Code**

The 1998 Florida Legislature passed a building code reform law that mandated a single statewide Florida Building Code. On March 1, 2002, the Code replaced more than 400 local codes and is designed to make the local building process more efficient, increase accountability, bring new and safer products to the market, increase consumer confidence and better protect the residents of this natural disaster prone state. The Code integrates minimum plumbing, mechanical, gas, electrical and building codes with public school, energy and accessibility codes, and state regulations for facility licensing. The Code correlates with the fire protection and life safety requirements of the Florida Fire Protection Code. This statute is applicable in both pre- and post- disaster situations. Additionally, the code recognizes, for floodplain management purposes, locally adopted flood damage prevention ordinances and defers to them on flood prone construction and development. (State Enhanced Hazard Mitigation Plan, 2013)

## **M. Chapter 9G-22, Florida Administrative Code**

The Hazard Mitigation Grant Program (HMGP) is a state administered federal program that helps local communities that have been damaged by natural disasters to accomplish meaningful mitigation measures. Chapter 9G-22, Florida Administrative Code, describes the process for application, project selection and distribution of funds under the HMGP. The rule requires local jurisdictions to develop a Local Mitigation Strategy (or Plan) in order to receive HMGP funding. The plan must contain a long-term recovery strategy and identify viable mitigation projects that are based on potential economic loss avoidance and overall risk reduction. The Local Mitigation Strategies in turn form the foundation of Florida's statewide mitigation program. This statute is applicable in both pre- and post-disaster situations. (State Enhanced Hazard Mitigation Plan, 2013)

## **N. Chapter 9G-6, Florida Administrative Code**

Chapter 9G-6, FAC establishes the compliance criteria, as well as the compliance review procedures for the County and Municipal Emergency Preparedness Management Plan (CEMP) that consist of provisions addressing aspects of preparedness, response, recovery and mitigation. Pursuant to Chapter 252.35 (b), the Chapter 9G-6 ensures that county plans (and the municipal plans for those municipalities that elect to establish emergency management programs) are coordinated and consistent with the state comprehensive emergency management plan. This statute is applicable in both pre- and post-disaster situations. (State Enhanced Hazard Mitigation Plan, 2013)

## **O. Blumenauer Flood Insurance Reform Act of 2004**

On June 30, 2004, President George W. Bush signed into law the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004. The Act (Public Law 108-264) reauthorizes the National Flood Insurance Program until September 30, 2008, and revises the existing Flood Mitigation Assistance Program in three ways (Severe Repetitive Loss):

- 1) It creates a Pilot Program at \$40 million per year to mitigate severe repetitive loss properties, as well as provides funds for local administration, and reduces the nonfederal match from 25% to 10% with an approved mitigation plan that specifies how the state intends to reduce the number of severe repetitive loss properties;
- 2) It authorizes an increase of 150% in flood insurance premium rates for those severe repetitive loss property owners who refuse an offer of a mitigation grant, and;
- 3) It amends the existing basic Flood Mitigation Assistance Program by increasing annual funding from \$20 million to \$40 million, while providing funds for local administration, and reducing the non-federal match from 25% to 10% with an

# Pinellas County Local Mitigation Strategy

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approved mitigation plan that specifies how the state intends to reduce the number of severe repetitive loss properties.

## **P. The Biggert-Waters National Flood Insurance Reform Act of 2012**

BW 12 provided long-term changes to the National Flood Insurance Program. Under the new law, rates are likely to increase overall to reflect the true flood risk of your home and many insurance discounts will be eliminated. For example, rates for certain secondary homes in high-risk areas will increase 25 percent per year over the next 4 years starting in 2013. Policy rates for all properties could increase based on one or all of the following circumstances:

- Change of ownership
- Lapse in coverage
- Change in risk
- Substantial damage or improvement to a building

([www.floodsmart.gov](http://www.floodsmart.gov))

## **Q. Homeowner Flood Insurance Affordability Act of 2014**

On March 21, 2014, President Obama signed the **Homeowner Flood Insurance Affordability Act of 2014** into law. This law repeals and modifies certain provisions of the Biggert-Waters Flood Insurance Reform Act, which was enacted in 2012, and makes additional program changes to other aspects of the program not covered by that Act. Many provisions of the Biggert-Waters Flood Insurance Reform Act remain and are still being implemented. Today, the program is focused on implementing recent legislation by adjusting premium increases, issuing new rates and map updates, supporting mitigation and ensuring special advocacy to connect policyholders with the information they need to better understand the program. ([www.floodsmart.gov](http://www.floodsmart.gov))

## **R. Chapter 62B-33, Florida Administrative Code**

Chapter 62B-36, Florida Administrative Code, (also known as the Beach Erosion Control Assistance Program) provides the design and siting requirements that must be met to obtain a coastal construction control line permit. Approval or denial of a permit application is based upon a review of the potential impacts to the beach dune system, adjacent properties, native salt resistant vegetation, and marine turtles. The Coastal Construction Control Line Program is an essential element of Florida's coastal management program. It provides protection for Florida's beaches and dunes while assuring reasonable use of private property. Recognizing the value of the state's beaches, the Florida legislature initiated the Coastal Construction Control Line Program to protect the coastal system from improperly sited and designed structures that can destabilize or destroy the beach and dune system. Once destabilized, the valuable natural resources are lost, as are its important values for recreation, upland property protection and environmental habitats. Adoption of a coastal construction control line establishes an area of jurisdiction in which special siting and design criteria are applied for construction and related activities. These standards may be more stringent than those already applied in the rest of the coastal building zone because of the greater forces expected to occur in the more seaward zone of the beach during a storm event. (State Enhanced Hazard Mitigation Plan, 2013)

## **Community Rating System**

CRS provides flood insurance premium discounts to NFIP-participating communities that take extra measures to manage floodplains above the minimum requirements. A point system is used to determine a CRS rating from 10 to 1, with lower scores indicating better ratings. A community that does not participate in CRS or that does not maintain the minimum number of credit points would be considered a Class 10 community. The more measures a community takes to minimize or

# Pinellas County Local Mitigation Strategy

eliminate exposure to floods, the more CRS points are awarded, the lower their CRS Class Rating and the higher the discount on flood insurance premiums. A list of CRS communities is available on FEMA's Web site at <http://www.fema.gov/library/viewRecord.do?id=3629> (FEMA, 2012b).

The unincorporated areas of Pinellas County and most of the incorporated communities participate in the CRS program. CRS class ratings for each of these communities are shown in Table 5-1.

**Table 5- 1: Pinellas County CRS Ratings**

Community	Community Identification Number	CRS Class Rating
Pinellas County (unincorporated areas)	125139	7
Belleair, Town of	125088	In Process of Applying
Belleair Beach, City of	125089	7
Belleair Bluffs, City of	120239	Not participating
Belleair Shore, Town of	125090	Not participating
Clearwater, City of	125096	7
Dunedin, City of	125103	6
Gulfport, City of	125108	6
Indian Rocks Beach, City of	125117	7
Indian Shores, Town of	125118	6
Kenneth City, Town of	120245	8
Largo, City of	125122	7
Madeira Beach, City of	125127	6
North Redington Beach, Town of	125133	7
Oldsmar, City of	120250	6
Pinellas Park, City of	120251	6
Redington Beach, Town of	125140	7
Redington Shores, Town of	125141	7
Safety Harbor, City of	125143	7
Seminole, City of	120257	Not participating
South Pasadena, City of	125151	7
St. Pete Beach, City of	125149	7
St. Petersburg, City of	125148	6
Tarpon Springs, City of	120259	7
Treasure Island, City of	125153	6

Source: FEMA Report, 2014

## Comprehensive Plans

A comprehensive plan is a land use document providing framework and policy direction for land use decisions. Comprehensive plans usually include chapters detailing policies affecting land use, transportation, housing capital facilities, utilities, coastal, and rural areas. Comprehensive plans identify where and how growth needs will be met. The status of current comprehensive plans is shown in Table 5-2.

**Table 5- 2: Status of Comprehensive Plans**

Participating Jurisdiction	Comp. Plan Status	Web Site

## Pinellas County Local Mitigation Strategy

Participating Jurisdiction	Comp. Plan Status	Web Site
Pinellas County	2008	<a href="http://www.pinellascounty.org/plan/comp_plan/comp-plan.pdf">http://www.pinellascounty.org/plan/comp_plan/comp-plan.pdf</a>
Belleair, Town of*	2006	<a href="http://www.co.pinellas.fl.us/PPC/docs/eardocs/ear06b.pdf">http://www.co.pinellas.fl.us/PPC/docs/eardocs/ear06b.pdf</a>
Belleair Beach, City of*	2006	<a href="http://www.co.pinellas.fl.us/ppc/docs/eardocs/ear06bbe.pdf">http://www.co.pinellas.fl.us/ppc/docs/eardocs/ear06bbe.pdf</a>
Belleair Bluffs, City of*	2006	<a href="http://www.co.pinellas.fl.us/ppc/docs/eardocs/ear06bbl.pdf">http://www.co.pinellas.fl.us/ppc/docs/eardocs/ear06bbl.pdf</a>
Belleair Shore, Town of*	2006	<a href="http://www.co.pinellas.fl.us/ppc/docs/eardocs/ear06bs.pdf">http://www.co.pinellas.fl.us/ppc/docs/eardocs/ear06bs.pdf</a>
Clearwater, City of	2009	<a href="http://www.myclearwater.com/gov/depts/planning_dev/long_range/plans/Comprehensive_Plan.asp">http://www.myclearwater.com/gov/depts/planning_dev/long_range/plans/Comprehensive_Plan.asp</a>
Dunedin, City of	2008	<a href="http://www.dunedingov.com/index.aspx?page=495">http://www.dunedingov.com/index.aspx?page=495</a>
Gulfport, City of	1999	<a href="http://www.mygulfport.us/Special_Documents/Gulfport_Comp_Plan.pdf">http://www.mygulfport.us/Special_Documents/Gulfport_Comp_Plan.pdf</a>
Indian Rocks Beach, City of	2010	<a href="http://www.indian-rocks-beach.com/docs/COMP%20PLAN-2010.pdf">http://www.indian-rocks-beach.com/docs/COMP%20PLAN-2010.pdf</a>
Indian Shores, Town of	2008	<a href="http://www.myindianshores.com/ordinances/2011%20Indian%20Shores%20Comprehensive%20Plan%20Final.pdf">http://www.myindianshores.com/ordinances/2011%20Indian%20Shores%20Comprehensive%20Plan%20Final.pdf</a>
Kenneth City, Town of	2008	<a href="https://www.municode.com/library/fl/kenneth_city/codes/code_of_ordinances">https://www.municode.com/library/fl/kenneth_city/codes/code_of_ordinances</a>
Largo, City of	2009	<a href="http://www.largo.com/egov/documents/1315947592_904725.pdf">http://www.largo.com/egov/documents/1315947592_904725.pdf</a>
Madeira Beach, City of	2008	<a href="http://www.madeirabeachfl.gov/images/Madeira_Beach_Comprehensive_Plan.pdf">http://www.madeirabeachfl.gov/images/Madeira_Beach_Comprehensive_Plan.pdf</a>
North Redington Beach, Town	2013	<a href="http://www.townofnorthredingtonbeach.com/pdfs/nrb-compplan-2013.pdf">http://www.townofnorthredingtonbeach.com/pdfs/nrb-compplan-2013.pdf</a>
Oldsmar, City of	2008	<a href="http://www.myoldsmar.com/Pages/Docs/OldsmarFL_CompPlan/index?textPage=1">http://www.myoldsmar.com/Pages/Docs/OldsmarFL_CompPlan/index?textPage=1</a>
Pinellas Park, City of	2012	<a href="http://www.pinellaspark.com/government/departments/community_development/community_planning/docs/Comprehensive_Plan_October_2012_for_web.pdf">http://www.pinellaspark.com/government/departments/community_development/community_planning/docs/Comprehensive_Plan_October_2012_for_web.pdf</a>
Redington Beach, Town of	2007	<a href="http://www.pinellasplanningcouncil.org/docs/eardocs/ear07rb.pdf">http://www.pinellasplanningcouncil.org/docs/eardocs/ear07rb.pdf</a>
Redington Shores, Town of	2009	<a href="http://www.townofredingtonshores.com/meeting%20pdfs/comprehensive-plan.pdf">http://www.townofredingtonshores.com/meeting%20pdfs/comprehensive-plan.pdf</a>
Safety Harbor, City of	2012	<a href="http://www.cityofsafetyharbor.com/DocumentCenter/Home/View/510">http://www.cityofsafetyharbor.com/DocumentCenter/Home/View/510</a>
Seminole, City of	2011	Currently under major revision
South Pasadena, City of	2013	<a href="http://www.mysouthpasadena.com">www.mysouthpasadena.com</a>
St. Pete Beach, City of	2011	Currently under major revision
St. Petersburg, City of	2011	<a href="http://www.stpete.org/development/Comp_plan.asp">http://www.stpete.org/development/Comp_plan.asp</a>
Tarpon Springs, City of	2009	<a href="http://ctsfl.us/DevelopmentServices/ComprehensivePlan/ComprehensivePlan.html">http://ctsfl.us/DevelopmentServices/ComprehensivePlan/ComprehensivePlan.html</a>
Treasure Island, City of	2006	Currently under major revision

### Local Programs, Policies and Regulations

# Pinellas County Local Mitigation Strategy

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While the County Emergency Management Administration and Planning Department serve as the coordinating and leadership role for the Pinellas County Local Mitigation Strategy, it is emphasized that many county and municipal departments, non-governmental agencies and private sector organizations have programs, resources and capabilities that will be invaluable in the implementation of the efforts to improve the disaster resistance of Florida's communities.

Some programs may not have been designed for specific hazard mitigation purposes, but do result in the reduction of potential human or economic losses from disasters. For example, the protection of coastal areas and wetlands was originally mandated to preserve environmental resources and habitat. However, it also has the effect of reducing vulnerable populations and property in the hurricane evacuation zones and floodplain areas.

As part of the 2009 update process, the Working Group is responsible for reviewing all of the local agency activities and identifying all relevant programs and policies that have some impact on mitigation. To complete this task, members of the Working Group have conducted local and county-wide meetings and departmental interviews to identify mitigation programs and policies.

Typically, activities fall into the following general categories:

- Emergency Management – Planning, Training, Exercise, Response and Recovery Floodplain Management Programs – Preventive, Property Protection, Structural Projects
- Comprehensive Planning – Preventive activities
- Emergency Services – Prevention and Outreach
  - Law Enforcement and Security Issues
  - Fire Prevention, Response and Safety
  - Hazardous Material Prevention, Response, and Safety
  - EMS, Health Care Risk Assessment, Security, Response
- Critical Facilities and Infrastructure Vulnerability Assessment and Protection
- Communications – Outreach, Warning, Education

A listing of the county and municipal departments and agencies and a general description of their mitigation missions are identified in Appendix 6. The mitigation plan for community participation and outreach is outlined in Appendix 7. Critical facilities and vulnerability analyses is presented in Appendix 12.

The following pages list the goals in each jurisdiction that match each of the measures enumerated. These are the LMS Working Group goals that are referenced:

1. Preventive Measures (planning, zoning, open space preservation, Building codes and enforcement, Utility retrofits
2. Property Protection - Acquisition, Relocation, Elevation, Retrofit
3. Emergency Services Measures - Warning, systems, shelters, safe rooms, monitoring systems, response planning, evacuation, critical facilities protection
4. Structural Projects - Seawalls, reservoirs, channel modification, storm water management facilities, drainage system maintenance
5. Natural Resource Protection - Wetland Protection, BMP, Erosion control, etc.
6. Public Information Programs

# Pinellas County Local Mitigation Strategy

**Table 5- 3: Belleair Beach Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element (FLUE) Goal 1	Manage the City’s future development and redevelopment toward maintaining a totally residential character, promoting a healthful and safe environment, conserving natural qualities, and enhancing the City’s economic base.	1, 5	Protects natural function of floodplains and wetland areas.
FLUE 1.4.2	Land use and zoning regulations shall include flexible and innovative techniques that recognize the vulnerability of the area between Gulf Boulevard and the Gulf of Mexico to storm surges and that incorporate the aesthetic value of the Gulf of Mexico into the development.	1	Protects natural functions of the coastal area and reduces the potential for life and property loss from storm events.
FLUE 1.4.3	Land development regulations shall contain minimum design standards including adequate drainage and stormwater management structures, open space, and safe and convenient on- site traffic flow. These standards shall be reviewed against the need for on-site vehicular parking.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses.
FLUE 1.1.6	<p><u>Preservation (P)</u></p> <p>It is the purpose of this category to depict those areas of the city that area now characterized, or appropriate to be characterized, as a natural resource feature worthy of preservation; and to recognize the significance of preserving such major environmental features and their ecological functions.</p> <p>Use Characteristics – Those uses appropriate to and consistent with this category include:</p> <p>Primary Uses – Open and undeveloped areas consistent with the following natural resource features and considerations: Tidal Wetlands including Saltwater Marsh, Undeveloped Barrier Islands and Spoil Islands; Natural Drainage ways; Land Seaward of the Coastal Construction Control Line; Dune Systems; Habitat for Endangered and Threatened Species; and</p>	1, 5	Protects natural function of floodplains, wetlands, and dune systems to minimize losses from flooding and storm events.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
	such additional areas determined to have environmental significance and recognized in the applicable local government comprehensive plan.		
Conservation and Coastal Management Element (CCME) Goal 1	Protect and improve of the environmental quality and natural and economic resources of the City of Belleair Beach; protect human life; and, limit public expenditures within the Coastal High Hazard Area.	1, 5	Protects natural functions of floodplains, wetlands, and coastal areas; restricts public expenditures of funds that may encourage more development within the coastal high hazard area.
CCME Policy 1.1.1	The dredging and filling of sea grass beds shall be prohibited except in circumstances of overriding public interest. Mitigation is required.	5	Best available practices to promote the benefits of respecting natural systems in Pinellas County.
CCME Policy 1.1.2	Future development of mangrove forests and coastal marshes shall be prohibited.	5	Best available practices to promote the benefits of respecting natural systems in Pinellas County.
CCME Policy 1.1.3	Living marine resources shall be protected from immediate and future degradation resulting from improper development and/or waste disposal practices. The City shall ensure that future infill development and redevelopment results in no net loss in living marine resources.	5	Best available practices to promote the benefits of respecting natural systems in Pinellas County.
CCME Policy 1.1.11	A coastal building setback requirement equal to or landward of the State Coastal Construction Control Line shall be strictly enforced.	1	Prevents building in the most vulnerable area along the coast and minimizes the potential loss of property and lives.
Conservation and Coastal Management Element (CCME) Objective 1.3	The City of Belleair Beach shall maintain the clearance time for hurricane evacuation identified by Tampa Bay Regional Planning Council. Any proposed development shall not increase this clearance time.	3	Maintaining or reducing evacuation times is important to reducing potential casualties.
CCME Policy 1.3.1	The evacuation times adopted by Tampa Bay Regional Planning Council's <i>Tampa Bay Region Hurricane Evacuation Study 2006</i> shall be used for comprehensive plan amendment review and development review and approval.	3	Reducing evacuation times is important to reducing potential casualties.
CCME Policy 1.3.2	The City shall coordinate with the Pinellas County to ensure continued shelter capacity to accommodate existing and future residents of the City.	3	Provides for coordination of land use changes with the amount of shelter space available or needed.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 1.3.3	The City shall provide information for distribution to City residents identifying the established evacuation routes and shelters.	3	Will assure that visitors and tourists who are not accustomed to dealing with tropical storm events are informed as to emergency evacuation procedures and alternative sheltering options.
CCME Policy 1.3.4	The City shall maintain and update its records and review its procedures annually with respect to identifying those individuals requiring assistance in the event of a natural disaster.	3	Periodic review will help ensure that the best disaster response measures are in place.
CCME Policy 1.3.5	The City shall coordinate with Pinellas County to ensure that future facility improvements to Causeway Boulevard do not increase hurricane evacuation clearance times.	3	Higher priority of construction projects along evacuation routes will assure adequate capacity to reduce evacuation
CCME Objective 1.4	The City shall restrict development and redevelopment densities to those adopted in the Future Land Use Element and shall limit the expenditure of public funds in Coastal High Hazard Areas (CHHA) to those facilities necessary for the protection of health and safety. All building and development activities in these areas shall be conducted in such a manner as to lessen the existing danger to life and public and private property.	1	Restricts higher development in areas where evacuation may be required; reducing the need for public shelter space; and restricts expenditure of public funds for projects that may encourage more future development.
CCME Policy 1.4.1	The CHHA is defined as that portion of the community below the elevation of the category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. However, the Coastal High Hazard Area defined by the Pinellas Planning Council's <i>Countywide Plan Rules</i> will be the regulatory standard for the City of Belleair Beach and depicted on <i>Map LU-4: Future Land Use and Future Transportation Corridors</i> .	3	Redefines Coastal High Hazard Area to be consistent with Florida Statutes.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 1.4.2	The City defines a Coastal Storm Area as the area that includes the following: the Coastal High Hazard Area, the causeway, any area surrounded by the CHHA or by the CHHA and a body of water, and all areas located within the Velocity Zone as designated by the Federal Emergency Management Agency.	3	Redefines Coastal High Hazard Area to be consistent with Florida Statutes.
CCME Policy 1.4.3	The CHHA as defined in Policy 1.4.1, together with the Coastal Storm Area as defined in Policy 1.4.2, being consistent with the Pinellas Planning Council <i>Countywide Plan Rules</i> , shall be the area of coastal development and redevelopment regulation within the City of Belleair Beach. This area is depicted on <i>Map LU-4: Future Land Use and Future Transportation Corridors</i> .	3	Redefines Coastal High Hazard Area to be consistent with Florida Statutes.
CCME Policy 1.4.4	City-funded roadways, water, sewer and drainage improvements shall not be built in the Coastal High Hazard Area unless the facility is for public access maintenance improvements, or restoration of infrastructure service following a natural disaster.	1	Restricts public expenditures that may encourage future development and minimizes potential damage or losses.
CCME Policy 1.4.5	The City shall continue to implement its adopted building code and participate in the NFIP	1, 2	Restricts development to prevent property loss and repetitive losses.
CCME Objective 1.5	The City shall implement the priority reconstruction/ redevelopment program outlined in this comprehensive plan, as appropriate, immediately following a natural disaster	3	Provides for consistent application of steps from recovery to reconstruction.
CCME Policy 1.5.1	Following a natural disaster, the City's Deputy Mayor and City Manager, in concert with City Council, shall coordinate the implementation of the Post Disaster Development Plan.	3	Provides for consistent application of steps from recovery to reconstruction.
CCME Policy 1.5.2	Following a natural disaster, the City shall: (1) review damages and assess the priorities for repair and/or reconstruction, (2) coordinate with county, state and federal officials as appropriate to prepare application for disaster assistance, (3) identify options for repair or reconstruction of damaged public facilities, and (4) implement a redevelopment strategy and plan for both short and long-term redevelopment.	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts; provides process for decision-making critical to the recovery period.
	The City shall develop and implement a program for immediate		

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 1.5.3	repair and clean up needed to protect the public health safety and welfare of returning citizens. Such activities shall include (1) restoration of potable water, sanitary sewer and electrical power as appropriate, (2) removal of storm debris to facilitate movement of vehicular traffic, and (3) identification and removal of unsafe structures and identifying structures to receive priority permitting approvals.	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts
CCME Policy 1.5.4	The City shall identify long-term redevelopment strategies based upon an assessment of infrastructure and/or structural damage. Appropriate interagency hazard mitigation reports shall be thoroughly assessed to assist the City in distinguishing between immediate repair clean-up activities and long-term repairs.	3	Serves to improve upon response plans in the short-term, mid- term, and long-term recovery and reconstruction after a disaster. Mitigation measures encourage preemptive approach to dealing with pending disasters.
CCME Policy 1.5.5	The City shall require that any structure which incurs damage in excess of fifty (50) percent of its fair market value shall be rebuilt to meet all applicable codes, ordinances and development regulations. This policy shall not be construed to prohibit replacement of a single family house on an existing platted lot.	1,2	Reconstruction to current higher standards will reduce the chances of future repetitive losses
CCME Policy 1.5.6	Recognizing that a major hurricane could result in the need for extensive repairs to public infrastructure, the City shall, maintain a contingency fund, at a level to be determined, in order to ensure a local dollar match for state and/or federal disaster assistance grants.	3	Provides for expeditious recovery following an emergency requiring repair or replacement of existing infrastructure.
CCME Policy 1.5.7	The City shall annually review the local and/or regional evacuation plans to ensure coordination of the City land use densities and population projections.	1, 3	Helps keep population "out of harm's way" and lessens the demand on evacuation routes and for additional public shelter space by directing population to non-evacuation areas.
CCME Policy 1.6.1	The City shall clearly post evacuation routes.	3	Expedite flow of hurricane evacuation along critical links and intersections.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Intergovernmental Coordination Element (ICE) Policy 2.2.10	The City will forward notice of proposed future land use element policies related to hurricane shelters and evacuation routes, as well as Future Land Use Map amendments resulting in an increase in population within Coastal High Hazard Areas and Coastal Storm Area, to the Tampa Bay Regional Planning Council and the Pinellas County Emergency Management Department to determine hurricane shelter space availability and the effect of increased populations on evacuation clearance times and routes.	3	Provides for coordination of land use changes with the amount of shelter space available or needed.
Capital Improvements Element (CIE) 1.1.4	Proposed capital improvement projects shall be evaluated according to the following criteria: <ul style="list-style-type: none"> <li>• Elimination of a proven or obvious hazard to public health, safety, or welfare;</li> <li>• Fulfillment of a City legal commitment;</li> <li>• Preservation, maintenance, refurbishment, achievement of full use, or replacement of existing facilities;</li> <li>• Enhancement of an existing facility to an adopted level of service;</li> <li>• Efficiency or use increase of existing facilities; prevention or reduction of future improvement costs; or provision of equitable service;</li> </ul>	1	Restricts public expenditures that may encourage future development and minimizes potential damage or losses.
Capital Improvements Element (CIE) 1.1.4 - continued	<ul style="list-style-type: none"> <li>• Facility enhancement to meet the demands of development and redevelopment;</li> <li>• Furtherance of goals, objectives, or policies adopted in the <i>Belleair Beach Comprehensive Plan</i>;</li> <li>• Increase of community economic base or quality of life;</li> <li>• Budget impact and financial feasibility; and</li> <li>• Consistency with plans of other agencies having responsibility for public facilities within the City.</li> </ul>	1	Restricts public expenditures that may encourage future development and minimizes potential damage or losses. - continued
CIE Objective 1.4	Public expenditures that support development in Coastal High Hazard Areas shall be limited to those improvements included in this comprehensive plan or determined by the City Council to be an overriding public health benefit.	1	Restricts public expenditures that may encourage future development and minimizes potential damage or losses.
CIE Policy 1.4.1	The city shall expend funds in Coastal High Hazard Areas only for the replacement and renewal of public facilities serving development or planned re-development as anticipated in this comprehensive plan	1	Restricts public expenditures that may encourage future development and minimizes potential damage or losses.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Land Development Regulations</b>			
Part II, City Code, Chapter 14, Article II, Civil Emergencies	This chapter outlines the authority of emergency declarations and the restrictions that may be imposed. Provides for organization, powers, and authority for use of city resources to prepare for, respond to, and recover from emergencies and disasters.	3	Provides a process to respond to disasters and emergencies in a timely manner.
Part II, City Code, Chapter 10, Building and Building Regulations	Sec. 10-3 establishes the coastal construction control line. Sec. 10- 36 provides for clean-up of unsecured building materials on construction sites during a hurricane watch or warning. Sec. 10-38 requires compliance with NPDES, for maintenance of the storm water system.	1, 2	Minimizes property losses and damage.
Part II, City Code, Chapter 22, Environment, Article II.	Provides that it is unlawful to obstruct storm drainage facilities and channels.	1	Minimizes property losses and damage.
Part II, City Code, Chapter 62, Utilities: Article III, Stormwater Utility	Provides for maintenance of storm sewer system; Prohibits waste discharge into storm sewer system provides for compliance with the NPDES; City enforces regulations for stormwater management, soil and erosion control and water quality.	1	Provides storm protection to minimize property loss.
Part II, City Code, Chapter 94, Zoning: Article III, Nonconformities	Provides for compliance with coastal construction control lines when rebuilding after a catastrophic loss	2	Provides for retrofitting of buildings following a natural disaster and to avoid repetitive losses.
Part II, City Code, Chapter 94, Zoning	Provides for basic land use and development requirements, including densities, building elevations, and grading of sites to prevent or correct drainage problems	1, 2	Provides applicable restrictions of development to reduce casualties, loss or damage of property.
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
Part II, City Code Chapter 74, Flood Prevention	This chapter outlines the methods to prevent flooding within the City. Requires verification and recording of lowest floor elevations for all new or substantially improved structures. Provides standards for construction within areas of special flood hazard to reduce or minimize flood damage. Includes variance criteria that may be used to moderate standards where necessary. Provides for notification to potential homebuyers of flood hazard area. Prohibits alteration of sand dunes or mangrove stands that would increase flooding potential.	1, 2, 5	Provides standards that limit property losses and damages due to flooding

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CRS: NFIP Number 125089	The City of Belleair Beach participates in the Community Rating System. The City is verified as class 7 and receives discounted rates for National Flood Insurance based on the CRS rating.	1, 2, 3, 4, 5, 6	Reduces potential property losses, increases public safety, and protects the environment.
<b>Emergency Management</b>			
City of Belleair Beach - Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the city's emergency operations including preparedness, response, recovery, and mitigation components.	3	This document is the primary document detailing the city's strategy for responding to and recovering from emergency situations.
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	Ensures a coordinated and consistent response to emergency situations.
<b>Other</b>			
Part II City Code, Chapter 26, Fire Prevention and Protection	This chapter prohibits bonfires and trash fires within the city. Provides for Enforcement of fire codes in accordance with the National Fire Protection Association and the Florida Building Code.	1	Serves to minimize potential property losses through fire prevention methods
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 5- 4: Belleair Bluffs Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element (FLUE) Goal 1	Ensure that the residential/family character of the City of Belleair Bluffs is maintained and protected. Maximize the potential for economic benefit resulting from the fact that the city serves the commercial needs of a larger population. Ensure the enjoyment of the limited amount of natural and man-made resources by citizens and visitors alike. Minimize the threat to health, safety, and welfare pose by hazards, nuisances, incompatible land uses, and environmental degradation.	1	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources.
FLUE Policy 1.1.1	The city shall enforce land development regulations which recognize the limitations of development along the coast including vulnerability of tropical storms, topography and soil conditions.	1	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
FLUE Policy 1.1.2	<p>The city shall enforce land development regulations</p> <ul style="list-style-type: none"> <li>• Regulate the subdivision of land;</li> <li>• Regulate signage;</li> <li>• Ensure that all development is consistent with federal flood insurance regulations;</li> <li>• Ensure the compatibility of adjacent land uses and provide for adequate and appropriate buffering;</li> <li>• Ensure that development orders and permits are issued only when it is documented that such development is consistent with the maintenance of the level-of-service standards for affected public facilities adopted by this Comprehensive Plan;</li> <li>• Provide requirements for the provision of open space, and safe and convenient on-site traffic flow and parking requirements;</li> <li>• Encourage the use of native vegetation in the landscaping of multi-family and commercial developments; and</li> <li>• Provide for the control of erosion and runoff from construction sites.</li> </ul>	1	Assures compliance with applicable regulations, plans, programs, and initiatives.
FLUE Policy 1.2.4	Residential areas shall be located and designed to protect life and property from natural and manmade hazards such as flooding, excessive traffic, subsidence, noxious odors, and noise.	1	Minimizes the effect of development on natural resources.
FLUE Objective 1.6	Development activities shall ensure the protection of natural resources.	1	Minimizes the effect of development on natural resources.
FLUE Policy 1.6.6	Dredge and fill activities shall be conducted only when necessary, as determined after review and comment by the appropriate governmental agencies and interested citizens, and in a manner least harmful to the surrounding environment.	1, 5	Encourages best available practices to promote the benefits of respecting natural systems in Pinellas County.
FLUE Objective 1.8	The city shall improve the stormwater drainage system located within its municipal boundaries	1, 4	Reduces drainage problems among properties.
FLUE Policy 1.8.1	Surface cover vegetation loss during construction shall be minimized and replaced where necessary to reduce erosion and flooding.	5	Minimize siltation that may impede upon the natural function of floodplains and wetlands.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
FLUE Policy 1.8.2	The developer/owner of any new development or redevelopment site shall be responsible for the on-site management of stormwater runoff in a manner so that post-development runoff rates, volumes, and pollutant loads do not exceed pre-development conditions.	1, 5	Reduces drainage problems among properties.
FLUE Policy 1.8.3	Impervious surface areas shall be minimized.	1	Reduces potential for flooding of properties.
FLUE Policy 1.8.4	The city shall ensure that development within the 100-year floodplain is strictly regulated.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains
FLUE Policy 1.8.5	The city shall comply with the policies of the <i>Pinellas County Master Drainage Plan</i> and the <i>Sunset Bluffs Drainage Study</i> .	1, 4	Reduces drainage problems among properties.
FLUE Policy 1.9.2	The development of residential and commercial land shall be timed and staged in conjunction with provision of supporting community facilities including streets, utilities, police and fire protection, emergency medical service, and public schools.	1	Maintains that the demand on public facilities and services are within an acceptable level relative to the capacities of the facilities and services.
FLUE Policy 1.9.3	Public facilities and utilities shall be located so as to maximize the efficiency of services provided; to minimize their cost; and to minimize their impacts on the natural environment.	1	Minimizes the effect of development on natural resources; reduces public expenditures for facilities and services beyond those needed to meet the needs of the residents.
IE Goal 2	An efficient master drainage system which protects human life, minimizes property damage, and improves stormwater quality and on-site retention shall be provided.	1, 4	Reduces drainage problems among properties.
IE Objective 2.1	The city shall continue to implement the drainage improvements identified in the <i>Sunset Bluffs Drainage Study</i> adopted in 2000.	1,4	Reduces drainage problems among properties.
IE Policy 2.1.1	The city requires the design requirements of the 100-year frequency, 24-hour storm event as the adopted level of service. Post development runoff shall not exceed predevelopment drainage peak discharge rates.	1	Maintains that the demand on public facilities and services are within an acceptable level relative to the capacities of the facilities and services.
IE Policy 2.1.3	The city shall implement specific stormwater drainage projects as identified and included in the Capital Improvements Schedule in the Capital Improvements Element.	1, 4	Reduces drainage problems among properties.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
IE Policy 2.1.4	<p>The city shall continue to require the protection of natural drainage features found within the city consistent with the <u><i>Sunset Bluffs Drainage Study</i></u>:</p> <ul style="list-style-type: none"> <li>• All applications for development approval within areas identified as coastal high hazard areas shall require site plan review;</li> <li>• The flood-carrying and flood storage capacity of the 100-year flood plain shall be maintained;</li> <li>• To the maximum extent legally possible, new development shall not be located in the coastal high hazard area;</li> <li>• To the maximum extent legally possible, residential development along Clearwater Harbor shall be low density residential with adequate setbacks to maintain any existing areas of natural habitat;</li> <li>• The prevention of erosion, retardation of runoff and protection of natural functions and values of the floodplain be considered while promoting public usage; and</li> <li>• The city shall require development or redevelopment proposals to be consistent with the performance standards regulating development within the designated floodplain.</li> </ul>	1, 5	Limits development potential within coastal high hazard areas; minimizes the effect of development on floodplains and reduces the potential for damages and loss of life and property; minimizes the effect of siltation on wetlands and floodplains.
IE Policy 2.1.5	<p>The city shall continue to cooperate with Pinellas County, Southwest Florida Water Management District, and Tampa Bay Water to identify those areas of recharge to the surficial aquifer located within the community and to enforce the appropriate protection measures.</p>	1, 5	Provides for the protection of natural drainage systems as well as aquifer recharge area.
IE Objective 2.2	<p>The city shall continue to cooperate with Pinellas County, the Southwest Florida Water Management District, and Tampa Bay Water to fully implement the planned improvements of the <u><i>Sunset Bluffs Drainage Study</i></u>.</p>	1, 4	Reduces drainage problems among properties.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Conservation and Coastal Management Element (CCME) Goal 1	To ensure the highest environmental quality possible, the City of Belleair Bluffs shall conserve, protect, and appropriately manage its aquatic, wetland, and terrestrial resources.	1, 5	Protects natural function of floodplains and wetland areas.
CCME Policy 1.1.4	The city shall continue to coordinate with neighboring municipalities and the County to protect the water quality of Clearwater Harbor; including methods for coordinating with other local governments to ensure adequate sites for water-dependent uses, preventing estuarine pollution, controlling surface water runoff, protecting living marine resources, reducing exposure to natural hazards, and ensuring public access.	1, 5	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources.
CCME Objective 1.2	The city shall strictly enforce regulations for development within the 100-year flood plain.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains.
CCME Policy 1.2.1	Recognizing that parts of the community are located within the 100-year flood plain, the city shall strictly enforce all appropriate federal, state, and regional coastal construction codes and coastal setback regulations.	1,5	Assures compliance with applicable regulations, plans, programs, and initiatives; reduces potential of flood losses and repetitive losses, and protects the natural system functions.
CCME Policy 1.2.2	The city shall protect the natural functions of the 100-year flood plain so that the flood-carrying and flood storage capacity are maintained.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains.
CCME Objective 1.3	The city shall protect the natural functions of the 100-year flood plain so that the flood-carrying and flood storage capacity are maintained.	1,5	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains.
CCME Policy 1.3.1	In the event that mangroves and marsh areas are identified within the city limits, the city shall designate these areas as preservation areas on the Future Land Use Map.	5	Mitigates potential property losses by maintaining natural system functions.
CCME Policy 1.3.2	The city shall designate any existing marine wetlands as preservation land	5	Mitigates potential property losses by maintaining natural system functions.
CCME Policy 1.4.2	Shorelines lacking wetland vegetation shall be planted with native vegetation in order to minimize potential flood damage, stabilize the shoreline, trap sediments and other nonpoint source pollutants, and provide additional habitat for fish and wildlife.	5	Provides storm protection to minimize property loss.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 1.7.1	<p>The city shall enforce the provisions of the coastal management policies to ensure that:</p> <ul style="list-style-type: none"> <li>• All development along the coastline is in accordance with the coastal construction setback line as established by the State of Florida, City of Belleair Bluffs, or other appropriate governmental agencies;</li> <li>• Sensitive coastal resources are protected from immediate and future degradation and erosion resulting from improper development practices and recreation misuse; and</li> <li>• Stabilization projects, preferably utilizing vegetation as the stabilizing medium, are incorporated, where appropriate.</li> </ul>	1,5	Protects natural function of shoreline and minimizes the amount of property that is within the most vulnerable areas; reduces potential property losses.
CCME Goal 2	The city shall provide a set of guidelines for development that protect the lives and property of its residents from the effects of natural disasters.	1, 3	Basic governmental purpose to protect the health, safety and welfare of citizens.
CCME Objective 2.1	The city shall limit public expenditures that support development permitted in the Coastal Storm Area except for restoration or enhancement of natural resources.	1	Restrict public expenditure that may encourage increase future development; minimizes potential losses.
CCME Policy 2.1.1	The City of Belleair Bluffs shall recognize the Coastal High Hazard Area as that portion of the community below the elevation of the category 1 storm surge line as established by the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. However, the Coastal High Hazard Area defined by the Pinellas Planning Council <i>Countywide Plan Rules</i> shall be the regulatory standard for the City of Belleair Bluffs and shall be depicted on the Future Land Use Map.	3	Redefines Coastal High Hazard Area to be consistent with Florida Statutes.
CCME Policy 2.1.2	<p>The city defines a Coastal Storm Area as the area that includes the following:</p> <ol style="list-style-type: none"> <li>(1) the Coastal High Hazard Area,</li> <li>(2) the causeway, body of water, and</li> <li>(4) all areas located within the Velocity Zone as designated by the Federal Emergency Management Agency.</li> </ol>	3	Defines specific areas that may become isolated in a flooding situation therefore exacerbating evacuation efforts and rescue efforts.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 2.1.3	The Coastal Storm Area as depicted on Map LU-4 of this comprehensive plan, is consistent with the Pinellas Planning Council <i>Countywide Plan Rules</i> , and is the area within Belleair Bluffs where coastal development regulations apply.	3	Defines specific areas that may become isolated in a flooding situation therefore exacerbating evacuation efforts and rescue efforts.
CCME Policy 2.1.4	The city shall not support or finance new local transportation corridors which lie within the Coastal Storm Area, although existing corridors may be maintained or improved as necessary to protect the health, safety and welfare of existing residents.	1, 3	Restrict public expenditure that may encourage increased future development; minimizes potential losses.
CCME Policy 2.1.5	The city shall not support sewer and water line extensions or expansions within the Coastal Storm Area which will encourage future growth/higher densities in those vulnerable areas.	1, 3	Restrict public expenditure that may encourage increased future development; minimizes potential losses.
CCME Objective 2.2	The city shall continue to direct population concentrations away from the designated Coastal High Hazard Area.	1, 3	Reduces potential casualties and prevents increasing of evacuation times and of shelter needs.
CCME Policy 2.2.1	The City of Belleair Bluffs shall continue to implement the growth management directives which limit densities within the Coastal High Hazard Area consistent with the Future Land Use Element of the Comprehensive Plan.	1,3	Reduces potential casualties and prevents increasing of evacuation times and of shelter needs.
CCME Policy 2.2.2	The city shall review federal and state development projects which are to be located within the Coastal High Hazard Area and support those projects which are consistent with this Comprehensive Plan.	1,3	Provides for consistency among plans; reduces public expenditures that may increase the potential for development in areas where damage or loss from natural disaster is most likely to occur.
CCME Policy 2.2.3	The city shall require a coastal hazard disclosure statement on all real estate transfers or leases within the Coastal High Hazard Area.	1	Provides public disclosure of potential for damage or loss from natural disasters.
CCME Objective 2.3	The city shall maintain or reduce hurricane clearance times.	3	Reducing evacuation times is important to reducing potential casualties.
CCME Policy 2.3.1	The city shall coordinate with state, regional and county agencies to ensure that major evacuation routes are adequately maintained and, when necessary, improved to facilitate an efficient and safe evacuation.	3	Provides for coordinated and consistent approach to evacuations; assures adequate capacity on evacuation routes.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 2.3.2	The city, in cooperation with the Pinellas County Department of Emergency Management and the Upper Pinellas County Chapter of the American Red Cross, shall sponsor annual hurricane preparedness seminars to increase hurricane awareness.	3, 6	Public awareness campaign will assure that citizenry is informed about their responsibilities for safety and how to prepare property and family for emergency situations.
CCME Policy 2.3.3	City emergency response personnel and volunteers shall coordinate with county and state emergency response agencies in emergency planning, including communications, traffic control and warning operations, to effect a safe and efficient evacuation of the City.	3	Training for emergency situations assures that the local responders are prepared for emergency events.
CCME Objective 2.4	The city shall reduce the risk of exposure of human life and public and private property to natural disasters through preparedness planning and implementation of hazard mitigation measures.	3, 6	Public awareness campaign will assure that citizenry is informed about their responsibilities for safety and how to prepare property and family for emergency situations.
CCME Policy 2.4.1	The city shall continue to coordinate with the Pinellas County Department of Emergency Management's <i>Comprehensive Disaster Preparedness Plan</i> which shall address the four phases of comprehensive emergency management: preparedness, response, recovery, and mitigation.	3	Serves to improve upon response plans in the short-term, mid-term, and long-term recovery and reconstruction after a disaster. Mitigation measures encourage preemptive approach to dealing with pending disasters.
CCME Policy 2.4.2	The city shall designate an emergency management coordinator who shall oversee the development/revision of a hurricane plan; act as a liaison between state, regional, county, and city emergency response and planning agencies; and ensure coordination between emergency management and development management activities in the city.	3	Training and coordination will provide the best response to disaster events.
CCME Policy 2.4.3	The city shall continue to enforce the existing coastal construction building code and the coastal construction standards embodied in the <i>Coastal Zone Protection Act</i> and shall strictly enforce their implementation through the building inspection process.	1, 5	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources.
CCME Policy 2.4.4	The city shall strictly enforce all appropriate federal, state, and local coastal construction codes, coastal setback requirements and floodplain management regulations.	1, 5	Assures compliance with federal, state, and local regulations and minimizes potential for loss by maintaining natural system.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 2.4.5	The city shall ensure that special care facilities are not located in the Coastal High Hazard Area.	1	Restricts group facilities where large concentrations of people would be required to evacuate and would need drastically increase the need for public shelter space.
CCME Policy 2.4.6	The City Commission shall review all elements of the Pinellas County <i>Comprehensive Emergency Management Plan</i> to assure that hazard mitigation considerations are effective and implemented within its area of responsibility.	1, 3	Review of hazard mitigation plans allows local governing body and personnel to implement h effective response measures
CCME Goal 3	The city shall expedite post-disaster recovery and reduce the future risk to human life and public and private property from natural hazards through recovery and redevelopment strategies.	3	Provides for consistent application of steps from recovery to reconstruction.
CCME Objective 3.1	The city shall maintain a recovery task force to assess damage and direct post-disaster recovery and redevelopment activities.	1, 3	Crucial decisions need to be made in a timely manner to minimize losses. Plan will establish duties of individual and or task forces.
CCME Policy 3.1.1	The recovery task force shall consist of city staff and other members as appointed by the City Commission.	3	Crucial decisions need to be made in a timely manner to minimize losses. Plan will establish duties of individual and or task forces.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 3.1.2	<p>The recovery task force shall fulfill the following responsibilities, as well as others deemed necessary:</p> <ul style="list-style-type: none"> <li>• Hear preliminary damage reports;</li> <li>• Take necessary steps to seek financial assistance from the appropriate state and federal agencies;</li> <li>• Authorize immediate clean-up and repairs necessary to protect the public health, safety and welfare;</li> <li>• Identify areas within the community where minor, moderate and major damage has occurred;</li> <li>• Recommend to the City Commission temporary building moratoria for building activities not essential to protect health, safety and welfare;</li> <li>• Recommend to the City Commission appropriate hazard mitigation policies which should be implemented in response to the disaster; and</li> <li>• Prepare a report evaluating post-disaster redevelopment response and make recommendations for necessary changes to the <i>Disaster Preparedness Plan</i> and this Comprehensive Plan.</li> </ul>	3	Consistently applied procedures will assure steps to enhance recovery and minimize losses.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Objective 3.2	In order to effectively manage the timing and sequence of reconstruction, the city will maintain a set of reconstruction permitting procedures.	3	Consistently applied procedures will assure steps to enhance recovery and minimize losses.
CCME Policy 3.2.1	Following a major natural disaster, the City Commission may adopt a temporary post-disaster building moratorium to allow sufficient time for immediate damage assessment, the identification of redevelopment opportunities, and hazard mitigation policy implementation.	3	Consistently applied procedures will assure steps to enhance recovery and minimize losses.
CCME Policy 3.2.2	The city shall implement a post-disaster procedure which will expedite permitting for minor repairs. The procedure shall include development plan review, engineering approval, building permitting, and shall provide that all permitting is coordinated with the appropriate agencies and is consistent with the objectives of this Comprehensive Plan.	3	Procedures will gauge whether mitigation initiatives are effective, timely, feasible, and efficiently implemented in achieving the intended goal.
CCME Objective 3.3	The city shall address key reconstruction and redevelopment strategies which will be used to promote hazard mitigation.	1, 2, 3	Criteria will assist in decisions in rebuilding facilities and infrastructure so to avoid repetitive losses and reduce future service interruption.
CCME Policy 3.3.1	Where feasible, property which has received recurring major hurricane damage from storm surge may be publicly acquired or designated Preservation on the Future Land Use Map, in order to prevent redevelopment of the property to its pre-disaster land use.	1, 2, 5	Acquisition of properties that are left as open space may help reduce potential losses on adjoining properties as well as reduce the number of repetitive loss properties/areas.
CCME Policy 3.3.2	<p>The City shall consider one or more of the following strategies in those areas which receive major or moderate damage:</p> <ul style="list-style-type: none"> <li>• Relocation further inland (Moving development/infrastructure away from the Coastal High Hazard Area);</li> <li>• Reduction of permissible density of development in the area;</li> <li>• Reconstruction according to more stringent building and construction standards; and</li> <li>• Public acquisition of damaged areas.</li> </ul>	1, 2, 5	Reconstruction to current higher standards will reduce the chances of future repetitive losses; acquisition of properties that may be left as open space may help reduce potential losses on adjoining properties as well as reducing the number of repetitive loss properties. Restricting densities reduces the number of lives and properties that are in harm's way.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 3.3.3	<p>The city shall integrate hazard and non-hazard mitigation goals during reconstruction permitting process including the following objectives:</p> <ul style="list-style-type: none"> <li>• Enhancement of local recreational and open space opportunities; enhancement of local public beach access;</li> <li>• Enhancement and restoration of local natural ecosystems;</li> <li>• Reduction of traffic congestion, noise, and other transportation related problems; and</li> <li>• Enhancement of the long-term economic vitality of the local commercial base.</li> </ul>	1, 2, 5	Mitigation measures allow preventive approach to potential natural disasters; reduces the potential for repetitive loss and enhances or restores the function of natural system to further minimize future losses.
Intergovernmental Coordination Element (ICE) Policy 1.2.1	<p>The city shall coordinate with the Pinellas County Emergency Management Department to address persons who are transportation disadvantaged as part of the “special needs” category in the event of hurricane evacuation.</p>	3, 5	Reduce potential casualties by providing assistance to populations that have a disadvantage that may jeopardize themselves and their families.
Capital Improvements Element (CIE) Policy 1.1.3	<p>Proposed capital improvement projects shall be evaluated and ranked in order of priority according to the following guidelines:</p> <ul style="list-style-type: none"> <li>• project is needed to eliminate a proven or obvious hazard to public health and safety;</li> <li>• project is needed to fulfill a legal commitment by the city;</li> <li>• project is needed to preserve, maintain, refurbish, achieve full use of, or replace existing facilities;</li> <li>• project will provide or bring an existing facility up to an adopted level of service;</li> <li>• project will increase efficiency or use of existing facilities, prevents or reduces future improvement cost, or provides service to all residents equitably;</li> <li>• project furthers policies adopted in other elements of this plan</li> </ul>	1	Restrict public expenditures that may encourage increased development; minimizes potential future losses.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Capital Improvements Element (CIE) Policy 1.1.3 - continued	<ul style="list-style-type: none"> <li>• project needed to serve development for which development order issued prior to adoption of this Comprehensive Plan</li> <li>• project will increase the economic base or quality of life of the residents;</li> <li>• budget impact of project, both capital and operating, will be considered and Committee will consider financial feasibility of project; and</li> <li>• project will be reviewed for consistency with plans of other agencies having responsibility for public facilities within the jurisdiction.</li> </ul>	1	Restrict public expenditures that may encourage increased development; minimizes potential future losses. - continued
CIE Objective 1.4	Public expenditures that subsidize development in Coastal High Hazard Areas shall be limited to those improvements included in the Coastal Management and Conservation Element.	1	Restrict public expenditure that may encourage increase future development; minimizes potential losses.
CIE Policy 1.4.1	The City shall expend funds in Coastal High Hazard Areas only for the replacement and renewal of public facilities serving existing development.	1	Restrict public expenditures that may encourage increased development; minimizes potential future losses.
<b>Land Development Regulations</b>			
Chapter 102, Land Development, Article XXVII- Flood Damage Protection	These provisions restrict or prohibit uses that would be damaged in special flood areas, requires protection of uses against flood damages, controls alteration of floodplains, channels and natural protective barriers; controls filling, grading, dredging and other development which may increase erosion or flood damage; and prevents or regulates construction of barriers that unnaturally divert floodwaters or increase hazards to other lands.	1,3, 4, 5	Minimizes public and private losses due to flood conditions
Chapter 102, Land Development, Article IX- Land Use Category Requirements	Defines permitted uses by land use category and identifies those uses not permitted in the coastal high hazard area or in the hurricane evacuation zone level A.	1	Provides applicable restrictions of development to reduce casualties, loss of property, the need for increased special needs shelter space and an increase in evacuation times.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Chapter 102, Land Development, Article XV- Flood Damage Prevention	Restricts or prohibits uses within areas of special flood hazard; provides standards for flood hazard reduction for new construction and substantial improvements; standards for new and replacement sanitary sewers and for placement of heating, cooling, electrical and other equipment to prevent flooding; and requires compliance with national flood insurance program requirements as well as requirements of SWFWMD. Provides variance procedures.	1, 4	Minimizes public and private losses due to flood conditions
Chapter 102, Land Development, Article XV- Stormwater Management	Stormwater facilities must meet run-off and water quality standards; vegetated buffers are to be maintained along shorelines, whether natural or man-made; provides for use of erosion control devices during construction periods; requires properties to meet the stormwater standards of the State, Pinellas County, SWFWMD and NPDES.	1, 4, 5	Provides for reduction of potential loss of property and prevents erosion and flooding problems.
Chapter 102, Land Development, Article XX- Coastal Zone Areas	Requires areas designated as coastal zone to meet building construction standards for the designated protection zone; protects wetlands and mangroves.	1, 5	Provides for building safety to minimize casualties and losses to persons and property; minimizes losses of natural barriers to flooding and storm damage.
Chapter 102, Land Development, Article X- Nonconforming Structures and Uses	Provides that nonconforming structures may not be replaced if damaged by floods or other disasters if the damage is greater than 51% of its assessed value.	1	Prevents rebuilding within flood hazard areas under certain conditions.
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
City Code, Part II, Chapter 133 - Storm Sewers	Requires that the storm sewer system be maintained in accordance with NPDES standards and prohibits unauthorized discharges to the storm sewers	4	

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Emergency Management</b>			
City of Belleair Bluffs Emergency Operations Plan	Addresses strategic and operational elements of the city's emergency management operations including preparedness, response, recovery, and mitigation components.	3	The Emergency Operations Plan is the City's primary document detailing procedures by which emergencies are handled.
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	
<b>Other</b>			
City Code, Part II, Chapter 84, Fire Prevention	Prohibits bonfires and rubbish fires; adopts the National Fire Protection Association Life Safety Code	1	Prevents burning in urban areas in order to avoid losses of persons and property.
<b>END OF LIST</b>			

# Pinellas County Local Mitigation Strategy

**Table 5- 5: Town of Belleair Shore Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use and Recreation and Open Space Element (FLUE), Policy 1.1.2	Maintain land development regulations which serve to enhance the protection of life and property from storm surges, wind and flooding, in part through impervious surface ratios, floor area ratios, and elevation of structures.	1	These development regulations will lessen the impact of storm events and flooding on properties, minimizing damage and loss of life and property.
FLUE Objective 1.2	Development in the Coastal Storm Area shall be restricted to existing densities, or lower, and public funding for facilities shall be limited to the restoration or enhancement of natural resources.	1	Prohibits an increase in residential density to avoid putting additional population at risk. Restrict public expenditure that may encourage increased future development; minimizes potential losses.
FLUE Policy 1.2.1	All future development and redevelopment within the Coastal Storm Area as shown on the Future Land Use Map shall be limited to Residential Suburban or Recreation/Open Space development.	1	Restricts development to existing type and density and avoids putting additional population or property within the coastal storm area. Minimizes the need for additional shelter space when evacuations are ordered.
FLUE Policy 1.2.2	The Town of Belleair Shore shall not amend the Residential Suburban land use category designation to permit densities greater than 1.39 dwelling units per acre except in compliance with Policy 1.3.7.	1	Restricts development to existing type and density and avoids putting additional population or property within the coastal storm area.
Coastal Management and Conservation Element (CMCE), Goal 5:	Protect and improve the environmental quality and economic resources of the coastal planning area; protect human life; and limit public expenditures in the Coastal High Hazard Area, designated as the Coastal Storm Area.	1	Protection and improvement of natural coastal environment, such as dunes, increases natural resistance to the impact of storms. Restrict public expenditure that may encourage increased future development; minimizes potential losses.
CMCE Objective 5.1	To ensure that maximum long term benefits are attained in the use of the coastal planning area by Belleair Shore residents through sound coastal management policies.	1	Protection and improvement of natural coastal environment, such as dunes, increases natural resistance to the impact of storms. Restrict public expenditure that may encourage increased future development; minimizes potential losses.
CMCE Policy 5.1.2	Continue to enforce the coastal construction setback line as established by local ordinance.	1	Restricts development within the most vulnerable portions of the coastal storm area and reduces the potential for property damage and loss.
CMCE, Objective 5.2	Restore or enhance the natural resources and habitat value of severely damaged, newly formed or extensively altered coastal areas following disastrous storm events and reduce exposure of human life and public and private property to natural hazards.	4, 5	Promotes the use of natural systems to mitigate future risk during natural disasters.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE, Policy 5.2.1	Post disaster redevelopment and land use shall be appropriate for the respective hazard zone and shall be limited to single-family residential and beach access.	1	Helps keep population "out of harm's way" and lessens the demand on evacuation routes and for additional public shelter space through restrictions on density.
CMCE, Policy 5.2.2	The Town of Belleair Shore, through interlocal agreements with the service provider, shall ensure that required infrastructure is available for development or that infrastructure will be reconstructed if destroyed so that redevelopment can occur.	1, 2, 3	Assists in decision-making process for rebuilding facilities and infrastructure so as to avoid repetitive losses and reduce future service interruption.
CMCE Objective 5.3	The Town of Belleair Shore shall not permit development that will increase the hurricane evacuation clearance time adopted by Pinellas County and the Tampa Bay Regional Planning Council <i>Hurricane Evacuation Study</i> .	3	Reducing evacuation times is important to reducing potential casualties.
CMCE Policy 5.3.1	The Town of Belleair Shore shall cooperate with appropriate emergency management officials in the event of a natural disaster.	3	Coordinate with emergency management officials to assure that the town and its residents use the best emergency management procedures.
CMCE Policy 5.3.2:	The Town of Belleair Shore supports the Tampa Bay Regional Planning Council's <i>Hurricane Evacuation Study</i> and the Pinellas County emergency management plans and will implement the guidelines contained therein.	3	Will assure that residents and visitors are informed as to emergency evacuation procedures and alternative sheltering options.
CMCE Goal 6:	Conserve, protect and enhance the Town's natural resources for future generations, recognizing their extensive biological and economic value.	1, 5	Maintaining natural functions helps to minimize damages or loss to life and property.
CMCE Objective 6.1	Protect and enhance natural resources by mitigating the adverse impacts of pollution and development, and by restoring natural systems wherever feasible.	1, 5	Maintaining natural functions helps to minimize damages or loss to life and property.
CMCE Policy 6.2.1	All construction in floodplains and floodways shall be required to comply with Federal Emergency Management Agency or Federal Insurance Administration standards and building codes.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses.
CMCE Policy 6.2.2	The Town shall prohibit dredging and filling or other development activities having significant long term impacts on the ecological or hydrological function of the floodplains, or other natural drainage ways, except in cases clearly in the public interest.	1, 5	Encourage best available practices to promote the benefits of respecting natural systems in Pinellas County.
CMCE Policy 6.2.3	Natural landscape barriers to flooding and stormwater runoff shall be implemented during the land development/redevelopment process.	1, 3	Provides for flood mitigation to minimize flood losses and repetitive losses.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Capital Improvements Element Policy 8.2.1	The Town shall not expend public monies for facility development in the Coastal Storm Area unless the facility provides for restoration or protection of a natural resource restoration or is otherwise required by law.	1	Restrict public expenditure that may encourage increased future development; minimizes potential losses.
<b>Emergency Management</b>			
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	
<b>Other</b>			
END OF LIST			

## Pinellas County Local Mitigation Strategy

**Table 5- 6: Town of Belleair Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element (FLUE), Goal 1, Policy 1.1.4	The town shall continue to implement land development regulations that shall contain specific and detailed provisions required to implement this comprehensive plan, which, at a minimum shall: <ul style="list-style-type: none"> <li>· Regulate the subdivision of land;</li> <li>· Regulate signage;</li> <li>· Ensure that all development is consistent with federal flood insurance regulations;</li> <li>· Ensure the compatibility of adjacent land uses and provide for adequate and appropriate buffering.</li> </ul>	1	Limits the development within floodplains, reduces potential losses, and maintains consistent regulations with federal insurance programs.
FLUE Policy 1.1.5	New residential areas shall be located and designed to protect life and property from natural and manmade hazards such as flooding, excessive traffic, subsidence, noxious odors, and noise.	1	Limits the exposure of development to natural hazards and reduces the potential for losses from natural disasters.
IE Goal 3	Stormwater shall be managed to provide flood protection for residents and businesses and to preserve, protect, and enhance the water quality of receiving water bodies.	1, 4	Plans will identify needs and further identify appropriate actions/projects to improve stormwater management and flood control.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
IE Objective 3.1, Policy 3.1.4	<p>The following stormwater management techniques shall be used:</p> <ul style="list-style-type: none"> <li>· No more than 60 percent of residential lots and 70 percent of commercial lots shall be covered with paving or other types of impervious surfaces;</li> <li>· Regular maintenance of retention swales adjacent to town roadways;</li> <li>· Use of front, rear, and side lot lines swales in new development;</li> <li>· Use of erosion and runoff control devices during construction;</li> <li>· Where necessary, the town shall consider construction of drainage retention areas in the public right-of-way and the use of eminent domain condemnation to acquire property for drainage retention purposes.</li> </ul>	1, 4	Reduces drainage problems among properties.
IE Objective 3.2, Policy 3.2.1	<p>In support of maintaining or improving stormwater management standards, the town shall protect natural drainage features found within the town as follows:</p> <ul style="list-style-type: none"> <li>· To the maximum extent legally possible, residential development along Clearwater Harbor shall be low density residential with adequate setbacks to maintain any existing areas of natural habitat;</li> <li>· The prevention of erosion, retardation of runoff, protection of natural functions, and values of the floodplain shall be considered while promoting public usage; and</li> <li>· The town shall require development or redevelopment proposals to be consistent with the performance standards <u>regulating development within the designated floodplain.</u></li> </ul>	1, 4	Reduces drainage problems among properties.
Conservation and Coastal Management Element (CCME), Policy 1.1.2	<p>The town shall protect water storage and water quality enhancement functions of wetlands and floodplains areas through acquisition of land, enforcement of laws, and the application of land and water management practices which provide for compatible uses.</p>	1, 5	Mitigating potential flood losses by maintain natural system functions of floodplains and wetlands.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME, Goal 1, Objective 1.2	Land development regulations controlling development within 100-year floodplain and Coastal High Hazard Area shall be strictly enforced.	1,5	Protects natural function of floodplains and coastal construction areas.
CCME Policy 1.2.1	Recognizing that the community is partially located within the 100-year floodplain and the Coastal High Hazard Area, the town shall strictly enforce all appropriate federal, state, and regional coastal construction codes and coastal setback regulations.	1,5	Assures compliance with applicable regulations, plans, programs, and initiatives; reduces potential for losses in the floodplain and coastal high hazard area.
CCME Goal 1, Objective 1.2, Policy 1.2.2	The town shall protect the natural functions of the 100-year floodplain, so that flood-carrying and flood storage capacities are maintained.	1,5	Protects natural function of floodplains and wetland areas.
CCME Policy 1.2.3	The town shall develop a strict floodplain management program to preserve hydrologically significant wetlands and other natural floodplain features.	1,5	Protects natural function of floodplains and wetland areas.
CCME Policy 1.2.4	The alteration of the 100-year floodplain of major drainage ways shall be subject to review and governed by provisions contained in the land development regulations.	1,5	Protects natural function of floodplains and wetland areas.
CCME Policy 1.2.6	All applications for development approval within those areas identified as Coastal High Hazard Area shall undergo site plan review.	1	Assures compliance with applicable regulations, plans, programs, and initiatives.
CCME Policy 1.2.7	The town will not increase density in the Coastal High Hazard Area beyond that anticipated in this comprehensive plan.	1	Restricts density in areas prone to natural disasters from tropical storms and hurricanes; reduces impact on shelters and evacuation routes.
CCME Goal 1, Objective 1.3	The town shall preserve wetlands, aquatic resources, and wildlife habitat to maintain their environmental and recreational value.	5	Mitigates potential flood losses by maintaining natural system functions of wetlands.
CCME Policy 1.3.1	All existing marine wetlands (e.g., saltmarshes, mangroves, and sea grass beds) not otherwise subject to development shall be designated as preservation land on Map LU-4: Future Land Use, and shall be protected from development, alteration, or use inconsistent with the intent of the comprehensive plan.	5	Maintains natural system functions to lessen the impact of storm events on the developed area.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Objective 1.4, Policy 1.4.3	Shorelines lacking wetland vegetation shall be planted with native vegetation in order to minimize potential flood damage, stabilize the shoreline, trap sediments and pollutants, and provide additional habitat for fish and wildlife.	4,5	Provides storm protection to minimize property loss.
CCME Policy 1.4.6:	Pilings, not fill, shall be used to elevate structures in the Coastal High Hazard Area.	1	Assures compliance with local, federal, and state regulations; reduces potential property loss claims.
CCME, Goal 1, Objective 1.7, Policy 1.7.2	The town shall coordinate with neighboring municipalities, Pinellas County, and the Tampa Bay Regional Planning Council, to protect regional estuaries, providing adequate sites for water-dependent uses, preventing estuarine pollution, controlling surface water runoff, protecting living marine resources, reducing exposure to natural hazards, and ensuring public access.	1	Minimizes potential flood losses by maintaining natural system functions of floodplains and wetlands in coordination with adjacent local governments; assures consistent approach to protection of such systems.
CCME, Goal 1, Objective 1.8:	The Town of Belleair shall protect its shoreline from the impacts of development through continued enforcement of coastal construction standards.	4,5	Provides storm protection to minimize property loss.
CCME, Objective 1.8, Policy 1.8.1:	Construction seaward of the Coastal Construction Control Line shall be subject to the permitting procedures pursuant to Section 161.05, Florida Statutes.	4,5	Provides storm protection to minimize property loss.
CCME, Objective 1.8, Policy 1.8.3:	The town, through the provision of public information, shall promote the planting of native marine vegetation in front of seawalls at act as a natural buffer against damage from tides and flooding.	4, 5, 6	Provides a public education program to enhance storm protection through natural system functions.
CCME Goal 2	The town shall provide a set of guidelines for development that protect the lives and property of its residents from the effects of natural disasters.	1, 3	Basic governmental purpose to protect the health, safety and welfare of citizens.
CCME Objective 2.1	The town shall limit public expenditures that support development in the Coastal High Hazard Area, except for the repair or replacement of existing or planned infrastructure, and the restoration or enhancement of natural resources.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 2.1.1	The Town of Belleair shall adopt the State definition of the Coastal High Hazard Area as that portion of the community below the elevation of the category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. However, the Coastal High Hazard Area defined by the Pinellas Planning Council's <i>Countywide Plan Rules</i> will be the regulatory standard for the Town of Belleair and placed upon <i>Map LU-4: Future Land Use</i> .	3	Redefines Coastal High Hazard Area to be consistent with Florida Statutes.
CCME Policy 2.1.2	The town shall not support or finance new local transportation corridors within the Coastal High Hazard Area, although existing corridors may be maintained or improved as necessary to protect the health, safety, and welfare of existing users.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.
CCME Policy 2.1.3	The town shall not support sewer and water line extensions or expansions within the Coastal High Hazard Area which will encourage future growth or higher densities in those vulnerable areas, except as anticipated in this comprehensive plan.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.
CCME, Goal 2, Objective 2.2	The town shall continue to direct population concentrations away from the designated Coastal High Hazard Area by maintaining or reducing permitted development densities.	1	Reduces potential casualties and prevents increasing of evacuation times and of shelter needs.
CCME Policy 2.2.1	The Town of Belleair shall continue to implement growth management directives which limit densities within the Coastal High Hazard Area, consistent with <i>Map LU-4: Future Land Use</i> .	1	Reduces potential casualties and prevents increasing of evacuation times and of shelter needs.
CCME Policy 2.2.2	The town shall consider implementing a program of public land acquisition and management for recreation, conservation, and preservation areas within the Coastal High Hazard Area and consider supporting those projects which are consistent with this plan.	5	Would reduce potential future losses and repetitive losses.
CCME Objective 2.3	The town shall maintain or reduce hurricane evacuation times.	3	Reducing evacuation times is important to reducing potential casualties.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 2.3.1	The town shall coordinate with state, regional, and county agencies to ensure that major evacuation routes are adequately maintained and, when necessary, improved to facilitate an efficient and safe evacuation.	3	Higher priority of construction projects along evacuation routes will assure adequate capacity to reduce evacuation times.
CCME Policy 2.3.2	The town, in cooperation with Pinellas County Department of Emergency Management and Upper Pinellas County Chapter of the American Red Cross, shall participate in annual hurricane preparedness seminars to include hurricane awareness.	3, 6	Public awareness campaign will assure that citizenry is informed about their responsibilities for safety and how to prepare property and family for emergency situations.
CCME Policy 2.3.3	Town emergency response personnel and volunteers shall coordinate with county and state emergency response agencies in emergency planning, including communications, traffic control, and warning operations, to effect a safe and efficient evacuation.	3, 6	Continued coordination with the county and state emergency agencies will assure that town is informed about their responsibilities for safety and how to prepare property and residents for emergency situations.
CCME, Goal 2, Objective 2.4	The town shall reduce the risk of exposure of human life and public and private property to natural disasters through implementation of the <i>Town of Belleair Disaster Preparedness Plan</i> .	3	Serves to improve upon response plans in the short-term, mid-term, and long-term recovery and reconstruction after a disaster. Mitigation measures encourage preemptive approach to dealing with pending disasters.
CCME Policy 2.4.1	The town, in coordination with Pinellas County Department of Emergency Management, shall implement and annually update the <i>Belleair Disaster Preparedness Plan</i> .	3	Provides for periodic review and updates to maintain awareness of the best practices for disaster response.
CCME Policy 2.4.2	The town shall designate an emergency management coordinator who shall oversee the update of the Belleair Disaster Preparedness Plan; act as a liaison between state, regional, county, and town emergency response and planning agencies; and ensure coordination between emergency management and development management activities.	1, 3	Crucial decisions need to be made in a timely manner to minimize losses. Plan will establish duties of individual and or task forces and ensure coordination with other emergency management agencies.
CCME Policy 2.4.3	The town shall continue to enforce the existing coastal construction building code and the coastal construction standards embodied in the Coastal Zone Protection Act, and shall strictly enforce their implementation through the building inspection process.	1	Enforcement of building regulations should minimize the loss or damage to property.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 2.4.4	The town shall strictly enforce all appropriate federal, state, and local coastal construction codes, coastal setback requirements, and floodplain management regulations.	1	Strict adherence to building regulations should minimize the potential damage or loss of lives or properties.
CCME Policy 2.4.5	Special care facilities shall not be located in the Coastal High Hazard Area.	1,3	Restricts group facilities where large concentrations of people would be required to evacuate and would need drastically increase the need for public shelter space.
CCME Policy 2.4.6	The town shall review all elements of the Pinellas County Comprehensive Emergency Management Plan to assure that hazard mitigation considerations are effective and implemented within its area of responsibility.	3	Restrictions, such as limited intense development in Special Flood Hazard Areas, CHHA, and Coastal Storm Areas will reduce property losses and reduce evacuation times and the need for public shelter space.
CCME, Goal 3	Through recovery and redevelopment strategies, the town shall expedite post-disaster recovery and reduce the future risk to human life and public and private property from natural hazards.	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts
CCME, Goal 3, Objective 3.1	The town shall maintain a recovery task force to assess damage and direct post-disaster recovery and redevelopment activities.	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts
CCME Policy 3.1.1	The recovery task force shall consist of the town staff and other members as appointed by the town, or as delegated by the Town Manager.	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 3.1.2	<p>The recovery task force shall fulfill the following responsibilities, as well as others deemed necessary:</p> <ul style="list-style-type: none"> <li>· Hear preliminary damage reports;</li> <li>· Take necessary steps to seek financial assistance from the appropriate state and federal agencies;</li> <li>· Authorize immediate clean-up and repairs necessary to protect the public health, safety and welfare;</li> <li>· Identify areas within the community where minor, moderate, and major damage has occurred;</li> <li>· Recommend to the town temporary building moratoria for building activities not essential to protect health, safety, and welfare.</li> <li>· Recommend to the town appropriate hazard mitigation policies which should be implemented in response to the disaster; and</li> <li>· Prepare a report evaluating post-disaster redevelopment response and make recommendations for necessary changes to this comprehensive plan.</li> </ul>	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts
CCME, Goal 3, Objective 3.2	In order to effectively manage the timing and sequence of reconstruction, the town will maintain a set of reconstruction permitting procedures, which will be used to promote hazard mitigation.	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts
CCME Policy 3.2.1	Following a major natural disaster, the town may adopt a temporary post-disaster building moratorium to allow sufficient time for immediate damage assessment, the identification of redevelopment opportunities, and hazard mitigation policy implementation.	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts
CCME Policy 3.2.2	The town shall implement the post-disaster procedures outlined in the <i>Pinellas County Comprehensive Emergency Management Plan</i> , in order to expedite permitting for minor repairs, consistent with the objectives of this comprehensive plan.	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 3.2.3	Where financially feasible and determined appropriate by the town, property which has received recurring major hurricane damage from storm surge may be publicly acquired or designated as preservation land on <i>Map LU-4: Future Land Use</i> , in order to prevent redevelopment of the property to its pre-hurricane land use.	1,2,5	Acquisition of properties that are left as open space may help reduce potential losses on adjoining properties as well as reduce the number of repetitive loss properties/areas.
CCME, Goal 3, Objective 3.2, Policy 3.2.4	The town may consider one or more of the following strategies in those areas which receive major or moderate storm damage: <ul style="list-style-type: none"> <li>· Relocation of structures farther inland;</li> <li>· Reduction of permissible density of development in the area;</li> <li>· Reconstruction according to more stringent building and construction standards; and</li> <li>· Public acquisition of damaged areas.</li> </ul>	1, 2, 5	Acquisition of properties that may be left as open space, and adherence to current building standards may help reduce potential losses on adjoining properties as well as reduce the number of repetitive loss properties/areas.
CCME Policy 3.2.5	The town shall interrelate hazard and non-hazard mitigation goals during reconstruction decision-making including the following objectives: <ul style="list-style-type: none"> <li>· Enhancement of local recreational and open space opportunities;</li> <li>· Enhancement of public access to the shoreline;</li> <li>· Enhancement and restoration of local natural ecosystems;</li> <li>· Reduction of traffic congestion, noise, and other transportation related problems; and,</li> <li>· Enhancement of long-term economic vitality of the local commercial base</li> </ul>	1, 2	Restrictions, such as limited intense development in Special Flood Hazard Areas, CHHA, and Coastal Storm Areas will reduce property losses and reduce evacuation times and the need for public shelter space.
ROSE Policy 1.3.6	The town shall protect areas identified as natural reservations.	1, 2, 5	Restricts development to prevent property loss and repetitive losses.

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Capital Improvements Element (CIE), Objective 1.1, Policy 1.1.3	Proposed capital improvement projects shall be evaluated according to the following criteria: <ul style="list-style-type: none"> <li>· Elimination of a proven or obvious hazard to public health, safety, or welfare;</li> <li>· Fulfillment of a town legal commitment;</li> <li>· Preservation, maintenance, refurbishment, achievement of full use, or replacement of existing facilities;</li> <li>· Enhancement of an existing facility to an adopted level of service;</li> <li>· Efficiency or use increase of existing facilities; prevention or reduction of future improvement costs; or provision of equitable service;</li> <li>· Facility enhancement to meet the demands of development and redevelopment;</li> <li>· Furtherance of goals, objectives, or policies adopted in the Belleair Comprehensive Plan;</li> <li>· Increase of community economic base or quality of life;</li> <li>· Budget impact and financial feasibility; and</li> <li>· Consistency with plans of other agencies having responsibility for public facilities within the town.</li> </ul>	1	Restricts public expenditure that may encourage increased future development; minimize potential losses.
CIE Objective 1.4	Public expenditures that support development in Coastal High Hazard Areas shall be limited to those improvements included in this comprehensive plan or determined by the town to be an overriding public health benefit.	1	Restrict public expenditure that may encourage increased future development; minimizes potential losses.
CIE Policy 1.4.1	The town shall expend funds in Coastal High Hazard Areas only for the replacement and renewal of public facilities serving development or planned re-development as anticipated in this comprehensive plan.	1	Restrict public expenditure that may encourage increased future development; minimizes potential losses.
<b>Emergency Management</b>			
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 5- 7: Clearwater Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Code of Ordinances/Community Development Code</b>			
<b>Floodplain Management/Community Rating System/Repetitive Loss Properties</b>			
<b>Emergency Management</b>			
Chapter 15	Emergency management – It is the intent of this chapter to provide the necessary organization, and authority to enable the timely and effective use of all available city resources to prepare for, respond to, and recover from emergencies, natural and manmade, likely to effect the security, safety or health of the city and its residents, whether such events occur within or without the corporate limits of the city.	3	Provides ongoing planning for and coordination of those actions necessary to ensure continuous service during and after a disaster.
Chapter 30 Sec 30.006	Detouring Traffic – At the advice of the city manager shall deem it advisable for public safety or convenience, temporarily alter traffic flow to meet the needs of the city during a possible evacuation period.	1	Provides better evacuation control and service in a timely manner.
Chapter 32, article X. sec. 32.391	Storm water Systems – Maintain efficient, economic and safe operation of the storm water system and to protect the health, safety, and general welfare of the public within the City of Clearwater.	3	Reduces the possibility of flood due to storm water retention
Chapter 51 Sec 51.32 (6)	Coastal Construction control line – The line of reference from which setback shall be measured from the Gulf of Mexico. Provides that all buildings or structures located in coastal high hazard area (V zones) shall be located landward of the coastal construction control line.	4	Provides a safer coastal environment.
Community Development Code Sec. 3.915	Stormwater Detention Facilities – Provides developmental standards and design specifications relating to storm water drainage and detention.	4	Establishes proper detention of storm water areas.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Community Development Code Sec. 4-202	Strom water drainage and retention – Ensures that proper design factors are used to provide proper retention and/or drainage of storm water run-off	4	Reduces possible flooding.
Chapter 47, article I. Sec. 47.005	Minimum Floor Elevation provides that all new or additional structures will have a floor line of a minimum one-foot above the crown of the road.	1	Reduces possible flooding.
Chapter 47, Article I. Sec. 47.004	Exception to Coastal Construction Zone; Flood proofing Certifications – Certification shall be performed by a professional engineer or/ architect.	5	Reduces flooding
Community Development Code Article 3, Division 7	Erosion and Siltation Control – Minimizes the impact of land alteration, development and construction activities on storm water and surface water systems.	5	Protects the public health, safety and welfare; and conserves wildlife and aquatic habitats.
Chapter 51	Flood Damage Prevention – it is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood condition is specific by provisions designed to: Restrict, Require, Control, Prevent.	4	Reduces flooding
<b>Comprehensive Emergency Management Plan</b>			
Policy, Basic Emergency Plan	The citizens of the City of Clearwater expect their government to help prepare them to recognize, avoid where possible, plan for and cope with the consequences of disasters and emergencies.	3	Provide mitigation efforts.
Executive Order Number 80-29	“Disaster Preparedness” – Provides the authority for any governing body of a political subdivision of the State to order an evacuation.	3	Saves Lives.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use A.1.1.2	No development which has the potential to discharge toxic chemicals (solvents, contaminating fluids, acids, etc.) may be permitted within one thousand (1,000) feet of a City water well, unless provision is made to store chemical containers in an enclosure approved by the City and a wellhead protection permit is obtained	3	Saves Lives
Future Land Use A.1.1.5	Stormwater shall be controlled through consistent application of local, state, and federal regulations, mitigation and management plans, and permitting procedures for both site-specific and basin-level development plans.	1	Provides Mitigation
Future Land Use A.1.1.8	Mitigation plans for alteration of non-jurisdictional wetlands, beach dunes, swamps, marshes, streams, creeks, one hundred (100) year flood plains, or lakes shall require not less than a 1:1 ratio of mitigation land (on- or off-site) as approved by the Engineering Department and/or City Council, and in coordination with the Southwest Florida Water Management District (SWFWMD).	5	Provides Mitigation
Capital Improvements I.1.2.1	City infrastructure located in the coastal high hazard area shall be given first priority in receiving renourishment projects, necessary maintenance, and repair and replacement projects; the coastal high hazard area is defined by the <i>Sea, Lake and Overland Surges from Hurricanes (SLOSH)</i> model to be inundated from a category one (1) hurricane, as reflected in the most recent <i>Regional Evacuation Study, Storm Tide Atlas</i> .	4	Provide Project Priorities
Coastal Zone Management E.1.2.5	The City shall prohibit the location of new hospitals, nursing homes and assisted living facilities in the Coastal Storm Area and the area inundated by a category 2 hurricane as depicted by the <i>SLOSH</i> model, as reflected in the most recent <i>Regional Evacuation Study, Storm Tide Atlas</i> .	1	

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Coastal Zone Management E.2.1.4	The City shall work toward reducing the existing quantity and improving the quality of stormwater runoff to estuarine and surface water bodies by ensuring that development and redevelopment adheres to the treatment standards set forth in State Water Policy, and complies with the retention and treatment requirements of Chapter 62-25 F.A.C., the Environmental Resource Permitting Rules 40D-4, 40D-40, 40D-400, F.A.C. of the Southwest Florida Water Management District (SWFWMD) and with any more stringent local regulations.	5	
Coastal Zone Management E.2.3.1	Restoration and enhancement of disturbed or degraded drainage systems shall be implemented by upstream detention of stormwater, maintenance of existing drainage channels, widening of bridges, culverts and other stormwater conveyance structures.	5	
Coastal Zone Management E.4.1.2	To the maximum extent feasible, sanitary sewer facilities and lift stations shall be built to resist the infiltration by floodwaters. The hazard mitigation annex, which covers the wastewater treatment system, shall be followed in the event of a storm; and hazard mitigation plans shall be updated as necessary.	1	
Conservation F.1.2.2	Construction and development activities in natural drainage channels shall be prohibited, except for public flood protection projects designed to correct specifically identified pre-existing flood conditions and for which no reasonable alternative flood control measures are available; such activities shall not increase the flood potential for areas outside the project target area, nor shall the overall water quality of the affected drainage channels be reduced as a result of the activities.	5	
Conservation F.1.5.1	Wetlands shall not be dredged and filled or disturbed in any manner other than by natural phenomenon and their natural functions shall be protected, except through the implementation of State or City mitigation standards	5	
Conservation F.1.6.5	All beaches, dunes, and associated vegetation shall be protected by local ordinance.	5	

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Conservation F.2.1.4	The City shall continue to implement a stormwater ordinance requiring redeveloped sites other than single-family residential areas, to incorporate water quantity and quality controls consistent with new development regulations, recognizing that case-by-case limitations may call for partial controls, offsite improvements or payments in lieu of improvements to achieve this goal.	4	
<b>END OF LIST</b>			

# Pinellas County Local Mitigation Strategy

**Table 5- 8: City of Dunedin Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Conservation and Coastal Management Element  CCME	Enforce building and construction codes in accordance with FEMA standards and the National Flood Insurance Program's (NFIP) regulations and all state, regional and county standards	1, 2	Requires compliance with City's Flood Ordinance
	As part of the City's post disaster redevelopment practices, address stormwater management, wastewater collection and treatment, land use and other infrastructure elements to evaluate hazard mitigation. Practices shall include, but not be limited to, the following	3	
	Prioritize immediate repair and cleanup actions and permitting activities subsequent to a natural disaster by collecting and analyzing storm damage data and basing the tasking of essential activities based on this data	1, 2	Based on statistics from other communities, essential activities can be estimated
	Relocate habitable structures which have incurred damage from a natural disaster, where damage is greater than 50 percent of their assessed value, to new locations outside the coastal storm area, provided that sufficient land is available	1	FEMA guidelines and local regulations minimize coastal flooding losses
	Any disturbance of natural shoreline resources that provide shoreline stabilization and protect landward areas from effects of storm events shall not be allowed if the disturbance would cause shoreline destabilization or increase storm risk to landward areas as compared to pre-development conditions	2	State and local regulation prohibit disturbance of the natural shoreline

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Conservation and Coastal Management Element  CCME	Prohibit the construction of new seawalls and limit the repair or reconstruction of seawalls unless no other alternative shore stabilization techniques are available which afford reasonable property protection	1, 4	
	Apply appropriate in-place procedures for professional and timely post-storm damage assessment.	1	Provides for assessments potentially leading to mitigation activities.
	City-funded infrastructure shall be prohibited within the coastal storm area except for the following: The expenditure for the maintenance, repair or replacement of existing facilities, or the expenditure for restoration or enhancement of natural resources or public access; or the expenditure needed for the maintenance and reconstruction of existing City facilities; or the expenditure for retrofitting for water quality enhancement of stormwater runoff; or the expenditure for a public facility of overriding public interest to ensure public health and safety.	1,2	Limits new infrastructure in the coastal high hazard area except in the public interest.
	The City shall prohibit the construction of hospitals, nursing homes and additions or expansions to, mobile home parks within the coastal storm area. The City shall prohibit the construction of adult congregate living facilities within the coastal storm area. The City shall prohibit new ACLFs and the expansion of the existing ACLFs within the CHHA. This provision shall not be in conflict with the mandates of Chapter 419, Florida Statutes, Community Residential Homes	2	Has not allowed new or expanded facilities in the coastal high hazard area.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Conservation and Coastal Management Element  CCME	Apply infrastructure standards that recognize coastal storm Area potentials.	1	Standards based on existing studies.
	Limit or delete consideration of non-essential public projects.	1, 2	City has conducted project evaluations to determine non-essential projects.
	Continue the application of the Urban Forestry Program.	1, 4	Information provided by City Arborist
	The update to the Post-Disaster Redevelopment Plan shall consider the following;	1, 4	Establishes Citywide procedures.
	Identification of areas requiring redevelopment (e.g., CRA District) and elimination of unsafe conditions and inappropriate uses as opportunities arise and may include temporary measures to reduce impacts	1, 2	Sets the stage for mitigation practices following a disaster.
	Accounting for wave, wind and flooding damage potentials in infrastructure design.	1, 2, 4	Based upon data from other communities.
	Monitoring of private development standards for damage mitigation.	1	Allows for review of site plans for development.
Conservation and Coastal Management element  CCME	Strategies and techniques outlined in the Pinellas County Comprehensive Emergency Management Plan, and recommendations contained in any hazard mitigation reports	1, 2	Sets the stage for the creation of a post-disaster redevelopment plan. Pursuant to results of Hazard Mitigation Study, such mitigation measures should be included in the redevelopment plan  Would effectively regulate the remaining vacant areas in the coastal high hazard area
	During the development review process, any additional residential development within the City's hurricane vulnerability area shall be examined carefully to include the hurricane evacuation plan. Development or redevelopment that poses serious threats to the efficacy of the hurricane evacuation plan shall be denied.	1, 2, 3, 4	

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Land Development Regulations</b>			
Land Development Code Chapter 105 Development Standards Section 105-22 Floodplain Management	<p>The Floodplain Management Ordinance provides for the following:</p> <ul style="list-style-type: none"> <li>a. "All new construction and substantial improvement to structures shall be required to comply with all related sections of the Florida Building Code, as adopted by the city in chapter 105-21.2 of this code, pertaining to methods, materials and anchorage, so as to minimize flood damage, with the rules/regulations established by the Federal Emergency Management Agency as they exist as of the date of this article, or as they may be amended in the future.</li> <li>b. Prohibits encroachments, new construction or substantial improvements within a floodway.</li> <li>c. Sets down specific standards in A-zones, including requirements for elevated building and for manufactured/mobile homes</li> <li>d. Sets down specific standards in V-zones, including requirements for elevated buildings and for manufactured/mobile homes</li> <li>b. Prohibits encroachments, new construction or substantial improvements within a floodway.</li> </ul>	1, 2, 4	Allows enforcement of local flood regulations
Land Development Code Chapter 105 Development Standards Section 105-22 Floodplain Management	<p>(3) Acquisition of land or land development rights for public purposes consistent with the policy of minimization of future property losses. (4) Acquisition of frequently flood-damaged structures."</p> <ul style="list-style-type: none"> <li>f. Review of subdivision proposals to ensure that they are consistent with the need to minimize flood damage to both property and public utilities, and to ensure that adequate drainage is provided.</li> <li>g. Requires "new or replacement water supply systems and/or sanitary sewer systems to be designed to minimize or eliminate infiltration of floodwaters into the system and discharges from the systems into floodwaters and require on-site disposal systems to be located so as to avoid impairment of them or contamination from them during flooding."</li> </ul>	1,2,4	Allows enforcement of local flood regulations

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
<p>Land Development Code</p> <p>Chapter 105</p> <p>Development Standards</p> <p>Section 105-22</p> <p>Floodplain Management</p> <p>City of Dunedin LMS</p> <p>Floodplain Management</p>	<p>d. Minimum consideration for development goals which states, “the formulation of community development goals following the occurrence of a flood disaster shall consider at least the following:</p> <p>(1) Preservation of the flood-prone areas for open space purposes.</p> <p>(2) Relocation of occupants away from flood-prone areas</p> <p>Encourage the elevation/retrofitting of structures to FEMA requirements through then enforcement of the 50% rule, through the distribution of information to repetitive loss areas, and through obtaining federal funds for such structural work.</p> <p>C. Emergency Services Measures</p> <ul style="list-style-type: none"> <li>- Continue the cooperative implementation of the Comprehensive Emergency Management Plan with Pinellas County</li> <li>- Send letters to owners of structures or facilities which produce, used or store highly volatile, flammable, explosive, toxic and/or water-reactive materials. These letters should Encourage the owners or operators to follow proper procedures in the event of an impending disaster.</li> <li>- Continue the annual distribution of the All Hazards Guide or Hurricane Guide for as long as it is produced and made available to residents and local governments.</li> <li>- Continue advising the Florida Department of Transportation of the critical nature of the Alternate US 19/Curlew Road intersection. Request that some type of improvement to the elevation conditions at this location be made</li> </ul>	<p>1, 2, 4, 5, 6</p>	<p>Continues to develop and send brochures and reproducible forms to real estate agencies regarding information relating to flood hazards of property. (The initial brochure being created earlier.)</p> <p>The Local Mitigation Strategy (LMS) with the City’s Action Plan included as an appendix, now serves as the City’s Floodplain Management Plan</p> <p>The vast majority of activities have been effectively implemented for several years, providing for a more disaster-resistant community. Many of the activities carry out the various policies and requirements of the comprehensive plan and the Land Development Code.</p>

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
	<p>D. Structural Projects</p> <ul style="list-style-type: none"> <li>- Continue the permitting of erosion protection projects as outlined in the Land Development Code.</li> <li>- Continue the enforcement of the Land Development code entitled "Stormwater management," particularly as it related to the construction of systems regulating stormwater runoff.</li> </ul> <p>E. Natural Resource Protection Activities</p> <p>F. Public Information Activities</p> <ul style="list-style-type: none"> <li>- Continue to provide the Map Determination Service, including the publicizing of the service.</li> <li>- Continue to maintain and publicize the flood information documents available at the Dunedin Public Library</li> <li>- Continue to provide technical assistance where possible on flood issues</li> <li>- Continue to publish, update and make available the Urban Stormwater Improvement Guidance booklet</li> </ul>		<ul style="list-style-type: none"> <li>- Continue to develop and send brochures and reproducible forms to real estate agencies regarding information relating to flood hazards of property. The local Mitigation Strategy (LMS) with the City's Action Plan included as an appendix, now serves as the City's Floodplain Management Plan.</li> </ul>
<b>END OF LIST</b>			

# Pinellas County Local Mitigation Strategy

**Table 5- 9: City of Gulfport Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element Objective 5	The city shall continue to enforce regulations that ensure compatibility between future land uses and topography, soil conditions and other natural resources and the protection of unique and/or irreplaceable natural resources.	1	The City continues to protect its floodplains since the floodplain has natural and beneficial functions including habitat for plants and animals, water quality, and green space to be preserved and for flood water retention, wetland protection, fish/wildlife habitat improvement, recreation and educational opportunities.
Future Land Use Element Policy 5.4	Natural drainage features such as lakes, creeks and wetlands shall be preserved.	1	Preservation of natural features reduces flood water hazards such as street and yard flooding while protecting animal and plant habitat.
Future Land Use Element Objective 8	The city shall ensure that densities within the coastal zone are compatible with the regional hurricane evacuation plan.	2	Reduces development and vulnerability from tropical cyclones while protecting the health, safety, and welfare of residents within the 100-year floodplain.
Future Land Use Element Policy 8.1	The city shall enforce Policies 4.1 through 4.8 outlined in the Coastal Management Element of the Comprehensive Plan.	2	Reduce future risk and exposure to residents and public and private property through planning efforts.
Utilities Element Drainage Sub-element Goal	To provide an efficient and effective stormwater management system which protects, to the maximum extent practical, human life, property and the natural environment from degradation of quality caused by flooding and surface waters erosion.	4	Ensures a proper functioning drainage system that reduces the quantity of storm water runoff that would otherwise cause flooding and erosion of soil and other natural features.
Utilities Element Drainage Sub-element Objective 1	The city shall continue to implement its Stormwater Management Plan (SMP) that provides for adequate drainage facilities by either maximizing the use of existing drainage facilities or the correcting of existing drainage deficiencies.	4	Ensures a proper functioning drainage system that reduces the quantity of storm water runoff that would otherwise cause flooding.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Utilities Element Drainage Sub-element Policy 1.1	<p>The city shall continue annual implementation of its Stormwater Management Plan that addresses but not be limited to, the following items:</p> <ul style="list-style-type: none"> <li>* A detailed Inventory of existing stormwater facilities.</li> <li>* The capacity of existing drainage facilities in terms of a design storm event (i.e. frequency and duration).</li> <li>* The current demand on the capacity, and the existing level of service of drainage facilities.</li> <li>* The general performance of the existing drainage facilities.</li> <li>* The potential for replacement, expansion and new siting of drainage facilities.</li> <li>* Implementing a level of service standards for facility capacity, water quality and flood control for new and existing drainage facility</li> </ul>	4	Ensures a proper functioning drainage system that reduces the quantity of storm water runoff that would otherwise cause flooding, erosion of soil and other natural features, and expose citizens to flood hazards.
Utilities Element Drainage Sub-element Objective 2	<p>The city shall continually to ensure that new and redevelopment shall not diminish existing levels of service for stormwater quantity and quality as defined by the following standards:</p> <p>1. Quantity:</p> <ul style="list-style-type: none"> <li>Level A - No significant street flooding Level</li> <li>B - No major residential yard flooding Level</li> <li>C - No significant structure flooding Level D -</li> <li>No limitations on flooding</li> </ul> <p>2. Quality:</p> <ul style="list-style-type: none"> <li>Level A - Exceeds state water quality standards set forth in Section 62-302, F.A.C. and the companion provisions of Chapter 62-4, F.A.C.</li> <li>Level B - Meets Southwest Florida Water Management District (SWFWMD) standards set forth in Rules 40D-4, 40D-40 and 40D- 400</li> <li>Level C - Provides no treatment due to construction prior to development of stormwater quality standards.</li> </ul>	1, 4	Improves stormwater runoff quantity and water quality while reducing flooding hazards to City residents.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Utilities Element Drainage Sub-element Policy 2.1	The city shall apply the following flood performance levels of service: Level A - for evacuation routes outside the 100-year flood plain Level B - areas outside the 100-year flood plain Level C - areas within the 100-year flood plain	1, 4	Intended to reduce the exposure of flooding within and outside of the 100-year floodplain.
Utilities Element Drainage Sub-element Policy 2.5	Detention or retention of stormwater treatment volume for new development or changes to existing development(s) shall be provided according to one of the following criteria and be consistent with Policies 2.6, 2.7 and 2.8, herein and SWFWMD requirements. Additionally, projects discharging directly into Boca Ciega Bay shall be required to provide treatment for a volume 50 percent more than required for the selected treatment system. 1. Wet detention treatment volume shall be provided for the first one inch of runoff from the project site, including off-site areas draining to the system. 2. Dry detention treatment volume shall be provided for the first one inch of rainfall or the first one-half inch of runoff, whichever is greater.	4	Drainage projects for development must meet water quality and quantity standards to protect the environment and exposure of residents to flooding.
Utilities Element Drainage Sub-element Policy 2.6	The city will appropriately amend its development regulations, within one year of adopting this policy, to accommodate a process to ensure that construction of new and improvements to existing development(s), which are exempt from FWMD requirements for surface water management systems will be required to meet a minimum design storm of ten year return frequency to contain the runoff from a 10 year, one hour duration rainfall event.	4	Intended to limit exposure to flooding caused by rain events.
Utilities Element Drainage Sub-element Policy 2.7	The post-development peak rate of surface discharge storm design standard shall confine the runoff from a 25-year, 6 hour rainfall event, or a 25-year, 24 hour rainfall event, whichever is more severe in order to protect human life and minimize property damage.	4	Intended to limit exposure to flooding caused by rain events and to protect property owners and their property.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Utilities Element Drainage Sub-element Policy 2.8	The post-development surface runoff shall meet the storm design standard to protect homes and commercial buildings against flooding by not exceeding the surface runoff from a 100-year, 24 hour rainfall event.	4	Reduces future flood damages.
Utilities Element Drainage Sub-element Policy 2.9	The city will appropriately amend its development regulations, within one year of adopting this policy, to accommodate a process to ensure that stormwater management detention systems receiving runoff from areas with an impervious surface ratio of fifty (50%) percent or greater, or containing a potential source of oil and grease contamination shall include a discharge structure with a baffle, skimmer, grease trap, or other suitable oil and grease separation mechanism to prevent oil and grease from discharging off-site.	4	Increases water quality which helps to protect animal/plan habitats and the natural functions of the floodplain.
Utilities Element Drainage Sub-element Objective 3	As an ongoing objective the city shall extend the useful life of existing drainage facilities through efficient and timely maintenance of those facilities according to the maintenance schedule established by the Public Services Department.	4	Ensures a properly functioning drainage system to prevent
Utilities Element Drainage Sub-element Policy 3.1	The city shall continue its street sweeping program and general maintenance of drainage inlets, pipes, outfalls and retention/detention ponds.	4	Reduces drainage system failures that could lead to street and yard flooding.
Utilities Element Drainage Sub-element Policy 3.2	The city shall investigate the use of backflow prevention devices in areas of stormwater inlets near surface waters and outfalls into surface waters to help prevent tidal backups in areas subject to flooding.	4	Backflow prevention is intended to help prevent tidal backups into the storm sewer system resulting in street and yard flooding.
Utilities Element Drainage Sub-element Objective 4	As an ongoing objective the city shall address protection and improvement of surface water quality by implementing design standards, levels of service, and best management practices identified by Southwest Florida Water Management District, Department of Environmental Protection, and the Environmental Protection Agency for construction, replacement, or improvements to the existing stormwater system.	4, 5	Intended to implement management practices that maximize water retention of drainage areas.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Utilities Element Drainage Sub-element Policy 4.2	The city shall participate, coordinate and implement the requirements of the National Pollution Discharge Elimination System Permit (NPDES).	4	The intent of NPDES is improving water quality which in turn will increase water quality that helps to protect animal/plant habitats and the natural functions of the floodplain.
Utilities Element Drainage Sub-element Policy 4.4	The city shall coordinate with Pinellas County to give priority to improve drainage along hurricane evacuation routes.	3, 4	Reduces flooding along evacuation routes to help reduce exposure and vulnerability to evacuees during an approaching tropical cyclone.
Utilities Element Drainage Sub-element Objective 5	As an ongoing objective the city shall protect natural drainage features and environmental resources.	1, 5	The City continues to protect its floodplains since the floodplain has natural and beneficial functions including habitat for plants and animals, water quality, and green space to be preserved and for flood water retention, wetland protection, fish/wildlife habitat improvement, recreation and educational opportunities.
Utilities Element Drainage Sub-element Policy 5.1	Natural drainage features such as lakes, creeks and wetlands shall be preserved through land use planning, land development regulation enforcement and site plan review.	1, 5	Through site plan review, developers will protect natural features within the 100-year floodplain thereby reducing risks and vulnerability to flooding.
Utilities Element Drainage Sub-element Policy 5.2	All drainage improvement plans will continue to be reviewed by the city for impacts upon preservation areas, recreation/open space areas, mangroves, and other environmental resources.	1, 5	The review process will ensure protection of natural features within the 100-year floodplain.
Utilities Element Drainage Sub-element Policy 5.3	Drainage improvements will utilize best management practices to reduce potential for adverse environmental impacts.	4, 5	Intended to implement management practices that maximize water retention of drainage areas.
Utilities Element Drainage Sub-element Policy 5.4	The city shall require that pollution control structures and techniques be used during construction to prevent water pollution from erosion and siltation.	5	Site developers will protect natural features from pollution, erosion, and siltation within the 100-year floodplain thereby protecting the natural and beneficial functions of the floodplain.
Utilities Element Natural Groundwater Aquifer Recharge Sub-element Objective 2	The city shall continue to protect and enhance natural drainage features.	5	The City will protect natural features within the 100-year floodplain thereby protecting the natural and beneficial functions of the floodplain.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Utilities Element Natural Groundwater Aquifer Recharge Sub- element Policy 2.1	An on-going maintenance program of lakes and stormwater retention ponds shall be continued.	4,5	Improves stormwater runoff quantity and water quality while reducing flooding hazards to City residents.
Utilities Element Natural Groundwater Aquifer Recharge Sub- element Policy 2.2	Natural drainage features such as lakes, ponds, creeks and wetlands shall be preserved.	5	The City will protect natural features within the 100-year floodplain thereby protecting the natural and beneficial functions of the floodplain.
Utilities Element Natural Groundwater Aquifer Recharge Sub- element Policy 2.3	Unique features, areas with potential for recharge, or areas that exhibit natural drainage collection/retention shall be protected through land use planning, site plan review and land development regulation enforcement.	1, 4, 5	The City will protect natural features within the 100-year floodplain thereby protecting the natural and beneficial functions of the floodplain.
Coastal Management and Conservation Element Conservation Sub-element Objective 1	The city shall continue to protect, conserve, manage and enhance its natural resources by ensuring the mitigation of adverse impacts resulting from future development/redevelopment and natural activities.	1, 4, 5	The City will, through methods such as the site planning process, ensure that developers will protect natural features within the 100-year floodplain thereby protecting the natural and beneficial functions of the floodplain.
Coastal Management and Conservation Element Conservation Sub-element Policy 1.1	Public and private development activity shall not be permitted to supplant key wetlands.	1, 5	The City will protect natural features within wetland areas to protect the natural and beneficial functions of the wetland areas.
Coastal Management and Conservation Element Conservation Sub-element Policy 1.2	Clam Bayou shall continue to be designated on the future land use map as Preservation and shall be afforded maximum protection from adverse impacts associated with future development/redevelopment.	1, 5	Limits development within Clam Bayou and protects the natural and beneficial functions of this marine estuary.
Coastal Management and Conservation Element Conservation Sub-element Policy 1.3	The city shall evaluate and encourage public acquisition of lands subject to storm damage in the coastal high hazard area and those considered to be environmentally sensitive lands. Public acquisition may involve assistance from federal, state and local programs.	2	Redirects development away from properties subject to high risk and vulnerability from flood/storm damage.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element Conservation Sub-element Policy 1.5	Areas adjacent to wetlands shall be deemed important buffer areas for wetland management and shall be treated in a manner which minimizes adverse environmental impacts on ecologically sensitive wetland through site design, the site plan review process, and identification of storm water projects, or development/redevelopment projects.	5	The City will protect natural features within wetland areas to protect the natural and beneficial functions of the wetland areas by creating buffer areas adjacent to the wetlands.
Coastal Management and Conservation Element Conservation Sub-element Policy 1.15	Coastal vegetation communities, coastal wildlife/ marine habitats, and marine/jurisdictional wetlands shall be protected from the adverse effects of development through site plan review and the subsequent application of the applicable provisions of Charting the Course.	1, 5	The City will use the site planning process to create or preserve wetlands which in turn will protect plant/animal habitats. Such wetland areas will have recreational benefits while providing features that reduce the effects from flooding, erosion, and wind driven waters such as those exhibiting wave action.
Coastal Management and Conservation Element Conservation Sub-element Objective 2	As an ongoing objective, the City shall conserve and protect marine wetlands, aquatic resources, and wildlife population and habitat to maintain their environmental, economic, and recreational value.	1, 5	The City will create or preserve wetlands which in turn will protect plant/animal habitats. Such wetland areas will have recreational benefits while providing features that reduce the effects from flooding, erosion, and wind driven waters such as those exhibiting wave action.
Coastal Management and Conservation Element Conservation Sub-element Policy 2.2	Marine wetlands, property containing numerous vegetative communities and shoreline and shoreline locations with limited habitat diversity shall be a priority for possible environmental land acquisition.	2, 5	The City will ensure protection of natural features within the 100-year floodplain thereby protecting the natural and beneficial functions of the floodplain.
Coastal Management and Conservation Element Conservation Sub-element Policy 2.4	The natural functions of those marine wetlands found within the city shall be conserved and protected through implementation of a comprehensive coastal marine wetland protection, restoration, and acquisition program developed in cooperation with the Tampa Bay Estuary Program.	5	The City will coordinate its land use planning process, site plan process and its land development regulations to protect natural features within the 100-year floodplain and the natural and beneficial functions of the floodplain in cooperation with the Tampa Bay Estuary Program.
Coastal Management and Conservation Element Conservation Sub-element Policy 2.5	In preparation of any marine wetland regulations, consideration shall be given to the type, value, function, size, condition, and location of the wetlands.	1, 5	As the City preserves/protects wetlands consideration will be given to plant/animal habitats, recreational benefits, and features that reduce the effects from flooding, erosion, and wind driven waters such as those exhibiting wave action.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element Conservation Sub-element Objective 4	The city shall continue to review, amend and adopt appropriate land development regulations to ensure the protection of the natural environment.	1, 5	The City will ensure, through its land development regulations, protection of natural features within the 100-year floodplain thereby protecting the natural and beneficial functions of the floodplain.
Coastal Management and Conservation Element Conservation Sub-element Policy 4.1	The city shall continue to review and amend its land development regulations in an effort to ensure maximum protection of the city's natural resources.	1	The City will ensure, through its land development regulations, protection of natural features within the 100-year floodplain thereby protecting the natural and beneficial functions of the floodplain.
Coastal Management and Conservation Element Conservation Sub-element Policy 6.6	Natural landscape barriers to flooding and stormwater shall be preserved or enhanced as practical during the land development/redevelopment process through site design and the site plan review process as provided in the land development regulations.	1, 5	The City will coordinate its land use planning process, site plan process and its land development regulations to protect natural features within the 100-year floodplain and the natural and beneficial functions of the floodplain.
Coastal Management and Conservation Element Conservation Sub-element Objective 7	As an ongoing objective, the City shall continue to implement measures programs designed to reduce the rate of soil erosion on natural coastline shorelines.	5	Intended to implement management practices that reduce erosion and reduction of natural coastal shorelines.
Coastal Management and Conservation Element Conservation Sub-element Policy 7.3	The city shall maintain and preserve and enhance the indigenous vegetative fringe along the natural shore line of Osgood Point, Clam Bayou and the municipal beach area.	5	The City will coordinate its land use planning, site plan process, land development regulations, and management practices to protect its natural shorelines and plant habitats found there.
Coastal Management and Conservation Element Conservation Sub-element Policy 7.5	The city shall continue the planting of sea oats or other indigenous vegetation to reduce beach erosion due to storm water runoff.	5	Intended to use sea oats and other marine vegetation to protect sand dunes and other shoreline features from erosion due to stormwater runoff.
Coastal Management and Conservation Element Conservation Sub-element Policy 7.6	The city shall continue in its efforts to obtain Federal, State or County assistance for fill and periodic renourishment of the beach.	5	Intended to protect the municipal beach which in turn will reduce flooding in the residential and business areas in proximity and upland from the beach.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element Coastal Management Sub-element Objective 1	The city shall continue to review its development regulations to ensure that as future development occurs, no net reduction in native vegetation, marine grass beds, mangrove forests and coastal marshes will occur.	1, 5	The City will ensure protection of natural features within the 100-year floodplain thereby protecting the natural and beneficial functions of the floodplain.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 1.2	Future development in mangrove forests and coastal marshes shall be prohibited.	1, 5	Directs development away from flood hazard areas while protecting shoreline and estuary vegetative habitats.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 1.4	The city shall encourage a performance zoning concept in those coastal areas characterized as having unique environmental concerns in order to encourage clustering of development on the upland portions of the sites thereby maximizing the protection of coastal resources.	1, 5	The City will coordinate its land use planning, site plan process, land development regulations, and management practices to protect upland and coastline resources.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 1.6	Clam Bayou and surrounding vegetated areas shall be preserved in their natural state and no development shall be permitted which would adversely affect this estuarine environment.	5	Directs development away from this marine estuary and preserves it floodplain functions.
Coastal Management and Conservation Element Coastal Management Sub-element Objective 3	The City of Gulfport will protect human life from the effects of natural disasters, especially through the continued maintenance or reduction of hurricane clearance times.	3	Reduces loss of life and property within flood prone areas.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 3.1	The city shall continue to enact its "Disaster Preparedness Plan" which includes the "Pinellas County Hurricane Evacuation Guide", "Recovery Plan" and "Post- Disaster Redevelopment Guide", and shall continue to implement hazard mitigation measures to reduce the exposure of human life, and public and private property to natural hazards.	1, 3	Intended to limit loss of life and property and improve hazard mitigation for future disasters.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element Coastal Management Sub-element Policy 3.2	The City of Gulfport's hurricane evacuation time shall meet Pinellas County's estimated 14 to 16 hours for an immediate evacuation order.	3	Reduces loss of life and property within flood prone areas.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 3.5	The City of Gulfport shall coordinate with the Metropolitan Planning Organization, Florida Department of Transportation and other appropriate agencies/governments to give priority to road improvement projects on hurricane evacuation routes.	1, 3	Reduces loss of life and property within flood prone areas.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 3.7	The Coastal High-Hazard Area (CHHA) shall be the Evacuation Level A areas identified in the most recent regional hurricane evacuation study.	1, 3	Reduces loss of life and property within flood prone areas.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 3.8	The city shall review the location of new, or expansion of existing nursing homes, assisted living facilities and other like facilities within the Coastal High-Hazard Area and Evacuation Level B areas and discourage such facilities if determined that this type of development may result in future danger or damage to property and human life.	1, 3	Directs special needs facilities away from the floodplain resulting in reduction of loss of life and property within flood prone areas.
Coastal Management and Conservation Element Coastal Management Sub-element Objective 4	As an ongoing objective, the City shall expedite post-disaster recovery and reduce the future risk to human life and public and private property from natural hazards through recovery and redevelopment strategies.	1	Intended to aid recovery while improving/increasing hazard mitigation for future disasters.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element Coastal Management Sub-element Policy 4.1	<p>At a minimum, the City shall ensure that it's Post-Disaster Redevelopment Guide addresses the following areas of Section 9J-5.012(3)(c)5, FAC:</p> <ul style="list-style-type: none"> <li>- Criteria for distinguishing between immediate repair and cleanup actions needed to protect health and safety and long-term repair and redevelopment activities. The issuance of development orders for long-term repair and redevelopment activities shall be authorized only after an assessment of the full extent of the damage and a determination as to whether additional repairs are necessary to insure compliance with those applicable regulations in effect at the time the development order is rendered.</li> <li>- Procedures for cooperating with Florida Power, General Telephone, the City of St. Petersburg and other public utility providers in addressing the removal, relocation, or structural modification of damaged infrastructure, when such infrastructure is determined to be unsafe and the action deemed appropriate by the public utility provider.</li> <li>- Provides for limiting repairs in areas identified as receiving repeated damage to those necessary to ensure the immediate health, safety, and welfare of the general public. Redevelopment in such areas shall be authorized only after an assessment of the full extent of the damage and the identification of those repairs necessary to insure compliance with those applicable regulations in effect at the time the development order is rendered.</li> </ul>	1	Intended to aid recovery and redevelopment efforts while improving/increasing hazard mitigation for future disasters.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 4.2	In addition to the above, the City shall be guided by the contents of the Pinellas County Local Mitigation Strategies (under development) and any applicable post disaster material prepared by the Pinellas County Office of Emergency Management.	1	Intended to improve/increase hazard mitigation for future disasters.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 4.4	The identification those portions of any interagency hazard mitigation report found to be applicable to the City shall be assured through implementation of Objective 10 of the Future Land Use Element.	1	Intended to improve/increase hazard mitigation for future disasters.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element Coastal Management Sub-element Policy 4.5	The City shall continue to work with the Pinellas County Office of Emergency Management in the development, implementation, and updating of the County's Local Mitigation Strategy through the review and revision of those projects applicable to the city.	1	Intended to improve/increase hazard mitigation for future disasters.
Coastal Management and Conservation Element Coastal Management Sub-element Objective 5	In order to effectively manage the timing and sequence of reconstruction, the City will establish, in advance, a set of reconstruction permitting procedures.	1	Intended to aid recovery and redevelopment efforts while improving/increasing hazard mitigation for future disasters.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 5.1	Following a disaster event, the City Council will consider the adoption of a temporary post-disaster building moratorium to allow sufficient time for immediate damage assessment and hazard mitigation policy implementation.	1	Intended to aid recovery and redevelopment efforts while improving/increasing hazard mitigation for future disasters.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 5.3	The City shall consider one or more of the following strategies in those areas which receive major or moderate damage: - Relocation; - Reduction of permissible density or intensity of use; - Reconstruction in compliance with current building and construction standards; or - Public acquisition.	1, 2	Intended to aid recovery and redevelopment efforts while improving/increasing hazard mitigation for future disasters.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 5.4	The City shall consider key reconstruction and redevelopment strategies which could be used to promote hazard mitigation, including: - Enhancement of recreational and open space opportunities including public beach access; - Enhancement and restoration of local natural ecosystems; - Reduction of traffic congestion; or - Enhancement of the long-term economic vitality.	1	Intended to aid recovery and redevelopment efforts while improving/increasing hazard mitigation for future disasters and protection of natural features within the floodplain.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element Coastal Management Sub-element Objective 6	As an ongoing objective, the City shall not increase densities or intensities of use within the designated Coastal High Hazard Area. Further, the city shall ensure that development activities in coastal high hazard areas are carried out in a manner which minimizes danger and/or damage to private and public property and human life. Development within high hazard areas shall be restricted and public funding for facilities within coastal high hazard areas shall be limited.	1	Reduces the intensity of development and vulnerability/risk of flooding within the 100-year floodplain.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 6.1	The City shall maintain adopted allowable density or intensities of use within the CHHA consistent with the Future Land Use Element of this Comprehensive Plan, except in cases of overriding public interest.	1	Reduces the intensity of development and vulnerability/risk of flooding within the 100-year floodplain.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 6.2	The City shall continue to implement growth management directives which limit densities or intensities of use within the CHHA consistent with the Future Land Use Map of this Comprehensive Plan.	1	Reduces the intensity of development and vulnerability/risk of flooding within the 100-year floodplain.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 6.3	The city shall continue to implement Federal Emergency Management Agency requirements through continued participation in the National Flood Insurance Program.	1	Reduces exposure/vulnerability to flood damage.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 6.4	The city shall, at a minimum, require building elevations at or above the 100-year flood plain as defined by the National Flood Insurance Rate Maps.	1	Reduces exposure/vulnerability to flood damage.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 6.5	High density developments in areas projected to receive major hurricane damage from coastline storms surges shall be avoided.	1	Reduces the intensity of development from areas of high flooding risk. Reduces exposure/vulnerability to flood damage.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element Coastal Management Sub-element Policy 6.7	New residential development and/or redevelopment within the Coastal High Hazard Area shall not be permitted to exceed the density provided for on the Future Land Use Map, as amended from time to time. However, any legally permitted residential dwelling unit existing as of May 21, 1985 which is destroyed by fire, natural disaster or other calamity may be rebuilt to the density existing prior to said destruction but shall otherwise be required to meet all construction codes in effect.	1	Reduces the intensity of development from areas of high flooding risk. Reduces exposure/vulnerability to flood damage. Improves hazard mitigation.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 6.9	The city shall continue to enforce local, state and federal development regulations to ensure at a minimum that the requirements for development within the Coastal High Hazard Area are met.	1	Reduces the intensity of development from areas of high flooding risk. Reduces exposure/vulnerability to flood damage. Improves hazard mitigation.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 6.10	The city shall review on a minimum five year schedule the hazard mitigation annex of its Disaster Preparedness Plan and make appropriate amendments to lessen the city's exposure to natural hazards.	1	Reduces exposure/vulnerability to flood damage. Improves hazard mitigation.
Coastal Management and Conservation Element Coastal Management Sub-element Objective 7	In recognition of its location along Boca Ciega Bay and its built-out character, the City shall, to the extent practical, continue to limit public expenditures that subsidize development permitted in the CHHA.	1	Limits vulnerability of redevelopment in the floodplain.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 7.1	Public expenditures for infrastructure in the CHHA shall be limited to existing development, new development which is consistent with the Future Land Use adopted in January 1999, or associated with the implementation of a Community Redevelopment Area, except in cases of overriding public interest.	1	Limits vulnerability of development and redevelopment in the floodplain.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element Coastal Management Sub-element Policy 7.2	The city shall restrict the expenditure of public funds for facility development in Coastal High Hazard Areas, unless the expenditure serves the following purposes: * The maintenance, repair or replacement of existing facilities; or * The restoration or enhancement of natural resources or public access; or * To address an existing deficiency identified in this Plan; or * The retrofitting of stormwater management facilities for water quality enhancement of stormwater runoff; or * The development or improvement of public roads identified in the Transportation Element of this Plan; or * A public facility or project of overriding public interest to ensure public health and safety.	1	Limits vulnerability of development and redevelopment in the floodplain. Improves hazard mitigation.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 7.3	Consistent with the goals, objectives and policies of this Element and the availability of budgeted funds, the city shall evaluate the acquisition of storm-damaged or potential storm-damaged property in the Coastal High-Hazard Area.	1, 2	Intended to direct development or redevelopment away from high flood risk or vulnerable properties.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 7.4	The city shall promote retrofitting of existing structures to mitigate potential damages from natural disasters.	1, 2	Improves hazard mitigation.
Coastal Management and Conservation Element Coastal Management Sub-element Objective 9	By 2003, the city shall develop a plan to restore or enhance the natural resources and habitat value of severely damaged, newly formed or extensively altered coastal areas following disastrous storm events.	5	The City will ensure protection of natural resources and its features within the 100-year floodplain thereby protecting the natural and beneficial functions of the floodplain.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 9.1	Land acquisition mechanisms, to include but not be limited to grants, matching grants and bonds, consistent with the Capital Improvements Element shall be researched to enable public acquisition of newly formed or extensively altered coastal lands following disastrous storm events.	2	Intended to direct development or redevelopment away from high flood risk or vulnerable properties.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element Coastal Management Sub-element Policy 9.2	The city shall continue to review and appropriately amend its development regulations and building codes to ensure hazard mitigation measures for all reconstruction in severely damaged coastal areas are included.	1	Improves hazard mitigation while reducing exposure to possible flood damages.
Coastal Management and Conservation Element Coastal Management Sub-element Policy 9.3	The city shall support public acquisition of properties in high hazard areas which suffered extensive storm damage through identification of such properties and developing a mechanism for purchase.	2	Intended to direct development or redevelopment away from high flood risk or vulnerable properties.
<b>Land Development Regulations</b>			
Code of Ordinances Part II, Chapter 6, Beaches, Boats, Boating, and Waterfront Structures	Article III: Seawalls, Bulkheads, and Other Waterfront Structures	1, 4	Establishes requirements for groins and seawalls for erosion and flood control. Requires investigation of adjacent shorelines and properties.
Code of Ordinances Part II, Chapter 7, Buildings	Article I: Building Codes.	1	Adopts the Florida Building Code as the building codes for the City. Establishes minimum building standards for reducing damages from multiple hazards.

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Code of Ordinances Part II, Chapter 10.5, Flood Damage Prevention	<p>Promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:</p> <p>(1) Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion or in flood heights or velocities.</p> <p>(2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.</p> <p>(3) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters.</p> <p>(4) Control filling, grading, dredging and other development which may increase erosion or flood damage.</p> <p>(5) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.</p>	1	Minimizes public and private losses due to flood conditions within the 100-year floodplain.
Code of Ordinances Part II, Chapter 11, Garbage, Trash, Sewers, and Water	Article V: Storm Sewers	1	Provides for planning, design, construction, and improvements of stormwater management facilities. Regulates water runoff quality and quantity resulting in reducing the amount of flooding and protecting habitats.
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
City of Gulfport LMS Floodplain Management	<p>Goals of LMS Floodplain Management:</p> <p>1). Protect structures, property and human life from the effects of natural hazards such as wind, tidal surge and rainfall runoff.</p> <p>2). Preserve and restore the municipal beach and other city-owned waterfront property since natural shorelines protect upland area from destructive wave action and are essential to the ambiance and economy of the city.</p> <p>3). Improve the housing stock and the maintenance of existing housing and commercial structures, especially within the repetitive loss area.</p> <p>4). Preserve the existing and future land use patterns, as determined by the Comprehensive Plan, Adopted 1989, as amended.</p> <p>5). Strengthen the city's economic base through redevelopment and</p>	1	The Floodplain Management through the City's use of the LMS is intended to determine how to address current local flooding problems and considers plans for potential future issues. The purpose of using the LMS plan is to show how to protect the beneficial attributes of the natural floodplain system and how to improve or implement manmade solutions to potential and actual flood hazards.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
	<p>economic development through plan implementation such as the Waterfront Area Redevelopment Plan.</p> <p>6). Protection of infrastructure, such as potable water, sanitary sewer and roadway access.</p> <p>7). Preserve and expand public access to coastal resources which may lead to increased recreational opportunities, open space and educational opportunities.</p> <p>8). Improve and protect the environment, natural areas, soils, water quality and aesthetics of the city.</p>		
Community Rating System Activity 310	City requires and maintains Elevation Certificates for new and substantially improved structures within Special Flood Hazard Areas as identified on the Flood Insurance Rate Maps.	1	Ensures that structures are properly elevated to meet the Base Flood Elevation requirement.
Community Rating System Activity 320	City provides current or historic Flood Insurance Rate Map information to property owners, residents, contractors, insurance agents, lenders, and others who request such information. Information is provided written or verbally. This service is advertised communitywide through outreach activities.	1	Educates the public and business people regarding flood zone information.
Community Rating System Activity 330	Annual outreach projects include brochures, newsletters, GTV programming, communitywide hurricane workshop, and the city's website. Hazard information and preparation includes personal preparation, property protection, hurricane preparedness, hazard mitigation, flooding, and flood and evacuation zones.	6	Distributes flood and hazard related educational information materials to the public and businesses.
Community Rating System Activity 350	Flood and hazard related information is provided through the Gulfport Public Library, Community Development Department office, and the city's website.	6	Provides flood and hazard related educational information materials for the public and businesses to review.
Community Rating System Activity 360	City staff provides technical assistance and flood related data to assist residents, property owners, contractors and businesses.	6	Provides flood and hazard related educational information materials and technical assistance through office or field visits for the public and businesses with specific disaster related issues. This service is advertised citywide.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Community Rating System Activity 420	The city continues to protect and preserve open space located within the 100-year floodplain through its Comprehensive Land Use Plan and Zoning designations.	1, 2	Properties designated as open space or preservation will remain as such. City acquired property is typically dedicated for open space or recreation. Such lands reduce the amount of development within the 100-year floodplain.
Community Rating System Activity 430	Building and zoning codes are enforced for all construction within the 100-year floodplain.	1	City codes provide higher regulatory standards that the minimum NFIP standards. Codes ensure that all structures are properly elevated for the particular flood zone they are located in.
Community Rating System Activity 440	Flood data maintenance is maintained through in-house mapping capabilities and coordination with Pinellas County.	1, 6	The city maintains flood related mapping through its GIS and historic FIRMs. Elevation reference markers are maintained through cooperation/coordination with the Pinellas County Engineering Department.
Community Rating System Activity 450	City's Building Division ensures that all provisions pertaining to erosion and sediment control and water quality, and that the all new structures outside the Special Flood Hazard Area be elevated above the crown of the adjacent roadway, are enforced.	1	Ensures proper drainage and structure elevation to prevent potential flooding.
Community Rating System Activity 502	Annual repetitive loss property area notifications are sent, including all repetitive loss properties.	6	Educational materials are sent to the public and business people regarding flood mitigation related items.
Community Rating System Activity 510	The LMS serves as the city's floodplain management plan. Staff continues support to the LMS Committee.	1	Ensures all hazards mitigation planning.
Community Rating System Activity 540	City continues to implement its drainage maintenance program to clean and maintain the drainage system.	4	Ensures proper maintenance of the drainage system to prevent street and yard flooding.
Community Rating System Activity 610	City coordinates as part of the Countywide Emergency Management Plan which is a multi-tiered plan including Urban Flood and Storm Advisory's and Warnings from the National Weather Service, countywide warnings from Pinellas County Emergency Management, and localized warnings for hazardous locations throughout the city from the Police and Fire Departments.	3	Ensures a coordinated and effective response to hazards and disasters.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Emergency Management</b>			
National Incident Management System (NIMS) Compliance	NIMS "provides a consistent nationwide template to establish Federal, State, tribal and local governments and private sector and nongovernmental organizations to work together effectively and efficiently to prepare for, prevent, respond to and recover from domestic incidents....."	3	Enhances manner in which local governments cooperate with other layers of government in recovering from a disaster. Includes Gulfport CERT teams.
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	Ensures a coordinated and effective response to hazards and disasters.
<b>Other</b>			
Capital Improvements Projects	The annual CIP is adopted as part of the Capital Improvements Program within the Comprehensive Land Use Plan. The CIP identifies individual projects that address hazard mitigation and flood-related projects.	4	<ol style="list-style-type: none"> <li>1. Emergency Generator Replacement - replace the 15-year old generator that services the city hall complex (city's EOC).</li> <li>2. 49th Street South Stormwater Improvements - installation of stormwater treatment pond at the southern terminus of 49th Street to increase the quantity/capacity and quality for treatment of stormwater runoff. Other improvements include retention ponds along Tangerine Avenue South.</li> <li>3. Stormwater System Improvements - to perform new projects, and restoration / rehabilitation of the system in small drainage basins.</li> <li>4. Stormwater System Maintenance - to clean existing system which is subject to collecting debris and sand, and tree roots infiltrating the sewer lines.</li> </ol>
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 5- 10: Indian Shores Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element (FLUE) Goal 1	Ensure that the residential/family character of the Town of Indian Shores is maintained and protected while maximizing the potential for economic benefit resulting from the tourist trade and the enjoyment of natural and man-made resources by citizens and visitors alike, and minimizing the threat to health, safety, and welfare posed by hazards, nuisances, incompatible land uses, and environmental degradation.	1, 3	Basic governmental purpose to protect the health, safety and welfare of citizens.
FLUE Policy 1.1.1	The Town shall enforce land development regulations which recognize the limitations of development on a barrier island, including 100-year floodplain, vulnerability to tropical storms, topography, and soil conditions.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains.
FLUE Policy 1.1.2	<p>The Town shall maintain land development regulations that contain specific and detailed provisions required to implement this comprehensive plan which, at a minimum, shall:</p> <ul style="list-style-type: none"> <li>• Regulate the subdivision of land;</li> <li>• Protect the limited amount of marine wetlands remaining in the community and those lands designated as Preservation on the Future Land Use Map and in the Coastal Management and Conservation Element;</li> <li>• Regulate signage;</li> <li>• Require that all development is consistent with federal flood insurance regulations;</li> <li>• Require that all development is consistent with those coastal construction regulations as may be adopted and/or amended by the State of Florida, Pinellas County, or the Town of Indian Shores;</li> <li>• Address the compatibility of adjacent land uses and provide for adequate and appropriate buffering;</li> <li>• Issue development orders and permits only when it is documented that such development is consistent with the level-of-service standards for the affected public facilities adopted by this comprehensive plan</li> </ul>	1, 5	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
FLUE Policy 1.1.2 - continued	<ul style="list-style-type: none"> <li>• Provide for drainage and stormwater management, based on the minimum criteria established by the Southwest Florida Water Management District, as may be amended, the Town of Indian Shores, or other appropriate governmental agencies. Provide requirements for the provision of open space, and safe and convenient on-site traffic flow and parking requirements;</li> <li>• Encourage the use of native vegetation in the landscaping of multifamily and commercial developments; and</li> <li>• Provide for the control of erosion and runoff from construction sites.</li> </ul>	1, 5	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources. - continued
FLUE Policy 1.2.6	<p>In order to minimize incompatibilities between residential and commercial uses, the following standards shall apply:</p> <ul style="list-style-type: none"> <li>• Residential uses shall be located and designed to protect life and property from natural and manmade hazards, such as flooding, excessive traffic, subsidence, noxious odors, and noise;</li> <li>• Future residential and commercial uses shall be compatible with the type and scale of surrounding land uses;</li> <li>• All outdoor lighting shall be designed and/or shielded so as not to create a nuisance to adjoining residential property owners or tenants; and</li> <li>• Where redevelopment or change of use results in a more intense commercial use adjacent to an existing residential use, buffering or other design techniques shall be used to minimize impacts from lighting, noise, and traffic.</li> </ul>	1	Application of land development regulations to minimize losses from flooding
IE Goal 2	To endeavor to provide an efficient drainage system which protects human life, minimizes property damage, and improves stormwater quality and on-site retention.	1, 4	Reduces drainage properties within the Town.
IE Objective 2.1	The Town shall continue to improve its stormwater management system consistent with the findings and projects contained within the adopted <i>Town of Indian Shores Watershed Management Plan</i> .	1, 4	Reduces drainage properties within the Town.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
IE Policy 2.1.3	<p>The following management techniques shall be utilized to address impacts from stormwater runoff:</p> <ul style="list-style-type: none"> <li>• No more than 80 percent of residential lots and 80 percent of commercial lots be covered by impervious surface.</li> <li>• Expansion and regular maintenance of retention swales adjacent to Town roadways, where possible.</li> <li>• Use of front, rear and side lot line swales in new development, Where possible.</li> <li>• Use of erosion and runoff control devices during construction.</li> <li>• Construction of drainage retention areas in the public rights-of-way shall be considered.</li> </ul>	1	Reduces drainage properties among properties; minimizes siltation that impedes the natural drainage flow or damage to floodplains and wetlands.
IE Policy 2.1.4	<p>The following techniques shall be utilized to protect natural drainage features found within the Town as follows:</p> <ul style="list-style-type: none"> <li>• All applications for development approval shall undergo site plan review;</li> <li>• The flood-carrying capacity of the 100-year flood plain shall be maintained;</li> <li>• Development along The Narrows, Boca Ciega Bay, and the Gulf of Mexico shall maintain adequate setbacks to maintain any existing areas of natural coastal/marine habitat;</li> <li>• The prevention of erosion, retardation of runoff, and protection of natural functions and values of the floodplain be considered while promoting public usage; and</li> <li>• The Town shall require development or redevelopment proposals to be consistent with the performance standards regulating development within the designated floodplain.</li> </ul>	1, 5	Protects natural function of floodplains and wetland areas.
IE Policy 2.1.5	The Town shall require that surface cover vegetation loss during construction is minimized and/or replaced to reduce erosion and flooding.	5	Minimize siltation that may impede upon the natural function of floodplains and wetlands.
Coastal Management and Conservation Element (CMCE) Goal 1	To ensure the highest environmental quality possible, and to conserve, protect and appropriately manage natural resources (aquatic, wetland, and terrestrial) within the Town.	5	Protects natural function of floodplains and wetland areas.
CMCE Policy 1.1.2	The Town shall protect water storage and water quality enhancement functions of wetlands and flood plains areas through enforcement of laws and the application of land and water management practices which provide for compatible uses.	5	Protects natural function of floodplains and wetland areas.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE Policy 1.1.6	The Town shall coordinate with neighboring municipalities and the County to protect estuaries which are within the jurisdiction of more than one local government; including methods for coordinating with other local governments to ensure adequate sites for water-dependent uses, preventing estuarine pollution, controlling surface water runoff, protecting living marine resources, reducing exposure to natural hazards, and ensuring public access.	1, 5	Protects natural function of floodplains and wetland areas.
CMCE Objective 1.2	Regulations for development within the 100-year flood plain shall be strictly enforced.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses.
CMCE Policy 1.2.1	The Town shall protect the natural functions of the 100-year flood plain so that the flood-carrying and flood-storage capacity are maintained.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses.
CMCE Policy 1.2.2	The Town shall enforce the current floodplain ordinance to ensure that state and local governments preserve hydrologically significant wetlands and other natural flood plain features.	1, 5	Protects natural function of floodplains and wetland areas.
CMCE Objective 1.3	The Town shall conserve or improve wetlands, aquatic resources, wildlife population, and habitat to maintain their environmental and recreational value.	5	Protects natural function of floodplains and wetland areas.
CMCE Policy 1.3.1	All existing marine wetlands shall be designated preservation land as set forth on the Future Land Use Map.	5	Protects natural function of floodplains and wetland areas.
CMCE Policy 1.3.2	Projects (e.g., marinas, causeways, and dredging) which could inhibit tidal circulation shall include measures to maintain or improve tidal circulation and flushing, in accordance with Florida Department of Environmental Protection (FDEP) regulations.	5	Encourages best available practices to promote the benefits of respecting natural systems in Indian Shores.
CMCE Policy 1.3.3	The Town's existing wetlands shall be conserved and protected from physical and hydrological alterations, as required by FDEP.	5	Protects natural function of wetlands.
CMCE Policy 1.3.4	Marine wetlands, barrier island property containing numerous vegetative communities and/or shoreline locations with limited habitat diversity shall be considered priorities for environmental land acquisition.	2, 5	Acquisition of properties that are left as open space may help reduce potential losses on adjoining properties as well as reduce the number of repetitive loss properties/areas.
CMCE Policy 1.4.3	Pilings, not fill, shall be used to elevate structures in native wetland vegetation areas, as approved by FDEP.	1	Projects the natural function of wetlands; may minimize potential losses from flooding.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE Objective 1.6	As an ongoing objective, the Town of Indian Shores will protect and encourage the restoration of its beaches, dunes and natural system and maintain construction standards which minimize the impacts of man-made structures on these systems.	5	Provides storm protection to minimize property loss.
CMCE Policy 1.6.1	Construction seaward of the Coastal Construction Control Line shall be subject to the permitting procedures pursuant to Section 161.05, Florida Statutes.	1	Assures compliance with state regulations; minimizes structures placed with most vulnerable area.
CMCE Policy 1.6.2	Where existing waterways are not sea walled, native marine vegetation shall be used for shoreline stabilization where technically feasible.	1, 4	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate...
CMCE Policy 1.6.3	The planting of native marine vegetation in front of the seawall to act as a natural buffer is encouraged.	1, 4	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate...
CMCE Policy 1.6.4	Dune preservation shall be maintained to protect the primary dunes, which shall address prohibitions on excavations, destruction of native vegetation, and activities which affect the natural fluctuation of the dunes.	1, 5	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate...
CMCE Policy 1.6.6	The Town shall encourage the replanting of shorelines lacking wetland vegetation with native vegetation in order to minimize potential flood damage, stabilize the shoreline and trap sediments and other non-point source pollutants, and provide additional habitat for fish and wildlife.	1, 5	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate...
CMCE Objective 1.7	The Town shall participate in the establishment and implementation of an intergovernmental coordination mechanism to protect coastal resources which shall address natural systems on a system wide basis regardless of political boundaries.	1	Maintains functions of natural systems, and reduces potential losses in storm events.
CMCE Policy 1.7.1	The Town shall continue to participate in proceedings to develop joint planning and management programs with the neighboring municipalities for hurricane evacuation, provision of public access, provision of infrastructure, controlling stormwater, protection of wetland vegetation, and coordinating efforts to protect species with special status.	3	Restrictions, such as limited intense development in Special Flood Hazard Areas, CHHA, and Coastal Storm Areas will reduce property losses and reduce evacuation times and the need for public shelter space.
CMCE Objective 1.8	Development activities shall ensure the protection of natural resources.	1	Protects functions of natural systems, reducing the potential loss during natural disasters.
CMCE Policy 1.8.2	The Town shall require the protection of coastal vegetative communities, coastal wildlife habitats, and dune systems from the adverse effects of development.	1	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate...

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE Policy 1.8.3	Dredge and fill activities shall be permitted consistent with state and regional regulations.	1	Assures compliance with state regulations; minimizes structures placed with most vulnerable area.
CMCE Goal 2	To provide a set of guidelines for development that protects the lives and property of its residents from the effects of natural hazards.	1	Basic governmental purpose to protect the health, safety and welfare of citizens.
CMCE Objective 2.1	The Town shall restrict development and redevelopment densities to those adopted in the Future Land Use Element and shall limit the expenditure of public funds in Coastal Storm Area to those facilities necessary for the protection of health and safety. All building and development activities in these areas shall be conducted in such a manner as to lessen the existing danger to life and public and private property.	3	Helps keep population "out of harm's way" and lessens the demand on evacuation routes and for additional public shelter space by directing population to non-evacuation areas; restricts expenditure of public funds that may encourage increased future development.
CMCE Policy 2.1.1	The Coastal High Hazard Area (CHHA) is defined as that portion of the community below the elevation of the category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. However, the Coastal Storm Area defined by the Pinellas Planning Council <i>Countywide Plan Rules</i> will be the regulatory standard for the Town of Indian Shores and depicted on <i>Map LU-4: Future Land Use and Future Transportation Corridors</i> .	3	Redefines Coastal High Hazard Area to be consistent with Florida Statutes.
CMCE Policy 2.1.2	The Town defines a Coastal Storm Area as the area that includes the following: 1 - the CHHA 2 - any area surrounded by the CHHA, or by the CHHA and a body of water, and 3 - All areas located within the Velocity Zone as designated by the Federal Emergency Management Agency.	1, 3	Defines specific areas that may become isolated in a flooding situation therefore exacerbating evacuation efforts and rescue efforts.
CMCE Policy 2.1.3	The CHHA as defined in Policy 2.1.1, together with the Coastal Storm Area as defined in Policy 2.1.2, being consistent with the Pinellas Planning Council <i>Countywide Plan Rules</i> , shall be the area of coastal development and redevelopment regulation within the Town of Indian Shores. This area is depicted on <i>Map LU-4: Future Land Use and Future Transportation Corridors</i> .	1, 3	Defines specific areas that may become isolated in a flooding situation therefore exacerbating evacuation efforts and rescue efforts.
CMCE Policy 2.1.4	The Town shall not support or finance new local transportation corridors that lie within the Coastal Storm Area, although existing corridors may be maintained or improved as necessary to protect the health, safety and welfare of existing residents.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE Policy 2.1.5	The Town shall not support sewer and water line extensions or expansions within the Coastal Storm Area, which will encourage future growth/higher densities in those vulnerable areas.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.
CMCE Policy 2.1.6	The Town of Indian Shores shall continue to implement the growth management directives, which limit densities within the Coastal Storm Area consistent with the Future Land Use Element of the comprehensive plan.	1, 3	Helps keep population "out of harm's way" and lessens the demand on evacuation routes and for additional public shelter space by directing population to non-evacuation areas; restricts expenditure of public funds that may encourage increased future development.
CMCE Policy 2.1.7	The Town shall review federal and state development proposals, which are to be located within the Coastal Storm Area, and support those projects, which are consistent with this plan.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.
CMCE Objective 2.2	The Town of Indian Shores shall maintain the clearance times for hurricane evacuation identified by Tampa Bay Regional Planning Council and the State of Florida. Any proposed development shall not increase this clearance time.	3	Prevents future casualties; reduces the public shelter deficit; improves upon evacuation times.
CMCE Policy 2.2.1	The evacuation times adopted by Tampa Bay Regional Planning Council <i>Tampa Bay Region Hurricane Evacuation Study 2006</i> , and the State's out-of-county category 5-hurricane standard of 16 hours, shall be used for development review and approval.	3	Reducing evacuation times is important to reducing potential casualties.
CMCE Policy 2.2.2	The Town, in cooperation with the Pinellas County Emergency Services and the South Pinellas County Chapter of the American Red Cross and the other island communities, shall sponsor annual hurricane preparedness seminars to increase hurricane awareness.	3, 6	Public awareness campaign will assure that citizenry is informed about their responsibilities for safety and how to prepare property and family for emergency situations.
CMCE Policy 2.2.3	Town emergency response personnel and volunteers shall coordinate with county and state emergency response agencies in emergency planning, including communications, traffic control, and warning operations, to affect a safe and efficient evacuation of the Town.	3	Assure that emergency response personnel and volunteers are informed as to their responsibilities and assures a safe and efficient response.
CMCE Objective 2.3	The Town shall reduce the risk of exposure of human life and public and private property to natural disasters through preparedness planning and implementation of hazard mitigation measures.	1, 2, 3	Implementation of emergency plans in the short-term, mid-term, and long-term recovery; provides for new safer technology during reconstruction after a disaster. Mitigation measures encourage preemptive approach to dealing with pending disasters.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE Policy 2.3.1	The Town shall designate an emergency management coordinator who acts as a liaison between State, regional, County and Town emergency response and planning agencies; and ensure coordination between emergency management and development management activities in the Town.	1, 3	Crucial decisions need to be made in a timely manner to minimize losses. Plan will establish duties of individual and or task forces.
CMCE Policy 2.3.2	Recognizing that the entire community is located within the Coastal Storm Area and the 100-year flood plain, the Town shall adopt and strictly enforce all appropriate federal, state, and local coastal construction codes, coastal setback requirements, special Coastal Construction Control Line facility siting restrictions, and floodplain management regulations.	1, 5	Protects natural function of floodplains and wetland areas.
CMCE Policy 2.3.3	Special care facilities shall not be located in the Coastal Storm Area, unless adequate provisions for safe and efficient evacuation and shelter are ensured.	3	Restricts group facilities where large concentrations of people would be required to evacuate and would need drastically increase the need for public shelter space.
CMCE Goal 3	The Town shall expedite post-disaster recovery and reduce the future risk to human life and public and private property from natural hazards, through recovery and redevelopment strategies.	1, 3	Provides for efforts to minimize losses and encourages efforts to return to normalcy.
CMCE Objective 3.1	The Town shall designate a Recovery Task Force to hear preliminary damage assessments and direct post-disaster recovery and redevelopment activities.	3	Crucial decisions need to be made in a timely manner to minimize losses. Plan to establish duties of task forces will add in recovery.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE Objective 3.1.1	The Recovery Task Force shall fulfill the following responsibilities, as well as others deemed necessary: <ul style="list-style-type: none"> <li>• Hear preliminary damage reports;</li> <li>• Take necessary steps to seek financial assistance from the appropriate state and federal agencies;</li> <li>• Authorize immediate clean-up and repairs necessary to protect the public health, safety and welfare;</li> <li>• Identify areas within the community where minor, moderate and major damage has occurred;</li> <li>• Recommend to the Town Council temporary building moratoria for building activities not essential to protect health, safety and welfare;</li> <li>• Recommend to the Town Council appropriate hazard mitigation policies which should be implemented in response to the disaster; and</li> <li>• Prepare a report evaluating post-disaster redevelopment response and make recommendations for necessary changes to this comprehensive plan.</li> </ul>	3	Crucial decisions need to be made in a timely manner to minimize losses. Plan to establish duties of task forces will add in recovery.
CMCE Objective 3.2	In order to effectively manage the timing and sequence of reconstruction, the Town will maintain a set of reconstruction permitting procedures.	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts
CMCE Policy 3.2.1	The Town shall maintain a post-disaster procedure, which will expedite permitting for minor repairs. The procedure shall include development plan review, engineering approval and building permitting and shall provide that all permitting is coordinated with the appropriate agencies and consistent with the objectives of this comprehensive plan.	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts
CMCE Objective 3.3	The Town shall implement key reconstruction and redevelopment strategies, which will be used to promote hazard mitigation.	1, 2	Reconstruction to current higher standards will reduce the chances of future repetitive losses
CMCE Policy 3.3.1	Owners of property developed prior to loss or damage shall have the right to restore it to previous intensity and density.	3	Establishes consistent reconstruction strategy while respecting property rights while
CMCE Policy 3.3.2	The Town will require that redevelopment and reconstruction of structures which have incurred damage from a natural disaster event, where damage is greater than 50 percent of their assessed value follow the building and construction standards in the Florida Building Code.	1, 2	Reconstruction to current higher standards will reduce the chances of future repetitive losses

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE Policy 3.3.3	<p>The Town shall interrelate hazard and non-hazard mitigation goals during reconstruction decision-making including the following objectives:</p> <ul style="list-style-type: none"> <li>• Enhancement of local recreational and open space opportunities; enhancement of local public beach access;</li> <li>• Enhancement and restoration of local natural ecosystems;</li> <li>• Reduction of traffic congestion, noise, and other transportation related problems; and</li> <li>• Enhancement of the long-term economic vitality of the local commercial base.</li> </ul>	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts
Intergovernmental Coordination Element (ICE) Policy 2.2.5	<p>The Town will forward notice of proposed Future Land Use Element policies related to hurricane shelters and evacuation routes, as well as Future Land Use Map amendments resulting in an increase in population within Coastal High Hazard Areas and Coastal Storm Area, to the Tampa Bay Regional Planning Council and the Pinellas County Emergency Management Department to determine hurricane shelter space availability and the effect of increased populations on evacuation clearance times and routes.</p>	3	Prevents future casualties and reduces the public shelter deficit.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Capital Improvements Element (CIE) Policy 1.1.4	<p>Proposed capital improvement projects shall be evaluated according to the following criteria:</p> <ul style="list-style-type: none"> <li>• Elimination of a proven or obvious hazard to public health, safety, or welfare;</li> </ul> <p>Fulfillment of a Town legal commitment;</p> <ul style="list-style-type: none"> <li>• Preservation, maintenance, refurbishment, achievement of full use, or replacement of existing facilities;</li> </ul> <p>Enhancement of an existing facility to an adopted level-of-service;</p> <ul style="list-style-type: none"> <li>• Efficiency or use increase of existing facilities; prevention or reduction of future improvement costs; or provision of equitable service;</li> <li>• Facility enhancement to meet the demands of development and redevelopment;</li> </ul> <p>Furtherance of goals, objectives, or policies adopted in the <i>Indian Shores Comprehensive Plan</i> ;</p> <p>Increase of community economic base or quality of life;</p> <p>Budget impact and financial feasibility; and</p> <ul style="list-style-type: none"> <li>• Consistency with plans of other agencies having responsibility for public facilities within the Town.</li> </ul>	1	Restrict public expenditure that may encourage increase future development; minimizes potential losses.
CIE Objective 1.4	Public expenditures that support development in Coastal High Hazard Areas shall be limited to those improvements included in this comprehensive plan or determined by the Town Council to be an overriding public health benefit.	1	Restrict public expenditures that may encourage increase in future development; minimizes potential losses.
CIE Policy 1.4.1	The Town shall expend funds in Coastal High Hazard Areas only for the replacement and renewal of public facilities serving development or planned redevelopment as anticipated in this comprehensive plan.	1	Restrict public expenditure that may encourage increase in future development; minimizes potential losses
<b>Emergency Management</b>			
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	
<b>END OF LIST</b>			

# Pinellas County Local Mitigation Strategy

**Table 5- 11: Indian Rocks Beach Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Coastal Management and Conservation Element: Goal 2	The City shall provide a set of guidelines for development that protects the lives and property of its residents from the effects of natural disasters.	2	Higher standards of construction provide more secure property values and a higher level of safety for residents.
Coastal Management and Conservation Element: Policy 2.1.3	Appropriate recommendations of interagency hazard mitigation reports, such as the Pinellas County Local Mitigation Strategy initiatives, shall be incorporated into this comprehensive plan	1	The County's mitigation efforts set the standard for municipal efforts.
Coastal Management and Conservation Element: Objective 2.4	The City shall reduce the risk of exposure of human life and public and private property to natural disasters through preparedness planning and implementation of hazard mitigation measures, and through annual update of the Indian Rocks Beach Emergency Response Manual.	1	Annual review ensures that standards remain up to date and technological advances are incorporated into the document.
Coastal Management and Conservation Element: Policy 2.4.1.	The City, in coordination with the Pinellas County Department of Emergency Management, shall annually update its <i>Emergency Response Manual</i> to address the four phases of comprehensive emergency management: preparedness, response, recovery, and mitigation.	1	Annual review ensures that standards remain up to date and technological advances are incorporated into the document.
Coastal Management and Conservation Element: Policy 2.4.2	The City shall maintain an Emergency Management Coordinator who shall oversee the update of the <i>Emergency Response Manual</i> ; act as a liaison between state, regional, county, and city emergency response and planning agencies; and ensure coordination between emergency management and development management activities.	3	The Public Services Director serves as the City's Emergency Management Coordinator.
Coastal Management and Conservation Element: Policy 2.4.3	The City shall continue to enforce the existing coastal construction building code and the coastal construction standards embodied in the <i>Coastal Zone Protection Act</i> , and shall strictly enforce their implementation through the building inspection process.	1	The City employs a full-time building inspector to review construction plans and inspect projects during construction.
Coastal Management and Conservation Element: Policy 2.4.4	The City Commission shall review all elements of the <i>Pinellas County Comprehensive Emergency Management Plan</i> to assure that hazard mitigation considerations are effective and implemented within its area of responsibility.	6	The City Commission's awareness of the Emergency Management Plan helps to communicate the information to the public.
Coastal Management and Conservation Element: Objective 3.1	By 2001, the City shall specifically designate a recovery task force to assess damage and direct post-disaster recovery and redevelopment activities.	2	This has been accomplished.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element: Policy 3.1.1	The recovery task force shall consist of the City Emergency Management Coordinator, the Community Development Director, and other members as appointed by the City Commission, or designated by the City Manager.	2	The City maintains this task force.
Coastal Management and Conservation Element: Policy 3.1.2	The Recovery Task Force shall fulfill the following responsibilities, as well as others deemed necessary: Hear preliminary damage reports; Take necessary steps to seek financial assistance from the appropriate state and federal agencies; Authorize immediate clean-up and repairs necessary to protect the public health, safety, and welfare; Identify areas within the community where minor, moderate, and major damage has occurred; Recommend to the City Commission temporary building moratoria for building activities not essential to protect health, safety, and welfare; Recommend to the City Commission appropriate hazard mitigation policies which should be implemented in response to the disaster; and Prepare a report evaluating post-disaster redevelopment response and make	2	The recovery task force continues to fulfil its responsibilities.
Coastal Management and Conservation Element: Objective 3.3	The City shall implement reconstruction and redevelopment strategies which will promote hazard mitigation.	2	Continued implementation of the land development regulations and building codes ensures ongoing hazard mitigation efforts.
Coastal Management and Conservation Element: Policy 3.3.1	Where feasible, property which has received recurring hurricane damage from storm surge may be publicly acquired or designated Preservation on <i>Map LU-4: Future Land Use</i> , to prevent redevelopment of the property to its pre-disaster land use.	2	The City purchased a 9+ acre parcel, now known as the Nature Preserve, to preserve land in the City from development.
Coastal Management and Conservation Element: Policy 3.3.2	The City shall consider one or more of the following strategies in those areas which receive major or moderate damage: Reduction of permissible density or intensity of development; Reconstruction according to more stringent building and construction standards; and Public acquisition of damaged areas.	2	As opportunities arise, the City will implement the applicable strategy.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element: Policy 3.3.3	The City shall interrelate hazard and non-hazard mitigation goals during the reconstruction permitting process, including the following objectives: Enhancement of local recreational and open space opportunities; Enhancement of local public beach access; Enhancement and restoration of local natural ecosystems; Reduction of traffic congestion, noise, and other transportation related problems; and Enhancement of the long-term economic vitality of the local commercial base.	1, 5	The City purchased a 9+ acre parcel, now known as the Nature Preserve, to preserve land in the City from development.
<b>Emergency Management</b>			
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	
<b>Other</b>			
END OF LIST			

## Pinellas County Local Mitigation Strategy

**Table 5- 12: Kenneth City Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element (FLUE), Goal 1	The residential and commercial character of the Town of Kenneth City shall be maintained and protected while: <ul style="list-style-type: none"> <li>• Maximizing the potential for economic benefit resulting from the fact that the town serves the commercial needs of a larger population, including town residents, residents of surrounding communities, and visitors;</li> <li>• Enhancing natural and manmade resources for use by citizens and visitors; and</li> <li>• Minimizing the threat to health, safety, and welfare posed by hazards, nuisances, incompatible land uses, and environmental degradation.</li> </ul>	1	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources.
FLUE Policy 1.2.3	Guidelines for the subdivision and use of land, the protection of environmentally sensitive resources, landscaping, and flood hazard safety shall continue to be implemented.	1, 5	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources.
FLUE Policy 1.3.2	Ensure that future residential areas are located and designed to protect life and property from natural and manmade hazards such as flooding, excessive traffic, subsidence, noxious odors, and noise.	1, 5	Protects natural function of floodplains and wetland areas.
FLUE Policy 1.3.4	The Town will use the Tampa Bay Regional Planning Council <i>Hurricane Evacuation Study</i> for guidance pertaining to residential future land use densities in hurricane evacuation areas.	1, 3	Provides for flood mitigation to minimize flood losses and repetitive losses, protects the natural function of floodplains, and lessens the concentration of the population in times of evacuation.
Infrastructure Element (IE), Goal 2:	The Town shall provide an efficient stormwater drainage system which protects human life, minimizes property damage, and improves stormwater quality and on-site retention.	1, 4, 5	Improves stormwater management and drainage facilities; reduces potential loss from flooding.
IE Policy 2.1.1	The drainage level-of-service standard shall be the design requirements of the 25-year frequency, 24-hour storm event or the highest feasible design requirements.	1	Maintains that the demand on public facilities and services are within an acceptable level relative to the capacities of the facilities and services; reduces drainage problems among properties.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
IE Policy 2.1.2	<p>The <i>master drainage plan</i> shall continue to address the following:</p> <ul style="list-style-type: none"> <li>• An inventory and evaluation of those areas which currently have flooding problems;</li> <li>• A hydrological map of Kenneth City showing natural and artificial drainage features;</li> <li>• A map of stormwater outfalls into lakes and retention ponds; and</li> <li>• A plan for correcting drainage deficiencies, including a prioritized list of corrective measures, and their projected implementation costs.</li> </ul>	1	Reduces drainage problems among properties.
IE Policy 2.1.4	The Town shall maintain drainage facilities adjacent to roadways in its jurisdiction, and where necessary, shall consider the use of eminent domain condemnation to acquire property for drainage retention purposes.	1, 4	Assures the availability of right-of-way where needed to protect properties from flooding.
IE Policy 2.1.5	The Town shall prevent erosion and excessive runoff, and protect natural drainage features through the site plan review and development process.	5	Minimize siltation that may impede upon the natural function of floodplains and wetlands.
IE, Policy 2.1.6	The Town shall support the efforts of Pinellas County to improve the portions of the Joe’s Creek drainage basin that fall within county jurisdiction.	4	Reduces drainage problems among properties.
Conservation Element (CE), Goal 1	To ensure the highest environmental quality possible, the Town of Kenneth City shall conserve, protect, and appropriately manage its aquatic, wetland, and terrestrial resources.	5	Protects natural function of wetland areas.
CE Policy 1.1.3	The Town shall protect the water storage and water quality enhancement functions of floodplain areas and the application of land and water management practices which provide for compatible uses.	5	Protects natural function of floodplains and wetland areas.
CE Objective 1.2	To maintain surface water quality and reduce flood damage, the Town shall protect the natural functions of floodplains, lakes, and the creek.	5	Protects natural function of floodplains and wetland areas.
CE Policy 1.2.1	Recognizing that parts of the community are located within the 100-year floodplain, the Town shall strictly enforce all appropriate federal, state, and regional construction codes.	1, 5	Protects natural function of floodplains and wetland areas.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CE Policy 1.2.2	The Town shall review and amend as necessary the current floodplain ordinance to ensure that hydrologically significant wetlands and other natural floodplain features are adequately protected.	1, 5	Provides for periodic review to ensure protection of floodplains and wetland areas.
CE Objective 1.3	The Town shall conserve or improve any identified wetlands or wildlife habitat.	1, 5	Protects the natural function of wetland areas.
CE Policy 1.3.1	Upon identification in the town, areas such as marshes, swamps, or other wetlands shall be designated Preservation land on <i>Map LU-24: Future Land Use and Transportation</i> .	1, 5	Restricts development in wetland areas and protects the natural function of such areas.
CE Policy 1.5.1	Unique and irreplaceable natural resources are protected from the adverse effects of development, except in cases of overriding public benefit.	1, 5	Protects the natural function of floodplain and wetland areas.
CE Objective 1.9	Land use planning shall be coordinated with hazard mitigation efforts, consistent with recommendations of the <i>Pinellas County Local Mitigation Strategy</i> .	1, 3	Provides coordination and consistent application with other local governments in Pinellas County; minimizes property damage and loss due to natural disasters.
CE Policy 1.9.1	Land development regulations governing development or redevelopment in flood prone areas shall be implemented based on the criteria of the National Flood Insurance Program.	1, 2, 5	Restricts development to prevent property loss and repetitive losses.
CE Policy 1.9.2	Appropriate recommendations of interagency hazard mitigation reports, such as the <i>Pinellas County Local Mitigation Strategy</i> , shall be incorporated into this comprehensive plan.	1, 3	Provides coordination and consistent application with other local governments in Pinellas County minimizing losses and responding to natural disasters.
CE Policy 1.9.3	The Town will forward notice of proposed future land use plan amendments with potential hurricane shelter and evacuation route impacts to the Tampa Bay Regional Planning Council and the Pinellas County Emergency Management Department which will be consulted, if necessary and appropriate, to ascertain the amount of currently available shelter space.	1, 3	Coordinates proposed land use decisions with the availability of shelter space and may reduce the demand on shelter and evacuation routes.
Intergovernmental Coordination Element (ICE), Policy 2.2.2:	The Town will continue to coordinate with Pinellas County for the provision of countywide facilities, including but not limited to, solid waste disposal, wastewater treatment, and the Pinellas County Emergency Operations Center.	3	Coordination will assist in consistent and effective response during emergency situations.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
ICE Policy 2.3.10	The Town will notify adjacent jurisdictions that share wetlands of its protection plans and solicit comments pertaining to any proposed action.	1	Coordinate with adjacent jurisdictions to mitigate potential flood losses by maintain natural system functions of floodplains and wetlands.
ICE Policy 2.3.12	The Town will participate in the Local Mitigation Committee to ensure that the strategies are implemented and updated.	3	Provides consistent and coordinated response; prevents future casualties; reduces the public shelter deficit; improves upon evacuation times.
Capital Improvements Element (CIE) Policy 1.1.3	<p>Proposed capital improvement projects shall be evaluated according to the following guidelines:</p> <ul style="list-style-type: none"> <li>• Project is needed to eliminate a proven or obvious hazard to public health and safety;</li> <li>• Project is needed to fulfill a legal commitment;</li> <li>• Project is needed to preserve, maintain, refurbish, achieve full use of, or replace existing facilities;</li> <li>• Project will provide a new facility or bring an existing one up to an adopted level of service;</li> <li>• Project will increase efficiency or use of existing facilities, prevent or reduce future improvement cost, or provide service to all residents equitably;</li> <li>• Project furthers policies adopted in other elements of this plan;</li> <li>• Project needed to serve development for which a development order was issued prior to adoption of this comprehensive plan;</li> <li>• Project will increase the economic base or quality of life of the residents;</li> <li>• Budget impact of project, both capital and operating, will be considered and the Town Council will consider financial feasibility of project; and</li> <li>• Project will be reviewed for consistency with plans of other agencies having responsibility for public facilities within the jurisdiction.</li> </ul>	1	Restricts public expenditure of funds that may encourage future development; minimize potential losses.
CIE Policy 1.4.2	Public facilities and services shall be located so as to maximize efficiency, minimize cost, and minimize impacts on the natural environment.	1	Protects natural functions of floodplains and wetland areas to minimize potential losses.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	
<b>Other</b>			
END OF LIST			

## Pinellas County Local Mitigation Strategy

**Table 5- 13: Largo Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element, Objective 2.6	The City shall prohibit high density and intensity development, and limit population densities, in Special Flood Hazard Areas (SFHAs), in accordance with the hurricane evacuation plan in the Tampa Bay Region Hurricane Evacuation Study (Tampa Bay Regional Planning Council (TBRPC), 2006) and all applicable state and federal regulations.	1	Limiting number of residents residing in Special Flood Hazard Areas
Future Land Use Element, Objective 2.6, Policy 2.6.1	The Future Land Use Map shall not be amended to designate parcels of land within the CHHA to a Future Land Use Map designation that permits more than 5.0 dwelling units per acre.	1	Limiting number of residents residing in Special Flood Hazard Areas
Future Land Use Element, Objective 2.6, Policy 2.6.2	Care and rehabilitative uses shall not be permitted in CHHAs.	1	Limiting number of residents residing in Special Flood Hazard Areas
Future Land Use Element, Objective 2.6, Policy 2.6.3	Critical facilities (hospitals, nursing homes, police and fire stations, vital public utilities, etc.) shall be prohibited from locating or expanding within CHHAs, 100-year floodplains or other SFHAs, as designated by the Federal Emergency Management Agency (FEMA).	1	Limiting expansion or intrusion into areas prone to flooding
Future Land Use Element, Objective 2.6, Policy 2.6.4	The siting of new or the expansion of existing mobile home or manufactured home communities within the CHHA shall be prohibited. This policy does not apply to the replacement or installation of individual homes with Manufactured Homes up to the maximum density allowed by the Future Land Use designation within the mobile home or manufactured home community, as long as the manufactured homes installed are properly anchored and elevated to the base flood elevation.	1	Limiting number of residents residing in Special Flood Hazard Areas
Future Land Use Element, Objective 2.6, Policy 2.6.5	Coordinate Future Land Use Map amendments with the Tampa Bay Region Hurricane Evacuation Study.	1	Limiting number of residents residing in Special Flood Hazard Areas

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Future Land Use Element, Objective 2.6, Policy 2.6.6	Encourage the use of the Transfer of Development Rights process to transfer development rights out of CHHAs and 100-year floodplains, and other areas determined to be environmentally sensitive, and prohibit these areas from receiving transfers of additional development rights or housing density bonuses.	1	Limiting number of residents residing in Special Flood Hazard Areas
Future Land Use Element, Objective 2.6, Policy 2.6.7	Continue to meet or exceed the flood damage prevention standards set forth by FEMA.	1	Limiting Damage or Property Loss
Future Land Use Element, Objective 2.6, Policy 2.6.8	Coordinate with Pinellas County on implementation of the Pinellas County Local Mitigation Strategy (part of the Pinellas County Emergency Management Plan, Pinellas County, and Resolution No. 06-136, as amended from time to time).	1	Limiting Damage or Property Loss
Natural Resources Element, Objective 1.4, Policy 1.4.4 (a-f)	Maintain performance standards for shoreline development that ensure environmental protection through the evaluation of: a. land use compatibility; b. availability of upland support services; c. existing protective status or ownership; d. hurricane contingency planning; e. protection of water quality and depth; and f. environmental disruptions and mitigation actions.	5	Protecting and Preserving Open Space and Sensitive Habitat
Natural Resources Element, Objective 2.1	Limit the development of non-water dependent uses in the Coastal High Hazard Area (CHHA).	1	Limiting Damage or Property Loss
Natural Resources Element, Objective 2.1, Policy 2.1.1	The CHHA shall be defined as the area below the elevation of the Category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model.	1	Limiting Damage or Property Loss
Natural Resources Element, Objective 2.1, Policy 2.1.2	Avoid the siting of non-water dependent public structures in CHHA.	3	Limiting Damage or Property Loss
Natural Resources Element, Objective 2.1, Policy 2.1.3	Minimize damage through the design and retrofit of public facilities located in the CHHA.	2	Limiting Damage or Property Loss
Natural Resources Element, Objective 2.1, Policy 2.1.4	Design capital improvement projects in the CHHA to assist in restoring or enhancing natural resources.	5	Protecting and Preserving Open Space and Sensitive Habitat

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Natural Resources Element, Objective 2.1, Policy 2.1.5	Maintain or improve the City's Class 6 rating of the CRS.	1	Limiting Damage or Property Loss
Natural Resources Element, Objective 2.1, Policy 2.1.6	Ensure consistency between the standards of the Comprehensive Development Code (CDC) and the NFIP.	1	Limiting Damage or Property Loss
Natural Resources Element, Objective 2.1, Policy 2.1.7	Limit residential development, including mobile home/manufactured home development, and siting of new/expansion of critical care facilities in the CHHA in accordance with Policies 2.6.1 – 2.6.4 of the Future Land Use Element.	1	Limiting number of residents residing in Special Flood Hazard Areas
Natural Resources Element, Objective 2.1, Policy 2.1.8	Coordinate with the Pinellas Planning Council and the Pinellas County Department of Emergency Management regarding implementation of any changes to the definition of the CHHA.	1	Limiting Damage or Property Loss
Natural Resources Element, Objective 2.1, Policy 2.1.9	Promote the retrofitting of mobile home park assembly facilities to meet Red Cross Standards for shelter locations.	3	Providing Emergency Shelter Locations for the safety of residents
Natural Resources Element, Objective 2.1, Policy 2.1.10	Protect and preserve historic resources through the measures identified in Future Land Use Element Objective 2.5, Housing Element Objective 1.5, and associated Policies.	2	Limiting Damage or Property Loss
Natural Resources Element, Objective 2.2	Protect public health, safety, and welfare through hazard mitigation.	1	Limiting expansion or intrusion into areas prone to flooding
Natural Resources Element, Objective 2.2, Policy 2.2.1	Jointly adopt and implement a countywide Local Mitigation Strategy (LMS) (part of the Pinellas County Emergency Management Plan, Pinellas County, and Resolution No. 06-136, as may be amended from time to time).	3	Limiting Damage or Property Loss
Natural Resources Element, Objective 2.2, Policy 2.2.2	Ensure consistency among citywide regulations, the City's Comprehensive Emergency Management Plan (2000), the Pinellas County Emergency Management Plan, and the LMS contained within the Pinellas County Emergency Management Plan, as may be amended from time to time.	1	Providing efficient emergency evacuation/mitigation procedures
Natural Resources Element, Objective 2.2, Policy 2.2.3	Annually assess the City's Comprehensive Emergency Management Plan to ensure proper response to natural disasters.	1	Providing efficient emergency evacuation/mitigation procedures

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Natural Resources Element, Objective 2.2, Policy 2.2.4	Actively participate in hurricane evacuation planning with Pinellas County and other local, regional, and state organizations in order to improve existing evacuation routes and shelter spaces as depicted on map T-10 of the Future Map Series for the Transportation Element.	1	Providing efficient emergency evacuation procedures
Natural Resources Element, Objective 2.2, Policy 2.2.5	Direct public investment away from the CHHA.	3	Limiting Damage or Property Loss
Natural Resources Element, Objective 2.2, Policy 2.2.6	Distinguish, in the LMS, between the immediate emergency period actions needed to protect the public health, safety, and welfare and those associated with long-range recovery activities.	1	Implementing local policy for the protection of residents now and in the future
Natural Resources Element, Objective 2.2, Policy 2.2.7	Establish temporary restrictions in the LMS for the issuance of building permits for reconstruction and repair work that is not immediately necessary for the protection of the public health, safety and welfare during periods following a disaster.	3	Rebuild, replace or maintain essential infrastructure in a timely manner after a storm event
Natural Resources Element, Objective 2.2, Policy 2.2.8	Establish criteria in the LMS for the evaluation of alternatives for the repair, replacement, modification, or relocation of public and private facilities and infrastructure within the CHHA which are consistent with the Pinellas County Post-Disaster Redevelopment Plan contained within the Pinellas County Emergency Management Plan and federal funding provisions.	2	Rebuild, replace or maintain essential infrastructure in a timely manner after a storm event
Natural Resources Element, Objective 2.2, Policy 2.2.9	Utilize the City's Comprehensive Plan, CDC, and other appropriate techniques to reduce unsafe conditions and inappropriate uses and limit redevelopment in areas of repeated damage caused by natural events.	2	Limiting Damage or Property Loss
Natural Resources Element, Objective 2.2, Policy 2.2.10	Evaluate the costs and benefits to City property owners and the community as a whole for expansion of development restrictions applied to structures within the CHHA to properties located within the Coastal Storm Area, as defined by Pinellas County. If deemed beneficial to expand the CHHA restrictions to include the properties in the Coastal Storm Area, amend the Comprehensive Plan to replace language regarding the CHHA restrictions with similar restrictions for the Coastal Storm Area.	2	Limiting Damage or Property Loss

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Natural Resources Element, Objective 2.2, Policy 2.2.11	Upon completion of the Watershed Management Plans for the drainage basins, in accordance with the Stormwater Element Objective 1.1., establish stormwater mitigation programs and projects to prevent flood damage to at-risk structures identified in the Watershed Management Plans.	4	Limiting Damage or Property Loss
Natural Resources Element, Objective 2.2, Policy 2.2.12	Coordinate with Pinellas County Department of Emergency Management to promote the Host Homes Program as an alternative to public shelters.	3	Providing Emergency Shelter Locations for the safety of residents
Transportation Element, Objective 1.1, Policy 1.1.17	Ensure the availability of adequate transportation facilities for the safe and timely evacuation of high risk areas, consistent with the Tampa Bay Region Hurricane Evacuation Study (Tampa Bay Regional Planning Council, 2006). The City will continue to work with Pinellas County to utilize the study information to assess the adequacy of its transportation system to provide for the evacuation of the public, and make appropriate amendments to the Comprehensive Plan, including existing and future hurricane evacuation routes and shelters as depicted in Figure, to ensure consistency and adequate protection of the public.	3	Providing efficient emergency evacuation procedures
Public Facilities Element, Stormwater Sub element, Objective 1.3	Maintain public stormwater infrastructure at adopted LOS Standards for flood control and water quality.	4	Limiting Damage or Property Loss
Public Facilities Element, Stormwater Sub element, Objective 1.3, Policy 1.3.2	Identify Repetitive Loss Properties within the City and plan and budget for the purchase of such properties as necessary to maintain the City's Community Rating System Rating of 6.	2	Limiting Damage or Property Loss
Public Facilities Element, Stormwater Sub element, Objective 1.3, Policy 1.3.6	Protect the natural environment by designing stormwater systems that are compatible with the natural topography of existing drainage basins.	4	Protecting and Preserving Open Space and Sensitive Habitat
Public Facilities Element, Stormwater Sub element, Objective 1.3, Policy 1.3.8	Heighten public awareness through education programs for stormwater pollution control in order to reduce the amount of sediment, debris, and pollutants that reach the MS4.	6	Citizen participation / education to promote awareness

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Public Facilities Element, Stormwater Sub element, Objective 1.4, Policy 1.4.4	Conduct and share methods of data collection, analysis, and modeling of Stormwater Management Systems to prevent flooding, monitor stormwater quality, and maintain stormwater facilities.	3	Provide for consistency between local agencies
Intergovernmental Element, Objective 3.1	The City's Comprehensive Plan shall be consistent with County-wide plans for land use, transportation, natural resources, housing, emergency management, and public schools.	1	Provide for consistency between local agencies
Intergovernmental Element, Objective 3.1, Policy 3.1.10	Participate with the Pinellas County Department of Emergency Management on the LMS Working Group.	1	Provide for consistency between local agencies
Intergovernmental Element, Objective 3.2, Policy 3.2.1	Continue to address regional issues such as Affordable Housing, Economic Development, Emergency Management, Public School Facilities and Natural Resource Protection, in addition to local planning issues identified in the City's Comprehensive Plan.	1	Implementing local policy for the protection of residents now and in the future
Public School Facilities Element, Objective 2.1, Policy 2.1.5 (8)	In addition to consistency with the City of Largo Comprehensive Plan, the proposed location of a new or expanded public educational facility of the School Board within one of the land use categories listed in Policy 2.1.3 shall be reviewed and considered with the following general criteria: The proposed location is not in a velocity flood zone or floodway.	2	Limiting expansion or intrusion into areas prone to flooding
Economic Development Element, Objective 1.1, Policy 1.1.7	Ensure rapid replacement of the infrastructure necessary to support the redevelopment and economic recovery of local businesses following a natural disaster event.	3	Rebuild, replace or maintain essential infrastructure in a timely manner after a storm event
Capital Improvement Element, Objective 1.2	Pursue retrofits and development of new Public Facilities to improve storm resistance and limit public investment that subsidizes or promotes development in Coastal High Hazard Areas (CHHAs) and other Special Flood Hazard Areas (SFHAs).	3	Limiting Damage or Property Loss
Capital Improvement Element, Objective 1.2, Policy 1.2.1	Maintain, but limit the expansion of, existing public infrastructure and facilities located in CHHAs except those services necessary to protect the health, safety, or welfare of the community.	2	Limiting expansion or intrusion into areas prone to flooding

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Capital Improvement Element, Objective 1.2, Policy 1.2.2	Design and retrofit public facilities, to the extent financially and structurally feasible, to minimize potential damage from natural events.	2	Limiting Damage or Property Loss
Capital Improvement Element, Objective 1.2, Policy 1.2.3	Maintain an adequate budgetary fund balance as a reserve emergency fund earmarked for expenditures to repair public facilities damaged during natural events.	3	Rebuild, replace or maintain essential infrastructure in a timely manner after a storm event
Capital Improvement Element, Objective 1.2, Policy 1.2.4	Design drainage projects in CHHAs and SFHAs to lessen the potential for flood damage.	3	Limiting Damage or Property Loss
Capital Improvement Element, Objective 1.2, Policy 1.2.5	Cooperate with Southwest Florida Water Management District (SWFWMD) and other agencies in the study and mitigation of drainage problems in CHHAs and SFHAs.	1	Limiting Damage or Property Loss
Capital Improvement Element, Objective 2.2, Policy 2.2.4 (d)(1)	As identified in the Stormwater Element, the City will pursue the development of a Watershed Management Plan, part of which will analyze and identify the existing LOS for flood control and water quality for each watershed. Capital improvements will be scheduled to, at a minimum, resolve any deficiencies in existing LOS to achieve minimum LOS Standards required by the State of Florida based on findings from the Watershed Management Plan.	4	Implementing local policy for the protection of residents now and in the future
Capital Improvement Element, Objective 2.2, Policy 2.2.4 (d)(2)	Until the Watershed Management Plan is completed, existing conditions shall be the adopted LOS Standard. Development shall not adversely impact existing flood control and water quality conditions.	1	Implementing local policy for the protection of residents now and in the future
Implementation, Monitoring and Evaluation Requirements, (A) Future Land Use Element, Goal 2 (4)	Perform periodic reviews of the Tampa Bay Region Hurricane Evacuation Study (Tampa Bay Regional Planning Council, 2006)	1	Providing efficient emergency evacuation/mitigation procedures
Implementation, Monitoring and Evaluation Requirements, (E) Natural Resources Element, Goal 2, (2)	Participate in the National Flood Insurance Program (NFIP)	1	Implementing local policy for the protection of residents now and in the future

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Implementation, Monitoring and Evaluation Requirements, (E) Natural Resources Element, Goal 2, (3)	Adopt and implement a Local Mitigation Strategy (LMS) (part of the Pinellas County Emergency Management Plan, Pinellas County, Resolution No. 06-136, as may be amended from time to time)	1	Implementing local policy for the protection of residents now and in the future
Implementation, Monitoring and Evaluation Requirements, (E) Natural Resources Element, Goal 2, (4)	Coordinate with Pinellas County on implementation of the Host Homes Program	3	Providing Emergency Shelter Locations for the safety of residents
Implementation, Monitoring and Evaluation Requirements, (E) Natural Resources Element, Goal 2, (5)	Annually assess the City's Comprehensive Emergency Management Plan (2000, as may be amended from time to time)	1	Implementing local policy for the protection of residents now and in the future
Implementation, Monitoring and Evaluation Requirements, (H) Public School Facilities Element, Goal 4	Opportunities are maximized for public schools to be designed such that they can serve a vital emergency management purpose in times of disaster.	3	Providing Emergency Shelter Locations for the safety of residents
Implementation, Monitoring and Evaluation Requirements, (H) Public School Facilities Element, Goal 4, (1)	Coordinate with the School District to provide emergency shelter spaces in accordance with the Tampa Bay Region Hurricane Evacuation Study	3	Providing Emergency Shelter Locations for the safety of residents
<b>Land Development Regulations</b>			
Comprehensive Development Code, Chapter 5, Development Review, Section 5300(f)	Stormwater Management Plan: A master drainage plan in compliance with all of the requirements of Section 6200 of this Code and showing the complete drainage system.	1	Implementing local policy for the protection of residents now and in the future

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Comprehensive Development Code, Chapter 5, Development Review, Section 5300(f)(1)	Closed drainage areas, land cover acreages, impacts on the quality of on-site and surrounding ground water and surface waters, stormwater runoff to adjacent lands and existing outfall systems, and the complete calculations used to design the system. Rights-of-way and easements for all drainage improvements including, but not limited to, retention/detention ponds, ditches, culverts, channels, water control structures and the like, required for the drainage of the site for both on-site and off-site improvements shall be provided, as well as existing and proposed major drainage patterns, drainage courses, and easements as shown and adopted on the Pinellas County Master Drainage Plan and City of Largo's Master Stormwater Management Plan, or as deemed appropriate by the City Engineer.	1	Implementing local policy for the protection of residents now and in the future
Comprehensive Development Code, Chapter 5, Development Review, Section 5300(f)(2)	Typical and special roadway and drainage sections, summary of cut and fill quantities, and cross-sections and specifications for all proposed pavement.	4	Implementing local policy for the protection of residents now and in the future
Comprehensive Development Code, Chapter 5, Development Review, Section 5300(f)(3)	For land in flood-prone areas: Plan of the channel showing the location of existing structures therein, obstructions, and other typical areas, along with representative cross-sections of these areas, typical cross-section of the existing and proposed channel, one hundred (100) year storm (twenty-four (24) hour duration) hydro-graphs and/or flood routing calculations and backwater curve profiles of the proposed waterway, unless the City Engineer approves the use of a lesser recurrence interval. Engineering shall evaluate all potential increases in flood hazards to lands upstream or downstream and facilities thereon, and shall make pro-visions for eliminating, at no public cost, the adverse effects due to the increase on said lands and facilities. Minimum finished floor elevation shall be set at least one foot above the maximum water surface elevation determined from a map of flood-prone areas prepared by the Federal Emergency Management Agency (FEMA) or Pinellas County Master Drainage Plan and City of Largo's Master Stormwater Management Plan.	4	Implementing local policy for the protection of residents now and in the future

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Comprehensive Development Code, Chapter 5, Development Review, Section 5300(f)(4)	Existing and proposed improvements to waterways, lakes, streams, channels or ditches, bridges, culverts, seawalls, bulkheads, docks, retaining walls, and any other proposed structure as required by the City Engineer	4	Implementing local policy for the protection of residents now and in the future
Comprehensive Development Code, Chapter 5, Development Review, Section 5300(k)(11)	All plats and re-plats within and flood hazard area shall carry the following flood hazard warning prominently displayed on the document: FLOOD HAZARD WARNING This property is located within a recognized flood hazard area, and may be subject to flooding. Local building and development control officials may be contacted to obtain the latest information regarding flood elevations and restrictions on development which may limit use of this property.	4	Implementing local policy for the protection of residents now and in the future
Comprehensive Development Code, Chapter 5, Development Review, Section 5400, Subsection 5402(A)(5)(a)	Site specific facilities with no positive outfall shall require retention for a one hundred (100) year, one hour storm event.	4	Implementing local policy for the protection of residents now and in the future
Comprehensive Development Code, Chapter 5, Development Review, Section 5400, Subsection 5402(A)(5)(b)	Site specific facilities with positive outfall, shall require retention for a twenty-five (25) year, one hour storm event.	4	Implementing local policy for the protection of residents now and in the future
Comprehensive Development Code, Chapter 6, Performance Standards, Section 6000, Subsection 6001(C)(1-5)	At the discretion of the Development Controls Officer, developments may not be allowed to develop to the maximum ISR and/or FAR depending on the following factors: (1) Intensity of the proposed use; Underlying site conditions such as: (a) Ground water quality and recharge capabilities; ( b) <Stormwater percolation capacity across the site; and (c) <Quality of stormwater discharge to adjacent wetlands or estuarine environments. (3) Relationship of the proposed use to surrounding existing uses; (4) <Availability of public facilities and services to accommodate the project; and (5) <Level of Service (LOS) on the transportation network serving the project.	1	Limiting expansion or intrusion into areas prone to flooding

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Comprehensive Development Code, Chapter 6, Performance Standards, Section 6000, Subsection 6001(D)	Gross density shall be calculated based on the total area of the parcel or the total area of contiguous parcels under common ownership. Land needed for drainage improvements, including retention/detention areas, existing ponds, lakes and streams, wetlands, future public rights-of-way, parkland dedication, circulation, recreation facilities, etc., shall be included in the calculation. However, land in existing public rights-of-way and any parcels with no allowable density shall not be included in density calculations.	1	Implementing local policy for the protection of residents now and in the future
Comprehensive Development Code, Chapter 6, Performance Standards, Section 6000, Subsection 6001(F)	Impervious surface is a measure of use intensity. The control of impervious surfaces ensures continued absorption of rainwater, aids in the control of stormwater runoff, and implements the policies of the Natural Resources Element of the adopted Comprehensive Plan.	5	Protecting and Preserving Open Space and Sensitive Habitat
Comprehensive Development Code, Chapter 6, Performance Standards, Section 6000, Subsection 6001(F)(2)	The impervious square footage of areas covered by semipermeable materials, such as turf block or porous concrete, shall be calculated by multiplying the total square footage of these areas by the percentage of perviousness of the covering material. The use of semipermeable materials may be used, for purposes of ISR calculation only, to a maximum of fifty (50) percent of the required standard. These areas shall be considered pervious for purposes of drainage calculations.	1	Implementing local policy for the protection of residents now and in the future
Comprehensive Development Code, Chapter 6, Performance Standards, Section 6000, Subsection 6001(F)(3)(a-c)	Residential properties: (a) Maximum allowable ISRs for residential developments shall be determined for the entire project during site plan review. (b)Swimming pools shall be considered impervious surfaces. (c)The placement, installation, or construction of sealed material (which includes, but is not limited to, asphalt, concrete, bricks, pavers, etc.) within front, side, or rear yards (including landscaped areas) of residential properties shall not result in an Impervious Surface Ratio (ISR) of sixty five (65) percent or more of the entire parcel. A Development Permit shall be required for the placement, installation, or construction of sealed materials (which includes, but is not limited to asphalt, concrete, bricks, pavers, etc.) in residential yards. (Ord. No. 2009-15, § 2, 05/05/09)	1	Implementing local policy for the protection of residents now and in the future

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
See Comprehensive Plan & Land Development Regulations Sheet	Lines 8, 11, 20 & 41		
City of Largo Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the city-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	
<b>END OF LIST</b>			

# Pinellas County Local Mitigation Strategy

**Table 5- 14: Madeira Beach Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element (FLUE) Goal 1	Ensure that the residential/family character of the City of Madeira Beach is maintained and protected. Maximize the potential for economic benefit resulting from the fact that the city serves the commercial needs of a larger population. Ensure the enjoyment of the limited amount of natural and man-made resources by citizens and visitors alike. Minimize the threat to health, safety, and welfare pose by hazards, nuisances, incompatible land uses, and environmental degradation.	1 thru 7	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources.
FLUE Objective 1.2	Future growth and development shall be managed through the implementation and enforcement of the land development regulations as codified in the City of Madeira Beach consistent with the comprehensive plan.	1	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources.
FLUE Objective 1.3	Because Madeira Beach lies within the Coastal Storm Area, the City shall limit public expenditures that support development, except for restoration and enhancement of natural resources, the maintenance or repair of existing infrastructure, or facilities determined to be an overriding benefit.	1-7	Restricts public expenditure that may encourage increase future development; minimizes potential losses.
FLUE Policy 1.3.6	Recognizing that the community is located primarily within the Coastal Storm Area and the 110-year floodplain, the City shall adopt and strictly enforce all appropriate federal, state, and local coastal construction codes, coastal setback requirements, the Coastal Construction Control Line, facility siting restrictions, and floodplain management regulations.	1-7	Assures compliance with applicable regulations, plans, programs, and initiatives and reduces drainage problems in the community.
FLUE Policy 1.3.7	Special care facilities, such as hospitals and nursing homes, shall not be located in the Coastal Storm Area. Assisted living facilities are discouraged unless adequate provisions for safe and efficient evacuation and shelter are ensured.	1, 3	Restricts group facilities where large concentration of people needing assistance would be required to evacuate and who would also increase the need for specialized public shelter space.
FLUE Objective 1.4	Due to its location in the Coastal Storm Area, the City shall not increase permanent densities above those established in this comprehensive plan as delineated by <i>Map LU-4, Future Land Use and Transportation</i> .	1,2,3	Reduces potential casualties and prevents increasing of evacuation times and of shelter needs.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
FLUE Policy 1.4.1	The City shall maintain or reduce allowable permanent density in the Coastal Storm Area, consistent with <i>Map LU-4, Future Land Use and Transportation</i> .	1,2,3	Reduces potential casualties and prevents increasing of evacuation times and of shelter needs.
FLUE Policy 1.4.2	The City of Madeira Beach shall continue to implement growth management standards limiting development to currently planned densities and intensities within the Coastal Storm area, consistent with <i>Map LU-4, Future Land Use and Transportation</i> .	1,2,3	Provides consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources. Reduces potential casualties and prevents increasing evacuation times and of shelter needs.
FLUE Policy 1.4.3	The City shall continue to seek opportunities for public land acquisition and management for recreation, conservation and preservation areas within the Coastal Storm Area.	1,2,5	Acquisition of properties that are left as open space may help reduce potential losses on adjoining properties as well as reduce the number of repetitive loss properties/areas.
Infrastructure Element (IE) Goal 4	Stormwater shall be managed to provide flood protection for residents and businesses and to preserve, protect and enhance the water quality of receiving water bodies.	1,2,3	Reduce drainage problems within the community and minimize adverse impacts on the quality of stormwater runoff.
IE Objective 4.1	All applicable federal state and local regulations relating to flood control and water quality shall continue to be met in public, and private design construction.	1,5	Assure compliance with federal, state and local regulations to reduce the potential for losses from natural disasters.
IE Policy 4.3.3	The City shall enforce provisions to ensure that construction and maintenance methods do not adversely affect water quality or water flow.	1,2,5	Protects natural function of floodplains and wetland areas.
IE Objective 4.4	The City shall continue to implement the storm water management plan to address drainage and existing flooding conditions.	1,4	Reduces drainage problems within the City, and minimizes the potential for losses..
Conservation and Coastal Management Element (CCME) Goal1	To ensure the highest environmental quality possible, the City of Madeira Beach shall conserve, protect and appropriately manage its air, aquatic, wetland and terrestrial resources.	1,2,3,5	Protects natural function of floodplains and wetland areas
CCME Policy 1.2	The City shall strictly enforce regulations for development within the 100-year floodplain, as established by the federal government.	1,2,3	Assures compliance with applicable regulations, provides for flood mitigation to minimize flood losses and repetitive losses and protects the natural function of floodplains.
CCME Policy 1.2.2	Recognizing that the community is within the 110-year floodplain, the City shall continue to enforce all appropriate federal, state and regional coastal construction codes and coastal setback regulations.	1,2,3	Assures compliance with applicable regulations, plans, programs
CCME Policy 1.2.3	The City shall protect the natural functions of the 100-year floodplain so that flood-carrying and flood-storage capacities are maintained.	1,2,3,	Provides for flood mitigation to minimize flood losses and repetitive losses and protects the natural function of floodplains.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 1.2.4	The City shall strictly enforce the floodplain management provisions contained in the land development regulations, in order to preserve hydrological significant wetlands and other natural floodplain features.	1,5	Protects natural function of floodplains and wetland areas.
CCME Policy 1.2.5	The land development regulations shall contain provisions which, at a minimum, protect natural drainage features found within the City as follows; <ul style="list-style-type: none"> <li>• The flood carrying and flood storage capacity of the 100-year floodplain shall be maintained;</li> <li>• Development along Boca Ciega Bay and the Gulf of Mexico shall maintain adequate setbacks to protect any existing areas of natural coastal/marine habitat;</li> <li>• The prevention of erosion, retardation of runoff and protection of natural functions and values of the floodplain shall be considered while promoting public usage; and</li> <li>• Development or redevelopment proposals shall be consistent with the performance standards regulating development within designated floodplains.</li> </ul>	1,2,3	Limits development potential with in coastal high hazard areas; minimizes the effect of development on floodplains and reduces the potential for damages and loss of life and property, and minimizes the effect of siltation on wetlands and floodplains.
CCME Objective 1.4	The City shall conserve, appropriately use and protect native vegetation.	5	Mitigates potential property losses by maintaining natural system functions.
CCME Policy 1.4.1	The City shall require that all new development and redevelopment include landscaping in accordance with standards contained in the land development regulations.	1	Assures compliance with the regulations and reduces potential property losses.
CCME Policy 1.4.2	Native vegetation shall continue to receive priority in landscaping requirements.	5	Mitigates potential property losses by maintaining natural system functions.
CCME Policy 1.4.3	The City shall encourage shorelines lacking wetland vegetation to be planted with native vegetation in order to minimize flood damage, stabilize the shoreline, trap sediments and other non-point source pollutants and provide additional habitat for fish and wildlife.	1,2	Protects natural function of shoreline and reduces potential property losses.
CCME Policy 1.4.6	The City shall recognize the limitation of development on a barrier island from the effect of the Coastal High Hazard Area, 100-year floodplain, vulnerability to tropical storms, topography and soil conditions.	1	Prevents development in the most vulnerable area along the coast

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 1.4.7	Development review criteria, contained in the land development regulations, shall include soil stability.	1,5	Minimizes the effect of development; assures compliance with federal, state and local regulations to reduce potential for losses from natural disasters.
CCME Policy 1.4.8	Pilings, not fill, shall be used to elevate structures in flood prone areas.	1	Assure compliance with local, federal and state regulations; reduces potential property loss claims.
CCME Goal 3	The City shall expedite post-disaster recovery and reduce the future risk to human life ad public and private property from natural hazards, through recovery and redevelopment strategies.	1-7	Provides for consistent application of steps from recovery to reconstruction.
CCME Objective 3.1	<p>The City emergency management coordinator shall designate appropriate staff to perform the following tasks;</p> <ul style="list-style-type: none"> <li>• Monitor preliminary damage reports following a disaster;</li> <li>• Take necessary steps to seek financial assistance from the appropriate state and federal agencies;</li> <li>• Authorize cleanup and repairs necessary to protect the public health, safety and welfare;</li> <li>• Identify areas within community where minor, moderate and major damage has occurred;</li> <li>• Recommend to the City Commission temporary building moratoria for building activities not essential to protect health, safety or welfare.</li> <li>• Recommend to the City Commission appropriate hazard mitigation policies which should be implemented in response to the disaster; and</li> <li>• Prepare a report evaluating post-disaster redevelopment response and make recommendations for necessary changes to this comprehensive plan.</li> </ul>	1-7	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts.
CCME Policy 3.1.2	The City shall review all elements of the <i>Pinellas County Comprehensive Plan</i> to assure that hazard mitigation considerations are effective and implemented within its area of responsibility.	1,3	Serves to improve upon response plans in the short-term, mid-term and long term recovery and reconstruction after a disaster. Mitigation measures encourage a preemptive approach to dealing with pending disasters.
CCME Objective 3.2	The City shall enforce the reconstruction permitting procedures.	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 3.2.1	Following a major hurricane or other disaster, the City Commission may adopt a temporary post-disaster building moratorium to allow sufficient time for damage assessment, the identification of redevelopment opportunities and hazard mitigation policy implementation.	1,2,3,4	Consistently applied procedures will assure steps to enhance recovery and minimize losses.
CCME Policy 3.2.2	The City shall enforce post-disaster redevelopment procedures which will expedite permitting for minor repairs including development plan review, engineering approval, building permitting and shall provide that all permitting is coordinated with the appropriate agencies and is consistent with the objectives of this comprehensive plan.	1,2,3,4	Procedures will gauge whether mitigation initiatives are effective, timely, feasible and efficiently implemented in achieving the intended goal.
CCME Policy 3.2.3	The City shall enforce the involuntary loss provisions of the land development regulations to protect private property rights by potentially allowing replacement and reconstruction housing units.	2	Continued enforcement of the land development regulations ensures the protection of private property rights.
CCME Objective 3.3	The City shall implement reconstruction and redevelopment strategies which will be used to promote hazard mitigation.	1,2,3,4	Criteria will assist in decisions in rebuilding facilities and infrastructure so to avoid repetitive losses and reduce future service interruption.
CCME Policy 3.3.1	Where financially feasible, property which has received recurring major hurricane damage (total devastation) from storm surge may be publicly acquired, or designated Preservation on <i>Map LU-4, Future Land Use and Transportation</i> . To prevent redevelopment of the property to its pre-disaster land use.	1,2,3,4	Acquisition of properties that are left as open space may help reduce potential losses on adjoining properties as well as reduce the number of repetitive loss properties/area.
CCME Policy 3.32	The City shall consider on or more of the following strategies in those areas which receive major or moderate damage: <ul style="list-style-type: none"> <li>• Reduction of permissible density or intensity of the development in the area;</li> <li>• Reconstruction according to more stringent building and construction standards</li> <li>• Public acquisition of damaged areas</li> </ul>	1,2,3,4	Reconstruction to current higher standards will reduce the chances of future repetitive losses; acquisition of properties that may be left as open space may help reduce potential losses on adjoining properties; as well as reducing the number of repetitive loss properties. Restricting densities reduces the number of lives and properties that are in harm's way.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 3.3.3	<p>The City shall interrelate hazard and non-hazard mitigation goals during reconstruction including the following objectives;</p> <ul style="list-style-type: none"> <li>• Enhancement of recreational and open space opportunities;</li> <li>• Enhancement of local public beach access;</li> <li>• Enhancement and restoration of local natural ecosystems;</li> <li>• Reduction of traffic congestion, noise and other transportation related problems; and</li> <li>• Enhancement of the long-term economic vitality of the local commercial base.</li> </ul>	1,2,3,4	Mitigation measures allow preventative approach to potential natural disasters; reduces the potential for repetitive loss and enhances or restores the function of natural systems to further minimize future losses.
Capital Improvements Element (CIE) Policy 1.4	Public expenditures that subsidize development in the Coastal Storm Area shall be limited to those improvements anticipated in this comprehensive plan or determined by the Board of City Commissioners to be an overriding public benefit.	1,2,3,4	Basic governmental purpose to protect the health, safety and welfare of citizens.
CIE Policy 1.4.1	The City shall expend funds in the Coastal Storm Area only for the replacement and renewal of public facilities in order to maintain adopted level of service.	1-7	Basic governmental purpose to protect the health, safety and welfare of citizens.
<b>Land Development Regulations</b>			
City Code Chapter 14	Buildings and Building Regulations	1,2,3,4	Minimum building standards, storm damage reduction.
City Code Sec. 14-35	Modular buildings or structures shall comply with the requirements of Chapter 94.	1,2,3,4	Minimizes public/private losses due to flooding.
City Code Sec. 14-36	All new buildings or structures lying within that portion of the City to the west of Gulf Boulevard shall be built upon pilings designed by a state licensed architect or engineer to withstand foreseeable high velocity wave and wind forces. The lowest floor level shall be at or above the 100-year flood elevation as determined by the National Flood Insurance Program. Foreseeable wave and wind forces shall include those produced by hurricanes.	1,2,5	Provides standards that limit public/private losses and damages due to flooding and other natural disasters.
City Code Chapter 70 Article IV	Utilities (Stormwater)	1,2,3	Administrates funds and manages the City's stormwater system.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
City Code Chapter 82	Land Development Regulations, General Provisions	1,3,4,5	Restricts or prohibits development within areas of special flood hazard; provides standards for flood hazard reduction for new construction and substantial improvements. Minimizes public and private losses due to flood conditions
City Code Chapter 94 Article II	Flood Damage Prevention	1,2,5	Promote the public health, safety and general welfare and provide standards and guidelines to minimize public and private losses due to flood conditions in specific areas within the City.
City Code Chapter 98 Article II	Soil and Water Protection	1,4,5	Protects the soil from erosion by wind and surface water, provides a buffer adjacent to wetlands to further protect water quality and quantity and associated wildlife from adjacent development impacts. Maximizes the filtration of surface water and minimizes land alteration activities.
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
Pinellas County Floodplain Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery and mitigation components.	1-7	This document provides detailed strategic and operational guidelines that the City should adopt in the event of an emergency (all-hazards guide)
<b>Emergency Management</b>			
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery and mitigation components.	1-7	CEMP is the Central document detailing procedures by which emergencies are handled. Provides strategic and operational guidelines in the event of an emergency (all hazards guide).
Madeira Beach Comprehensive Emergency Management Plan+	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery and mitigation components.	3	The document provides detailed strategic and operational guidelines that the City should adopt in the event of an emergency.
<b>Other</b>			
City of Madeira Beach and the Redington Beach Communities Disaster Plan	Establishes strategies to effectively coordinate property protection and lifesaving efforts that are to be made during and after a disaster.	3	Provides detailed operational and strategic guidelines that the City should follow to respond to a natural or manmade disaster.
<b>END OF LIST</b>			

# Pinellas County Local Mitigation Strategy

**Table 5- 15: North Redington Beach Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element (FLUE), Goal 1	The Town of North Redington Beach shall, consistent with public interest and community desire, protect and promote its small town coastal character and shall be a safe, attractive and desirable place in which to visit, live and work.	1, 3	Basic governmental purpose of promoting a community vision and providing public safety.
FLUE Objective 1.1	The Future Land Use Map shall support densities and intensities of development that are compatible with, and further, the Town’s small town coastal character, consider the needs of its businesses and residents, the surrounding natural environment, and the availability of public services and facilities.	1	Plans for development that is compatible with the Town's vulnerable coastal location and cognizant of the needs of businesses and residents, including public safety.
FLUE Policy 1.2.4.	The Town shall continue to require all uses requesting development authorization to submit a site plan for review with particular emphasis on drainage retention and storm water management, open space protection and flood protection, traffic flow and needed vehicle parking, consistent with the Town’s land development regulations.	1, 4	Requires proposed development to emphasize storm water management and flood protection, among other things.
FLUE Objective 1.3	The Town shall apply its land development code in a manner that fosters the Town’s character and architectural identity, that promotes a safe and pedestrian-friendly environment, that recognizes the conditions and environment imposed by a coastal location, and encourages a mix of complementary and compatible land uses.	1, 4	Requires the Town to apply its land development code in ways that recognize the vulnerabilities imposed by its coastal location.
FLUE Policy 1.3.3	In particular, the Town shall, through its Land Development Code, require that each new or redeveloped tourist accommodation submit, as part of their site plan, an evacuation plan and strategy for review and approval by Pinellas County Emergency Management and the Town.	3	Requires new or redeveloped tourist accommodations to submit an evacuation plan and strategy, furthering public safety.
FLUE Policy 1.3.4	The Town shall utilize development agreements, consistent with the allowances of Chapter 163.3220 of the Florida Statutes, as the appropriate means of implementing the incentive-based, and disaster planning, provisions of the Land Development Code.	1	Promotes the use of development agreements to implement disaster planning provisions.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
FLUE Objective 1.6	To protect both its residents and visitors alike, the Town shall ensure that its land use, development and redevelopment planning is coordinated and consistent with regional and County disaster planning efforts, including evacuation plans and requirements.	1, 3	Ensures coordination and consistency with regional and county disaster planning efforts.
FLUE Policy 1.6.1	The Town shall coordinate with Pinellas County Emergency Management, the Tampa Bay Regional Planning Council, and adjacent communities on education and outreach targeted towards the specific needs and requirements of residents, businesses, and visitors.	6	Coordination with education and outreach regarding disaster planning.
FLUE Policy 1.6.2	The Town shall require that all development approvals for new or redeveloped tourist accommodations include a disaster/evacuation plan approved by both the Town and by Pinellas County Emergency Management that addresses emergency communication and evacuation requirements for that tourist accommodation.	3, 6	Requires new or redeveloped tourist accommodations to submit an evacuation plan that addresses emergency communication and evacuation, furthering public safety.
FLUE Policy 1.6.3	The Town shall require that all tourist accommodations implement the evacuation component of their approved disaster/evacuation plan, upon directive by the Pinellas County Board of County Commissioners.	3	Requires tourist accommodations to implement disaster plan upon directive of the BOCC.
FLUE Policy 1.6.4	The Town shall encourage Pinellas County to adopt appropriate countywide regulations that address the need to evacuate tourist accommodations from the barrier islands in a consistent and organized fashion.	3	Desire for consistent, organized evacuations of tourist accommodations countywide.
FLUE Policy 1.6.5	The Town shall coordinate with adjacent coastal communities, including through participation on the Barrier Island Governmental Council (BIG-C), regarding the impacts of development and redevelopment on evacuation clearance times.	3	Calls for coordination with adjacent coastal communities regarding the effects of development on evacuation clearance times.
FLUE Policy 1.6.6	The Town shall make information available to developers/property owners/ operators of tourist accommodations indicating the type of disaster planning/ evacuation strategies and activities that Pinellas County Emergency Management considers to be effective and acceptable.	3, 6	Requires making public information available regarding disaster planning.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
FLUE Policy 1.6.7	For tourist accommodations, the developer, property owner and facility operator shall, by April of 2005, be required to commit to implementing the approved disaster/evacuation strategies as a condition of their development approval and through, if the Town deems it appropriate, a development agreement for the property.	3	Sets a date to begin tourist accommodation evacuation plan requirements.
FLUE Policy 1.6.8	The Town shall continue to encourage residents to find “host home” accommodations with friends and relatives who do not live in an evacuation zone as a means of reducing impacts on shelter facilities.	3, 6	Encourages host homes to help offset shelter facility demand.
FLUE Objective 1.10	The protection of natural resources shall be ensured through land development regulations and the continued application of the Aquatic Lands zoning district.	5	Protecting natural resources will help protect property during natural disaster events.
FLUE Policy 1.10.2	The Town shall continue to protect environmentally sensitive lands through zoning and land development regulations to maintain their environmental function and recreational values.	1, 5	Protecting natural resources will help protect property during natural disaster events. Sets parameters for doing so via zoning regulations.
FLUE Policy 1.13.2	The Town shall plan comprehensively for the Gulf Boulevard Corridor in a manner that addresses traffic control, public safety, pedestrian scale development and design features, building design and orientation, and continuity in the character of its public amenities and landscaping/streetscaping	1	Calls for planning the Gulf Boulevard corridor with public safety, including disaster planning and evacuation, in mind.
Transportation Element 3.1.5	The Town shall coordinate its land use decisions with the recognition of Gulf Boulevard as the only roadway for communities on Sand Key to access evacuation routes off the barrier island.	1	Recognizes the importance of Gulf Boulevard as an evacuation corridor.
Housing Element (HE) 4.1.6	The Town shall continue to use the County and its local development review process to require adherence to federal flood proofing requirements and building standards in order to help protect local residents and their homes from weather-related disaster.	1	Requires adherence to flood proofing and building standards through the use of the County and its development review process.
HE Policy 4.2.2	The Town shall continue to contract with Pinellas County for permitting and building inspection services to ensure that all building and safety standards are met during development and redevelopment activities, particularly in regard to the Town’s coastal location.	1	The Town utilizes the County for building permits and inspections.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Infrastructure Element (IE) Goal 8	The Town, in coordination with other government agencies as appropriate, shall maintain an effective stormwater management system in order to protect human life, minimize property damage and improve water quality.	4	Requires an effective stormwater management system to reduce drainage problems.
IE Objective 8.1	The Town shall support a stormwater management system that seeks, as far as practicable, to minimize flooding hazards and environmental impacts.	4	Supports a stormwater management system that minimizes flooding hazards.
IE Policy 8.1.1	The Town shall maintain a stormwater management system that is capable of providing a level of service sufficient to contain a 25- year, 24-hour non-tropical rainfall event during normal tide levels.	4	Reduces drainage problems and flooding hazards.
IE Policy 8.1.2	The use of best management practices and on-site stormwater retention equivalent to the first one inch of rainfall shall be required for new development or redevelopment in the Town.	4	Reduces drainage problems and flooding hazards.
IE Policy 8.1.8	In an effort to maximize the life of its stormwater management system, the Town shall investigate the feasibility of maintenance dredging to remove sediment buildup at drainage outfall pipe locations in Boca Ciega Bay.	4	Reduces potential drainage problems; avoids siltation build- up, will prevent back-up of stormwater runoff, reduces risk of flooding.
IE Policy 8.1.9	The Town shall continue to maintain and implement a floodplain management plan that addresses drainage and existing flooding conditions.	4	Addresses drainage and existing flooding problems.
IE Objective 8.2	The Town's stormwater management system shall be monitored on a continual basis to identify and correct deficiencies.	4	Prevents future drainage problems.
IE Policy 8.2.2	The Town shall implement its capital improvements program to replace and upgrade drainage piping that is determined to be undersized and/or deteriorated.	4	Prevents future drainage problems.
IE Policy 8.2.4	The Town shall investigate, where appropriate, grants for stormwater improvements and encourage cooperative funding and joint projects with neighboring municipalities and other government agencies, when appropriate.	4	Potential for joint stormwater improvement projects and grant funds to help reduce the cost of addressing drainage problems.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element (CMCE) Goal 9	The Town supports coastal development that is consistent with the Future Land Use Element, and that considers the Town's character, and is consistent with public benefit, with sound public infrastructure planning and investment strategies, with environmental conditions and that considers the vulnerability of the Town's coastal location.	1, 4, 5	Provides fundamental support to address the vulnerability of the Town's coastal location.
CMCE Objective 9.1	The Town shall regulate development and redevelopment in a manner that minimizes exposure of human life to, and minimizes property damage from, the effects of coastal storms, through the development and application of hazard mitigation measures, including the regulation of construction and land use activities.	1, 3	Reduces potential damage and exposure to the effects of coastal storms.
CMCE Policy 9.1.1	The Town of North Redington Beach recognizes the Coastal High Hazard Area as that portion of the community defined by the <i>Sea, Lake, and Overland Surges from Hurricanes (SLOSH)</i> model to be inundated from a Category 1 hurricane, as reflected in the most recent <i>Regional Evacuation Study, Storm Tide Atlas</i> . However, the area defined in Policy 9.1.2. as the Coastal Storm Area shall be the regulatory standard for the Town of North Redington Beach.	1, 3	Meets State of Florida requirements.
CMCE Policy 9.1.2	The Coastal Storm Area for the Town of North Redington Beach, depicted in Figure 5-4 of the <i>Coastal Management and Conservation Element</i> , encompasses all of the following: 1. The Coastal High Hazard Area; 2. All land connected to the mainland of Pinellas County by bridges or causeways; 3. All land located within the Velocity Zone, as designated by the Federal Emergency Management Agency.	1, 3	Defines specific areas that may become isolated in a flooding situation therefore exacerbating evacuation efforts and rescue efforts.
CMCE Policy 9.1.3	The Town shall continue to participate in the Federal flood insurance program (FEMA), including maintaining flood proofing development standards, and regulating development in the Coastal Storm Area, through the Future Land Use Plan, and development agreements where appropriate for tourist accommodations.	1	Assure that the Town will continue to participate in the Federal flood insurance program.
CMCE Policy 9.1.4	Mangrove areas shall be preserved as protective buffers against storm winds and waves through application of the Aquatic Lands zoning district.	1, 5	Helps reduce the damaging effects of storm winds and waves.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE Policy 9.1.7	The Town shall continue to enforce all appropriate Federal, State and regional coastal and floodplain regulations and construction codes, coastal setback requirements and the State minimum building code.	1	Reduces exposure to natural disaster hazards.
CMCE Policy 9.1.8	The Town shall review decisions regarding the location of the Coastal Construction Control Line to assure that existing and planned investment, facilities, and property rights are maintained and protected; preservation of beach and waterfront resources are enhanced; and public safety is assured consistent with this Comprehensive Plan.	1,5	Aims to strike a balance without compromising public safety.
CMCE Policy 9.1.9	The reconstruction, should the property be destroyed by natural causes, of any legally nonconforming residential, hotel or motel structure located in the Gulf Boulevard Planning Corridor whose existing, permitted density exceeds that of this Comprehensive Plan, shall adhere to the Town's Comprehensive Plan, the Town's land development regulations and the coastal management regulations (local, State and Federal) in effect at the time the development order is issued for reconstruction, but shall be allowed to rebuild the type of use that was destroyed at the legally nonconforming density.	1	Allows redevelopment to previously existing densities, but requires adherence to current storm protection standards and regulations.
CMCE Objective 9.2	The Town shall support development and redevelopment that is consistent with the character of the Town and shall not authorize changes in density or intensity that are inconsistent with this character, or are incompatible with a coastal location.	1	Promotes development that is compatible with a coastal location.
CMCE Policy 9.2.1	The Town shall only permit public expenditures in the Coastal Storm Area that support development that is consistent with the provisions of the Town's Comprehensive Plan.	1	Ensures that expenditure are consistent with the Comprehensive Plan.
CMCE Policy 9.2.3	To protect against coastal hazards, as redevelopment occurs and as the opportunity arises, the Town will take those steps necessary to eliminate or modify unsafe conditions or structures.	2	Helps reduce future liabilities.
CMCE Policy 9.2.4	The Town shall continue to make information available to residents and businesses regarding flood and storm surge hazards, the Town's coastal vulnerability, and corresponding evacuation requirements.	6	Promotes disaster preparedness and orderly evacuations.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE Policy 9.2.5	All new and redeveloped tourist accommodations, including those undergoing substantial improvement, shall submit an evacuation/disaster plan to Pinellas County Emergency Management and the Town for review and approval prior to development authorization.	1, 3	Requires new or redeveloped tourist accommodations to submit an evacuation plan and strategy, furthering public safety.
CMCE Objective 9.3	The Town shall coordinate with, and support, Pinellas County's disaster planning efforts, and their strategies for managing emergency shelter impacts, maintaining evacuation clearance times, and educating the public regarding disaster and evacuation planning.	3	Enhances disaster preparedness.
CMCE Policy 9.3.1	The Town shall support construction of planned road improvements in the Metropolitan Planning Organization's Long Range Highway Plan that affect critical links in evacuation routes.	1, 3	Promotes more efficient evacuation events.
CMCE Policy 9.3.2	Proposed or requested increases in Future Land Use Map residential densities in evacuation areas shall document the availability of adequate public shelter spaces for the additional residents before they are approved.	1, 3	Designed to help ensure adequate shelter space is available for new residents.
CMCE Policy 9.3.3	A designated Town official shall coordinate with the County and State in the development of emergency management plans and the dissemination of pertinent emergency management information.	3, 6	Increases efficiency in coordination efforts and disaster planning.
CMCE Policy 9.3.4	The Town shall continue to participate in the Local Mitigation Strategy workgroup coordinated by the County and shall, therefore, ensure that the Town remains eligible to receive federal funds for pre- and post-disaster projects and planning.	3	Ensures the Town remains eligible for federal funds for disaster preparation and recovery.
CMCE Policy 9.3.5	For residential development proposals other than for an individual single family home, the Town shall require the developer to submit information prior to site plan approval that evaluates the impact of their development proposal on evacuation timing and public shelter needs.	1, 3	Designed to help ensure adequate shelter space and evacuation capacity is available for new residents.
CMCE Policy 9.3.6	The adopted level of service standard for out-of-county hurricane evacuation clearance time for a Category 5 storm event as measured on the Saffir-Simpson scale shall be 16 hours.	3	Meets State of Florida requirements.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE Policy 9.3.7	The Town shall participate with Pinellas County and other municipalities in the assessment of shelter needs for its residents, and in the review of any development impact mitigation strategies proposed as a result of allowances under Ch., 163.3178, F.S., but with the understanding that the safety of existing or future residents and visitors shall not be compromised by development approvals.	3	Helps ensure adequate shelter space.
CMCE Objective 9.4	In the event of a declared natural disaster, the Town shall follow the procedures and guidelines in its Post-Disaster Redevelopment Plan, designed to reduce the exposure of human life and public and private property to natural hazards and to facilitate post- disaster recovery.	3	Reduces exposure to natural hazards and facilitates recovery after a disaster occurs.
CMCE Policy 9.4.1	Consistent with its Post Disaster Redevelopment Plan, the Town will make decisions on all redevelopment and reconstruction following a natural disaster.	2, 4	Gives Town authority in redevelopment and reconstruction efforts.
CMCE Policy 9.4.2	The Town may consider implementing a temporary moratorium for a specific length of time following a declaration of natural disaster. This moratorium would affect the permitting of new construction, reconstruction, repair or redevelopment.	1, 2, 4	Helps prioritize recovery decisions in an efficient, effective manner.
CMCE Policy 9.4.3	Following a natural disaster, the Town shall appoint damage assessment teams, each containing a broad range of expertise, who shall assess the effectiveness of current hazard mitigation measures and give a report on their findings to those making redevelopment decisions.	2, 4	Will help enhance future hazard mitigation measures.
CMCE Policy 9.4.4	The Town's post disaster damage assessment and recovery operations will be coordinated with those of the County in order to provide maximum protection to the public and to ensure efficient and coordinated recovery.	2, 4	Coordination with the County helps assure efficient recovery operations.
CMCE Policy 9.4.5	Priority shall be given to those repairs that will restore essential public services and facilities to as many persons, as soon as possible, following a natural disaster.	4	Helps restore services to as many people as soon as practicable after a disaster.
CMCE Policy 9.4.6	Repair and/or replacement of damaged or destroyed infrastructure shall not exceed the pre-disaster capacity unless the need for additional capacity had been documented in this Comprehensive Plan and the Capital Improvements Element herein.	1	Prevents un-needed increase in capacity.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE Policy 9.4.7	Private repair and reconstruction following a natural disaster shall only be allowed in those areas where essential public services and facilities have been restored.	1, 2	Helps recovery occur in an orderly fashion.
CMCE Policy 9.4.8	The Town shall support the use of public acquisition funds for purchasing properties that suffer repeated damage during natural disaster and flood events.	2	Removes future liabilities for damage-prone properties.
CMCE Objective 10.1	The Town shall continue to protect existing natural vegetation and wildlife habitats to maintain their environmental function and recreational values.	5	Protecting natural vegetation helps mitigate potential storm damage.
CMCE Policy 10.1.1	Existing natural areas, including mangroves and tidal marshes, shall be protected from development encroachment through continued application of the Aquatic Land zoning district. Any intrusion shall require at least 1:1 mitigation for the disturbed areas.	1, 5	Protecting mangroves helps mitigate potential storm damage.
CMCE Objective 10.3	The Town shall support the Pinellas County hazardous waste program to ensure waste is handled, collected, transported, stored, disposed of and recycled in a manner that protects human health, safety and the environment.	1	Works with Pinellas County to help reduce the dangers of hazardous wastes.
CMCE Policy 10.3.2	The Town shall continue to encourage residents to deposit household chemical waste at the Pinellas County hazardous waste center or other approved, appropriate locations.	6	Promotes safe disposal at the County's hazardous waste center.
CMCE Policy 10.3.4	The Town shall continue to support the Pinellas County Pollution Prevention Program, which regulates small generators of hazardous wastes in order to protect natural resources and public health.	6	Aims to protect natural resources and public health from the dangers of hazardous waste.
CMCE Policy 10.3.5	The Town shall support and comply with Federal, State, and local policies and guidelines regarding accidents involving hazardous waste.	3	Supports policies and guidelines to help reduce problems from hazardous waste accidents.
CMCE Policy 10.3.6	The Town, in conjunction with Pinellas County, shall make information available regarding the safe handling of hazardous wastes and proper steps to take in the case of an emergency, and shall direct users of hazardous material to Pinellas County staff for technical assistance.	6	Helps to reduce hazardous waste incidences by promoting public education and information.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE Objective 10.5	The Town shall support the conservation, maintenance, protection and restoration of its coastal beach and dune systems in an effort to retain their contributions to storm protection, recreation, natural resources, and economic development.	5	Protecting the coastal beach and dune systems helps mitigate and reduce storm damage.
CMCE Policy 10.5.4	The Town shall support the planting of beach and dune vegetation and the creation of small-scale dunes (or increases in elevation), where feasible, and particularly in association with beach nourishment activities, both for their intrinsic natural resource value and for the additional storm protection provided.	5	Protecting dune vegetation and dune systems helps mitigate and reduce storm damage.
CMCE Policy 10.7.1	The Town shall cooperate with all County, State and Federal regulations governing hurricane evacuation, public beach access, provision of infrastructure in Coastal High Hazard Areas, regulation of stormwater drainage into local waters, protection of wetland vegetation, and protection of species with special status.	1, 3, 4, 5	Cooperation with agency regulations helps streamline the hurricane evacuation process.
CMCE Policy 10.7.2	The Town shall coordinate with neighboring municipalities, Pinellas County and State and regional agencies in efforts to protect regional estuaries, provide adequate sites for water dependent uses, prevent estuarine pollution, control surface water runoff, protect living marine resources, reduce exposure to natural hazards, and increase public shoreline access.	5	Intergovernmental coordination helps reduce exposure to natural hazards.
Intergovernmental Coordination Element (ICE) Policy 12.1.10	The Town shall continue to work in coordination with Pinellas County on disaster planning and emergency management issues associated with the Town's coastal location, on local mitigation strategies and on post disaster coordination.	3	Recognizes the need for coordination with the County regarding emergency management and disaster planning.
ICE Policy 12.1.11	The Town shall coordinate with Pinellas County during the development review process, consistent with the provisions adopted in the Future Land Use Element and Coastal Management Element of the Town's Comprehensive Plan to ensure that public safety issues associated with residents and tourists are addressed.	1, 3	Same idea as above, with an emphasis on resident and tourist public safety issues.

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Capital Improvements Element (CIE) Policy 13.1.2	Proposed capital improvement projects shall be evaluated and ranked in order of priority based upon the following guidelines: • The project eliminates a public safety hazard; • The project will increase the efficiency of existing facilities, prevent or reduce future improvement costs, and address future needs; • The budget impact and financial feasibility of the project will be considered; • Plans of other governments and agencies having responsibility for public facilities within the jurisdiction will be considered.	1, 2, 4	Prioritizes capital improvement projects with a strong emphasis on eliminating public safety hazards.
CIE Objective 13.2	Public expenditures that subsidize development in the Coastal Storm Area shall be allowed consistent with development restrictions and regulations imposed by the Future Land Use Element and the Coastal Management and Conservation Element of this Comprehensive Plan.	1	Emphasizes that restrictions and regulations related to the Coastal Storm Area will be adhered to.
CIE Policy 13.2.1	The entire Town is within the Coastal Storm Area, requiring that all public expenditures be consistent with the provisions of the Future Land Use Element and the Coastal Management and Conservation Element.	1	Promotes internal consistency within the Town's Comprehensive Plan.
<b>Land Development Regulations</b>			
Chapter 82 Article II	Flood Damage Prevention	1, 4	Requires that new construction or substantial improvements meet specific requirements to mitigate flood damage.
Chapter 18	Buildings and Building Regulations	1	Requires compliance with issuance of permits and inspections to ensure structures are constructed to mitigate flood loss.
Chapter 90	Subdivision of Land	1	Requires all proposed subdivisions to make provisions of the accommodation and retention of stormwater within the limits of the subdivision or plat.
Chapter 98 Article IV	Nonconforming Uses	1, 4	Requires any nonconforming use or structure which has been damaged by 50 percent or more of its area or value, to be reestablished in conformance with current regulations.
Chapter 98 Article V	Districts and District Regulations	1	Establishes consistent use of land, building, and open space to reduce impacts on all properties. Requires compliance with existing zoning, safety, base flood elevations, and drainage requirements.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Chapter 98 Article VI	Supplemental District Regulations	1	Establishes regulations for land grading and retention of stormwater runoff to prevent damage to adjacent properties during storm events.
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
Chapter 82 Article II	Flood Damage Prevention	1, 2, 5	Sets regulations for construction and use of property within flood areas as well as methods to reduce flood losses. Also requires protection of mangroves and dunes.
Chapter 70 Article V	Stormwater Management Utility	1	Sets standards to promote the health, safety and general welfare of the inhabitants of the town and prohibits unauthorized discharges of the storm sewers.
<b>Emergency Management</b>			
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 5- 16: Oldsmar Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text/Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element, Policy 1.2.3.	The Land Development Code shall contain provisions whereby residential areas are located and designed to protect life and property from natural and manmade hazards such as flooding, excessive traffic, subsidence, noxious odors, and noise.	1	Reduces property loss by accommodating drainage before development.
Future Land Use Element, Policy 1.9.1.	The LDC contains provisions whereby the developer/owner of any new development or redevelopment site is responsible for the on-site management of stormwater runoff in a manner that shall ensure post-development runoff rates, volumes and pollutant loads do not exceed pre-development conditions.	4	Reduces threat of flooding of streets and properties during rain events.
Future Land Use Element, Policy 1.9.2.	The LDC contains provisions whereby the use of impervious surface areas is minimized.	1	Reduces threat of flooding of streets and properties during rain events.
Future Land Use Element, Policy 1.9.3.	The city shall protect the natural functions of floodplain areas through provisions contained in the LDC, to ensure that the flood-carrying and flood storage capacity and water quality benefits are maintained.	4	Reduces property loss by accommodating drainage before development.
Future Land Use Element, Policy 1.9.4.	To the maximum extent legally possible, new development shall not be located in floodways, the area of highest velocity during flow.	1	Reduces property loss by accommodating drainage before development.
Future Land Use Element, Policy 1.9.5.	New development permitted in the flood fringe, the area of the floodplain outside the floodway, is required to meet flood hazard construction requirements.	1	Reduces property loss by accommodating drainage before development and consistent with FEMA legislation.
Future Land Use Element, Policy 1.9.6.	The prevention of erosion, retardation of runoff and protection of natural functions and values of the floodplain, will be considered while promoting public usage by requiring compliance to the Land Development Code.	5	Reduces property loss by accommodating drainage before development.
Future Land Use Element, Policy 1.9.7.	The city shall continue participation with Pinellas and Hillsborough Counties to fully implement the planned improvements of their Master Drainage Plans, as amended and as applicable to the City.	5	Supports intergovernmental coordination.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text/Description	LMS Goal	Evaluation
Future Land Use Element, Policy 1.9.8.	The city will cooperate with the counties on its borders to implement the Pinellas and Hillsborough Counties Master Drainage Plans within the city's drainage basins.	5	Reduces property loss by accommodating drainage before development.
Future Land Use Element, Policy 1.9.9.	Any cost to the city shall be equitably measured and proportionate to the amount of stormwater runoff directly attributable to the city.	4	Allows for property funding of mitigation projects.
Future Land Use Element, Policy 1.9.10.	Any new stormwater management policies developed and implemented by the city shall, at a minimum, address the following: <ul style="list-style-type: none"> <li>• The identification of drainage problem areas;</li> <li>• The identification of those areas in need of immediate corrective action; and</li> <li>• The identification of corrective measures, listed by priority, and cost of the individual measure by problem area.</li> </ul>	4	Reduces property loss by accommodating drainage before development.
Future Land Use Element, Policy 1.9.11.	The City shall continue to encourage the use of low impact development techniques in site design to store, infiltrate and evaporate stormwater runoff on the site. General performance criteria, which eliminate wetland impacts and minimize stormwater infrastructure needs include: <ul style="list-style-type: none"> <li>• Disturbing no more land than is necessary to provide for the desired use;</li> <li>• Preserving indigenous vegetation to the maximum extent possible; and</li> <li>• Minimizing impervious cover in all land development activities.</li> </ul>	4	Reduces property loss by accommodating drainage before development.
Future Land Use Element, Policy 2.1.1.	The city shall limit public expenditures that subsidize development permitted in coastal high hazard areas, except for restoration or enhancement of natural resources.	1	Reduces property damage by limiting development within high risk areas.
Future Land Use Element, Policy 2.1.2.	Discourage population concentrations in the designated coastal high-hazard area by prohibiting large scale land use plan amendments which increase density and allowing suitable redevelopment and infill, so densities in the older section of town are stable.	1	Reduces property damage and risk to life by limiting development within high risk areas.
Future Land Use Element, Policy 2.1.3.	Maintain or reduce hurricane clearance times.	3	Ensures effective response to hurricane evacuations.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text/Description	LMS Goal	Evaluation
Future Land Use Element, Policy 2.1.4.	The risk of exposure of human life, and public and private property to natural disasters shall be reduced through preparedness planning and implementation of hazard mitigation measures.	3	Reduces property loss by accommodating drainage before development.
Future Land Use Element, Policy 2.1.5.	Development within the FIRM V-Zone shall be minimized by enforcement of the LDC.	1	Reduces property loss by accommodating drainage before development.
Future Land Use Element, Policy 2.1.6.	The City will continue to implement activities in order to maintain or improve its Community Rating System classification (FEMA).	3	Reduces flood insurance premiums for property owners.
Coastal Management and Conservation Element, Objective 1.2.	Regulations for development within the 100-year flood plain shall be strictly enforced.	1	Reduces property loss by accommodating drainage before development and reduces flood insurance premiums for property owners.
Coastal Management and Conservation Element, Policy 1.2.1.	New development or redevelopment approvals shall require that post-development runoff rate, volume and pollutant load do not exceed predevelopment conditions.	4	Reduces property loss by accommodating drainage before development.
Coastal Management and Conservation Element, Policy 1.2.2.	Recognizing that portions of the community are located within the 100-year flood plain, the city shall maintain strict enforcement of appropriate federal, state, and regional coastal construction codes and coastal setback regulations.	1	Reduces property loss by accommodating drainage before development.
Coastal Management and Conservation Element, Policy 1.2.3.	The city shall protect the natural functions of the 100-year floodplain so that the flood carrying and flood storage capacity is maintained by enforcing its zoning codes.	1	Reduces threat of flooding during rain events.
Coastal Management and Conservation Element, Policy 1.2.4.	The city shall maintain a strict flood plain management program to preserve hydrological significant wetlands and other natural flood plain features.	4	Uses natural features to limit risk of property loss due to flooding.
Coastal Management and Conservation Element, Policy 1.2.6.	In order to reduce non-point source pollutant loading and improve the functioning of the city's drainage system, dumping of debris of any kind (e.g., yard clippings and trimmings), into drainage ditches, canals and stormwater control structures shall be prohibited.	4	Ensures a properly functioning drainage system.
Coastal Management and Conservation Element, Policy 1.2.7.	The city shall endeavor to protect existing natural resources by enforcing its LDC.	1	Uses natural resources to aid in drainage.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text/Description	LMS Goal	Evaluation
Coastal Management and Conservation Element, Policy 1.3.1.	All existing marine wetlands shall be designated preservation land as set forth on the Future Land Use Map.	1	Preserves natural drainage systems.
Coastal Management and Conservation Element, Policy 1.3.3.	Conservation areas, such as coastal marshes, freshwater swamps and mangrove areas shall be protected from development that would significantly alter their function and character. Once a conservation area is established, at least 1:1 mitigation of these communities shall be required.	1	Preserves natural drainage systems.
Coastal Management and Conservation Element, Objective 2.3.	As of the effective date of this Comprehensive Plan, the city shall maintain or reduce hurricane clearance times via its Hurricane evacuation plan.	3	Reduces risk to human life.
Coastal Management and Conservation Element, Policy 2.3.1.	The city shall coordinate with state, regional and county agencies to ensure that major evacuation routes are adequately maintained and, when necessary, improved to facilitate an efficient and safe evacuation.	3	Reduces risk to human life.
Coastal Management and Conservation Element, Policy 2.3.2.	The city, in cooperation with the Pinellas County Department of Emergency Management and the Tampa Bay Chapter of the American Red Cross shall sponsor annual hurricane preparedness seminars to increase hurricane awareness.	3	Educates the public on how to prepare for hurricane damage.
Coastal Management and Conservation Element, Policy 2.3.3.	City emergency response personnel and volunteers shall coordinate with county and state emergency response agencies in emergency planning, including communications, traffic control and warning operations, to effect a safe and efficient evacuation of the city.	3	Reduces risk to human life.
Coastal Management and Conservation Element, Policy 2.3.4.	The city shall continue to implement and refine activities for hurricane evacuation.	3	Reduces risk to human life.
Coastal Management and Conservation Element, Policy 2.3.5.	The City shall update the Emergency Management Operations Plan.	3	Ensures a correct plan.

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Source (Document, Number, Chapter, Section)	Text/Description	LMS Goal	Evaluation
Coastal Management and Conservation Element, Policy 2.3.6.	The City shall cooperate with state and regional agencies and with other local governments towards reducing the out-of-county hurricane clearance time of 55 hours in 2006, as determined in the Tampa Bay Region Hurricane Evacuation Study 2006, for a category 5 storm event as measured on the Saffir-Simpson scale.	3	Reduces risk to human life.
Coastal Management and Conservation Element, Policy 2.3.7.	The adopted level of service standard for out-of-county hurricane evacuation clearance time for a category 5 storm event as measured on the Saffir-Simpson scale shall be 16 hours.	3	Reduces risk to human life.
Coastal Management and Conservation Element, Objective 2.4.	The city shall reduce the risk of exposure of human life and public and private property to natural disasters through preparedness planning and implementation of hazard mitigation measures.	3	Reduces risk to human life.
Coastal Management and Conservation Element, Policy 2.4.1.	The city, in coordination with the county Department of Emergency Management, shall maintain a comprehensive Hurricane Plan which shall address the four phases of comprehensive emergency management: preparedness, response, recovery and mitigation.	3	Reduces risk to human life and property loss.
Coastal Management and Conservation Element, Policy 2.4.2.	The city shall designate an emergency management coordinator who shall oversee the development/revision of a hurricane plan; act as a liaison between states, regional, county and city emergency response and planning agencies; and ensure coordination between emergency management and development management activities in the city.	3	Ensures plan is correct and implemented efficiently.
Coastal Management and Conservation Element, Policy 2.4.3.	The city shall review the existing coastal construction building code and should adopt, at a minimum, the coastal construction standards embodied in the Coastal Zone Protection Act and shall strictly enforce their implementation through the building inspection process.	4	Reduces property loss by accommodating drainage before development.
Coastal Management and Conservation Element, Policy 2.4.4.	The city shall adopt and strictly enforce all appropriate federal, state, and local coastal construction codes, coastal setback requirements and flood plain management regulations.	1	Reduces property loss by accommodating drainage before development.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text/Description	LMS Goal	Evaluation
Coastal Management and Conservation Element, Policy 2.4.5.	Special care facilities shall not be located in the Coastal High Hazard Area. Special care facilities are discouraged in the Hurricane Vulnerability Zone unless adequate provisions for safe and efficient evacuation and shelter are ensured.	3	Reduces risk to residents less able to evacuate.
Coastal Management and Conservation Element, Policy 2.4.6.	The city shall incorporate into its peacetime emergency plan recommendations from hazard mitigation reports.	3	Ensures a thorough plan.
Coastal Management and Conservation Element, Policy 2.4.7.	The city shall increase public awareness regarding mitigation by providing education and information to property and business owners about storm damage and ways to properly protect structures.	3	Educates the public on how to prepare for hurricane damage.
Coastal Management and Conservation Element, Policy 2.4.8.	The Capital improvements identified in the Pinellas Count Local Mitigation Strategy (LMS) under the jurisdiction of the City shall be considered incorporated into the Capital Improvements Element of the City of Oldsmar Comprehensive Plan.	3	Ensures a funding source for flood mitigation projects.
<b>Land Development Code</b>			
Article IV	Subdivision Regulations	1	Promotes appropriate development of land and ensures infrastructure is incorporated properly
Article VI	Flood Control, Stormwater Management and Wetlands Protection	4	Ensures that development and redevelopment will not negatively impact the City's drainage.
Article IX	Resource Protection Regulations	1	Protects the natural drainage features of the City.
<b>END OF LIST</b>			

# Pinellas County Local Mitigation Strategy

**Table 5- 17: Pinellas County Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use/Quality Communities Objective 1.6	Pinellas County shall annually review, and amend as necessary, land use and development code provisions which restrain development and redevelopment in areas such as hurricane velocity zones and flood-prone areas to comply with the most recent standards of the National Flood Insurance program and all other applicable federal and state regulations, including any relevant findings derived from interagency hazard mitigation reports, in order to protect property and the health, safety and welfare of all residents.	1	Limits development within the special flood hazard areas, the Coast High Hazard Area (CHHA), as defined as areas that can be inundated by Category 1 hurricane (per SLOSH model), and the Coastal Storm Area, as defined as encompassing all of the following: the CHHA, land connected to the Pinellas mainland by bridges or causeways, and areas that can be inundated by a Category 2 or greater hurricane and that are surrounded by the CHHA or by the CHHA and a body of water, and land located within the Velocity Zone (per FEMA). Mitigates flood damage and repetitive loss by requiring new structures and structures with substantial improvements to be built to more stringent standards.
Future Land Use/Quality Communities Policy 1.6.1.	Development or redevelopment in storm impact areas shall be restricted based upon the Natural Disaster Planning objectives and policies listed in the Coastal Management Element. The policies associated with those objectives shall be consistent with the criteria in the National Flood Insurance Program, and the County's Flood Damage Prevention and Flood Plain Management provisions of the Land Development Code.	1	Limits development within the special flood hazard areas, the Coast High Hazard Area (CHHA), as defined as areas that can be inundated by Category 1 hurricane (per SLOSH model), and the Coastal Storm Area, as defined as encompassing all of the following: the CHHA, land connected to the Pinellas mainland by bridges or causeways, and areas that can be inundated by a Category 2 or greater hurricane and that are surrounded by the CHHA or by the CHHA and a body of water, and land located within the Velocity Zone (per FEMA). Mitigates flood damage and repetitive loss by requiring new structures and structures with substantial improvements to be built to more stringent standards.
Future Land Use/Quality Communities Policy 1.6.2	The Land Development Code provisions regulating development or redevelopment in flood prone areas shall be reviewed and amended as necessary should the criteria in the National Flood Insurance Program be modified?	1	Allows for periodic review to update building requirements accordingly to mitigate potential damages

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Future Land Use/Quality Communities Policy 1.6.3	The Local Planning Agency shall review those interagency hazard mitigation report recommendations addressing the elimination or reduction of land uses that are susceptible to damage by natural hazard, and shall recommend to the Board any changes to the Future Land Use Map and/or Plan policies considered critical to reducing, or mitigating, such hazard.	1	Public input through the Local Planning Agency forum provides for transparency in decisions that certain land uses are susceptible to repetitive losses caused by natural hazards are not compatible with their location and the land use changes can mitigate the repetitive costs incurred by the natural hazard.
Future Land Use/Quality Communities Policy 3.2.1.	Significant wetlands and twenty-five year floodplains shall continue to be protected and conserved by their existing designations of Preservation on the Future Land Use Map (FLUM), as adopted by the Board and based upon the comprehensive assessments performed by Pinellas County to evaluate, and subsequently identify, those wetland and floodplain resources with significant value or function.	5	Mitigating potential flood losses by maintain natural system functions of floodplains and wetlands.
Future Land Use/Quality Communities Policy 3.2.2.	Where development activity results in an adverse impact to wetland	5	Mitigating potential flood losses by maintain natural system functions of floodplains and wetlands.
Future Land Use/Quality Communities Policy 3.2.3.	Pinellas County shall continue to use a variety of methods for protecting the County's open space areas and natural resources (including wetlands) which include, but are not limited to, the acquisition of open space and environmentally sensitive areas, allowing the Transfer of Development Rights (TDRs), density averaging, and requiring upland buffers adjacent to wetlands and other natural environments identified by Pinellas County.	1,5	Mitigating potential flood losses by maintain natural system functions of floodplains and wetlands, and still respecting development rights.
Future Land Use/Quality Communities Policy 3.2.4.	Pinellas County shall continue to protect the natural resources of the County through, at a minimum, the application of the Pinellas County Stormwater Management Plan and the Florida State Implementation Plan addressing air quality, as well as enforcement of the Flood Damage Prevention, Flood Plain Management, Habitat Management and Landscape, and the Pinellas County Water and Navigation Control Authority sections of the Land Development Code, and the Future Land Use Map.	1,5	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Future Land Use/Quality Communities Policy 3.2.6.	Natural drainage features/areas shall be utilized where possible as part of the Pinellas County Stormwater Management Plan.	4,5	Provides for preference to maintain effective natural systems to creating drainage structures
Future Land Use/Quality Communities Policy 3.2.8.	The potable water system, well fields, wellheads and aquifer recharge areas shall be protected through ongoing implementation of the County's groundwater protection program; by the County's continued acquisition of environmentally sensitive areas; by permitting in the area east of East Lake Road and north of Keystone Road in the vicinity of the Eldridge-Wilde well field only Preservation, Preservation-Resource Management, Recreation/Open Space, and Residential Rural (0.5 unit per acre) land uses designations, and institutional uses approved through the County's conditional use or special exception process that are consistent with the very low density characteristics of the area; by regulation of borrow pits, and by prohibiting landfills and additional commercial and industrial land uses within the zones of protection determined by the County's groundwater protection program.	1,5	Provides for the protection of natural drainage systems as well a major aquifer recharge area.
Future Land Use/Quality Communities Policy 3.2.9	Natural drainage storage areas shall continue to be preserved by land use provisions.	1,5	Provides for preference to maintain effective natural systems to creating drainage structures
Future Land Use/Quality Communities Policy 3.2.10	Pinellas County shall continue its program of integrated land and water resource planning and management, as exemplified by the commitment to comprehensive watershed studies and the preparation of management plans, by the enforcement of a comprehensive wellhead protection program including land use restrictions, permitting and monitoring criteria, and land acquisition, by ongoing implementation of a multi-faceted water conservation and demand reduction program, by exploring reasonable technologies for water supply, and by the application of Comprehensive Plan policies and land development regulations directed at such things as habitat management and enhancement, promotion of native and drought tolerant plantings, wetland protection, stormwater treatment, and floodplain management.	5	Provides a comprehensive approach to conserving potable water resources as well as carrying out stormwater drainage and floodplain management policies.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Future Land Use/Quality Communities Policy 3.2.11.	Pinellas County shall continue to identify and protect isolated wetlands and other environmentally sensitive vegetative communities and habitats through the site plan process, which includes the application of project-appropriate land development regulations, conservation easement requirements, staff review of pertinent vegetation and habitat information, specific permitting requirements, and field work by development review staff.	1,5	Maintenance of an inventory of wetlands and environmentally sensitive lands so they may be monitored to maintain the integrity the functions of the respective isolated ecosystems.
Future Land Use/Quality Communities Policy 3.2.12.	Pinellas County shall continue to participate in efforts, such as those underway by the Tampa Bay National Estuary Program, and via local watershed planning and similar initiatives in response to Policy 2.1.2. In the Natural Resource Conservation and Management (NRCM) Element of this Plan, to identify significant wetland and other habitat areas for protection, restoration and/or enhancement. Staff will periodically review, at a minimum, the maps and related information from the Florida Game and Fresh Water Fish Commission and the Southwest Florida Water Management District to ensure that the most accurate information is being used at all times, and to determine if there are additional significant wetland areas that should be amended to Preservation or Preservation-Resource Management on the Future Land Use Map.	5	Maintenance of an inventory of wetlands and environmentally sensitive lands so they may be monitored to maintain the integrity the functions of the respective isolated ecosystems.
Future Land Use/Quality Communities Objective 4.3.	Pinellas County Land Development Regulations shall require that the level of population density and development intensity in the coastal planning area shall be compatible with the evacuation capabilities provided for in the hurricane evacuation program.	1,3	Helps keep population "out of harm's way" and lessens the demand on evacuation routes and for additional public shelter space by directing population to non-evacuation areas.
Future Land Use/Quality Communities Policy 4.3.1.	In order to limit the exposure of residents and property to coastal hazards and not increase existing and planned demands on hurricane evacuation corridors and public shelters, the population density and development intensity within the coastal planning area shall be consistent with Objective 1.3 of the Coastal Management Element and the supporting policies.	1,3	Helps keep population "out of harm's way" and lessens the demand on evacuation routes and for additional public shelter space by directing population to non-evacuation areas.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Future Land Use/Quality Communities Policy 4.4.1.	Pinellas County's Concurrency Management System shall include, as a minimum, level of service standards for roadways, potable water, sanitary sewer, solid waste, drainage and recreation and open space.	1	Maintains that the demand on public facilities and services are within an acceptable level relative to the capacities of the facilities and services.
Transportation Policy 1.5.3.	Pinellas County shall not vacate public right-of-way until it is deter	3	Assures that existing rights-of way is not required for public use before disposing.
Natural Resources/Conservation Policy 1.1.8.	To protect groundwater recharge and groundwater quality, Pinellas County will preserve or restore natural drainage features through application of surface water management regulations during site plan review, by adherence to applicable federal, state and local regulations in County-designed projects, and by supporting potable water system improvements which are designed to protect and enhance the source water supply.	5	Protects natural function of floodplains and wetland areas.
Natural Resources/Conservation Policy 1.1.14.	Pinellas County will regulate land use and development in a manner that protects the functions of natural drainage features for their contribution to recharge of the potable water supply.	1,5	Protects natural function of floodplains and wetland areas.
Natural Resources/Conservation Policy 2.1.19.	Pinellas County considers the protection of intact upland systems to be a priority and will continue to coordinate with environmental and regulatory agencies regarding the need to protect the County's diminishing uplands, particularly from wetland mitigation regulations applied during the development and permitting process.	1,5	Protects natural function of floodplains and wetland areas.
Natural Resources/Conservation Policy Goal 6	Pinellas County will preserve, protect, restore and manage the natural resources of its floodplains to maintain or enhance water quality, plant and animal diversity, and aquatic productivity, to protect the flood storage value and purpose, and to protect the public and minimize property damage...	5	Protects natural function of floodplains and wetland areas.
Natural Resources/Conservation Policy 6.1.1.	All construction in floodplains and flood ways shall continue to be required to comply with Federal Emergency Management Agency or Federal Insurance Administration standards and County building codes, and will meet or exceed the requirements of the County's participation in the Community Rating System (CRS).	1,5	Provides for flood mitigation to minimize flood losses and repetitive losses.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Natural Resources/Conservation Policy 6.1.2.	Developers shall continue to be required, through the site plan review process, to incorporate those wetland portions of sites which are within 100-year floodplains as conservation easements.	1,5	Protects natural function of floodplains and wetland areas.
Natural Resources/Conservation Policy 6.1.3.	Construction in floodplains shall continue to be limited by the enforcement of Section 158, the Pinellas County Floodplain Management portion of the Land Development Code, as amended, and in addition, will be subject to the permitting authority of the Southwest Florida Water Management District (SWFWMD), as delegated by the Federal Emergency Management Agency (FEMA).	1	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains.
Natural Resources/Conservation Policy 6.1.4.	No development or fill is allowed within the 100-year floodway, but may be permitted within the 25-year and 100-year floodplain as long as there is no increase in base flood elevation as a result of the activity, and as long as the flood hazard reduction provisions of Section 158 of the Pinellas County Code are met.	1,5	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains.
Natural Resources/Conservation Policy 6.1.5.	Because of their contribution to floodplain stability and floodplain habitat value, special emphasis will be placed on protecting viable native floodplain forests from destruction by excavation activities during development and redevelopment.	5	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains.
Natural Resources/Conservation Policy 6.1.6.	To protect public safety and minimize potential property damage, any request to increase residential density above 5.0 units per acre on the Future Land Use Map within the 100 year floodplain for property located within a repetitive loss area, or located within an area of known flooding identified in an existing watershed plan approved by the Board of County Commissioners, must be able to demonstrate how existing flooding issues will be resolved.	1,5	Provides for flood mitigation to minimize flood losses and repetitive losses, protects the natural function of floodplains, and lessens the concentration of the population in times of evacuation.
Natural Resources/Conservation Policy 6.1.7.	To protect the natural recharge areas and extensive natural systems in northeast Pinellas County, the County will not approve any request to increase residential density above 5.0 units per acre on the Future Land Use Map for areas within 100-year floodplains located in Planning Sector 2 (East Lake Tarpon Planning Sector).	1,5	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Natural Resources/Conservation Policy 6.1.8.	A request to increase density over 5.0 units per acre on the Future Land Use Map within the 100-year floodplain where the property is also located within that area defined by the SLOSH model to be inundated by a Category 3 hurricane may be considered as long as the applicant can demonstrate that the impact of the proposed amendment on the demand for shelter space can be mitigated and the requirements of Policy 6.1.9 are met.	1,3	Provides for flood mitigation to minimize flood losses and repetitive losses, protects the natural function of floodplains, and lessens the concentration of the population in times of evacuation.
Natural Resources/Conservation Policy 6.1.9.	A request to amend the Future Land Use Map on a property within the 100-year floodplain to a designation with an increased maximum impervious surface ratio will be required to provide adequate information to demonstrate that their development proposal will meet County floodplain, flood protection and stormwater regulations, in which case a development agreement may be required to formalize floodplain management and public safety requirements. Applicants are encouraged to incorporate the disaster mitigation components of the Florida Green Building Coalition as a part of the project design.	1	Provides for flexibility from the strict interpretation of the land development regulations; however, it places the onus on the applicant to show compliance with best available practices of mitigation techniques. A formal development agreement binds the applicant to adequate compliance.
Natural Resources/Conservation Policy 6.1.10.	A request to amend the Future Land Use Map or a development or redevelopment application for a project within a floodplain located within a watershed with an approved watershed plan will be reviewed for consistency with, and must further, the goals of the respective watershed plan.	1,5	Requires intradepartmental coordination and compliance with applicable plans, programs and initiatives.
Natural Resources/Conservation Policy 6.1.11.	A reduction in floodplain storage as a result of development or redevelopment activity will require comparable compensation.	1,5	Protects natural function of floodplains and wetland areas.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Natural Resources/Conservation Policy 6.1.12.	As a part of the site plan review, for any project located within the floodplain, the development applicant will be required to provide adequate information to the County that demonstrates that floodplain functions will not be adversely impacted by the development, that adjacent properties will not be adversely affected, that the project is not inconsistent with an approved watershed plan, and that the offsite stormwater conveyance system will be able to accommodate flows from the project site.	1	Assures compliance with applicable regulations, plans, programs, and initiatives.
Natural Resources/Conservation Policy 6.1.13.	In association with the update to the Land Development Code, the County will review existing regulations to ensure that site development, erosion control, habitat management, water quality and flood control requirements are internally consistent, mutually supportive, effective and sustainable for the long term.	1,5	Assures consistent interpretation and implementation of Natural Resources/ Conservation policies.
Natural Resources/Conservation Policy 6.1.14.	By December 2008, Pinellas County will evaluate how best to promote development and redevelopment proposals that demonstrate a sustainability commitment through such means as: reducing the amount of impervious surface on an already developed site, maximizing or restoring natural floodplain functions and habitat, demonstrating innovation in stormwater management techniques, and/or recognizing the potential for changing long term floodplain conditions due to the anticipated impacts of climate change.	1,5	Provides for an education campaign to encourage best available practices to promote the benefits of respecting natural systems in Pinellas County.
Natural Resources/Conservation Policy 6.1.15.	The County shall encourage acceptable materials and alternatives to the hardening and bulk heading of natural banks, natural stream courses, lakes and creeks through the enforcement of appropriate ordinances, and by 2009, shall develop criteria for acceptable materials to use for this purpose.	4	Promote best available practices to lessen construction costs of re-engineering natural systems.
Natural Resources/Conservation Objective 6.2.	Pinellas County shall continue to maintain, and enhance where possible, the current balance of living resources in the floodplains of the County.	5	Promote best available practices to lessen construction costs of re-engineering natural systems.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Natural Resources/Conservation Policy 6.2.1.	The County shall continue to prohibit dredging and filling or other development activities having significant long-term impacts on the ecological or hydrological function of the floodplains, except in cases clearly in the public interest.	1,5	Provides for an education campaign to encourage best available practices to promote the benefits of respecting natural systems in Pinellas County.
Natural Resources/Conservation Policy 6.2.2.	Pinellas County shall enforce its policies on natural systems and living resources in order to support the ecological value and natural function of its 25 and 100 year floodplains	5	Provides for an education campaign to encourage best available practices to promote the benefits of respecting natural systems in Pinellas County.
Natural Resources/Conservation Policy 6.2.3.	The County shall continue to cooperate with the Southwest Florida Water Management District and other appropriate agencies in expanding or enhancing existing natural habitats associated with floodplains.	5	Provides for an education campaign to encourage best available practices to promote the benefits of respecting natural systems in Pinellas County.
Natural Resources/Conservation Policy 6.2.4.	Fill may be limited to the footprint of the building when necessary to protect floodplain function or habitat, and to meet the County's provisions for flood hazard reduction and standards for development in areas subject to flooding.	5	Protects natural function of floodplains and wetland areas.
Natural Resources/Conservation Policy 6.2.5.	The County shall continue to enforce its erosion control regulations to reduce sedimentation in floodplains resulting from upland development activities.	5	Minimize siltation that may impede upon the natural function of floodplains and wetlands.
Coastal Management Goal 1:	Pinellas County will protect human life, private property and public investment from the effects of hurricanes and other natural disasters	1,3	Basic governmental purpose to protect the health, safety and welfare of citizens.
Coastal Management Objective 1.1.	Pinellas County shall continue to implement, and update and revise, as necessary, its Post-Disaster Redevelopment Plan, as approved by the Pinellas County Board of County Commissioners, as part of the Pinellas County Comprehensive Emergency Management Plan, and shall continue to implement hazard mitigation measures to reduce the exposure of human life and public and private property to natural hazards.	3	Serves to improve upon response plans in the short-term, mid-term, and long-term recovery and reconstruction after a disaster. Mitigation measures encourage preemptive approach to dealing with pending disasters.
Coastal Management Policy 1.1.1.	The Redevelopment Plan shall provide guidelines for actions to be taken following natural disasters for immediate emergency recovery needed to protect the public health and safety, for short- range restoration, and for long-range reconstruction.	3	Provides for consistent application of steps from recovery to reconstruction.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management Policy 1.1.2.	The Redevelopment Plan shall establish who will be responsible for making crucial decisions after a natural disaster regarding repair, reconstruction, relocation and hazard mitigation; this body could take the form of a recovery task force.	1,3	Crucial decisions need to be made in a timely manner to minimize losses. Plan will establish duties of individual and or task forces.
Coastal Management Policy 1.1.3.	The Redevelopment Plan shall establish procedures for the restoration of essential public services and facilities following a disaster.	3	Consistently applied procedures will assure steps to enhance recovery and minimize losses.
Coastal Management Policy 1.1.4.	The Redevelopment Plan shall establish procedures for evaluating the effectiveness of current hazard mitigation measures at preventing damage.	3	Procedures will gauge whether mitigation initiatives are effective, timely, feasible, and efficiently implemented in achieving the intended goal.
Coastal Management Policy 1.1.5.	The Redevelopment Plan shall establish procedures for utilizing information obtained from damage assessment teams in expediting post-disaster recovery.	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts
Coastal Management Policy 1.1.6.	The Redevelopment Plan shall contain provisions for enactment of a temporary restriction on issuing permits for reconstruction and repair not immediately needed to protect the public health, safety and welfare, and contain recommendations to enact expedited processes, such as permitting selected minor repairs and licensing and/or registering contractors.	1.3	Provides for efforts to minimize losses and encourages efforts to return to normalcy.
Coastal Management Policy 1.1.7.	The Redevelopment Plan shall establish criteria for evaluating the options for repairing, replacing, modifying or relocating public and private facilities and infrastructure within coastal high-hazard areas. Any actions chosen by Pinellas County to repair, replace, modify, or relocate public facilities and infrastructure within the coastal high hazard area shall be consistent with federal and state funding standards.	1,2,3	Criteria will assist in decisions in rebuilding facilities and infrastructure so to avoid repetitive losses and reduce future service interruption.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management Policy 1.1.8.	The Redevelopment Plan shall establish that structures damaged by fire or natural forces to the extent that the cost of reconstruction or repair exceeds 50 percent of the market value of the structure before the damage occurred shall be rebuilt to meet all applicable federal, state and local regulations. The Land Development Code shall determine the status of nonconforming uses when properties experience the level of damage addressed in this policy.	1,2	Reconstruction to current higher standards will reduce the chances of future repetitive losses
Coastal Management Policy 1.1.9.	The Redevelopment Plan shall include guidelines and criteria for determining priorities for the acquisition of storm-damaged property in the coastal high-hazard area. These guidelines shall give priority to eliminating unsafe conditions and inappropriate uses. These guidelines/criteria will also be used to prioritize potential coastal acquisitions through the State's land acquisition program. By June 2008, additional criteria will be developed and included within the redevelopment plan to recognize pristine coastal properties or properties of significant or important environmental sensitivity.	1,2,5	Acquisition of properties that are left as open space may help reduce potential losses on adjoining properties as well as reduce the number of repetitive loss properties/areas.
Coastal Management Policy 1.1.10.	Pinellas County shall continue to implement its existing hazard mitigation programs that include shoreline restoration and enhancement, building code and floodplain regulations, development management techniques such as land use, zoning, and subdivision regulations, and other applicable hazard mitigation measures. Recommendations from interagency hazard mitigation reports may be incorporated, at the discretion of the County. These mitigation programs shall be amended, as necessary, to remain consistent with federal and state requirements.	1,2	Restrictions, such as limited intense development in Special Flood Hazard Areas, CHHA, and Coastal Storm Areas will reduce property losses and reduce evacuation times and the need for public shelter space.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management Policy 1.1.11.	Pinellas County will use its Comprehensive Plan, its Land Development Code, its Local Mitigation Strategy, and other applicable hazard mitigation measures, including appropriate recommendations from interagency hazard mitigation reports, to reduce unsafe conditions and inappropriate uses as opportunities arise, and to limit redevelopment in areas of repeated damage	1,2,3	Restrictions, such as limited intense development in Special Flood Hazard Areas, CHHA, and Coastal Storm Areas will reduce property losses and reduce evacuation times and the need for public shelter space.
Coastal Management Policy 1.1.12.	Pinellas County shall periodically evaluate both its Post-Disaster Redevelopment Plan and its Comprehensive Plan with the Local Mitigation Strategy in order to determine if any amendments or revisions are required in order to facilitate implementation of the final strategies.	1,2,3,5	Periodic review assesses consistency among plans and effectiveness of implementing programs and projects.
Coastal Management Policy 1.1.13.	The Post-Disaster Redevelopment Plan for Pinellas County shall also address steps to attain disaster assistance and funding to promote redevelopment of private property and businesses in order to foster economic recovery.	1,2,3	Initiating steps to help businesses reopen is key to long term recovery of the community.
Coastal Management Objective 1.2.	Pinellas County shall cooperate with state and regional agencies, and with other local governments to maintain or reduce hurricane clearance times as a component of the evacuation times for Pinellas County.	3	Reducing evacuation times is important to reducing potential casualties.
Coastal Management Policy 1.2.1.	Pinellas County shall work towards reducing the out-of-county hurricane evacuation clearance time of 55 hours in 2006, as determined in the <i>Tampa Bay Region Hurricane Evacuation Study 2006</i> , for a category 5 storm event as measured on the Saffir-Simpson scale.	3	Reducing evacuation times is important to reducing potential casualties.
Coastal Management Policy 1.2.2.	The adopted level of service standard for out-of-county hurricane evacuation clearance time for a category 5 storm event as measured on the Saffir-Simpson scale shall be 16 hours.	3	Reducing evacuation times is important to reducing potential casualties.

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Coastal Management Policy 1.2.3.	Pursuant to the Capital Improvements Element, Pinellas County shall annually evaluate projects proposed for inclusion within the Six-Year Schedule of Improvements and shall place a high priority on improvement needs for critical links and evacuation route points, and for bridges, causeways and highway facilities designated as regional evacuation routes when scheduling capital improvement projects.	3	Higher priority of construction projects along evacuation routes will assure adequate capacity to reduce evacuation times.
Coastal Management Policy 1.2.4.	The Board shall continue to enforce its regulations requiring the development of a hurricane evacuation plan by recreational vehicle parks and transient accommodations.	3	Will assure that visitors and tourists who are not accustomed to dealing with tropical storm events are informed as to emergency evacuation procedures and alternative sheltering options.
Coastal Management Policy 1.2.5.	The County shall coordinate with the Florida Department of Transportation during preparation of the Transportation Improvement Plan for District 7 in order to encourage the State to give priority to road improvement projects on regional hurricane evacuation routes.	3	Higher priority of construction projects along evacuation routes will assure adequate capacity to reduce evacuation times.
Coastal Management Policy 1.2.6.	The County shall utilize the existing countywide computerized traffic signalization system and available law enforcement officers to expedite hurricane evacuation.	3	Expedite flow of hurricane evacuation along critical links and intersections.
Coastal Management Policy 1.2.7.	The County shall continue its public awareness campaign in cooperation with the Tampa Bay Regional Planning Agency to educate the general public on proper hurricane evacuation procedures. As part of the County's public awareness campaign, the County shall also publish and make available a hurricane preparedness publication to the general public prior to June 1 of each year.	3,6	Public awareness campaign will assure that citizenry is informed about their responsibilities for safety and how to prepare property and family for emergency situations.
Coastal Management Policy 1.2.8.	Pinellas County shall cooperate with the State Division of Emergency Management to coordinate multi-county evacuations in a manner consistent with the Pinellas County Hurricane Evacuation Implementation Guide.	3	Out-of-county evacuation will affect evacuation of neighboring counties; coordination will help in providing best evacuation procedures.
Coastal Management Policy 1.2.9.	County-maintained roadways used as evacuation routes shall continue to be clearly posted.	3	Expedite flow of hurricane evacuation along critical links and intersections.

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Coastal Management Policy 1.2.10.	Hurricane evacuation shall be planned and conducted in a manner consistent with the Pinellas County Comprehensive Emergency Management Plan.	3	CEMP is the central document detailing procedures by which emergencies are handled.
Coastal Management Policy 1.2.11.	To improve upon the intergovernmental and agency coordination, the County shall consider establishing an optional Public Safety Element of the Pinellas County Comprehensive Plan.	3	An opportunity to comprehensively review the interrelationships and the effects of public safety with development, land use, and public facilities and infrastructure.
Coastal Management Policy 1.2.12.	In assessing transportation needs, Pinellas County shall review its Special Needs/Evacuation Registration Program and other sources in considering the evacuation needs of at-risk populations that have special needs, language barriers, and that are transportation disadvantaged.	3,6	Reduce potential casualties by providing assistance to populations that have a disadvantage that may jeopardize themselves and their families.
Coastal Management Objective 1.3.	Pinellas County shall restrict development within the coastal storm area, and shall direct population concentrations out of the coastal storm area.	1	Reduces potential casualties and prevents increasing of evacuation times and of shelter needs.
Coastal Management Policy 1.3.1.	The coastal high-hazard area (CHHA) shall be the area defined by the <i>Sea, Lake and Overland Surges from Hurricanes (SLOSH)</i> model to be inundated from a category one hurricane, as reflected in the most recent <i>Regional Evacuation Study, Storm Tide Atlas</i> .	3	Redefines Coastal High Hazard Area to be consistent with Florida Statutes.
Coastal Management Policy 1.3.2.	The coastal storm area shall be the area delineated in Figure 2 of the Coastal Management Element, which encompasses all of the following: (1) the Coastal High Hazard Area (CHHA), (2) all land connected to the mainland of Pinellas County by bridges or causeways, (3) those isolated areas that are defined by the SLOSH model to be inundated by a category two hurricane or above and that are surrounded by the CHHA or by the CHHA and a body of water, and (4) all land located within the Velocity Zone as designated by the Federal Emergency Management Agency.	1,3	Defines specific areas that may become isolated in a flooding situation therefore exacerbating evacuation efforts and rescue efforts.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management Policy 1.3.3.	If 20% or more of a parcel of land is located within the coastal storm area, then the entire parcel shall be considered within the coastal storm area. However, if either a parcel of land or a group of parcels that are part of a master development plan is equal to or greater than 5 acres and less than 50% of the parcel or group of parcels is within the coastal storm area, the property owner may elect to provide a survey of the parcel or parcels to determine the exact location of the coastal storm area.	1,3	Defines specific areas that may become isolated in a flooding situation therefore exacerbating evacuation efforts and rescue efforts.
Coastal Management Policy 1.3.4.	Pinellas County shall prohibit the location of new, or expansion of existing hospitals, nursing homes, and assisted living facilities within the coastal storm area and the area inundated by a category 2 hurricane as depicted by the <i>SLOSH</i> model, as reflected in the most recent <i>Regional Evacuation Study, Storm Tide Atlas</i> .	1,3	Restricts group facilities where large concentrations of people would be required to evacuate and would need drastically increase the need for public shelter space.
Coastal Management Policy 1.3.5.	Pinellas County shall not approve any request to amend the Future Land Use Map (FLUM) to designate parcels of land within the coastal storm area with a FLUM category that permits more than 5.0 dwelling units per gross acre.	1,3	Restricts higher development in areas where evacuation may be required; reducing the need for public shelter space.
Coastal Management Policy 1.3.7.	Pinellas County shall prohibit the siting of new or the expansion of existing mobile or manufactured home communities within the coastal storm area. This policy does not apply to the replacement of individual homes within the community with modern manufactured housing, as long as the replacement manufactured homes are properly anchored and elevated to the base flood elevation.	1,2,3	Restricts facilities where a high density of people reside and who would be required to evacuate and would need drastically increase the need for public shelter space.
Coastal Management Policy 1.3.8.	During the statutorily required evaluation and appraisal process, the County's existing hazard mitigation programs, including those within the Land Development Code, shall be reviewed and revised if necessary to reduce the vulnerability of future development in the coastal storm area. This review shall evaluate the recommendations of existing interagency hazard mitigation reports and the mitigation functions chapter of the Pinellas County Comprehensive Emergency Management Plan.	3	Restrictions, such as limited intense development in Special Flood Hazard Areas, CHHA, and Coastal Storm Areas will reduce property losses and reduce evacuation times and the need for public shelter space.

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Coastal Management Policy 1.3.9.	Consistent with the goals, objectives and policies of this Element and the availability of budgeted funds, the County shall evaluate the acquisition of storm-damaged property in the coastal storm area.	2	Acquisition of properties that are left as open space may help reduce potential losses on adjoining properties as well as reduce the number of repetitive loss properties/areas.
Coastal Management Policy 1.3.10.	By June 1, 2008, Pinellas County shall evaluate the feasibility of limiting the capacity of hospitals, nursing homes, and assisted living facilities proposed to be located within area inundated by a category 3 hurricane as depicted by the <i>SLOSH</i> model, as reflected within the most recent <i>Regional Evacuation Study, Storm Tide Atlas</i> .	1,3	Restricts group facilities where large concentration of people would be required to evacuate and would need drastically increase the need for public shelter space.
Coastal Management Policy 1.3.11	If Pinellas County elects to utilize the provisions of §163.3178(9), F.S., to comply with the State's coastal high-hazard provisions when amending the Pinellas County Comprehensive Plan, any appropriate mitigation that may be required by this section shall be directed at increasing the number of hurricane shelter spaces, unless an alternative mitigation proposal has been approved by the Pinellas County Director of Emergency Management or her/his designee.	1,3	Provide for the reducing the existing public shelter deficit.
Coastal Management Policy 1.3.12.	Mitigation required under Policy 1.3.11. above shall not exceed the amount required for a developer to accommodate impacts reasonably attributable to their development, and shall require Pinellas County and the developer to enter into a binding agreement to memorialize the mitigation plan.	3	Accommodates for any increase for public shelter space or for any increase in evacuation times.
Coastal Management Objective 1.4.	Pinellas County shall restrict public expenditures that subsidize development or redevelopment in the coastal storm area.	1	Restrict public expenditure that may encourage increased future development; minimizes potential losses.
Coastal Management Policy 1.4.1.	County-funded infrastructure shall be prohibited within the coastal storm area except for the following: The expenditure for the maintenance, repair or replacement of existing facilities; or The expenditure for restoration or enhancement of natural resources or public access; or The expenditure needed to address an existing deficiency identified in this plan; or	1	Restrict public expenditure that may encourage increased future development; minimizes potential losses.

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Coastal Management Policy 1.4.1. - continued	The expenditure for the retrofitting of stormwater management facilities for water quality enhancement of stormwater runoff; or The expenditure for the development or improvement of public roads and bridges identified in the Traffic Circulation Element of this plan; or The expenditure for a public facility of overriding public interest to ensure public health, safety, and welfare.	1	Restrict public expenditure that may encourage increased future development; minimizes potential losses. - continued
Coastal Management Policy 1.4.2.	When public infrastructure within the coastal storm area is destroyed or receives damage that equals or exceeds 50 percent of the cost of replacing the facility at its current location, the County shall analyze the feasibility of relocating this infrastructure landward of the coastal storm area. This requirement is included within the Pinellas County Post-Disaster Redevelopment Plan as adopted within the Pinellas County Comprehensive Emergency Management Plan.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.
Coastal Management Policy 1.4.3.	Pinellas County shall not construct bridges or causeways to barrier islands not serviced by such infrastructure at the time of Plan adoption.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.
Coastal Management Policy 1.4.4.	Capital improvements identified the Pinellas County Local Mitigation Strategy (LMS) under the jurisdiction of Pinellas County shall be considered to be incorporated into the Capital Improvements Element of the Pinellas County Comprehensive Plan.	1	Provides consistency between plans.
Coastal Management Objective 1.5.	Between June 2007 and June 2012, the existing deficit of public shelter spaces within the County shall be reduced by five percent.	1,3	Prevents future casualties
Coastal Management Policy 1.5.1.	The County shall coordinate with local jurisdictions and appropriate agencies (including the Tampa Chapter of the American Red Cross) in the development of a countywide plan for increasing the number of public shelter spaces in Pinellas County.	3	Prevents future casualties and reduces the public shelter deficit.

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Coastal Management Policy 1.5.2.	Pinellas County shall expand its coordination efforts within the limits provided by legislative authority to coordinate facility expansion plans and development review with the Pinellas County School Board so that new school facilities and facility expansion will be located and designed to provide hurricane shelters.	3	Prevents future casualties and reduces the public shelter deficit.
Coastal Management Policy 1.5.3.	If the County determines, during its review of a proposed public school site for consistency with the Pinellas County Comprehensive Plan and after consideration of the criteria in Section 235.26(9) of the Florida Statutes, that the site is an appropriate location for a shelter, the final determination of consistency will include a recommendation that the public school be constructed to function as a public emergency shelter.	3	Prevents future casualties and reduces the public shelter deficit.
Coastal Management Policy 1.5.4.	Whenever possible, new or expanded county buildings shall be located, designed, and constructed so that they may be utilized for hurricane shelters.	3	Prevents future casualties and reduces the public shelter deficit.
Coastal Management Policy 1.5.5.	Alternatives to traditional public sheltering shall be developed and promoted through public education by Pinellas County and other appropriate agencies. Alternatives to traditional public sheltering shall include, but not necessarily be limited to, host home programs, inland sheltering, retrofitting of existing structures whenever possible, utilizing refuges of last resort as appropriate, and evacuation of guests from transient accommodations to inland “sister” transient accommodations.	3	Prevents future casualties and reduces the public shelter deficit.
Coastal Management Policy 1.5.6.	Pinellas County shall initiate discussion of new cooperative efforts between the County, municipalities, the Pinellas County School Board, and other appropriate agencies in an attempt to increase the number of public shelters and to reduce the shelter deficit.	3	Prevents future casualties and reduces the public shelter deficit.
Coastal Management Policy 1.5.7.	In order to reduce demand on limited public shelter spaces, Pinellas County shall utilize its public education program to inform Pinellas County residents about safe alternatives to using public shelter during hurricane evacuations.	3	Prevents future casualties and reduces the public shelter deficit.

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Coastal Management Policy 1.5.8.	As a means of identifying solutions to the existing public shelter deficit, Pinellas County shall continue to host occasional emergency shelter workshops, or summits, with affected governments and agencies in updating the status of public shelter availability and capacity.	3	Prevents future casualties and reduces the public shelter deficit.
Coastal Management Policy 1.5.9.	Pinellas County shall participate with the State Division of Emergency Management and regional planning council in updating a regional evacuation study and, within a year of its completion, shall have evaluated any relevant recommendations, including those regarding shelter capacity, for inclusion in the Comprehensive Plan and the Comprehensive Emergency Management Plan.	3	Prevents future casualties; reduces the public shelter deficit; improves upon evacuation times.
Coastal Management Policy 1.5.10.	In assessing shelter space, Pinellas County shall consider the shelter needs of at-risk populations that have special needs, language barriers, and pets.	3	Prevents future casualties and reduces the public shelter deficit.
Coastal Management Goal 2	Pinellas County shall conserve, maintain and restore coastal beach and dune systems to balance the benefits to storm protection, recreation, and the economy with their function as a natural resource.	5	Provides storm protection to minimize property loss.
Coastal Management Objective 2.1.	Pinellas County shall continue to manage its sandy shoreline with the intent of restoring and preserving the natural functions of the beach and dune system.	5	Provides storm protection to minimize property loss.
Coastal Management Policy 2.1.1.	Pinellas County shall continue to restore the developed sandy beaches and dunes primarily via its beach nourishment program; hard engineering structures shall be considered as a second option, to be implemented only if beach nourishment alone is insufficient in maintaining the beach and dune system.	4,5	Provides storm protection to minimize property loss.
Coastal Management Policy 2.1.3.	Pinellas County shall monitor erosion of the County's nourished beaches and continue enhancement based on the results of the monitoring program.	5	Provides storm protection to minimize property loss.
Coastal Management Policy 2.1.5.	Pinellas County will not support shoreline hardening along the sandy beaches and dunes, except where necessary to protect upland property.	5	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate...
Surface Water Management Objective 1.4.	Stormwater deficiencies and flood control improvements will be identified during the development of individual watershed plans	4,5	Identification of needs further identify appropriate actions/projects to improve stormwater management and flood control.

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Surface Water Management Policy 1.5.1.	Pinellas County shall continue to systematically prepare watershed or water body management plans for approval and implementation by the Board of County Commissioners. Such plans shall address water quality, stormwater management, habitat requirements, and biological targets, as well as recommended funding sources.	5	Plans will identify needs and further identify appropriate actions/projects to improve stormwater management and flood control.
Surface Water Management Policy 1.5.2.	Comprehensive watershed and water body management plans shall be developed and implemented in a manner that is unique to the character and condition of each watershed or water body, and shall address, as appropriate, the need for: (1) stormwater, water quality, water quantity, and habitat-related capital projects, (2) public education and citizen involvement, (3) specific management activities including, if necessary, additional regulation and/or incentive based programs, and (4) the necessary monitoring to evaluate the short and long term successes of the overall management program, (5) the implementation of the Total Maximum Daily Load (TMDL) requirements, and (6) opportunities to incorporate recreational opportunities.	5	Plans will identify needs and further identify appropriate actions/projects to improve stormwater management and flood control with maintaining natural functions and providing multiple uses within the limits of the resource.
Surface Water Management Policy 1.6.1.	Pinellas County shall enforce County stormwater regulations requiring new construction, or redeveloped sites other than an individual single family parcel to meet the current applicable stormwater management standards (consistent with the Regulatory Framework section of the Surface Water Management Element).	1	Reduces drainage problems among properties.
Surface Water Management Policy 1.6.3.	By 2010, Pinellas County will amend its Land Development Regulations to require that all parcels of land, other than an individual single family parcel, be able to show that the development or redevelopment of a site meets Pinellas County stormwater regulations or results in improved stormwater treatment when compared to its previous state.	1	Reduces drainage problems among properties.

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Surface Water Management Policy 1.6.4.	As a part of the development review process, individual single-family construction will be reviewed to make sure that onsite construction and regrading do not create an adverse impact on neighboring properties or the County's stormwater system.	1	Reduces drainage problems among properties.
Surface Water Management Policy 1.6.5.	Development and redevelopment projects in Pinellas County shall be reviewed using the most current stormwater models available, to evaluate the project's impacts on adjacent properties, and the local stormwater conveyance system to accommodate the flows associated with the project.	1	Reduces drainage problems among properties.
Capital Improvement Objective 1.2.	Public expenditures that subsidize development in the coastal high-hazard area shall be limited to those improvements that are consistent with applicable goals, objectives, and policies in the Coastal Management, Future Land Use and Quality Communities, Surface Water Management, and Natural Resource, Conservation, and Management Elements of the Pinellas County Comprehensive Plan.	1	Restrict public expenditure that may encourage increase future development; minimizes potential losses.
Capital Improvement Policy 1.2.1.	<p>County-funded infrastructure shall be prohibited within the coastal high-hazard area except for the following:</p> <ul style="list-style-type: none"> <li>the expenditure is for the maintenance, repair or replacement of existing facilities; or</li> <li>the expenditure is for restoration or enhancement of natural resources or public access; or</li> <li>the expenditure is needed to address an existing deficiency identified in this plan; or</li> <li>the expenditure is for the retrofitting of stormwater management facilities for water quality enhancement of stormwater runoff; or</li> <li>the expenditure is for the development or improvement of public roads and bridges identified in the Transportation Element of this plan; or</li> <li>the expenditure is for a public facility of overriding public interest as determined by the Board of County Commissioners.</li> </ul>	1	Restrict public expenditure that may encourage increased future development; minimizes potential losses.

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<b>Land Development Regulations</b>			
Pinellas County Code, Chapter 34, Civil Emergencies	This chapter outlines the authority of emergency declarations and the restrictions that may be imposed. Also, the chapter has provisions that hurricane evacuation plans are required at recreational vehicle parks and at transient accommodation, such as hotels and motels.	3	Provides for process to minimize potential casualties and loss of property. Will assure that visitors and tourists who are not accustomed to dealing with tropical storm events are informed as to emergency evacuation procedures and alternative sheltering options.
Pinellas County Code, Chapter 138, Zoning	Provides for the basic land use and development requirements for residential, commercial, industrial and other development within the unincorporated areas of the County.	1	Provides applicable restrictions of development to reduce casualties, loss of property, the need for increased shelter space and the increase of evacuation times.
Pinellas County Code, Chapter 154, Article II, Drainage Requirements	Provides for complete drainage system requirements that a development needs to follow from site plan through construction phase.	1,2,5	Provides for reduction of potential loss of property and prevents erosion and flooding problems.
Pinellas County Code, Chapter 158, Floodplain Management	Provides for requirements in developing in floodprone areas to protect natural functions of floodplains and to mitigate flood losses. Provides for minimum requirements in order to participate in the National Flood Insurance Program.	1,2,5	Restricts development to prevent property loss and repetitive losses.
Pinellas County Code, Chapter 170, Article III, Flood Damage Prevention	Provides for permit and variance procedures in developing within certain flood hazard zones.	1,2,5	Restricts development to prevent property loss and repetitive losses.
ICC Building Code	The International Code Council Building Code provides specific and consistent construction requirements and product standards for residential and commercial construction that dedicated to building safety and fire prevention. These codes also include higher standards against weather forces specific to our State.	1	Provides for building safety and fire prevention to minimize casualties and property loss
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
Floodplain Management Plan Goal 1	Pinellas County shall preserve, protect, restore, and manage the natural resources of its floodplains to maintain or enhance water quality, plant and animal diversity, and aquatic productivity.	5	Protects natural function of floodplains and wetland areas.
Floodplain Management Plan Goal 2	Pinellas County will protect human life, private property and public investment from the effects of hurricanes and other natural disasters.	1,3	Basic governmental purpose to protect the health, safety and welfare of citizens.

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Floodplain Management Plan Goal 3	Pinellas County shall conserve, maintain, and restore coastal beach and dune systems so as to retain their contributions to storm protection, recreation, natural resources, and economic development.	1,5	Provides storm protection to minimize property loss.
Floodplain Management Plan Goal 4	Pinellas County shall promote a balanced relationship between the natural environment and development.	5	Protects natural function of floodplains and wetland areas, and provides storm protection with minimal capital investment.
Floodplain Management Plan Goal 5	Pinellas County shall ensure that development and redevelopment meets or exceeds all applicable Federal and State minimum building codes and elevation criteria.	1,2	Provides for building safety and fire prevention to minimize casualties and property loss
Floodplain Management Plan Goal 6	Pinellas County shall promote public and private sector awareness and preparation regarding flood hazards.	6	Public awareness campaign will assure that citizenry is informed about their responsibilities for safety and how to prepare property and family for emergency situations.
Floodplain Management Plan Action Plan - Preventive Measures	On an annual basis, the County's existing hazard mitigation programs, including those within the Land Development Code, shall be reviewed and revised if necessary to reduce the vulnerability of development in coastal high-hazard areas. This review shall evaluate the recommendations of existing interagency hazard mitigation reports and the mitigation functions chapter of the Pinellas County Comprehensive Emergency Management Plan.	2	Mitigates flood damage and repetitive loss by requiring new structures and structures with substantial improvements to be built to more stringent standards.
Floodplain Management Plan Action Plan - Preventive Measures	Consistent with Policy 1.3.3 of the Coastal Management Element of the Pinellas County Comprehensive Plan, the County shall not approve any request for residential density above 5.0 units per gross acre on the Future Land Use Map for areas within 100-year floodplains, and the Coastal High Hazard Area.	1	Defines specific areas that may become isolated in a flooding situation therefore exacerbating evacuation efforts and rescue efforts.
Floodplain Management Plan Action Plan - Preventive Measures	Pinellas County shall continue to use a variety of methods for protecting the County's open space areas and natural resources (including wetlands) which include, but are not limited to, the acquisition of open space and environmentally sensitive areas, allowing the Transfer of Development Rights (TDRs), and requiring upland buffers adjacent to wetlands and other natural environments identified in Pinellas County.	1	Mitigating potential flood losses by maintain natural system functions of floodplains and wetlands, and still respecting development rights.

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Floodplain Management Plan Action Plan - Property Protection	As discussed in Chapter V herein, Pinellas County will utilize its Comprehensive Plan, Land Development Code, and other applicable hazard mitigation measures, including appropriate recommendations from interagency hazard mitigation reports, to reduce unsafe conditions and inappropriate uses as opportunities arise, and to limit redevelopment in areas of repeated damage.	2	Mitigates flood damage and repetitive loss by requiring new structures and structures with substantial improvements to be built to more stringent standards.
Floodplain Management Plan Action Plan - Property Protection	Not only shall all development in floodplains and floodways be required to comply with Federal Emergency Management and Federal Insurance Administration standards, it shall also be required to meet those of the additional standards of contained in the Pinellas County Land Development Code and Comprehensive Plan. Such requirements are enumerated herein throughout Chapter V.	2	Limits development within the special flood hazard areas, the Coast High Hazard Area (CHHA), as defined as areas that can be inundated by Category 1 hurricane (per SLOSH model), and the Coastal Storm Area, as defined as encompassing all of the following: the CHHA, land connected to the Pinellas mainland by bridges or causeways, and areas that can be inundated by a Category 2 or greater hurricane and that are surrounded by the CHHA or by the CHHA and a body of water, and land located within the Velocity Zone (per FEMA). Mitigates flood damage and repetitive loss by requiring new structures and structures with substantial improvements to be built to more stringent standards.
Floodplain Management Plan Action Plan - Property Protection	Pinellas County shall continue to implement its existing hazard mitigation programs that include shoreline restoration and enhancement, building code and floodplain regulations, development management techniques such as land use, zoning, and subdivision regulations, and other applicable hazard mitigation measures. Recommendations from interagency hazard mitigation reports may be incorporated at the discretion of the County. These mitigation programs shall be amended, as necessary, to remain consistent with federal and state requirements.	2	Mitigates flood damage and repetitive loss by requiring new structures and structures with substantial improvements to be built to more stringent standards.
Floodplain Management Plan Action Plan - Property Protection	Pinellas County shall prohibit the siting of new or the expansion of existing mobile home development within the Coastal High Hazard Area.	2	Restricts facilities where a high density of people reside and who would be required to evacuate and would need drastically increase the need for public shelter space.

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Floodplain Management Plan Action Plan - Natural Resources Protection	The Board of County Commissioners, in its role as the Pinellas County Water and Navigation Control Authority, shall continue to prohibit dredging and filling or other development activities having significant long-term impacts on the ecological or hydrological function of the floodplains, except in cases clearly in the public interest.	5	Provides for an education campaign to encourage best available practices to promote the benefits of respecting natural systems in Pinellas County.
Floodplain Management Plan Action Plan - Natural Resources Protection	Developers shall be required, through the site plan review process, to incorporate those wetland portions of sites which are within 100-year floodplains as conservation easements.	5	Protects natural function of floodplains and wetland areas.
Floodplain Management Plan Action Plan - Natural Resources Protection	Erosion control regulations and practices, as summarized in Section 5.3 herein, shall continue to be enforced to control sedimentation, to assure the continued efficient operation of the drainage system and to protect streams, lakes, bays, and other water bodies and natural resources from substantial alteration of their natural functions	5	Minimize siltation that may impede upon the natural function of floodplains and wetlands.
Floodplain Management Plan Action Plan - Natural Resources Protection	County-owned beach front property shall be managed to provide for public access, public facilities, and the preservation or enhancement of natural functions in a manner consistent with Goals 2 and 3 of the Coastal Management Element of the Pinellas County Comprehensive Plan and their supporting objectives and policies.	5	Provides storm protection to minimize property loss.
Floodplain Management Plan Action Plan - Natural Resources Protection	The County's process for identifying and prioritizing coastal properties for acquisition shall consider, at a minimum, the following criteria: The degree of environmental significance and pristine condition; Consistency with hazard mitigation requirements; Beach access and management opportunities; and Urban recreational needs	5	Would reduce future potential losses and repetitive losses.
Floodplain Management Plan Action Plan - Natural Resources Protection	Pinellas County shall continue to protect the stability of the dune systems and the beach itself by utilizing construction standards, development regulations and other appropriate measures that minimize man-made impacts on the beach and dune systems.	5	Provides storm protection to minimize property loss.

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Floodplain Management Plan Action Plan - Natural Resources Protection	Wetlands and floodplains shall continue to be preserved through such means as a preservation designation on the Future Land Use Map, and shall be protected as conveyance systems, as well as wildlife and vegetative habitat.	5	Mitigating potential flood losses by maintain natural system functions of floodplains and wetlands.
Floodplain Management Plan Action Plan - Natural Resources Protection	Pinellas County shall continue the role as the lead agency for coordinating and managing beach renourishment/restoration projects.	5	Provides storm protection to minimize property loss.
Floodplain Management Plan Action Plan - Emergencies Services	Pinellas County shall continue to implement its Post-Disaster Redevelopment Plan as part of the Pinellas County Comprehensive Emergency Management Plan, and shall continue to implement hazard mitigation measures, as referenced throughout Chapter V herein, to reduce the exposure of human life and public and private property to natural hazards.	3	Serves to improve upon response plans in the short-term, mid-term, and long-term recovery and reconstruction after a disaster. Mitigation measures encourage preemptive approach to dealing with pending disasters.
Floodplain Management Plan Action Plan - Emergencies Services	Pinellas County shall prohibit the location of new, or expansion of existing hospitals, nursing homes, and assisted living facilities within the Coastal High Hazard Area. The County shall discourage the siting of these facilities within the Evacuation Level B Zone.	3	Restricts group facilities where large concentrations of people would be required to evacuate and would need drastically increase the need for public shelter space.
Floodplain Management Plan Action Plan - Structural Projects	In implementation of, or revisions to, the Pinellas County Stormwater Management Plan, the County shall support the use of natural alternatives, the conservation of and restoration of drainage systems, and the protection and improvement of the quality of receiving waters and their living resources.	4	Reduce drainage problems among properties and protect the natural functions of wetlands, drainage systems, and floodplains.
Floodplain Management Plan Action Plan - Structural Projects	Surface water management projects as well as ongoing operations and maintenance activities shall be carried out consistent with watershed/water body management plans, which are cooperative efforts developed with the participation of state, regional and local agencies and adopted by the Board of County Commissioners.	4	Plans will identify needs and further identify appropriate actions/projects to improve stormwater management and flood control with maintaining natural functions and providing multiple uses within the limits of the resource.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Floodplain Management Plan Action Plan - Structural Projects	The Stormwater Management Plan shall be reviewed annually in order to facilitate revisions to existing schedules and/or identify implementation problems and project modifications; and to facilitate the inclusion of flood and erosion control, water quality and habitat improvement projects in the Capital Improvements Plan.	4	Plans will identify needs and further identify appropriate actions/projects to improve stormwater management and flood control with maintaining natural functions and providing multiple uses within the limits of the resource.
Floodplain Management Plan Action Plan - Public Information	The County shall continue to promote disaster preparedness through activities of the Department of Public Affairs. Such activities shall include the broadcasting of helpful information through the Pinellas County Government Access (PCGA) cable television channel, the generation of feature articles, and maintaining a long-standing relationship with the electronic and print media.	6	Public awareness campaign will assure that citizenry is informed about their responsibilities for safety and how to prepare property and family for emergency situations.
Floodplain Management Plan Action Plan - Public Information	The County shall continue its public awareness campaign in cooperation with the Tampa Bay Regional Council to educate the general public on proper hurricane evacuation procedures.	6	Public awareness campaign will assure that citizenry is informed about their responsibilities for safety and how to prepare property and family for emergency situations.
Floodplain Management Plan Action Plan - Public Information	The Pinellas County Planning Department shall continue the implementation of its outreach projects, information programs, and coordination with the Pinellas County Public Library System, as enumerated in Section 5.6 herein.	6	Public awareness campaign will assure that citizenry is informed about their responsibilities for safety and how to prepare property and family for emergency situations.
<b>Emergency Management</b>			
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	CEMP is the central document detailing procedures by which emergencies are handled.
<b>Other</b>			
Brooker Creek Management Plan, 1993, update 2008	Wildfire Control	4	Provides for prescribed burning to minimize potential for wildfires
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 5- 18: Pinellas Park Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Drainage Element, Policy D.1.2.2	Drainage channels serving drainage basins greater than one square mile shall be sized to contain a 25-year/24-hour storm event within the channel banks. Peak post-development runoff shall not exceed peak pre-development runoff rates.	4	Reduces threat of low level and street flooding during the rainy season.
Drainage Element, Policy D.1.2.3	Closed conduit (storm sewer) systems serving drainage basins greater than one square mile shall be sized so that the hydraulic grade-line is no higher than the inlet grate, inlet throat or rim elevations for a 25-year/24-hour storm event. No surcharging will be allowed.	4	Reduces threat of low level and street flooding during the rainy season.
Drainage Element, Policy D.1.2.4	Drainage channels serving drainage basins less than one square mile shall be sized to contain a 10-year/24-hour storm event within the channel banks. Peak post-development runoff shall not exceed peak pre-development runoff rates.	4	Reduces threat of low level and street flooding during the rainy season.
Drainage Element, Policy D.1.2.5	Closed conduit (storm sewer) systems serving drainage basins less than one square mile shall be sized so that the hydraulic grade-line is no higher the inlet grate, inlet throat or rim elevations for a 10-year/24-hour storm event. No surcharging will be allowed.	4	Reduces threat of low level and street flooding during the rainy season.
Drainage Element, Policy D.1.2.6	Retention or detention facilities shall be sized so that the post-development condition discharge amount does not exceed the pre-development condition discharge amount for a 25-year/24 hour storm event and one foot of freeboard is maintained.	4	Reduces threat of low level and street flooding during the rainy season.
Drainage Element, Policy D.1.2.7	The 100-year/24-hour storm event shall be confined to streets and yards for all new construction in order to protect human life and minimize structural damage.	4	Reduces property loss due to 100-year flood; insures consistency with NFIP policies.
Drainage Element, Policy D.1.2.10	Continue to control encroachment in the 100-year floodplain.	4	Reduces property loss due to 100-year flood; insures consistency with NFIP policies.
Drainage Element, Policy D.1.3.9	The City through the land use planning and development review processes shall control encroachment into the 100 year floodplain.	4	Ensures new or redeveloped properties implement flood protection measures; reduces property loss

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Drainage Element, Policy D.1.5.4	Development shall be prohibited in areas where there are insufficient drainage facilities, unless improvements will be in place at the time of development impact.	1	Reduces property loss through accommodating drainage before development.
Drainage Element, Objective D.1.7	The City of Pinellas Park shall continue to guide floodplain construction, reconstruction and redevelopment within the City.	1	Ensures new or redeveloped properties meet/implant flood protection measures.
Drainage Element, Policy D.1.7.1	The City of Pinellas Park shall implement the Floodplain Management Plan which describes ongoing activities to disseminate information about flood hazards of the area to residents.	6	Through education and implementation the public is instructed on how to prepare for and avoid damage due to flood.
Drainage Element, Policy D.1.7.2	The Floodplain Management Plan will focus on: Availability of Public Information; Mapping and Regulatory Activities; Flood Damage Reduction Activities; and Flood Preparedness.	6	Educates the public on how to prepare or avoid damage due to flood.
Drainage Element, Policy D.1.7.3	The City of Pinellas Park shall complete elevation certificates based upon Finished Floor Surveys (actual construction) for all buildings located within the Special Flood Hazard Area (SFHA). These completed certificates shall be maintained in hard copy form and on computer format, as provided by the Insurance Services Office (ISO).	1	Documentation of elevations in accordance with NFIP/CRS program provides for flood insurance and lower flood insurance rates for residents.
Drainage Element, Policy D.1.7.4	The City of Pinellas Park shall provide flood zone determinations from the latest Flood Insurance Rate Maps (FIRM) to all inquirers for property located within the corporate limits of Pinellas Park.	1	Provision of information in accordance with NFIP/CRS program provides for flood insurance and lower flood insurance rates for residents.
Drainage Element, Policy D.1.7.5	The City of Pinellas Park shall provide inquirers, upon request, verbally or in written form, the following information from the latest FIRM: Community Number; Panel Number and Suffix; Map Revision Date; The FIRM Zone; Base Flood Elevation.	1	Provision of information in accordance with NFIP/CRS program provides for flood insurance and lower flood insurance rates for residents.
Drainage Element, Policy D.1.7.6	All properties located in an SFHA, the City of Pinellas Park shall inform the inquirer that the purchase of flood insurance is mandatory according to the Flood Disaster Protection Act of 1973.	1	Provision of information in accordance with NFIP/CRS program provides for flood insurance and lower flood insurance rates for residents.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Drainage Element, Policy D.1.7.7	The City of Pinellas Park shall be responsible for the review of all development and redevelopment site plans and construction plans for compliance with Stormwater Management regulations.	1	Reduces loss due to flood.
Drainage Element, Objective D.1.8	The City shall continue to educate the community and enhance residents' awareness and preparedness of flood hazards in the City of Pinellas Park in accordance with FEMA Regulations.	6	Provision of information in accordance with NFIP/CRS program provides for flood insurance and lower flood insurance rates for residents.
Drainage Element, Policy D.1.8.1	The City of Pinellas Park shall conduct outreach projects which are produced and distributed throughout the community to enhance resident's awareness and preparedness of flood hazards.	6	Provision of information in accordance with NFIP/CRS program provides for flood insurance and lower flood insurance rates for residents.
Drainage Element, Policy D.1.8.2	A floodplain information section of the City of Pinellas Park Newsletter shall be mailed annually to all addresses within the City.	6	Provision of information in accordance with NFIP/CRS program provides for flood insurance and lower flood insurance rates for residents.
Drainage Element, Policy D.1.8.3	A Floodplain Notice will be prepared and mailed annually to all addresses within the City located in an SFHA. The distribution of this document shall coincide with the start of the rainy season.	6	Provision of information in accordance with NFIP/CRS program provides for flood insurance and lower flood insurance rates for residents.
Drainage Element, Policy D.1.8.4	The Floodplain Notice shall contain information on the following subjects: Local Flood Hazard; Local Flood Hazard Map; Local Flood Warning System; Flood Safety; Flood Insurance; Property Protection; Permit Requirements Substantial Improvement Requirements; and Drainage Maintenance.	6	Provision of information in accordance with NFIP/CRS program provides for flood insurance and lower flood insurance rates for residents.
Drainage Element, Policy D.1.8.5	The City of Pinellas Park shall maintain and annually update in the Reference Section of the public library the following information: a copy of the Flood Insurance Rate Map with an explanation of its use; documents on flood insurance; documents on retrofitting flood prone buildings; documents on community floodplain management and flood hazard mitigation; and a directory of addresses and telephone numbers of local offices that can provide additional information on the above topics.	6	Provision of information in accordance with NFIP/CRS program provides for flood insurance and lower flood insurance rates for residents.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Drainage Element, Policy D.1.8.6	The City of Pinellas Park shall provide the following flood protection assistance: a. Site specific flood and flood related data such as floor elevations, data on historical flooding in the neighborhood, or other similar information that is available; b. Information on how to select a qualified contractor and what recourse people have if they are dissatisfied with a contractor's performance. c. Site visits to review flooding, drainage and storm sewer problems and provide one on one guidance to the property owner. d. Guidance and assistance on retrofitting techniques to the property owner.	6	Provision of information in accordance with NFIP/CRS program provides for flood insurance and lower flood insurance rates for residents.
Drainage Element, Policy D.1.8.7	The City of Pinellas Park shall develop and maintain digitized FIRM maps. These maps shall be updated to include all new revisions to the City's FIRMs, Letters of Map Amendments and Letters of Map Revisions and any changes as appropriate.	1	Ensures that the public is informed about flood hazard and how to address flood hazards.
Drainage Element, Policy D.1.8.8	The City of Pinellas Park shall maintain a database in which the following information is tracked: a. Whether the property is located in an SFHA; b. The specific flood zone of the property; and c. The base flood elevation, if applicable. This information shall be updated to include all new revisions to the City's FIRMs, Letters of Map Amendments, Letters of Map Revisions and any changes as appropriate.	1	Ensures that best possible data is used regarding new development and redevelopment in the City. Use of this data ensures that appropriate construction methods are used and insurance purchased.
Drainage Element, Policy D.1.8.10	The City of Pinellas Park shall update the Pinellas Park Disaster Operations Plan annually.	3	Ensures coordination with Pinellas County Emergency Management.
Drainage Element, Objective D.1.9	The City shall continue to maintain an operationally effective drainage system through inspections and routine maintenance.		Ensures a properly functioning drainage system that won't back up and cause flooding.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Drainage Element, Policy D.1.9.1	The City of Pinellas Park shall be responsible for inspection, maintenance, and removal of debris from the City's drainage system and shall include those canals, ditches, channels, stream enclosures, culverts, bridge openings, street gutters, underground storm sewers, inlets, catch basins and any retention basins over which the City has jurisdictional authority.	4	Ensures a properly functioning drainage system that won't back up and cause flooding.
Drainage Element, Policy D.1.9.2	The City of Pinellas Park will conduct annual inspections of the drainage system and maintain records of inspections and debris removal.	4	Ensures a properly functioning drainage system that won't back up and cause flooding.
Drainage Element, Policy D.1.9.3	The City of Pinellas Park shall prohibit anyone from throwing any garbage, trash or refuse in any stream or other body of water.	4	Ensures a properly functioning drainage system that won't back up and cause flooding.
Land Use Element, Objective LU.1.16	In recognition of the fact that a portion of the City of Pinellas Park is located within the Coastal High Hazard Area (CHHA), as defined by Section 9J-5.003(19), F.A.C., the City shall, to the extent practical, limit public expenditures that subsidize development only to existing or future development which is consistent with the Future Land Use Map adopted with this plan.	1	Limits the exposure to flood damage.
Land Use Element, Policy LU.1.21.17	Recognizing that the CHHA within the City of Pinellas Park lies within the 100 year floodplain of the Cross Bayou Canal, the City shall enforce all appropriate federal, state, and local construction codes appropriate for such location.	1	Limits the exposure to flood damage.
Land Use Element, Policy LU.1.21.18	The City shall maintain the adopted densities or intensities and continue to implement growth management measures which limit densities or intensities of use within the CHHA consistent with the Future Land Use Element of this Comprehensive Plan.	1	Limits the exposure to flood damage.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text/Description	LMS Goal	Evaluation
OBJECTIVE LU .1.20	Through the Land Use Plan and <i>Land Development Code</i> , the City shall regulate the types and intensities of uses within those areas that have been identified as being subject to periodic flooding.	1	Limits exposure to flooding.
POLICY LU.1.20.2	The density and/or intensity of use shall not be increased within the Coastal Storm Area.	1	Limits exposure to flooding.
POLICY LU.1.20.3	Development or redevelopment in areas that have been identified as being subject to periodic flooding shall be consistent with the requirements of the National Flood Insurance Program and of the Flood Damage Control provisions of the <i>Land Development Code</i> .	1	Limits exposure to flooding.
OBJECTIVE LU.1.21	The City shall restrict development within the Coastal Storm Area, and shall direct population concentrations out of the Coastal Storm Area.	1	Limits exposure to flooding.
POLICY LU.1.21.1	The coastal high-hazard area (CHHA) shall be the area defined by the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model to be inundated from a category one hurricane, as reflected in the <i>Tampa Bay Region Hurricane City of Pinellas Park, Florida 19 Goals, Objectives and Policies - 2012 Evacuation Study, Storm Tide Atlas</i>	1	Limits exposure to flooding.
POLICY LU.1.21.2	The Coastal Storm Area of the City shall be the area that encompasses all of the following: a. The Coastal High Hazard Area (CHHA), defined as the category 1 storm surge line as established by the Sea, Lake and Overland Surges from Hurricanes (SLOSH) computerized storm surge model for the Tampa Bay Basin; and b) Those isolated areas that are depicted by the SLOSH model to be isolated within or surrounded by the CHHA or by the CHHA and a body of water.	1	Limits exposure to flooding.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text/Description	LMS Goal	Evaluation
POLICY LU.1.21.4	The City shall prohibit the location of new, or expansion of existing hospitals, nursing homes, and assisted living facilities within the coastal storm area.	1	Limits exposure to flooding.
POLICY LU.1.21.5	The City shall not approve any request to amend the Future Land Use Map (FLUM) to designate parcels of land within the coastal storm area with a FLUM category that permits more than 5.0 dwelling units per gross acre.	1	Limits exposure to flooding.
POLICY LU.1.21.6	Dwelling units may not be reallocated to property within the coastal storm area from other properties within the coastal storm area, or from other properties outside the coastal storm area.	1	Redirects exposure to flooding.
POLICY LU.1.21.7	The land development regulations will be amended to allow the transfer of development rights from property within the coastal storm area, to designated property in suitable areas outside the coastal storm area, in accordance with the Land Use Element, Future Land Use Map Category descriptions, and land development regulations of the City of Pinellas Park.	1	Redirects exposure to flooding.
POLICY LU.1.21.19	The City shall restrict public expenditures for infrastructure in the coastal storm area, with the exception of maintenance, repair, and replacement of existing facilities; expenditures for protection, restoration, or enhancement of natural resources or public access; or expenditures for a public facility of overriding public interest to ensure public health, safety, and welfare.	1	Limits exposure to flooding.
POLICY C.1.2.6	The City shall continue to protect and conserve the natural functions of soils, wildlife habitats, lakes, floodplains, and wetlands	5	Protects floodplains

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text/Description	LMS Goal	Evaluation
POLICY C.1.3.2	The City shall continue to, through the land use planning and development review processes, conserve and protect wetlands and floodplains from detrimental physical and hydrological alteration.	1	Protects floodplains
POLICY D.1.2.10	Continue to control encroachment in the 100-year floodplain.	1	Limits exposure to flooding
POLICY D.1.3.9	The City through the land use planning and development review processes shall control encroachment into the 100-year floodplain.	1	Limits exposure to flooding
POLICY D.1.8.2	A floodplain information section of the City of Pinellas Park Newsletter shall be distributed annually to all addresses within the City.	6	Public Outreach and Education
POLICY D.1.8.3	A Floodplain Notice will be prepared and distributed annually to all addresses <b>City of Pinellas Park, Florida 75 Goals, Objectives and Policies – 2012</b> within the City located in an SFHA. The distribution of this document shall coincide with the start of the rainy season.	6	Public Outreach and Education
POLICY D.1.8.4	The Floodplain Notice shall contain information on the following subjects: Local Flood Hazard; Local Flood Hazard Map; Local Flood Warning System; Flood Safety; Flood Insurance; Property Protection; Permit Requirements Substantial Improvement Requirements; and Drainage Maintenance.	6	Public Outreach and Education

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text/Description	LMS Goal	Evaluation
POLICY D.1.8.6	The City of Pinellas Park shall provide the following flood protection assistance: a. Site-specific flood and flood-related data such as floor elevations, data on historical flooding in the neighborhood, or other similar information that is available; b. Information on how to select a qualified contractor and what recourse people have if they are dissatisfied with a contractor's performance. c. Site visits to review flooding, drainage, and storm sewer problems and provide one-on-one guidance to the property owner. d. Guidance and assistance on retrofitting techniques to the property owner.	6	Public Outreach and Education
OBJECTIVE D.1.9	The City shall continue to maintain an operationally effective drainage system through inspections and routine maintenance.	4	Protects natural function of floodplains and wetland areas.
POLICY D.1.9.1	The City of Pinellas Park shall be responsible for inspection, maintenance, and removal of debris from the City's drainage system and shall include those canals, ditches, channels, stream enclosures, culverts, bridge openings, street gutters, underground storm sewers, inlets, catch basins, and any retention basins over which the City has jurisdictional authority.	4	Ensures proper maintenance of the drainage system.
POLICY D.1.9.2	The City of Pinellas Park will conduct annual inspections of the drainage system and maintain records of inspections and debris removal.	4	Ensures proper maintenance of the drainage system.
POLICY D.1.9.3	The City of Pinellas Park shall prohibit anyone from throwing any garbage, trash, or refuse in any stream or other body of water.	4	Ensures proper maintenance of the drainage system.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Land Development Regulations</b>			
Article 1	Adoption of Subdivision Codes.	1	Promotes appropriate utilization of land; limits nuisance and harmful impacts upon abutting properties.
Article 2	Sets forth the drainage requirements for the City of Pinellas Park.	1,4	All new or substantially altered structures or properties must comply.
Article 8	Adoption of a Floodplain Management Ordinance.	1, 4	Requires that new construction or substantial improvements meet specific requirements to mitigate flood damage.
Article 11	Adoption of National Fire Prevention Codes.	1	Requires that structures meet the minimum fire codes.
Article 15	Adoption of Zoning Codes.	1	Promotes appropriate utilization of land; limits nuisance and harmful impacts upon abutting properties.
Section 18-901	Adoption of Building, Life Safety, Electrical, Gas, Mechanical, Plumbing and Housing Codes.	1	Requires that structures meet minimum building standards so that damage is reduced.
Section 18-911	Requires that all new structures be at 24 inches and above the highest elevation of any abutting road, but not less than the base flood elevation.	1	Moves new structures out of the floodplain.
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
CRS Activity 310	City maintains Elevation Certificates for new and substantially improved structures in the community.	1	Ensures that structures are properly elevated.
CRS Activity 320	Flood Insurance Rate Map information is provided free of charge to all persons requesting such material. Information is provided either verbally or through formal letters depending upon the individual's needs. This service is advertised communitywide.	1	Ensures that information is provided to individuals and businesses.
CRS Activity 330	Public outreach projects include letters, brochures and booklets with information on hurricane preparedness, hazard mitigation, flooding and flood zones.	6	Provides necessary educational materials to the public.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CRS Activity 350	Flood protection information is provided through the Pinellas Park Library, through information located in the Planning Office and through the City's website.	6	Provides necessary educational materials to the public.
CRS Activity 360	City staff provides technical flood-related data and assistance to residents, property owners, contractors and consultants.	6	Ensures proper education on flood-related issues.
CRS Activity 420	The City continues to preserve open space in the floodplain. When the City acquires land in the floodplain it is typically dedicated in perpetuity for open space or recreational purposes.	1,2	Ensures that encroachment into floodplain is minimized.
CRS Activity 430	The City's Drainage Code and Flood Damage Control Code provide higher regulatory standards than what the NFIP calls for.	1	Ensures that structures are properly elevated.
CRS Activity 440	The City maintains a drainage-way maintenance system database and a known flooding event database.	1	Ensures availability of information on current conditions.
CRS Activity 450	Minimum Finished Floor Elevation (FFE) must be no less than twenty-four (24) inches above the centerline of any abutting street, not including median strips. When the structure is within the Special Flood Hazard Area (SFHA), the minimum FFE must be either the Base Flood Elevation (BFE) or twenty-four (24) inches above the centerline of the abutting road, whichever is higher.	1	Ensures that structures are properly elevated.
CRS Activity 503	Repetitive Loss Area Property Protection Notices are sent to approximately 800 addresses.	6	Provides necessary educational materials to the public.
CRS Activity 510	The LMS serves as the City's Floodplain Management Plan and the City continues to support the LMS Committee.	1	Ensures that proper planning for disasters is undertaken.
CRS Activity 520	All structures the City has acquired in the floodplain due to flooding issues have been removed and the property then cleared and dedicated in perpetuity for open space and recreational purposes.	2	Ensures that encroachment into floodplain is minimized.
CRS Activity 540	The City mows and cleans all drainage channels within the City's jurisdiction. Regulations prohibiting stream dumping are enforced.	4	Ensures proper maintenance of the drainage system.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CRS Activity 610	As part of a major metropolitan area there is a multi-tiered system of flood warning. The tiers include Urban Flood Advisories and Warnings from the National Weather Service, regional warnings through the Pinellas County Division of Emergency Management, and localized flood warnings for hazardous locations throughout the community.	3	Ensures a coordinated and effective response to a disaster.
CRS Activity 630	Although the City has no dams within its jurisdiction, it receives dam credit from the State of Florida.	1	Reduces probability of dam failure. CRS credit provided for any community in a State with a dam safety program that has submitted the necessary documentation of its program to the Federal Emergency Management.
<b>Emergency Management</b>			
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	Ensures a coordinated and effective response to a disaster.
Pinellas Park Hurricane Response Plan	Provides City department level responsibilities to dealing with a hurricane.	3	Ensures a coordinated and effective response to a hurricane.
Pinellas Park Disaster Response and Recovery Plan	Provides City employees with guidelines to emergency operations. Includes flood response, hazardous materials, terrorism, tornadoes, drought, civil disturbance and wildfires.	3	Ensures a coordinated and effective response to a disaster.
<b>Other</b>			
Annual Budget	Drainage improvements, stormwater facilities rehabilitation and pipe lining projects.	4	Optimizes the flow of stormwater.
Annual Budget	Inspection, rehabilitation and relining of sewer pipes.	4	Minimizes mixing of stormwater with effluent.
National Incident Management System (NIMS) Compliance	NIMS "provides a consistent nationwide template to establish Federal, State, tribal and local governments and private sector and nongovernmental organizations to work together effectively and efficiently to prepare for, prevent, respond to and recover from domestic incidents...."	3	Enhances manner in which local governments cooperate with other layers of government in recovering from a disaster.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Association of State Flood Plain Managers (ASFPM) Certified Floodplain Manager Program (CFM) Program.	ASFPM's CFM Program helps "reduce the nation's flood losses and protect and enhance the natural resources and functions of its floodplains by improving the knowledge and abilities of floodplain managers in the United States."	6	Enhances abilities of local officials dealing with flood plain issues.
Florida Building Code 2010	The Florida Building Code (FBC) 2010 has adopted ASCE Standard 24-05 - Flood Resistant Design and Construction. The FBC by way of 24-05 has incorporated the NFIP construction requirements for all construction occurring within the Special Flood Hazard Area.	6	Requires that new construction or substantial improvements meet specific requirements to mitigate flood damage and establishes a 1 foot freeboard.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 5- 19: Redington Beach Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element (FLUE), Goal 1	Ensure that the residential and family character of the Town of Redington Beach is maintained and protected while maximizing the potential for economic benefit resulting from enhanced property values, seasonal visitors, and the tourist trade and the enjoyment of natural and man-made resources by citizens and visitors alike, and minimizing the threat to health, safety, and welfare posed by hazards, nuisances, incompatible land uses, and environmental degradation.	1, 3	Basic governmental purpose to protect the health, safety and welfare of citizens.
FLUE Policy 1.1.2	Residential areas shall be located and designed to protect life and property from natural and manmade hazards such as flooding, excessive traffic, subsidence, noxious odors, and noise.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains.
FLUE Policy 1.5.3	Public facilities and utilities shall be located so as to maximize the efficiency of services provided; to minimize their cost; and to minimize their impacts on the natural environment.	1, 4	Promote best available practices to lessen construction costs of re-engineering natural systems; restrict expenditure of public funds in areas prone to natural disaster, reducing the potential for replacement costs.
FLUE Objective 2.1	The Town shall implement development regulations that protect and preserve the natural functions of the coastal area.	1, 5	Minimize the adverse impacts of development on natural systems, thereby reducing potential impacts from natural disasters.
FLUE Policy 2.1.1	All development along the coastline shall be in accordance with the coastal construction setback line as established by the State of Florida, the Town of Redington Beach, or other appropriate governmental agencies.	1, 5	Provides consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources; assure compliance with federal, state, and local regulations to reduce potential losses from natural disasters.
FLUE Policy 2.1.2	Prohibit all development and other activities which disturb the coastal dune system.	5	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate.
FLUE Policy 2.1.3	The land development regulations shall continue to protect the coastal dune system through restoration and maintenance provisions.	5	Minimize the adverse impacts of development on natural systems, thereby reducing potential impacts from natural disasters.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
FLUE Policy 2.1.4	Sensitive coastal resources shall be protected from immediate and future degradation and erosion resulting from improper development practices and recreational misuse.	1, 5	Minimize the adverse impacts of development on natural systems, thereby reducing potential impacts from natural disasters.
FLUE Policy 2.1.5	Beach stabilization projects, preferably utilizing vegetation as the stabilizing medium, shall be incorporated into development plans, where appropriate.	1, 4, 5	Minimize the adverse impacts of development on natural systems, thereby reducing potential impacts from natural disasters.
FLUE Policy 2.1.6	Sand dunes and native vegetation shall be utilized to stabilize shorelines and protect upland areas from flooding hazards. Where seawall construction is unavoidable, said construction shall be compatible with seawall construction on adjacent property in terms of height and setback, whenever possible.	1, 5	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate...
FLUE Policy 2.1.7	Participate in the beach restoration program established by Pinellas County.	5	Provides storm protection to minimize property loss.
FLUE Objective 2.2	The Town shall limit public expenditures that subsidize development permitted in the Coastal Storm Area except for restoration or enhancement of natural resources.	1	Restrict public expenditures that may encourage increase in future development; minimizes potential losses.
FLUE Policy 2.2.1	The Town of Redington Beach shall recognize the Coastal High Hazard Area as that portion of the community below the elevation of the category 1 storm surge line as established by the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. However, the Coastal High Hazard Area defined by the Pinellas Planning Council <i>Countywide Plan Rules</i> , and defined in Policy 2.2.2 as the Coastal Storm Area, shall be the regulatory standard for the Town of Redington Beach and shall be depicted on the Future Land Use and Transportation Map.	3	Redefines Coastal High Hazard Area to be consistent with Florida Statutes.
FLUE Policy 2.2.2	The Coastal Storm Area is defined as the area that includes the following: <ol style="list-style-type: none"> <li>1. the Coastal High Hazard Area,</li> <li>2. any area surrounded by the CHHA or by the CHHA and a body of water, and</li> <li>3. all areas located within the Velocity Zone as designated by the Federal Emergency Management Agency.</li> </ol>	3	Defines specific areas that may become isolated in a flooding situation therefore exacerbating evacuation efforts and rescue efforts.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
FLUE Policy 2.2.3	The Town shall not support or finance new local transportation corridors which lie within the Coastal Storm Area, although existing corridors may be maintained or improved as necessary to protect the health, safety and welfare of residents.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.
FLUE Policy 2.2.4	The Town shall not support sewer and water line extensions or expansions within the Coastal Storm Area which will encourage future growth or higher densities in those vulnerable areas.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.
FLUE Objective 2.3	Due to its location in the Coastal Storm Area, the Town shall not increase permanent densities above those established in this comprehensive plan, as delineated by <i>Map 5, Future Land Use and Transportation</i> .	1, 3	Helps keep population "out of harm's way" and lessens the demand on evacuation routes and for additional public shelter space by directing population to non-evacuation areas.
FLUE Policy 2.3.1	The Town of Redington Beach, acknowledging its particular vulnerability to coastal hazards as a barrier island community, recognizes the entire town as within the Coastal Storm Area and the first geographic area to be evacuated in the event of a hurricane threat.	3	Reduce potential casualties by providing assistance to populations that have a disadvantage that may jeopardize themselves and their families.
FLUE Policy 2.3.2	The Town shall maintain or reduce allowable density in the Coastal Storm (the entire island community) consistent with the Future Land Use and Transportation Map of this comprehensive plan.	1, 3	Helps keep population "out of harm's way" and lessens the demand on evacuation routes and for additional public shelter space by directing population to non-evacuation areas.
FLUE Policy 2.3.3	The Town shall implement a program of public land acquisition and management for recreation, conservation and preservation within the Coastal Storm Area.	1,2 5	Acquisition of properties that are left as open space may help reduce potential losses on adjoining properties as well as reduce the number of repetitive loss properties/areas.
FLUE Policy 2.3.4	The Town shall review federal and state development projects which are to be located within the Coastal Storm Area, and support those projects which are consistent with this plan.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.
FLUE Policy 2.3.5	Special care facilities shall not be located in the Coastal Storm Area unless adequate provisions for safe and efficient evacuation and shelter are ensured.	1, 3	Restricts group facilities where large concentrations of people would be required to evacuate and would drastically increase the need for public shelter space.

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
FLUE Policy 3.1.4	<p>The land development regulations shall contain specific and detailed provisions required to implement this comprehensive plan, which, at a minimum:</p> <ol style="list-style-type: none"> <li>1. Regulate the subdivision of land;</li> <li>2. Protect marine wetlands remaining in and around the community and those lands designated as Preservation on the Future Land Use and Transportation Map;</li> <li>3. Regulate signage;</li> <li>4. Ensure that all development is consistent with Federal Flood Insurance regulations;</li> <li>5. Ensure that all development is consistent with those coastal construction regulations as may be adopted or amended by the State of Florida, Pinellas County, or the Town of Redington Beach;</li> <li>6. Ensure the compatibility of adjacent land uses and provide for adequate and appropriate buffering;</li> <li>7. Provide for drainage and stormwater management, based on the minimum criteria established by the Southwest Florida Water Management District, the Town of Redington Beach or other appropriate governmental agencies;</li> <li>8. Provide requirements for the provision of open space, and safe and convenient on-site traffic flow and parking requirements;</li> <li>9. Encourage the use of native vegetation in the landscaping of multi-family and commercial developments; and</li> <li>10. Provide provisions for the control of erosion and runoff from construction sites.</li> <li>11. Promote green building techniques and materials.</li> </ol>	1, 5	Provide for consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources; assure compliance with federal, state, and local regulations to reduce the potential for losses from natural disasters.
Housing Element (HE) Objective 1.6	The useful life of the existing housing stock will be conserved and extended, where the structures are in compliance with Federal Emergency Management Agency (FEMA) regulations, and neighborhood quality will be improved.	1	Compliance with FEMA regulations will minimize the potential for damage or losses to property and lives.
HE Policy 1.6.1	The Town shall ensure that as existing housing is replaced by redevelopment, this new construction is compliant with all applicable FEMA regulations for residential construction.	1, 5	Enforces preventive measures to minimize damage from floods.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Infrastructure Element (IE) Goal 2	To endeavor to provide an efficient drainage system which protects human life, minimizes property damage, and improves stormwater quality and on-site retention.	1, 4	Reduces drainage problems within the Town.
IE Objective 2.1	The Town shall seek to improve the stormwater drainage system located within its municipal boundaries.	1, 4	Reduces drainage problems within the Town.
IE Policy 2.1.1	Ensure that surface cover vegetation loss during construction is minimized or replaced to reduce erosion and flooding.	5	Minimize siltation that may impede upon the natural function of floodplains and wetlands.
IE Policy 2.1.4	Implement the town's Watershed Management Plan in conjunction with the Southwest Florida Water Management District to address existing drainage and flooding conditions.	1, 4	Reduces drainage problems within the Town.
IE Policy 2.2.1	All development activity shall adhere to the level-of-service standard for drainage requirements of the 25 year, 24 hour rainfall storm design standard.	1, 4	Reduces drainage properties within the Town.
IE Policy 2.2.4	<p>The land development regulations shall continue to enforce provisions which, at a minimum, protect natural drainage features found within the Town as follows:</p> <ol style="list-style-type: none"> <li>1. All applications for development approval within those areas identified as coastal high hazard area shall undergo site plan review;</li> <li>2. The flood-carrying and flood storage capacity of the 100-year floodplain shall be maintained;</li> <li>3. Development along Boca Ciega Bay shall maintain adequate setbacks to maintain any existing areas of natural coastal/marine habitat;</li> <li>4. The prevention of erosion, retardation of runoff and protection of natural functions and values of the floodplain shall be considered while promoting public usage; and</li> <li>5. The Town shall require development or redevelopment proposals to be consistent with the performance standards regulating development within the designated floodplain.</li> </ol>	1, 4	Implementing the stormwater management system will reduce potential drainage problems; avoid siltation build-up will prevent back-up of stormwater runoff, reducing risk of flooding.
IE Policy 2.3.1	The Town shall assess existing conditions and recommend modifications or cures to relieve existing drainage problems.	4, 5	Identification of needs further identify appropriate actions/projects to improve stormwater management and flood control.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Conservation and Coastal Management Element (CCME) Goal 1	To ensure the highest environmental quality possible, the Town of Redington Beach shall conserve, protect and appropriately manage its natural resources (aquatic, wetland, and terrestrial).	5	Protects natural function of floodplains and wetland areas.
CCME Policy 1.1.4	The Town shall protect water storage and water quality enhancement functions of wetlands and floodplain areas through acquisition, enforcement of laws and the application of land and water management practices which provide for compatible uses.	1, 2, 5	Protects natural function of floodplains and wetland areas.
CCME Objective 1.2	The Town shall continue to strictly enforce regulations for development within the 100-year floodplain.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses.
CCME Policy 1.2.1	Recognizing that the community is located within the 100-year floodplain, the Town shall strictly enforce all appropriate flood regulations.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses.
CCME Policy 1.2.2	The Town shall protect the natural functions of the 100-year floodplain so that the flood-carrying and flood storage capacity are maintained.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses.
CCME Policy 1.2.3	The Town shall continue to enforce its floodplain ordinance.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses.
CCME Policy 1.2.4	The Town shall enforce land development regulations which recognize the limitations of development on a barrier island (e.g., 100-year floodplain, vulnerability to tropical storms, topography and soil conditions).	1, 5	Protects natural function of floodplains and wetland areas.
CCME Objective 1.3	The Town shall conserve or improve wetlands, aquatic resources, and wildlife population and habitat to maintain their environmental and recreational value.	5	Protects natural function of floodplains and wetland areas.
CCME Policy 1.3.1	Natural areas such as mangroves and marshes shall be designated as Preservation on the Future Land Use and Transportation Map (see Appendix 1).	5	Protects natural function of floodplains and wetland areas.
CCME Policy 1.3.2	All existing marine wetlands shall be identified as Preservation land as set forth on the Marine Resource Map (Appendix 1).	5	Protects natural function of floodplains and wetland areas.
CCME Policy 1.3.4	The town's existing wetlands shall be conserved and protected from physical and hydrological alterations.	5	Protects natural function of floodplains and wetland areas.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 1.3.5	Marine wetlands, barrier island property containing numerous vegetative communities and/or shoreline locations with limited habitat diversity shall be considered priorities for environmental land acquisition.	2, 5	Protects natural function of floodplains and wetland areas.
CCME Policy 1.4.3	The Town, through the provision of public information, shall encourage shorelines lacking wetland vegetation to be planted with native vegetation in order to minimize potential flood damage, stabilize the shoreline, trap sediments and other non-point source pollutants, and provide additional habitat for fish and wildlife.	4, 5, 6	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate...
CCME Policy 1.4.7	Although limited natural resources remain in the Town of Redington Beach, every effort shall be taken to protect these resources as follows:  1. Recreational development shall be compatible with the surrounding environment and shall be subject to performance standards adopted in land development regulations;  2. The clearing of trees and wetland vegetation shall be prohibited, unless specifically permitted; and  3. All applications for development approval shall be subject to <u>site plan review</u> .	5	Protects natural function of wetland areas.
CCME Objective 1.10	The Town of Redington Beach shall protect and restore its beaches, dunes and natural system and establish construction standards which minimize the impacts of man-made structures on these systems.	5	Provides storm protection to minimize property loss.
CCME Policy 1.10.1	Construction seaward of the Coastal Construction Control line shall be subject to the permitting procedures pursuant to the Laws of Florida.	5	Provides storm protection to minimize property loss.
CCME Policy 1.10.2	Ensure that coastal vegetative communities, coastal wildlife habitats, and dune systems are protected from the adverse effects of development.	1, 5	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate...
CCME Policy 1.10.3	Where existing waterways are not sea walled, native marine vegetation shall be used for shoreline stabilization where technically feasible.	5	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate.
CCME Policy 1.10.4	The planting of native marine vegetation in front of the seawall to act as a natural buffer is encouraged.	5	Provides storm protection to minimize property loss.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 1.10.5	A dune preservation zone shall be established by development regulations to protect the primary dunes, which shall address prohibitions on excavations, destruction of native vegetation, and activities which affect the natural fluctuation of the dunes.	1, 5	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate...
CCME Goal 2	The Town shall provide a set of guidelines for development that protect the lives and property of its residents from the effects of natural hazards.	1	Basic governmental purpose to protect the health, safety and welfare of citizens.
CCME Objective 2.1	The Town shall maintain or reduce hurricane clearance times.	3	Reducing evacuation times is important to reducing potential casualties.
CCME Policy 2.1.1	The Town shall coordinate with state, regional and county agencies to ensure that major evacuation routes are adequately maintained and, when necessary, improved to facilitate an efficient and safe evacuation.	3	Higher priority of construction projects along evacuation routes will assure adequate capacity to reduce evacuation times.
CCME Policy 2.1.2	The Town, in cooperation with the Pinellas County Department of Emergency Management and the South Pinellas County Chapter of the American Red Cross and the other island communities, shall sponsor annual hurricane preparedness seminars to increase hurricane awareness.	3, 6	Public awareness campaign will assure that citizenry is informed about their responsibilities for safety and how to prepare property and family for emergency situations.
CCME Policy 2.1.3	Town emergency response personnel and volunteers shall coordinate with county and state emergency response agencies in emergency planning, including communications, traffic control, and warning operations, to effect a safe and efficient evacuation of the Town.	3	Assures that emergency response personnel and volunteers are informed as to their responsibilities and assures a safe and efficient response.
CCME Objective 2.2	The Town shall reduce the risk of exposure of human life and public and private property to natural disasters through preparedness planning and implementation of hazard mitigation measures.	1, 2, 3	Implementation of emergency plans in the short-term, mid-term, and long-term recovery; provides for new safer technology during reconstruction after a disaster. Mitigation measures encourage preemptive approach to dealing with pending disasters.
CCME Policy 2.2.1	The Town, in coordination with the Pinellas County Department of Emergency Management, shall maintain and upgrade its hurricane evacuation plan which shall address the four phases of comprehensive emergency management: preparedness, response, recovery and mitigation.	3	Coordinate with the county and other local communities will improve response plans in the short-term, mid-term, and long-term recovery and reconstruction after a disaster. Mitigation measures encourage preemptive approach to dealing with pending disasters.

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Policy 2.2.2	Continue to oversee the development or revision of a hurricane plan; act as a liaison between state, regional, county and town emergency response and planning agencies; and ensure coordination between emergency management and development management activities in the town.	1, 2, 3, 5	Periodic review assesses consistency among plans and effectiveness of implementing programs and projects.
CCME Policy 2.2.3	The Town Commission shall review all elements of the Pinellas County Local Mitigation Strategy to assure that hazard mitigation considerations are effective and implemented within its area of responsibility.	1, 2, 3	Periodic review assesses consistency among plans and effectiveness of implementing programs and projects.
CCME Goal 3	The Town shall expedite post-disaster recovery and reduce the future risk to human life and public and private property from natural hazards through recovery and redevelopment strategies.	1, 3	Provides for efforts to minimize losses and encourages efforts to return to normalcy.
CCME Objective 3.1	The Town shall designate a Recovery Task Force to hear Preliminary damage assessments and direct post-disaster recovery and redevelopment activities.	3	Crucial decisions need to be made in a timely manner to Minimize losses. Plan to establish duties of task forces will aid in recovery.
CCME Policy 3.1.1	The Recovery Task Force shall consist of the Town Emergency Management Coordinator, the Building and Inspection Department and other members as appointed by the Board of Commissioners.	3	Crucial decisions need to be made in a timely manner to minimize losses. Plan to establish duties of task forces will aid in recovery.
CCME Policy 3.1.2	The Recovery Task Force shall fulfill the following responsibilities, as well as others deemed necessary: <ol style="list-style-type: none"> <li>1. Hear preliminary damage reports;</li> <li>2. Take necessary steps to seek financial assistance from the appropriate state and federal agencies;</li> <li>3. Authorize immediate clean-up and repairs necessary to protect the public health, safety and welfare;</li> <li>4. Identify areas within the community where minor, moderate and major damage has occurred;</li> <li>5. Recommend to the Board of Commissioners temporary building moratoria for building activities not essential to protect health, safety and welfare;</li> <li>6. Recommend to the Board of Commissioners appropriate hazard mitigation policies which should be implemented in response to the disaster; and</li> <li>7. Prepare a report evaluating post-disaster redevelopment response and make recommendations for necessary changes to this comprehensive plan.</li> </ol>	3	Crucial decisions need to be made in a timely manner to minimize losses. Plan to establish duties of task forces will aid in recovery.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CCME Objective 3.2	Maintain a set of reconstruction permitting procedures.	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts
CCME Policy 3.2.1	Following a major hurricane event, the Board of Commissioners will adopt a temporary post-disaster building moratorium to allow sufficient time for immediate damage assessment, the identification of redevelopment opportunities, and hazard mitigation policy implementation.	1, 3	Provides for efforts to minimize losses and encourages efforts to return to normalcy.
CCME Policy 3.2.2	The Town shall adopt a post-disaster procedure which will expedite permitting for minor repairs. The procedure shall include development plan review, engineering approval and building permitting and shall provide that all permitting is coordinated with the appropriate agencies and consistent with the objectives of this comprehensive plan.	3	Provides for efforts to minimize losses and encourages efforts to return to normalcy.
CCME Objective 3.3	The Town shall address key reconstruction and redevelopment strategies which will be used to promote hazard mitigation.	1, 3	Provides for efforts to minimize losses and encourages efforts to return to normalcy.
CCME Policy 3.3.1	Where financially feasible, property which has received recurring major hurricane damage (total devastation) from storm surge should be publicly acquired or designated preservation on the Future Land Use Map to prevent redevelopment of the property to its pre-hurricane land use.	1, 2, 5	Acquisition of properties that are left as open space may help reduce potential losses on adjoining properties as well as reduce the number of repetitive loss properties/areas.
CCME Policy 3.3.2	The Town shall interrelate hazard and non-hazard mitigation goals during reconstruction decision-making including the following objectives: <ol style="list-style-type: none"> <li>1. Enhancement of local recreational and open space opportunities;</li> <li>2. Enhancement of local beach access;</li> <li>3. Enhancement and restoration of local natural ecosystems;</li> <li>4. Reduction of traffic congestion, noise, and other transportation related problems; and</li> <li>5. Enhancement of the long-term economic vitality of the local commercial base.</li> </ol>	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts
Recreation and Open Space Element (ROSE) Policy 1.3.3	Open space in parks shall be maintained to protect and preserve native habitats and provide passive recreation opportunities.	5	Protects natural systems to prevent or minimize damage.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Intergovernmental Coordination Element (ICE) Policy 2.2.11	The Town will coordinate proposed future land use plan policies related to hurricane shelters and evacuation routes, as well as map amendments resulting in an increase in population within the Coastal Storm Area, with the TBRPC and the Pinellas County Emergency Management Department in order to determine hurricane shelter space availability and the effect of increased evacuating populations on evacuation clearance times and routes.	3	Prevents future casualties and reduces the public shelter deficit.
ICE Objective 2.3	The Town shall participate in the establishment and implementation of an intergovernmental coordination mechanism to protect coastal resources which shall address natural systems on a system-wide basis regardless of political boundaries.	1, 5	Minimize the adverse impacts of development on natural systems, thereby reducing potential impacts from natural disasters.
ICE Policy 2.3.1	The Town shall be involved in proceedings to develop joint planning and management programs with the neighboring municipalities for hurricane evacuation, provision of public access, provision of infrastructure, controlling stormwater, protection of wetland vegetation and coordinating efforts to protect species with special status.	1, 3	Restrictions, such as limited intense development in Special Flood Hazard Areas, CHHA, and Coastal Storm Areas will reduce property losses and reduce evacuation times and the need for public shelter space.
ICE Policy 2.3.2	Through the Pinellas Planning Council or other appropriate governmental mechanism, the Town shall coordinate with neighboring municipalities and the County to protect estuaries which are within the jurisdiction of more than one local government; including methods for coordinating with other local governments to ensure adequate sites for water-dependent uses, preventing estuarine pollution, controlling surface water runoff, protecting living marine resources, reducing exposure to natural hazards, and ensuring public access.	1, 3, 5	Restrictions, such as limited intense development in Special Flood Hazard Areas, CHHA, and Coastal Storm Areas will reduce property losses and reduce evacuation times and the need for public shelter space.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Capital Improvements Element (CIE) Policy 1.1.5	<p>Proposed capital improvement projects shall be evaluated and ranked in order of priority according to the following guidelines:</p> <ol style="list-style-type: none"> <li>1. Project is needed to eliminate a proven or obvious hazard to public health and safety;</li> <li>2. Project is needed to fulfill a legal commitment by the Town;</li> <li>3. Project is needed to preserve, maintain, refurbish achieve full use of, or replace existing facilities;</li> <li>4. Project will bring an existing facility into compliance with an adopted level-of-service standard;</li> <li>5. Project will increase efficiency or use of existing facilities, prevents or reduces future improvement cost, or provides service to all residents equitably;</li> <li>6. Project is needed to accommodate facility demands resulting from new development or re-development</li> <li>7. Project furthers policies adopted in other elements of this plan</li> <li>8. Project needed to serve development for which development order issued prior to adoption of this comprehensive plan</li> <li>9. Project will increase the economic base or quality of life of the residents;</li> <li>10. Budget impact of project, both capital and operating, will be considered and Committee will consider financial feasibility of project; and</li> <li>11. Project will be reviewed for consistency with plans of other agencies having responsibility for public facilities within the jurisdiction</li> </ol>	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.
CIE Objective 1.4	Public expenditures that subsidize development in the Coastal Storm Area shall be limited to those improvements included in the Conservation and Coastal Management Element.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.
CIE Policy 1.4.1	The Town shall expend funds in Coastal Storm Area only for the replacement and renewal of public facilities serving existing development.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Emergency Management</b>			
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	
<b>Other</b>			
END OF LIST			

## Pinellas County Local Mitigation Strategy

**Table 5- 20: Redington Shores Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element (FLUE), Goal 1	Ensure that the residential/family character of the Town of Redington Shores is maintained and protected while maximizing the potential for economic benefit resulting from the tourist trade and the enjoyment of natural and man-made resources by citizens and visitors alike, and minimizing the threat to health, safety, and welfare posed by hazards, nuisances, incompatible land uses, and environmental degradation.	1, 3	Basic governmental purpose to protect the health, safety and welfare of citizens.
FLUE, Policy 1.1.7	Residential areas shall be located and designed, to the extent practical, to protect life and property from natural and manmade hazards such as flooding, excessive traffic, subsidence, noxious odors, noise, and deterioration of structures.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains.
FLUE, Objective 1.5	Development activities shall ensure the protection of natural resources.	1, 5	Protects natural system functions and reduces potential for flood losses.
FLUE, Policy 1.5.2	Unique and/or irreplaceable natural resources shall be protected from the adverse effects of development, except in cases of overriding public interest.	1, 5	Minimize the adverse impacts of development on natural systems, thereby reducing potential impacts from natural disasters.
FLUE, Policy 1.5.5	The land development regulations shall require the protection of coastal vegetative communities, coastal wildlife habitats, and dune systems from the adverse effects of development.	1, 5	Minimize the adverse impacts of development on natural systems, thereby reducing potential impacts from natural disasters.
FLUE, Policy 1.6.3	Public facilities and utilities shall be located so as to maximize the efficiency of services provided; to minimize their cost; and to minimize their impacts on the natural environment.	1, 4	Promote best available practices to lessen construction costs of re-engineering natural systems; restrict expenditure of public funds in areas prone to natural disaster, reducing the potential for replacement costs.
FLUE, Policy 2.1.1	The Town shall adopt land development regulations which recognize the limitations of development on a barrier island (e.g., 100-year floodplain, vulnerability to tropical storms, topography, and soil conditions).	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses.

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
FLUE, Policy 2.1.2	<p>The Town shall adopt land development regulations that contain specific and detailed provisions required to implement this Comprehensive Plan, which, at a minimum shall:</p> <ul style="list-style-type: none"> <li>• Regulate the subdivision of land;</li> <li>• Protect the limited amount of marine wetlands remaining in the community and those lands designated as Preservation on the Future Land Use Map and in the Coastal Management and Conservation Element;</li> <li>• Regulate signage;</li> <li>• Ensure that all development is consistent with federal flood insurance regulations;</li> <li>• Ensure that all development is consistent with those coastal construction regulations as may be adopted and/or amended by the State of Florida, Pinellas County, or the Town of Redington Shores;</li> <li>• Ensure the compatibility of adjacent land uses and provide for adequate and appropriate buffering;</li> <li>• Ensure that development orders and permits are issued only when it is documented that such development is consistent with the level of service standards for the affected public facilities adopted by this Comprehensive Plan;</li> <li>• Provide for drainage and stormwater management, based on the minimum criteria established by the Southwest Florida Water Management District, as may be amended, the Town of Redington Shores or other appropriate governmental agencies;</li> <li>• Provide requirements for the provision of open space, and safe and convenient on-site traffic flow and parking requirements;</li> <li>• Encourage the use of native vegetation in the landscaping of multifamily and commercial developments;</li> </ul>	1, 5	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources; assure compliance with federal, state, and local regulations to reduce potential for losses from natural disasters.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Infrastructure Element (IE), Goal 2	To endeavor to provide an efficient drainage system which protects human life, minimizes property damage, and improves stormwater quality and on-site retention.	1, 4	Reduces drainage problems within the Town.
IE, Objective 2.1	The Town shall support a stormwater management system that seeks, as far as practicable, to minimize flooding hazards and environmental impacts.	1, 4	Reduces drainage problems within the Town.
IE, Policy 2.1.1	The Town shall maintain a stormwater management system that is capable of providing a level of service sufficient to contain a 25- year, 24-hour non-tropical rainfall event during normal tide levels.	1, 4	Reduces drainage properties within the Town.
IE, Policy 2.1.7	In an effort to maximize the life of its stormwater management system, the Town shall investigate the feasibility of maintenance dredging to remove sediment buildup at drainage outfall pipe locations in Boca Ciega Bay. Future drainage outfalls associated with either new development or redevelopment, shall be designed to prevent the direct discharge of runoff into Boca Ciega Bay or the Gulf of Mexico.	1, 4	Implementing the stormwater management system will reduce potential drainage problems; avoid siltation build-up will prevent back-up of stormwater runoff, reducing risk of flooding.
IE, Policy 2.1.8	The Town shall continue to maintain and implement a floodplain management plan that addresses drainage and existing flooding conditions.	1, 4	Reduces drainage problems within the Town.
IE, Policy 2.1.11	The land development regulations shall ensure that surface cover vegetation loss during construction shall be minimized and/or replaced to reduce erosion and flooding	5	Minimize siltation that may impede upon the natural function of floodplains and wetlands.
Coastal Management and Conservation Element (CMCE), Goal 1	To ensure the highest environmental quality possible, the Town of Redington Shores shall conserve, protect, and appropriately manage the natural resources (aquatic, terrestrial, and wetland).	5	Protects natural function of floodplains and wetland areas.
CMCE, Policy 1.1.2	The Town shall protect water storage and water quality enhancement functions of wetlands and floodplains areas through acquisition, enforcement of laws and the application of land and water management practices which provide for compatible uses.	1, 2, 5	Protects natural function of floodplains and wetland areas.
CMCE, Objective 1.2	Regulations for development within the 100-year floodplain shall be strictly enforced.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses.
CMCE, Policy 1.2.1	New development or redevelopment approvals shall require that post-development runoff rates, volumes and pollutant loads do not exceed predevelopment conditions.	1	Reduces drainage problems for adjoining properties.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE, Policy 1.2.2	Recognizing that the community is located in the 100-year floodplain, the Town shall strictly enforce all appropriate federal, state, and regional coastal construction codes and coastal setback regulations.	1	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains.
CMCE, Policy 1.2.3	The Town shall protect the natural functions of the 100-year floodplain so that the flood-carrying and flood storage capacity are maintained.	1, 5	Provides for flood mitigation to minimize flood losses and repetitive losses.
CMCE, Policy 1.2.4	The Town shall continue to participate in a strict floodplain management to preserve hydrologically significant wetlands and other natural floodplain features.	1, 5	Protects natural function of floodplains and wetland areas.
CMCE, Objective 1.3	The Town shall conserve or improve wetlands, aquatic resources, and wildlife population and habitat to maintain their environmental and recreational value.	1, 5	Protects natural function of floodplains and wetland areas.
CMCE, Policy 1.3.1	Areas such as mangroves and marsh areas shall be identified on the Future Land Use Map as preservation areas.	5	Protects natural function of floodplains and wetland areas.
CMCE, Policy 1.3.2	All existing marine wetlands shall be designated preservation land as set forth on the Marine Resource Map.	5	Protects natural function of floodplains and wetland areas.
CMCE, Policy 1.3.4	The Town's existing wetlands shall be conserved and protected from physical and hydrological alterations.	5	Protects natural function of floodplains and wetland areas.
CMCE, Policy 1.3.5	Marine wetlands, barrier island property containing numerous vegetative communities, and/or shoreline locations with limited habitat diversity shall be considered priorities for environmental land acquisition.	2, 5	Acquisition of properties that are left as open space may help reduce potential losses on adjoining properties as well as reduce the number of repetitive loss properties/areas.
CMCE, Policy 1.4.1	The Town shall encourage the replanting of shorelines lacking wetland vegetation with native vegetation in order to minimize potential flood damage, stabilize the shoreline, trap sediments and other non-point source pollutants, and provide additional habitat for fish and wildlife.	1, 5	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate...

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE Policy 1.4.5	<p>Although limited natural resources remain in the Town of Redington Shores, every effort shall be taken to protect these resources as follows:</p> <ul style="list-style-type: none"> <li>• Recreational development shall be compatible with the surrounding environment and shall be subject to performance standards adopted in land development regulations;</li> <li>• The clearing of trees and wetland vegetation shall be prohibited, unless specifically permitted; and</li> <li>• All applications for development approval shall be subject to site plan review.</li> </ul>	5	Protects natural function of wetland areas.
CMCE, Policy 1.8.3	The Town shall coordinate with neighboring municipalities and the County to protect estuaries which are within the jurisdiction of more than one local government; including methods for coordinating with other local governments to ensure adequate sites for water-dependent uses, preventing estuarine pollution, controlling surface water runoff, protecting living marine resources, reducing exposure to natural hazards, and ensuring public access.	1, 5	Protects natural function of floodplains and wetland areas.
CMCE, Objective 1.9	The Town of Redington Shores shall protect and restore its beaches, dunes, and natural systems and establish construction standards which minimize the impacts of man-made structures on these systems.	5	Provides storm protection to minimize property loss.
CMCE, Policy 1.9.1	Construction seaward of the Coastal Construction Control Line shall be subject to the permitting procedures pursuant to Section 161.05, Florida Statutes.	1	Assures compliance with state regulations; minimizes structures placed with most vulnerable area.
CMCE, Policy 1.9.2	The planting of native marine vegetation in front of the seawall to act as a natural buffer is encouraged.	1, 4	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate...
CMCE, Policy 1.9.3	In order to protect the dunes, the Town shall prohibit excavations, destruction of native vegetation, and activities which affect the natural fluctuation of the dunes.	1, 5	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate...
CMCE, Policy 1.9.7	The land development regulations shall ensure that sensitive coastal resources are protected from immediate and future degradation and erosion resulting from improper development practices and recreation misuse.	1, 5	Maintains functions of natural systems, and reduces potential losses in storm events.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE, Policy 1.9.8	The land development regulations shall contain provisions whereby coastline stabilization projects, preferably utilizing vegetation as the stabilizing medium, are incorporated into development plans, where appropriate.	1, 5	Provides storm protection to minimize property loss, reduces public expenditure where natural function of beaches and dunes are adequate...
CMCE, Policy 1.9.9	The Town shall protect the general public health, safety and welfare by minimizing development in high risk areas, such as the hurricane velocity zone, by full support of Coastal Construction Zone limitations.	1	Helps keep population out of harm's way and minimizes damage and loss of life and property
CMCE, Policy 1.10	The Town shall continue to participate in intergovernmental coordination processes to protect coastal resources which shall address natural systems on a system wide basis regardless of political boundaries.	1, 5	Protects natural function of floodplains and wetland areas.
CMCE, Policy 1.10.1	The Town shall continue to participate in proceedings to develop joint planning and management programs with the neighboring municipalities for hurricane evacuation, provision of public access, provision of infrastructure, controlling stormwater, protection of wetland vegetation, and coordinating efforts to protect species with special status.	3	Restrictions, such as limited intense development in Special Flood Hazard Areas, CHHA, and Coastal Storm Areas will reduce property losses and reduce evacuation times and the need for public shelter space.
CMCE, Policy 1.10.2	The Town shall continue to participate with neighboring cities, County, and appropriate state and federal agencies in the preparation and implementation of coastal management plans.	1	Assures compliance with federal, state, and local regulations; minimizes structures placed with most vulnerable area; achieves consistent treatment of coastal areas.
CMCE, Goal 2	The Town shall provide a set of guidelines for development that protect the lives and property of its residents, and preserves the integrity of its natural environment.	1	Basic governmental purpose to protect the health, safety and welfare of citizens.
CMCE, Objective 2.1	The Town shall restrict development and redevelopment densities to those adopted in the Future Land Use Element and shall limit the expenditure of public funds in Coastal Storm Area to those facilities necessary for the protection of health and safety. All building and development activities in these areas shall be conducted in such a manner as to lessen the existing danger to life and public and private property.	3	Helps keep population "out of harm's way" and lessens the demand on evacuation routes and for additional public shelter space by directing population to non-evacuation areas; restricts expenditure of public funds that may encourage increased future development.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE, Policy 2.1.1	The Coastal High Hazard Area (CHHA) is defined as that portion of the community below the elevation of the category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. However, the Coastal Storm Area defined by the Pinellas Planning Council <i>Countywide Plan Rules</i> will be the regulatory standard for the Town of Redington Shores and depicted on <i>Map LU-4: Future Land Use and Future Transportation Corridors</i> .	3	Redefines Coastal High Hazard Area to be consistent with Florida Statutes.
CMCE, Policy 2.1.2	The Town defines a Coastal Storm Area as the area that includes the following: 1- the CHHA 2 - any area surrounded by the CHHA or by the CHHA and a body of water, and 3 - all areas located within the Velocity Zone as designated by the Federal Emergency Management Agency.	1, 3	Defines specific areas that may become isolated in a flooding situation therefore exacerbating evacuation efforts and rescue efforts.
CMCE, Policy 2.1.3	The CHHA as defined in Policy 2.1.1, together with the Coastal Storm Area as defined in Policy 2.1.2, being consistent with the Pinellas Planning Council <i>Countywide Plan Rules</i> , shall be the area of coastal development and redevelopment regulation within the Town of Redington Shores. This area is depicted on <i>Map LU- 4: Future Land Use and Future Transportation Corridors</i> .	1, 3	Defines specific areas that may become isolated in a flooding situation therefore exacerbating evacuation efforts and rescue efforts.
CMCE, Policy 2.1.4	The Town shall not support or finance new local transportation corridors which lie within the Coastal Storm Area, although existing corridors may be maintained or improved as necessary to protect the health, safety and welfare of existing residents.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.
CMCE, Policy 2.1.5	The Town shall not support sewer and water line extensions or expansions within the Coastal Storm Area which will encourage future growth/higher densities in those vulnerable areas.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE, Policy 2.1.6	The Town of Redington Shores, acknowledging its particular vulnerability to coastal hazards as a barrier island community, recognizes the entire Town as within the Coastal Storm Area and the first geographic area to be evacuated in the event of a hurricane threat.	3	Reduce potential casualties by providing assistance to populations that have a disadvantage that may jeopardize themselves and their families.
CMCE, Policy 2.1.7	The Town shall maintain or reduce allowable density in the Coastal Storm Area consistent with the Future Land Use Map of this Comprehensive Plan.	1, 3	Restricts or reduces the number of people at risk in an emergency situation
CMCE, Policy 2.1.8	The Town shall review federal and state development projects which are to be located within the Coastal Storm Area, and support those projects which are consistent with this Plan.	1	Restrict public expenditure that may encourage increased future development; analyzes expenditures of limited resources; minimizes potential future losses.
CMCE, Objective 2.2	The Town of Redington Shores shall maintain the clearance times for hurricane evacuation identified by Tampa Bay Regional Planning Council and the State of Florida. Any proposed development shall not increase this clearance time.	3	Prevents future casualties; reduces the public shelter deficit; improves upon evacuation times.
CMCE, Policy 2.2.1	The evacuation times adopted by Tampa Bay Regional Planning Council <i>Tampa Bay Regional Hurricane Evacuation Study 2006</i> , and the State's out-of-county category 5-hurricane standard of 16 hours, shall be used for Comprehensive Plan amendment review and development review and approval.	3	Reducing evacuation times is important to reducing potential casualties.
CMCE, Policy 2.2.2	The Town, in cooperation with Pinellas County, the Pinellas County Chapter of the American Red Cross, and the other island communities, shall sponsor annual hurricane preparedness seminars to increase hurricane awareness.	3, 6	Public awareness campaign will assure that citizenry is informed about their responsibilities for safety and how to prepare property and family for emergency situations.
CMCE, Policy 2.2.3	Town emergency response personnel and volunteers shall coordinate with County and State emergency response agencies in emergency planning, including communications, traffic control and warning operations, to effect a safe and efficient evacuation of the Town.	3	Assures that emergency response personnel and volunteers are informed as to their responsibilities and assures a safe and efficient response.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE, Objective 2.3	The Town shall reduce the risk of exposure of human life and public and private property to natural disasters through preparedness planning and implementation of hazard mitigation measures.	1, 2, 3	Implementation of emergency plans in the short-term, mid-term, and long-term recovery; provides for new safer technology during reconstruction after a disaster. Mitigation measures encourage preemptive approach to dealing with pending disasters.
CMCE, Policy 2.3.1	The Town, in coordination with the County and other communities on Sand Key, shall develop a comprehensive hurricane plan which shall address the four phases of comprehensive emergency management: preparedness, response, recovery, and mitigation.	3	Coordinate with the county and other local communities will improve response plans in the short-term, mid-term, and long-term recovery and reconstruction after a disaster. Mitigation measures encourage preemptive approach to dealing with pending disasters.
CMCE, Policy 2.3.2	The Town shall designate an emergency management coordinator who shall participate in coordination of a hurricane plan; act as a liaison between State, regional, County, and Town emergency response and planning agencies; and ensure coordination between emergency management and development management activities in the Town.	3	Crucial decisions need to be made in a timely manner to minimize losses. Plan will establish duties of individual and provide a link to other emergency management activities.
CMCE, Policy 2.3.3	Recognizing that the entire community is located with the Coastal Storm Area and the 100-year floodplain, the Town shall continue to strictly enforce all appropriate federal, State, and local coastal construction codes, coastal setback requirements, special CCCL facility siting restrictions, and floodplain management regulations.	1, 5	Protects natural function of floodplains and wetland areas.
CMCE, Policy 2.3.4	Special care facilities shall not be located in the Coastal Storm Area.	1, 3	Restricts group facilities where large concentrations of people would be required to evacuate and would drastically increase the need for public shelter space.
CMCE, Policy 2.3.5	The Town Commission shall review all elements of the Local Hazard Mitigation Strategy to ensure that hazard mitigation considerations are effective and implemented within its area of responsibility.	1, 2, 3, 5	Periodic review assesses consistency among plans and effectiveness of implementing programs and projects.
CMCE, Goal 3	The Town shall expedite post-disaster recovery and reduce the future risk to human life and public and private property from natural hazards through recovery and redevelopment strategies.	1, 3	Provides for efforts to minimize losses and encourages efforts to return to normalcy.

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE, Objective 3.1	The Town Commission shall serve as the Recovery Task Force to hear preliminary damage assessments and direct post-disaster recovery and redevelopment activities.	3	Crucial decisions need to be made in a timely manner to minimize losses. Plan to establish duties of task forces will aid in recovery.
CMCE, Policy 3.1.1	Depending upon the severity of the impact of the storm on the Town, the Town Commission will appoint working groups to include the Mayor, Commissioners, and Building Department officials, and others deemed necessary to carry out these procedures.	3	Crucial decisions need to be made in a timely manner to minimize losses. Plan to establish duties of task force and assignment of duties will aid in recovery.
CMCE, Policy 3.1.2	<p>These working groups shall at a minimum:</p> <ul style="list-style-type: none"> <li>• Review preliminary damage reports, and identify areas where minor, moderate, and major damage has occurred;</li> <li>• Seek financial assistance from the State and federal agencies;</li> <li>• Recommend Town action to initiate immediate clean up and repair to protect health, safety and welfare; to declare temporary building moratoria for activities not essential to protect the health, safety and welfare; and, initiate hazard mitigation policies;</li> <li>• Evaluate post-disaster redevelopment response and recommend necessary changes to the Comprehensive Plan.</li> </ul>	3	Crucial decisions need to be made in a timely manner to minimize losses. Plan to establish duties of task force and assignment of duties will aid in recovery.
CMCE, Objective 3.2	In order to effectively manage the timing and sequence of reconstruction, the Town will maintain a set of reconstruction permitting procedures.	3	Establishing consistent procedures will enhance effectiveness and efficiency of recovery/reconstruction efforts
CMCE, Policy 3.2.1	Following a hurricane with major damage, the Town Commission will adopt a temporary post-disaster building moratorium to allow sufficient time for immediate damage assessment, the identification of redevelopment opportunities, and hazard mitigation policy implementation.	1, 3	Provides for efforts to minimize losses and encourages efforts to return to normalcy.
CMCE, Policy 3.2.2	The Town shall adopt a post-disaster procedure which will expedite permitting for minor repairs. The procedure shall include development plan review, engineering approval, and building permitting and shall provide that all permitting is coordinated with the appropriate agencies and consistent with the objectives of this Comprehensive Plan.	3	Provides for efforts to minimize losses and encourages efforts to return to normalcy.
CMCE, Objective 3.3	The Town shall consider key reconstruction and redevelopment strategies to promote hazard mitigation.	1, 2	Reconstruction to current higher standards will reduce the chances of future repetitive losses

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CMCE, Policy 3.3.1	Where feasible, property which has received recurring damage from storm surge should be publicly acquired or designated preservation on the Future Land Use Map to prevent redevelopment of the property to its pre-storm land use.	1, 2, 5	Acquisition of properties that are left as open space may help reduce potential losses on adjoining properties as well as reduce the number of repetitive loss properties/areas.
CMCE, Policy 3.3.2	The Town shall consider one or more of the following strategies in those areas which receive major or moderate damage: <ul style="list-style-type: none"> <li>• Relocation further inland (moving development/infrastructure away from the Coastal High Hazard Area);</li> <li>• Reduction of permissible density of development in the area;</li> <li>• Reconstruction according to more stringent building and construction standards; and</li> <li>• Public acquisition of damaged areas.</li> </ul>	1, 2, 3	Acquiring damaged properties, relocating further inland, reducing permissible densities, or reconstructing to more stringent building standards will help reduce potential losses, including repetitive loss properties.
Intergovernmental Coordination Element (ICE), Policy 2.2.8	The Town will coordinate proposed future land use plan policies related to hurricane shelters and evacuation routes, as well as map amendments resulting in an increase in population within Coastal Storm Areas, to the TBRPC and Pinellas County for the purpose of determining shelter space availability and the effect of increased populations on evacuation clearance times and routes.	3	Prevents future casualties and reduces the public shelter deficit.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Capital Improvements Element (CIE), Policy 1.1.4	Proposed capital improvement projects shall be evaluated according to the following criteria: <ul style="list-style-type: none"> <li>• Elimination of a proven or obvious hazard to public health, safety, or welfare;</li> <li>• Fulfillment of a Town legal commitment;</li> <li>• Preservation, maintenance, refurbishment, achievement of full use, or replacement of existing facilities;</li> <li>• Enhancement of an existing facility to an adopted level-of-service standard;</li> <li>• Efficiency or use increase of existing facilities; prevention or reduction of future improvement costs; or provision of equitable service;</li> <li>• Facility enhancement to meet the demands of development and redevelopment;</li> <li>• Furtherance of goals, objectives, or policies adopted in the <i>Redington Shores Comprehensive Plan</i> ;</li> <li>• Increase of community economic base or quality of life;</li> <li>• Budget impact and financial feasibility; and</li> <li>• Consistency with plans of other agencies having responsibility for public facilities within the Town.</li> </ul>	1	Restrict public expenditure that may encourage increase future development; minimizes potential losses.
CIE, Objective 1.4	Public expenditures that support development in Coastal Storm Area shall be limited to those improvements included in this Comprehensive Plan or determined by the Town Commission to be an overriding public health benefit.	1	Restrict public expenditures that may encourage increase in future development; minimizes potential losses.
CIE, Policy 1.4.1	The Town shall expend funds in Coastal Storm Areas only for the replacement and renewal of public facilities serving development or planned redevelopment as anticipated in this Comprehensive Plan.	1	Restrict public expenditures that may encourage increase in future development; minimizes potential losses.
<b>Land Development Regulations</b>			
Article IV	Seawalls, Groins, Bulkhead, Jetty, and Boat Lift	4	Requires that new construction or substantial improvements meet mitigation requirements.
Article V	Building permits	1	Requires compliance with existing zoning, safety, base flood elevations, and drainage requirements.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Part 2	Flood Damage Prevention	1, 4	Requires that new construction or substantial improvements meet specific requirements to mitigate flood damage.
Part 4	Subdivision of Land	1	Promotes appropriate utilization of land, limits nuisance and harmful impacts upon abutting properties.
Part 5	Zoning	1	Establishes consistent use of land, building, and open space to reduce impacts on all properties.
Part 6	Resources, Vegetation, and Environmentally Sensitive Lands	5	Preserves and protects the appearance, character, value, and safety to promote the general welfare of the community.
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
Section 2.0	Public Involvement	3, 6	Encourages residents to participate in the FPMP process and specifies communication paths for public information.
Section 4.0	Hazard Assessment	2	Defines the primary sources of risk from floods, lists repetitive loss properties, and documents the loss history from floods.
Section 5.1	Problem Assessment - Damage prone buildings	2	Identifies the historic construction practices, defines the Base Flood Elevation requirements, and informs residents of the availability of assistance programs.
Section 5.4	Critical facilities	3	Lists loss prevention measures and the facilities to be used to enhance public safety and protect properties.
Section 7.1.3	Floodplain regulations	2	Presents the National Flood Insurance Program policies on preventive measures to mitigate damage from floods.
Section 7.1.4	Storm water management	1	Ensures that streets and properties are protected from the accumulation of flood waters.
Section 7.4.1	Flood warning and flood response	3	Provides for the distribution of information in many formats to the residents before the occurrence of the event and for restoring services after the return to their island.
Section 8.0	The Action Plan	2	Lists the projects necessary to minimize losses due to floods.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Emergency Management</b>			
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	
Redington Shores Disaster Plan 2008	Establish policies to protect property and save lives.	3	Annually renewable plan to identify roles and responsibilities for the staff and elected officials, emergency phone numbers, and specify facilities, transportation, evacuation requirements, and reentry processes.
<b>Other</b>			
END OF LIST			

## Pinellas County Local Mitigation Strategy

**Table 5- 21: City of Safety Harbor Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan      Future Land Development</b>			
Policy 1.8.1	Significant environmental features shall be protected through provisions contained in the land development regulations or other appropriate regulations.		Reduces flooding. Reduces erosion and runoff.
Policy 1.8.2	Development review criteria, as contained in the land development regulations, shall include soil suitability.		Ensures protection measured where unsuitable soils exist.
<b>Policy 1.8.6</b>	All applications for development approval within those areas identified as marine wetland and riverine floodplain shall be subject to site plan review as contained in the land development regulations.		Ensures new or redeveloped properties meet/implement flood protection measures.
<b>Policy 1.8.9</b>	The land development regulations shall ensure that land use planning and project development emphasize the preservation of coastal vegetative communities and wildlife habitats, stream corridors, and unique upland vegetation.		Natural function of these areas preserved.
<b>Policy 1.8.15</b>	The City shall protect the general public health, safety, and welfare by minimizing development in high risk areas such as the hurricane vulnerability.		Reduces loss of lives and property
<b>Policy 1.9.1</b>	The land development regulations shall contain provisions whereby the natural functions of the 100-year flood plain are protected.		Reduces loss of lives and property.
<b>Policy 1.9.2</b>	Residential areas within the 100-year flood plain shall be approved only if they are in conformance with National Flood Insurance Administration standards and adopted drainage plans for the area.		Ensures new or redeveloped properties meet/implement flood protection measures.
<b>Policy 1.9.3:</b>	The land development regulations shall contain provisions which encourage the use of native vegetation to the fullest extent possible to stabilize shorelines and protect upland areas from the hazards of flooding.		Reduces damage from manmade erosion control structures, (i.e. seawalls)

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Policy 1.9.4:</b>	The land development regulations shall contain provisions whereby, to the maximum extent legally possible, new development is not located in floodways, as defined by the Federal Emergency Management Agency (FEMA).		Reduce loss of lives and property. Minimize development in high risk areas.
<b>Policy 1.9.5:</b>	New development permitted in the flood fringe, the area of the floodplain outside the floodway, shall be required, through provisions contained in the land development regulations, to meet flood hazard construction requirements.		Ensures new or redeveloped properties implement flood protection measures; reduces property loss.
<b>Policy 1.9.7:</b>	The land development regulations shall contain provisions whereby the developer/owner of any new development or redevelopment site is responsible for the on-site management of stormwater runoff in a manner that shall ensure post-development runoff rates, volumes and pollutant loads do not exceed predevelopment conditions.		Ensures new and redeveloped properties implement flood protection measures; reduces property damage.
<b>Policy 1.9.8:</b>	The land development regulations shall contain provisions whereby impervious surface areas are minimized.		Reduces flooding
<b>Measure:</b>	Implementation of floodplain construction regulations consistent with FEMA regulations.		Ensures new and redeveloped properties implement flood protection measures; reduces property damage.
<b>Objective 1.10:</b>	As an ongoing objective, the City shall work with Pinellas County and the City of Clearwater to fully implement the planned improvements of the Pinellas County Master Drainage Plan, as amended.		Ensures new and redeveloped properties implement flood protection measures; reduces property damage.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Policy 1.10.1:</b>	<p>The implementation of the Pinellas County Master Drainage Plan shall be in cooperation with those local governments within the City's drainage basins.</p> <p>Policy 1.10.3: Any stormwater management policies developed and implemented by the City shall, at a minimum, address the following:</p> <ul style="list-style-type: none"> <li>•The identification of drainage problem areas;</li> <li>•The identification of those areas in need of immediate corrective action; and</li> <li>•The identification of corrective measures, listed by priority, and cost of the individual measure by problem area.</li> </ul>		Reduce loss of lives and property.
<b>Policy 1.10.4:</b>	By 1996, the City, in cooperation with the Pinellas County Engineering Department, shall survey and map those creek beds and floodways located within its municipal boundaries.		Reduce loss of lives and property.
<b>Policy 1.10.5:</b>	The City shall implement the recommendations of its Master Drainage Plan.		Ensures new and redeveloped properties implement flood protection measures; reduces property damage.
<b>Objective 2.1:</b>	Recognizing its vulnerability to the effects of tropical storms, the City shall endeavor to protect the lives and property of its residents through implementation of the City's floodplain management and land development regulations, coordination with Pinellas County Emergency Management, the proper placement of allowable densities, through effective post-disaster redevelopment strategies, and through effective hazard mitigation techniques identified by interagency hazard mitigation report recommendations that the City considers appropriate.		Reduces investment in infrastructure.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Policy 2.1.1 :</b>	The City shall limit public expenditures that subsidize development permitted in coastal high-hazard areas, except for restoration or enhancement of natural resources or recreation or open space areas.		Reduces investment in infrastructure.
<b>Policy 2.1.2:</b>	Through site plan review and the subdivision plat process, the City shall direct population concentrations away from the designated coastal high-hazard areas.		Reduces loss of lives and property.
<b>Policy 2.1.3:</b>	Maintain or reduce hurricane evacuation clearance times.		Reduce loss of lives.
<b>Policy 2.1.4:</b>	The risk of exposure of human life and public and private property to natural disasters shall be reduced through preparedness planning and implementation of hazard mitigation measures.		Reduces exposure through disaster planning and hazard mitigation.
<b>Policy 2.1.5:</b>	The City shall analyze proposed development and redevelopment in accordance with the recommendations contained in available hazard mitigation reports, and shall encourage the elimination of uses inconsistent with these reports.		Provides a guidance tool for the City from past experiences.
<b>COASTAL AND CONSERVATION ELEMENT</b>			
<b>Policy 1.2.1:</b>	New development or redevelopment approvals shall require that post-development runoff rates, volumes and pollutant loads do not exceed pre-development conditions.		Ensures new and redeveloped properties implement flood protection measures; reduces property damage.
<b>Policy 1.2.2:</b>	Recognizing that portions of the community are located within the 100-year flood plain, the City shall continue to strictly enforce all appropriate federal, state, and regional coastal construction codes and coastal setback regulations.		Ensures new and redeveloped properties implement flood protection measures; reduces property damage.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Policy 1.2.3:</b>	The City shall protect the natural functions of the 100-year flood plain so that the flood-carrying and flood storage capacity are maintained including a requirement for compensatory storage in all non coastal flood hazard areas.		Ensures new and redeveloped properties implement flood protection measures; reduces property damage.
<b>Policy 1.2.4:</b>	The City shall cooperate with State agencies to encourage the development of a strict flood plain management program by state and local governments to preserve hydrologically significant wetlands and other natural flood plain features.		Reduces loss from inappropriate development in a flood plain.
<b>Policy 1.2.5:</b>	The flood plain of all major drainage ways for a 100-year storm shall continue to be identified and the alteration of these flood plains shall remain subject to review.		Reduces loss from inappropriate development in a flood plain.
<b>Policy 1.2.6:</b>	In order to reduce non-point source pollutant loadings and improve the functioning of the City's drainage system, the City shall prohibit the dumping of debris of any kind (e.g., yard clippings and trimmings), into drainage ditches, canals and stormwater control structures.		Reduce pollutants to natural water source.
<b>Policy 1.2.7:</b>	The City shall participate in the National Flood Insurance Community Rating System program.		Provides incentive for voluntary programs to reduce loss and reduce cost of flood insurance.
<b>Policy 2.1.1:</b>	As of the effective date of this Comprehensive Plan, the City of Safety Harbor shall designate the Coastal High Hazard Area as the area defined by the Sea, Lake and Overland Surges from Hurricanes (SLOSH) model to be inundated from a category one hurricane, as reflected in the most recent Regional Evacuation Study, Storm Tide Atlas.		Provides geographic area for coastal high hazard area strategy.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Policy 2.1.2:</b>	The City shall not support or finance new local transportation corridors which lie within the Coastal High Hazard Area, although existing corridors may be maintained or improved as necessary to protect the health, safety and welfare of existing residents.		Reduce loss of life and infrastructure.
<b>Policy 2.2.1:</b>	The City of Safety Harbor, recognizing its vulnerability to coastal hazards identifies the portion of the City within Evacuation Levels "A" and "B" as within the "Hurricane Vulnerability Zone", and in the absence of any specific plans for redevelopment or hazard mitigation shall maintain residential density increases below dwelling units per acre.		Maintains or reduces densities.
<b>Policy 2.2.2:</b>	The City shall maintain or reduce allowable density in the "Hurricane Vulnerability Zone" consistent with the Future Land Use Map of this Comprehensive Plan.		Maintains or reduces densities.
<b>Policy 2.2.3:</b>	The City of Safety Harbor shall continue to implement growth management directives which prohibit the intensification of development allowed by the Future Land Use Atlas within the Coastal High Hazard Area.		Maintains or reduces densities.
<b>Policy 2.2.4:</b>	The City shall implement a program of public land acquisition and management for recreation, conservation and preservation areas within the Hurricane Vulnerability Zone.		Reduces amount of land area available for development in vulnerable areas.
<b>Public Safety/ Emergency Management</b>			
<b>Policy 2.3.1:</b>	Through the Pinellas Area Transportation Study (PATS) Metropolitan Planning Organization (MPO), the City shall support the efforts of state, regional and county agencies to ensure that major evacuation routes are adequately maintained and, when necessary, improved to facilitate an efficient and safe evacuation.		Reduce loss of lives.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Policy 2.3.2:</b>	The City, in cooperation with the Pinellas County Department of Civil Emergency Services and the Upper Pinellas County Chapter of the American Red Cross shall participate in annual hurricane preparedness seminars to increase hurricane awareness.		Reduce loss of lives.
<b>Policy 2.3.3:</b>	City emergency response personnel and volunteers shall coordinate with county and state emergency response agencies in emergency planning, including communications, traffic control and warning operations, to affect a safe and efficient evacuation of the City.		Reduces loss of lives.
<b>Policy 2.4.3:</b>	The City shall adopt and strictly enforce all appropriate federal, state, and local coastal construction codes, coastal setback requirements and flood plain management regulations.		Preserves natural functions of floodplain and increases setbacks for structures along water bodies/wetlands.
<b>Policy 2.4.2:</b>	The City shall designate an emergency management coordinator who shall oversee the development/revision of a hurricane plan; act as a liaison between state, regional, county and city emergency response and planning agencies; and ensure coordination between emergency management and development management activities in the City.		Reduces loss of life and property.
<b>Policy 2.4.4:</b>	Special care facilities shall not be located in the Coastal High Hazard Area and shall be restricted from locating in the Hurricane Vulnerability Zone unless adequate provisions for safe and efficient evacuation and shelter are ensured.		Limits new facilities that are difficult to evacuate in hazardous areas.

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Policy 2.4.6:	<p>The City shall implement the following post disaster redevelopment policies consistent with the plans for Pinellas County and the Tampa Bay Regional Planning Council:</p> <ul style="list-style-type: none"> <li>•The use of temporary moratoria and phased permitting to allow comprehensive damage assessment and proper redevelopment;</li> <li>•Utilize BOAF inspectors where necessary to assist with the redevelopment process;</li> <li>•Review the need for a “freeboard” requirement;</li> <li>•Utilize periodic audits of public facilities to determine the need for protection measures;</li> <li>•Review the need for additional shoreline protection measures;</li> <li>•Review damaged public facilities and infrastructure to determine if it should be replaced, upgraded or flood proofed to be made safer, relocated or discontinued;</li> <li>•Enforcement of the City’s flood and building regulations (50 % Rule) as they pertain to nonconforming structures and require redevelopment to meet current regulations;</li> <li>•Review the feasibility of acquiring properties subject to repeated storm damage;</li> <li>•Allow the transfer of development rights away from vulnerable areas;</li> <li>•Utilize conservation easements to protect vulnerable areas;</li> <li>•Review existing densities to determine if reductions are warranted;</li> </ul>		Implements post disaster mitigation policies to reduce future loss.
Appendix 5	<p>Allow the clustering of developments where feasible; and</p> <p>Review the effectiveness of existing coastal setback requirements.</p>	Safety Harbor	

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Objective 3.1:</b>	The City's Damage Assessment Team will continue to investigate preliminary damage assessments and coordinate post-disaster recovery and redevelopment activities as the City's designated Recovery Task Force.		Ensure proper communication with outside entities including: FEMA, State, County and insurance carriers to properly assess the damage and needed resources.
<b>Policy 3.1.1:</b>	The Damage Assessment Team as the designated Recovery Task Force shall consist of the City Emergency Management Coordinator and staff of the Planning, Public Works, Building and Finance Departments and other members as appointed by the City Manager or his designate.		Knowledgeable and committed employees serving critical roles on the DAT.
<b>Policy 3.1.2:</b>	<p>The Damage Assessment Team as the designated Recovery Task Force shall fulfill the following responsibilities, as well as others deemed necessary:</p> <ul style="list-style-type: none"> <li>•Develop damage assessments.</li> <li>•Take necessary steps to seek financial assistance from the appropriate state and federal agencies through the designated County agency.</li> <li>•Authorize immediate clean-up and repairs necessary to protect the public health, safety and welfare;</li> <li>•Identify areas within the community where minor, moderate and major damage has occurred;</li> <li>•If necessary, recommend to the City Commission temporary building moratoria for building activities not essential to protect health, safety and welfare;</li> <li>•Recommend to the City Commission appropriate hazard mitigation policies which should be implemented in response to the disaster; and</li> <li>•Prepare a report evaluating post-disaster redevelopment response and make recommendations for necessary changes to this Comprehensive Plan.</li> </ul>		

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Policy 3.2.2:</b>	The City shall adopt a post-disaster procedure which will expedite permitting for minor repairs. The procedure shall include development plan review, engineering approval and building permitting and shall provide that all permitting is coordinated with the appropriate agencies and consistent with the objectives of this Comprehensive Plan.		Produce expedient procedure to re-build while ensuring proper permitting.
<b>Policy 3.3.1:</b>	Where feasible, property which has received recurring major hurricane damage from storm surge should be publicly acquired or designated preservation or conservation on the Future Land Use Map to prevent redevelopment of the property to its pre-hurricane land use.		Reduces future losses.
<b>Land Development Regulations</b>			
<b>Policy 4.1.1:</b>	Land development regulations shall be adopted which implement the requirements of the following Coastal and Conservation Element policies.		Reduces future losses.
<b>Policy 4.1.2</b>	The City shall adopt land development regulations that contain specific and detailed provisions to implement this Comprehensive Plan, which, at a minimum: <ul style="list-style-type: none"> <li>• <i>Regulate the subdivision of land;</i></li> <li>• <i>Ensure that residential subdivisions are designed so that all individual lots have access to the internal street system and lots along the periphery are buffered from major roads and incompatible land uses;</i></li> <li>• <i>Protect those wetlands found in the community, floodplains, and those lands designated as Preservation on the Future Land Use Map and in the Coastal and Conservation Element;</i></li> <li>• <i>Regulate signage;</i></li> <li>• <i>Ensure that all development and/or redevelopment is consistent with Federal Flood Insurance Regulations;</i></li> </ul>		Reduces loss of lives and property.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
	<ul style="list-style-type: none"> <li>• <i>Ensure that all development, where appropriate, is consistent with those coastal construction regulations as may be adopted and/or amended by the State of Florida, Pinellas County, or the City of Safety Harbor;</i></li> <li>• <i>Ensure the compatibility of adjacent land uses and provide for adequate and appropriate open space and buffering;</i></li> <li>• <i>Address historically significant properties meriting protection;</i></li> <li>• <i>Ensure that development orders and permits are issued only when it is documented that such development is consistent with the level of service standards for the affected public facilities adopted by this Comprehensive Plan;</i></li> <li>• <i>Provide for drainage and stormwater management, based on the minimum criteria established by the Florida Department of Environmental Regulation, the Southwest Florida Water Management District, as may be amended, the City of Safety Harbor, or other appropriate governmental agencies;</i></li> <li>• <i>Provide requirements for the provision of open space, and safe and convenient on-site traffic flow and parking requirements;</i></li> <li>• <i>Encourage the use of native vegetation in landscaping;</i></li> <li>• <i>Require the control of erosion and runoff from construction sites;</i></li> <li>• <i>Require development plan review for all commercial, industrial, single family, multifamily, and mixed-use development proposals and specify the performance standards; and</i></li> <li>• <i>Establish specific performance standards that must be met by development projects in all areas of special concern as applicable (e.g., scenic and non-commercial highway corridors, creek beds, floodways, wetlands, other environmentally-sensitive areas, shorelines, and neighborhoods with either historical or architectural significance).</i></li> </ul>		

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Intergovernmental Coordination Element</b>			
<b>Policy 1.2.1:</b>	The City of Safety Harbor shall, through the Pinellas County Metropolitan Planning Organization, work with FDOT and Pinellas County to attain and assure acceptable continued operational levels of service for state and county roadways within the City.		Coordination of roadway access.
<b>Policy 1.2.2:</b>	The City shall continue, through current interlocal agreements, to coordinate with Pinellas County and the City of Clearwater to ensure that future needs are considered in the expansion, acquisition and design of wastewater treatment and potable water facilities.		Ensure current and future water resource and waste water needs are met through coordination with local governments.
<b>Policy 1.2.3:</b>	The City will coordinate its levels of service, concurrency management methodologies, and land development regulations with the FDOT and Pinellas County, respectively, to encourage compatibility with the appropriate jurisdiction's level of service and access management standards for county and state maintained roadways.		Maintain communications for the good of all.
<b>Policy 1.2.4:</b>	The City will coordinate with service providers that have no regulatory authority over the use of land in the city to develop recommendations that address ways to improve coordination of the City's concurrency management methodologies and systems, and levels of service.		Seek outside guidance and best practice feedback on continual improvement and services.
<b>Policy 1.3.1:</b>	All appropriate agencies (federal, state, regional and local), jurisdictions, and the public shall be coordinated with during the designation of new dredge spoil disposal sites.		Compliance with all regulatory agencies to address spoil disposal sites.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Policy 1.4.1:</b>	The City shall continue to communicate and coordinate with Pinellas County, including Pinellas County Utilities and the Metropolitan Planning Organization, the Pinellas County Planning Council, Pinellas County School Board, Tampa Bay Regional Planning Council, Tampa Bay Water, Southwest Florida Water Management District and other state agencies such as the Department of Community Affairs, Department of Environmental Protection, Department of Transportation and Health and Rehabilitative Services, and federal agencies on projects and programs that fall within their jurisdictions or are multi-jurisdictional in nature.		Maintain communications for the good of all.
<b>Policy 1.4.5:</b>	The City will review the Tampa Bay Regional Planning Council's (TBRPC) Hurricane Evacuation Study for issues that pertain to requests for residential density increases and the general application of residential future land use densities in coastal high hazard areas.		Reduces loss of lives and property.
<b>Policy 1.4.9:</b>	The City will coordinate the development of its stormwater management plan with Pinellas County and neighboring jurisdictions in shared drainage basins for comments pertaining to their respective plans.		Coordination to reduce future loss.
<b>Policy 1.4.12:</b>	The City will coordinate its hurricane recovery plans with the Pinellas County Disaster Advisory Committee, and development requests within hurricane vulnerability zones with Pinellas County Emergency Management Department staff.		Coordination to reduce future loss.
<b>Policy 1.4.15:</b>	The City will implement the countywide Local Hazard Mitigation Strategy, as adopted and amended, and shall continue to participate in the countywide workgroup.		Coordination to reduce future loss.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Policy 1.6.11:</b>	The City will coordinate with the PPC, or the appropriate ad hoc committees, in the development, review, and recommendation of efficient countywide guidelines to coordinate the location of problematic land uses.		Reduces loss of lives and property,
<b>END OF LIST</b>			

# Pinellas County Local Mitigation Strategy

**Table 5- 22: City of Seminole Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element, Policy 1.1.2	The land development regulations recognize the potential limitations to development caused by the Coastal High Hazard Area (CHHA), and prohibits residential or equivalent uses in 11 future land use map (FLUM) categories	1	Reduces loss of lives and property.
Future Land Use Element, Policy 1.2.3	The land development regulations shall recognize the potential limitations to development caused by topography, soil conditions, floodplains, and the CHHA, and shall take these factors into account during site plan review.	1	Ensures new or redeveloped properties implement flood protection measures; reduces property loss.
Future Land Use Element, Policy 1.2.4	The land development regulations shall include provisions for landscaping, flood hazard safety, the subdivision and use of land, and the protection of environmentally sensitive areas.	1	Ensures new or redeveloped properties implement flood protection measures; reduces property loss.
Future Land Use Element, Policy 1.2.6	The land development regulations shall contain provisions for drainage and stormwater management, based on the minimum criteria established by the Southwest Florida Water Management District (SWFWMD), the City of Seminole, or other governmental agencies with jurisdictional responsibilities, and the <i>Pinellas County Master Drainage Plan</i> .	1	Reduces threat of low level and street flooding during the rainy season.
Future Land Use Element, Policy 1.2.7	The land development regulations shall protect the limited amount of marine wetlands remaining in the community, and any lands designated as Preservation on the Future Land Use Map and in the Coastal Management and Conservation Element.	5	Ensures new or redeveloped properties meet/implement flood protection measures.
Future Land Use Element, Policy 1.2.8	The land development regulations shall ensure that all development is consistent with National Flood Insurance Program (NFIP) regulations.	2	Reduces property loss due to 100-year flood; insures consistency with NFIP policies.
Future Land Use Element, Policy 1.2.12	The land development regulations shall contain provisions for the control of erosion and runoff from construction sites.	1	Reduces threat of low level and street flooding during the rainy season.
Future Land Use Element, Policy 1.3.4	The land development regulations shall ensure that residential land uses are located and designed to protect life and property from natural and manmade hazards such as flooding, excessive traffic, subsidence, noxious odors, noise, and deterioration of structures.	1	Ensures new or redeveloped properties implement flood protection measures; reduces property loss.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Future Land Use Element, Policy 1.8.5	The land development regulations shall contain provisions prohibiting the clearing of trees and wetland vegetation, unless a permit has been obtained.	5	Reduces loss due to flooding.
Future Land Use Element, Policy 1.8.7	The land development regulations shall contain provisions protecting coastal vegetative communities and coastal wildlife habitats from the adverse effects of development.	5	Reduces loss due to flooding.
Future Land Use Element, Policy 1.8.8	The land development regulations shall contain provisions which ensure that tidal flushing and circulation patterns are not significantly altered by development activities.	5	Limits the exposure to flood damage.
Future Land Use Element, Policy 1.8.10	Dredge and fill activities shall be conducted only when necessary, as determined after review and comment by the appropriate governmental agencies and interested citizens, and in a manner least harmful to the surrounding environment.	4	Limits the exposure to flood damage.
Infrastructure Element, Policy 5.1.1	Prior to the adoption of the master drainage plan, the City's interim level of service shall be the design requirements of the 25- year frequency, 24-hour storm event.	4	Reduces threat of low level and street flooding during the rainy season.
Infrastructure Element, Policy 5.1.2	The master drainage plan for the City of Seminole shall, at a minimum, address an inventory and evaluation of those areas which currently have flooding problems; an analysis of methods to correct system deficiencies, maximize existing facilities, and increase capacity to meet future needs; and develop a prioritized list of recommended corrective measures, and their projected costs.	4	Ensures a properly functioning drainage system.
Infrastructure Element, Policy 5.1.7	Post-development stormwater runoff shall not exceed predevelopment drainage peak discharge rates.	4	Reduces property loss through accommodating drainage before development.
Infrastructure Element, Policy 5.1.8	The following management techniques shall be used as an interim drainage plan: expansion and regular maintenance of retention swales adjacent to City roadways; use of erosion and runoff control devices during construction; use of front, rear and side lot line swales in new development; where necessary, the property acquisition and the construction of drainage retention areas in public rights-of-way; and the use of native marine vegetation for shoreline stabilization where technically feasible.	4	Reduces property loss through accommodating drainage before development.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Infrastructure Element, Policy 5.1.9	Those intermit management techniques identified in Policy 5.1.8 shall be incorporated into the final master drainage plan for the City of Seminole.	4	Reduces property loss through accommodating drainage before development.
Infrastructure Element, Policy 5.1.10	The land development regulations shall contain provisions which, at a minimum, protect natural drainage features found within the City as follows: the flood-carrying and flood storage capacity of the 100-year floodplain shall be maintained; to the maximum extent legally possible, new development shall not be located in the CHHA; the prevention of erosion, retardation of runoff, and protection of natural functions and values of the floodplain shall be considered while promoting public usage; and the City shall require development or redevelopment proposals to be consistent with performance standards regulating development within the designated floodplain.	1	Ensures new or redeveloped properties meet/implement flood protection measures.
Coastal Management and Conservation Element, Goal 1	To ensure the highest environmental quality possible, the City of Seminole shall conserve, protect, and appropriately manage its aquatic, wetland, and terrestrial natural resources.	5	Reduces property loss due to 100-year flood; insures consistency with NFIP policies.
Coastal Management and Conservation Element, Policy 1.1.3	The City shall protect water storage and water quality enhancement functions of wetlands, floodplains, and aquifer recharge areas through land acquisition, enforcement of laws, and the application of land and water management practices which provide for compatible uses.	5	Reduces loss due to flooding.
Coastal Management and Conservation Element, Policy 1.1.4	The City shall minimize the amount of impervious surface areas in order to promote groundwater infiltration, minimize runoff, and improve water quality.	1	Reduces threat of low level and street flooding during the rainy season.
Coastal Management and Conservation Element, Objective 1.2	Land development regulations controlling development within the 100-year floodplain shall be strictly enforced.	1	Reduces property loss through accommodating drainage before development.
Coastal Management and Conservation Element, Policy 1.2.1	The City shall utilize land development regulations and site plan review to protect the natural functions of the 100-year floodplain so that flood-carrying and flood-storage capacities are maintained.	1	Reduces property loss due to 100-year flood; insures consistency with NFIP policies.
Coastal Management and Conservation Element, Policy 1.2.2	The City shall participate in state and federal floodplain management programs, in order to preserve hydrologically significant wetlands and other natural floodplain features.	5	Reduces loss due to flooding.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element, Policy 1.2.3	In order to reduce nonpoint source pollutant loadings and improve the functioning of the City drainage system, dumping of debris of any kind into drainage ditches, canals, and stormwater control structures shall be prohibited.	4	Ensures a properly functioning drainage system.
Coastal Management and Conservation Element, Policy 1.3.2	Environmentally sensitive areas, such as coastal marshes, freshwater swamps, and mangrove areas which have not been designated as Preservation on the FLUM shall be protected from development that would significantly alter their function and character. Once identified, at least a 1:1 post-development mitigation of these communities shall be required.	4	Reduces threat of low level and street flooding during the rainy season.
Coastal Management and Conservation Element, Policy 1.3.3	Dredge and fill activities shall be permitted only when determined to be an overriding public benefit, after review and approval by appropriate government agencies and other interested parties, and shall be conducted in a manner least harmful to the surrounding environment.	4	Ensures a properly functioning drainage system.
Coastal Management and Conservation Element, Policy 1.4.1	The City shall continue to enforce the local tree ordinance, requiring that all new development and redevelopment preserve at least 25 percent of the native vegetation on site. This should not be interpreted to allow development in wetland areas.	1	Limits the exposure to flood damage.
Coastal Management and Conservation Element, Policy 1.4.3	Land development regulations shall encourage shorelines lacking wetland vegetation, seawalls, or bulkheads to be planted with native vegetation, in order to minimize potential flood damage, stabilize the shoreline, trap sediments and other nonpoint source pollutants, and provide additional habitat for fish and wildlife.	5	Limits the exposure to flood damage.
Coastal Management and Conservation Element, Policy 1.4.6	The City shall require new developments and redevelopments to use soil erosion control mechanisms, where such mechanisms are necessary to control sedimentation, ensure the continual efficient operation of the drainage system, and protect streams and bays from substantial alteration of their natural functions.	1	Ensures a properly functioning drainage system.
Coastal Management and Conservation Element, Objective 1.6	The City shall participate with Pinellas County to ensure hazardous wastes are handled, collected, transported, stored, disposed of, and recycled in a manner adequate to protect human health, safety, and the environment.	1	Limits the exposure to flood damage.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element, Policy 1.6.1	The City, through its representative agency (Seminole Fire Rescue), shall work with the Florida Department of Environmental Protection, the Tampa Bay Regional Planning Council (TBRPC), and Pinellas County in maintaining an emergency response plan to handle accidents involving hazardous waste	3	Reduces loss of lives and property.
Coastal Management and conservation Element, Objective 1.8	The City of Seminole shall protect its shoreline and the estuarine environment from the impacts of development, giving priority to low-density residential and water-dependent uses.	1	Ensures new or redeveloped properties implement flood protection measures; reduces property loss.
Coastal Management and Conservation Element, Policy 1.9.1	The City shall comply with all state, federal, and county regulations governing hurricane evacuation, provision of public access to shores, provision of infrastructure, management of stormwater drainage, protection of wetland vegetation, and protection of species with special status.	3	Reduces loss of lives and property.
Coastal Management and Conservation Element, Policy 1.9.2	The City shall coordinate with neighboring municipalities and Pinellas County to protect estuaries which are within the jurisdiction of more than one local government, ensure adequate sites for water-dependent uses, prevent estuarine pollution, control surface water runoff, protect living marine resources, reduce exposure to natural hazards, and ensure public access to shores.	5	Reduces loss due to flooding.
Coastal Management and Conservation Element, Policy 1.9.3	The City shall comply with federal, county, and state regulations governing the protection and management of Lake Seminole and Long Bayou.	5	Reduces loss due to flooding.
Coastal Management and Conservation Element, Goal 2	The City shall provide a set of guidelines for development that protect the lives and property of its residents from the negative effects of natural disasters.	1	Reduces loss of lives and property.
Coastal Management and Conservation Element, Objective 2.1	The City shall maintain or reduce hurricane evacuation times.	3	Reduces loss of lives and property.
Coastal Management and Conservation Element, Policy 2.1.1	The City shall coordinate with state, regional, and county agencies to ensure that major evacuation routes are adequately maintained, and when necessary improved, to facilitate an efficient and safe evacuation.	3	Reduces loss of lives and property.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element, Policy 2.1.2	The City, in cooperation with the Pinellas County Department of Emergency Management and the Tampa Bay Chapter of the American Red Cross, shall participate in annual hurricane preparedness seminars.	3	Reduces loss of lives and property.
Coastal Management and Conservation Element, Policy 2.1.3	City emergency response personnel and volunteers shall coordinate with county and state emergency response agencies in emergency planning, including communications, traffic control, and warning operations, to effect a safe and efficient evacuation.	3	Reduces loss of lives and property.
Coastal Management and Conservation Element, Objective 2.2	The City shall reduce the risk of exposure of human life and public and private property to natural disasters through implementation of the City emergency operations plan, and through hazard mitigation measures.	3	Reduces loss of lives and property.
Coastal Management and Conservation Element, Policy 2.2.1	The City, in coordination with the Pinellas County Department of Emergency Management, shall maintain a comprehensive emergency operations plan which shall address the four phases of comprehensive emergency management: preparedness, response, recovery, and mitigation.	3	Reduces loss of lives and property.
Coastal Management and Conservation Element, Policy 2.2.2	The City shall retain an emergency management coordinator who shall oversee updating of the emergency operations plan; act as a liaison between state, regional, county, and City emergency response and planning agencies; and ensure coordination between emergency management and development management activities.	3	Reduces loss of lives and property.
Coastal Management and Conservation Element, Policy 2.2.3	The City shall continue to enforce all appropriate federal, state, and local coastal construction codes, including the <i>Coastal Zone Protection Act</i> , and shall strictly enforce their implementation through the building inspection process.	1	Ensures new or redeveloped properties meet/implement flood protection measures.
Coastal Management and Conservation Element, Policy 2.2.4	Special care facilities shall not be located in the CHHA, and are discouraged in other hurricane evacuation zones unless adequate provisions for safe and efficient evacuation and shelter are ensured.	3	Reduces loss of lives and property.
Coastal Management and Conservation Element, Policy 2.2.5	The City shall retain facilities that can be used as an emergency operations center (EOC), in order to continue essential services and communications under disaster conditions.	3	Reduces loss of lives and property.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element, Policy 2.2.6	In coordination with Pinellas County authorities, the City shall require mobile home residents, wherever located, to move to a safe location when any evacuation order is issued under the regional evacuation plan.	3	Reduces loss of lives and property.
Coastal Management and Conservation Element, Objective 2.3	The City shall limit public expenditures that support development in the CHHA, other than maintaining established levels of service for the existing or planned population, and enhancement of natural resources.	1	Reduces property loss due to 100-year flood.
Coastal Management and Conservation Element, Policy 2.3.2	The City shall designate the CHHA as the area below the elevation of the category 1 storm surge line as established by a Sea, Lake and overland Surges from Hurricanes (SLOSH) computerized storm surge model, as reflected in the most recent <i>Regional Evacuation Study, Storm Tide Atlas</i> .	1	Reduces property loss due to 100-year flood.
Coastal Management and Conservation Element, Policy 2.3.3	The City shall not support or finance new local transportation corridors within the CHHA, although existing corridors may be maintained or improved as necessary to protect the health, safety, and welfare of existing users.	1	Aids in preventing development in the CHHA.
Coastal Management and Conservation Element, Policy 2.3.4	The City shall not support sewer and water line extensions or expansions within the CHHA that will encourage future growth or higher densities in those vulnerable areas, except as anticipated in the comprehensive plan.	1	Aids in preventing development in the CHHA.
Coastal Management and Conservation Element, Objective 2.4	The City shall continue to direct population concentrations away from the designated CHHA.	1	Aids in preventing development in the CHHA.
Coastal Management and Conservation Element, Policy 2.4.1	The City shall continue to implement growth management directives which limit densities within the CHHA, consistent with the FLUM.	1	Aids in preventing development in the CHHA.
Coastal Management and Conservation Element, Policy 2.4.2	The City shall consider implementing a program of public land acquisition and management for Recreation/Open Space and Preservation areas within the CHHA.	2	Reduces property loss due to 100-year flood.
Coastal Management and Conservation Element, Goal 3	The City shall expedite post-disaster recovery, and reduce the future risk to human life and public and private property from natural hazards, through recovery and redevelopment strategies.	1	Reduces loss of lives and property.

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Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element, Objective 3.1	The City shall maintain a recovery task force to hear preliminary damage assessments, direct short-term repair and cleanup activities, and guide long-term recovery and redevelopment activities following a disaster.	3	Aids in recovery after an emergency event.
Coastal Management and Conservation Element, Policy 3.1.1	The recovery task force shall consist of City staff and other members as appointed by the City Council or City Manager.	3	Aids in recovery after an emergency event.
Coastal Management and Conservation Element, Policy 3.1.2	The recovery task force shall fulfill the following responsibilities, as well as others deemed necessary: hear preliminary damage reports and identify areas where damage has occurred; seek financial assistance; authorize immediate clean-up and repairs; recommend to the City Council temporary building moratoria and appropriate hazard mitigation policies which should be implemented; and prepare an evaluation report and make recommendations for necessary changes to the <i>City of Seminole Comprehensive Plan</i> .	3	Aids in recovery after an emergency event.
Coastal Management and Conservation Element, Objective 3.2	The City shall maintain a system of post-disaster recovery procedures, including debris clearance, property damage assessment, and restoration of basic services, and shall promote hazard mitigation.	3	Aids in recovery after an emergency event.
Coastal Management and Conservation Element, Policy 3.2.1	Following a major disaster, the City Council may adopt a temporary post-disaster building moratorium to allow sufficient time for immediate damage assessment, the identification of redevelopment opportunities, and hazard mitigation policy implementation.	3	Aids in recovery after an emergency event.
Coastal Management and Conservation Element, Policy 3.2.2	The City shall implement the post-disaster procedures outlined in the emergency operations plan, in order to expedite permitting for minor repairs, consistent with the objectives of the comprehensive plan.	3	Aids in recovery after an emergency event.
Coastal Management and Conservation Element, Policy 3.2.3	Where financially feasible and determined appropriate, the City may consider the following strategies for property which has received recurring major storm damage: designation of the land as Preservation; reduction of permissible development density; reconstruction according to more stringent building and construction standards; and public acquisition of damaged areas.	1	Reduces loss of lives and property.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Management and Conservation Element, Policy 3.2.4	The City shall address key reconstruction and redevelopment strategies which will be used to promote hazard mitigation which shall include the following objectives: enhancement of recreational/open space opportunities; enhancement and restoration of local natural ecosystems; reduction of transportation-related problems; and enhancement of the long-term viability of the commercial base.	1	Ensures new or redeveloped properties implement flood protection measures; reduces property loss.
Coastal Management and Conservation Element, Policy 3.2.5	Appropriate recommendations of interagency hazard mitigation reports, such as the <i>Pinellas County Local Mitigation Strategies</i> initiative, shall be incorporated into the <i>Comprehensive Plan</i> .	1	Aids in recovery after an emergency event.
Intergovernmental Coordination Element, Policy 1.5.6	The City will coordinate and cooperate with Pinellas County for joint projects identified in the municipal stormwater management plan and the <i>Pinellas County Stormwater Management Plan</i> .	4	Reduces property loss through accommodating drainage before development.
Intergovernmental Coordination Element, Policy 1.5.7	The City will continue to coordinate with Pinellas County for the provision of countywide facilities, including but not limited to, solid waste disposal, wastewater treatment, and the Pinellas County EOC.	3	Reduces loss of lives and property.
Intergovernmental Coordination Element, Policy 1.5.9	The City will forward notice of proposed FLUM plan amendments with potential hurricane shelter and evacuation route impacts to the TBRPC and the Pinellas County Emergency Management Department who will be consulted, if necessary and appropriate, to ascertain the amount of currently available shelter space.	3	Reduces loss of lives and property.
Intergovernmental Coordination Element, Policy 2.1.4	The City will use the TBRPC <i>Hurricane Evacuation Study</i> for guidance pertaining to residential future land use densities in CHHAs.	3	Aids in preventing development in the CHHA.
Intergovernmental Coordination Element, Policy 2.1.12	The City will notify adjacent jurisdictions that share wetlands of its protection plans and solicit comments pertaining to any proposed action.	5	Limits the exposure to flood damage.
Intergovernmental Coordination Element, Policy 2.1.14	The City will continue to administer its standards for shoreline protection and dock placement with the Pinellas County Water and Navigation Control Authority.	5	Limits the exposure to flood damage.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Intergovernmental Coordination Element, Policy 2.1.16	The City will forward its emergency response plan to handle hazardous waste spills to Pinellas County, the TBRPC, and the Florida Department of Environmental Protection to solicit comments pertaining to their respective plans.	3	Reduces loss of lives and property.
Intergovernmental Coordination Element, Policy 2.1.18	After adoption of the <i>Pinellas County Unified Local Mitigation Strategy</i> , if necessary, the City will amend its <i>Comprehensive Plan</i> and land development regulations based upon the strategy.	1	Ensures new or redeveloped properties meet/implement flood protection measures.
Intergovernmental Coordination Element, Policy 2.1.19	The City will participate in the continuing meetings of the Hazard Mitigation Committee to ensure that the strategies are implemented and updated.	1	Ensures new or redeveloped properties meet/implement flood protection measures.
Capital Improvements Element, Policy 1.1.3	Proposed capital improvement projects shall be evaluated according to ten criteria, including the elimination of a proven or obvious hazard to public health, safety, or welfare.	1	Reduces loss of lives and property.
Capital Improvements Element, Objective 1.4	Public expenditures that support development in the CHHA shall be limited to those improvements included in the <i>Comprehensive Plan</i> or determined by the City Council to be an overriding public benefit.	1	Aids in preventing development in the CHHA.
Capital Improvements Element, Policy 1.4.1	Funds shall not be expended in the CHHA, except as may be deemed appropriate to renew, replace, or improve public facility levels of service established in the <i>Comprehensive Plan</i> .	1	Aids in preventing development in the CHHA.
Capital Improvements Element, Policy 1.4.2	Development orders shall require applicants to fully fund public improvements in new developments and redevelopments located in the CHHA.	1	Aids in preventing development in the CHHA.
Public School Facilities Element, Policy 2.1.5	In addition to consistency with the <i>City of Seminole Comprehensive Plan</i> , the proposed location of a new or expanded public educational facility of the Pinellas County Schools within one of the appropriate land use categories shall be reviewed and considered according to ten criteria including that the proposed location is not in conflict with the stormwater management plan and any watershed management plans adopted by the City of Seminole, if applicable; and that the proposed location is not in a velocity flood zone or a floodway.	1	Ensures new or redeveloped properties meet/implement flood protection measures.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Public School Facilities Element, Goal 4	Opportunities are maximized for public schools to be designed such that they can serve a vital emergency management purpose in times of disaster.	3	Reduces loss of lives and property.
Public School Facilities Element, Objective 4.1	The safety of the public shall be a high priority when designing future public school facilities and renovating existing facilities.	2	Reduces loss of lives and property.
Public School Facilities Element, Policy 4.1.1	The City of Seminole shall coordinate with the Pinellas County Schools and Pinellas County on emergency preparedness issues, including the use of public school facilities for emergency shelters.	3	Reduces loss of lives and property.
Public School Facilities Element, Policy 4.1.2	Future public school facilities that are not located within category 1, 2 or 3 evacuation zones, shall be designed to serve the public as emergency shelters, consistent with Section 1013.372 F.S. These public school facilities shall be designed according to the public shelter criteria outlined in the Florida Building Code.	2	Reduces loss of lives and property.
Public School Facilities Element, Policy 4.1.3	The City of Seminole shall annually update its Capital Improvements Element to ensure that the Pinellas County School's capital needs are reflected in the <i>Comprehensive Plan</i> , enabling the coordination of existing and planned public school facilities with the required local capital projects needed to provide emergency shelter spaces, as identified by the <i>Tampa Bay Regional Hurricane Evacuation Study</i> , developed by the TBRPC.	2	Reduces loss of lives and property.
<b>Land Development Regulations</b>			
Chapter 6, Article II	Adoption of Building, Mechanical, Plumbing, Electrical, Fire Prevention, and Standard Housing Codes.	1	Ensures new or redeveloped properties implement flood protection measures; reduces property loss.
Chapter 18, Article V	Sets standards for site debris and hurricane protection.	3	Ensures new or redeveloped properties implement flood protection measures; reduces property loss.
Section 34-2	Establishes rules, regulations and procedures for the collection, removal and disposal of solid waste materials to promote the health, welfare and safety of City residents, including prohibiting depositing waste on City streets.	1	Reduces loss of lives and property.
Chapter 38, Article III	Sets forth standard for the installation of emergency vehicle pre-emption equipment.	3	Reduces loss of lives and property.
Section 39-36	Prohibits stopping, standing or parking in certain specified areas, such as obstructing emergency vehicle access.	1	Reduces loss of lives and property.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Chapter 58, Article IV	Establishes design standards, management policies, and maintenance standards for stormwater for the City of Seminole.	4	Reduces threat of low level and street flooding during the rainy season.
Chapter 62, Article III	Sets forth the environmentally sensitive lands standards for the City of Seminole.	1	Ensures a properly functioning drainage system.
Chapter 62, Article IV	Sets forth the floodplain standards for the City of Seminole.	1	Limits the exposure to flood damage.
Section 70-2	Requires that development and use of property must be in compliance with the future land use element of the City's Comprehensive Plan.	1	Ensures new or redeveloped properties implement flood protection measures.
Chapter 70, Article III	Sets zoning standards for site plan review.	1	Ensures new or redeveloped properties implement flood protection measures.
Chapter 70, Article VII	Sets standards for the development of specific zoning districts.	1	Ensures new or redeveloped properties implement flood protection measures.
Chapter 70, Article IX	Sets zoning standards for the placement and utilization of accessory structures and uses.	1	Ensures new or redeveloped properties implement flood protection measures.
Chapter 70, Article XI	Sets zoning standards for performance and supplementary district uses.	1	Ensures new or redeveloped properties implement flood protection measures.
Chapter 70, Article XIII	Sets zoning standards for telecommunication towers and antennas.	1	Ensures new or redeveloped properties implement flood protection measures.
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
CRS Activity 310	Maintain FEMA elevation certificates for all new construction.	1	Reduces property loss due to 100-year flood; insures consistency with NFIP policies.
CRS Activity 450	Regulate new development throughout the watershed to ensure that post-development runoff is no worse than pre-development runoff.	1	Reduces property loss through accommodating drainage before development.
CRS Activity 510	Prepare, adopt, implement and update a comprehensive plan using a standard planning process.	1	Ensures new or redeveloped properties meet/implement flood protection measures+D119.
CRS Activity 540	Conduct periodic inspections of all channels and retention basins and perform maintenance as needed.	4	Ensures a properly functioning drainage system.
<b>Emergency Management</b>			
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	3	Reduces loss of lives and property.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
City of Seminole Emergency Management Plan & Disaster Preparedness Guide	Establishes a framework through which the City may prepare for, respond to, recover from, and mitigate the impacts of a wide range of disasters that may adversely affect the health, safety or general welfare of the residents of Seminole.	3	Reduces loss of lives and property.
City of Seminole Emergency Preparedness Employee Handbook	Details the roles and responsibilities of City employees in the event of a hurricane, with the handbook also being made available to citizens of Seminole.	6	Educates the public on how to prepare or avoid damage due to flood hazards.
<b>Other</b>			
Annual Budget	Construction of a City EOC facility and administration office for Public Works.	3	Reduces loss of lives and property.
Annual Budget	Drainage improvements that will be identified in the drainage master plan that will reduce the cost for repairs performed concerning drainage emergencies.	4	Ensures a properly functioning drainage system.
Annual Budget	Public education for disaster (hurricane) planning, particularly for school children, provided by the Fire Rescue Department.	6	Educates the public on how to prepare or avoid damage due to flood hazards.
Annual Budget	Disaster education provided to Fire Department employees.	3	Reduces loss of lives and property.
Annual Budget	District Chiefs attendance at Hurricane Conference.	1	Reduces loss of lives and property.
Annual Budget	Preventive hurricane tree cutting program.	1	Reduces loss of lives and property.
National Incident Management System (NIMS) Compliance	NIMS training and compliance provided to all necessary staff, with the City of Seminole practices being in compliance with the NIMS.	3	Reduces loss of lives and property.
<b>END OF LIST</b>			

# Pinellas County Local Mitigation Strategy

**Table 5- 23: South Pasadena Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
City Comprehensive Plan, Coastal Management Section - POLICY 502.101	Support construction of planned road improvements in the Metropolitan Planning Organization’s Long Range Highway Plan that affect critical links in evacuation routes.	1	Reduces likelihood of loss of life.
City Comprehensive Plan, Coastal Management Section - POLICY 502.105	The City shall consider the evacuation level and location of any proposed development prior to the issuance of development permit authorization.	1	Reduces likelihood of loss of life. Facilitates evacuation in the event of a disaster. Minimizes need for subsequent mitigation efforts.
City Comprehensive Plan, Coastal Management Section - POLICY 502.201	Continue to participate in the federal flood insurance program, including the stringent enforcement of minimum elevation and flood proofing standards, as specified in the city’s flood protection ordinance.	2	Has limited the number of homes and businesses in the flood plain.
City Comprehensive Plan, Coastal Management Section - POLICY 502.202	Preserve mangrove areas as protective buffers against storm winds and waves.	4	Reduces storm damage.
City Comprehensive Plan, Coastal Management Section - POLICY 502.204	Expansion of public infrastructure will be permitted in the coastal high-hazard areas only for the purposes of water-dependent recreation or resource restoration, or where there are no alternatives for meeting infrastructure deficiencies identified in the City’s comprehensive plan.	2	Limits potential loss.
City Comprehensive Plan, Coastal Management Section - POLICY 502.205	Construction involving redevelopment which is located in the coastal high-hazard zone shall emphasize the use of hazard mitigation measures including relocation of structures and strict enforcement of construction standards.	2	Limits potential loss.
City Comprehensive Plan, Coastal Management Section - POLICY 502.206	New development within the coastal high-hazard area shall be consistent with the City’s comprehensive plan as to both land use and density and/or intensity.	2	Limits potential loss.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
City Comprehensive Plan, Coastal Management Section - POLICY 502.207	The City shall continue to stringently enforce compliance with all adopted federal, state, and regional coastal construction codes, coastal set back requirements and building codes.	2	Results in construction of structures which can survive storms.
City Comprehensive Plan, Coastal Management Section - POLICY 502.304	Prior to authorizing any repairs or redevelopment the City Commission shall fully consider other options such as removal, relocation or structural modification. In authorizing repair and redevelopment following a natural disaster, the following priorities shall be used by City officials. 1. Repair and cleanup of infrastructure which removes immediate hazards and protects the health and safety of the City residents. 2. Repair of infrastructure which restores services to City residents. 3. Removal, relocation or structural modification of unsafe structures. 4. Replacement or relocation of infrastructure which would impede redevelopment. 5. Redevelopment of damaged structures or property.	1	Ensures repairs begin with the most critical infrastructure damage that affects public health and safety.
City Comprehensive Plan, Coastal Management Section - POLICY 502.306	Private repair and reconstruction shall only be allowed in those areas where essential public services and facilities have been restored.	1	Promotes public health, safety and general welfare.
City Comprehensive Plan, Coastal Management Section - POLICY 504.104	Establish a review procedure whereby a development project's impact on evacuation times for the area shall be determined prior to development approval by the City.	1	Reduces likelihood of loss of life.
City Comprehensive Plan, Capital Improvements Section - POLICY 901.103	Proposed capital improvement projects shall continue to be evaluated and ranked in order of priority according to the following guidelines. Project is needed to eliminate a proven or obvious hazard to public health and safety; Project is needed to fulfill a legal commitment by the City; Project is needed to preserve, maintain, refurbish or achieve full use of existing facilities; Project will provide or bring an existing facility up to an adopted level of service; Project will increase efficiency or use of existing facilities, prevents or reduces future improvement cost, or provides service to all residents equitably; Project will increase the economic base or quality of life of the residents; Budget impact of project, both capital and operating, will be considered and Committee will consider financial feasibility of project; and Project will be reviewed for consistency with plans of other agencies having responsibility for public facilities within the jurisdiction.	1	Reduces likelihood of loss of life.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Land Development Regulations</b>			
City Comprehensive Plan, Land Use Section - POLICY 101.402	All future requests for land use amendments shall be reviewed as to location, considering potential hazards such as flooding, excessive traffic, soil substance, noxious odors and noise	2	Reduces potential flooding.
City Comprehensive Plan, Land Use Section - POLICY 101.601	Require all uses requesting development authorization to submit a site plan for review with particular emphasis on drainage retention and stormwater management, open space and flood protection.	2	Has limited the number of homes and businesses subject to flooding.
City Comprehensive Plan, Land Use Section - POLICY 101.802	Consider the purchase of properties which are incompatible with surrounding uses or provide for undesired densities as part of future capital improvements projects.	1	Has resulted in high density property located in the V zone being acquired.
City Comprehensive Plan, Land Use Section - POLICY 101.1001	All development and redevelopment shall consider the potential impact on emergency management plans and hurricane evacuation based on the current Pinellas County Local Mitigation Strategy and the Statewide Regional Evacuation Study (SRES) for the Tampa Bay Region.	3	Facilitates evacuation in the event of a disaster.
City Comprehensive Plan, Land Use Section - POLICY 101.1002	Coordinate coastal area population densities with appropriate local or regional hurricane evacuation plan.		Facilitates evacuation and reduces likelihood of loss of life. City Population has risen less than 3% in the past decade.
City Comprehensive Plan, Land Use Section - POLICY 101.1404	The reconstruction of any legally nonconforming residential structure shall adhere to those development regulations (local, state and federal) in effect at the time the development order is issued.	2	Has limited the number of structures subject to flooding.
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
City Comprehensive Plan, Infrastructure Section - POLICY 401.201	Maintain sealed manholes in all flood prone areas.	2	Reduces potential flooding.
City Comprehensive Plan, Infrastructure Section - POLICY 403.101	Require on-site or approved off-site retention on all new or remodeled development in the City.	2	Reduces potential flooding.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
City Comprehensive Plan, Infrastructure Section - POLICY 403.103	Require pervious paving for all non required parking areas and temporary drive areas.	2	Reduces potential flooding.
City Comprehensive Plan, Infrastructure Section - POLICY 403.104	Reduce paving requirements within the land development code by requiring 10 percent of all parking areas for new construction to be permeable paving.	2	Reduces potential flooding.
City Comprehensive Plan, Infrastructure Section - POLICY 403.204	The City shall maintain a stormwater drainage system which is capable of providing a LOS sufficient to handle a 25-year, 6-hour storm event during normal tide levels.	3	Reduces potential flooding.
City Comprehensive Plan, Infrastructure Section - POLICY 403.206	The Level of Service for storm water discharge and water quality shall be as follows. Quantity: The 25-year, 24 hour duration storm event. Post-development peak rate of surface discharge shall not exceed the historic discharge rate. Quality: Each storm water management system shall be designed to prevent degradation of receiving waters. Each system shall conform to state water quality standards as set forth in Chapter 62 F.A.C.	3	Reduces potential flooding.
City Comprehensive Plan, Infrastructure Section - POLICY 403.302	Stormwater management systems shall be required of all new development or redevelopment involving 25 percent or more of the structure or site.	2	Reduces potential flooding.
City Comprehensive Plan, Coastal Management Section - POLICY 502.203	Encourage the State to establish a public acquisition fund for purchasing properties that suffered damage during a natural disaster.	1	Reduces repetitive loss.
City Comprehensive Plan, Coastal Management Section - POLICY 502.301	Permits shall be required for all repair and redevelopment which results from natural disaster except those required to protect the public health and safety. The City Commission may waive permit fees for repairs or redevelopment, and shall review any repair or redevelopment which affects 50 percent or more of a damaged structure or property.	1	Reduces repetitive loss.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
City Comprehensive Plan, Coastal Management Section - POLICY 502.302	As soon as practical following the declaration of a natural disaster encompassing South Pasadena, the City Commission shall call an emergency meeting and establish a temporary moratorium on the permitting of new construction and redevelopment in accordance with the guidelines suggested by the City's damage assessment team.	1	Allow adequate time to rebuild in compliance with South Pasadena Comprehensive Plan. Limits potential repetitive loss.
City Comprehensive Plan, Coastal Management Section - POLICY 502.303	The City's damage assessment team shall consist of the Director of Public Safety, The Director of Public Works, the City's Building Official, the City's Building Inspector and other members designated by the City's Incident Commander; the team shall assess the extent of the damages following a natural disaster and make recommendations to the City Commission regarding the geographic location and time length for the permitting moratorium. The damage assessment team shall also evaluate the effectiveness of hazard mitigation measures and submit recommendations to the City Commission for modification of mitigation policies and programs.	1	Ensures structures damaged more than 50% are not built back or built to higher standards. Identifies the geographic locations that may benefit from a permitting moratorium. Identifies where any potential mitigation efforts may be most beneficial. Limits potential repetitive loss.
City Comprehensive Plan, Coastal Management Section - POLICY 502.305	Repair and/or replacement of damaged or destroyed infrastructure shall not exceed the pre-disaster capacity unless a deficiency has been identified within this comprehensive plan.	1	Limits potential repetitive loss.
City Comprehensive Plan, Coastal Management Section - POLICY 502.307	Following a natural disaster, repetitive loss properties shall not be permitted to redevelop without an approved redevelopment plan that demonstrates that proposed redevelopment includes structural improvements that eliminate the potential of future loss.	1	Limits potential repetitive loss.
City Comprehensive Plan, Coastal Management Section - POLICY 502.308	To the maximum extent feasible, redevelopment in those areas identified as being wholly or partially within the coastal high-hazard area and also within the V zone shall require relocation to reduce future damage.	1	Limits potential repetitive loss.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
City Comprehensive Plan, Coastal Management Section - POLICY 502.309	Immediate repair and cleanup actions needed to protect public health and safety shall be permitted immediately following a natural disaster, however, the redevelopment of any facility which sustained more than 50% damage shall be considered long term repair and redevelopment and shall not be permitted until all of the requirements of the post disaster plan including considering alternatives such as removal, relocation and structural modifications have been addressed.	1	Limits potential repetitive loss.
City Comprehensive Plan, Coastal Management Section - POLICY 502.4	The City shall not increase the residential densities permitted by its Future Land Use Map, and shall continue to enforce land use regulations which discourage redevelopment in the V zone of the coastal High Hazard area. The City shall not increase residential density beyond the number of existing residential units as of September 6, 1989 unless the increase is a result of annexation.	1	Limits potential repetitive loss.
Ch 108 City Code	Flood Damage Prevention Chapter of City Code requires elevation of residential structures and elevation for flood proofing of commercial structures.	2	Promotes public health, safety and general welfare and minimizes public and private losses.
Ch 130 City Code 69-76	Storm water runoff control requires retrofit of all redevelopment to retain storm water on site.	2	Reduced potential flooding and limits potential repetitive loss.
<b>Emergency Management</b>			
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	1	Reduces loss of life and property.
City Emergency Action Guide	Provides for the safety of the citizens of South Pasadena and its Fire District in times of disaster. Provides direction to assure a smooth, organized operation from warning stage through recovery phase of an incident.	1	Reduces loss of life and property.
City Comprehensive Plan, Coastal Management Section - POLICY 502.102	Local governments should coordinate efforts to develop and equip an emergency fallen tree and pole removing team for cleaning fallen trees from evacuation routes.	1	Reduces likelihood of loss of life.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
City Comprehensive Plan, Coastal Management Section - POLICY 502.103	The City shall appoint a representative to work with the County and the Tampa Bay Regional Planning Council to assure that adequate shelter space is available to the existing and proposed residents of the City.	1	Reduces likelihood of loss of life.
City Comprehensive Plan, Coastal Management Section - POLICY 502.104	The City shall continue to appoint a representative to coordinate with county and state in developing emergency management plans and disseminating information.	1	Reduces likelihood of loss of life. Facilitates recovery following a disaster.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 5- 24: St. Petersburg Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
D1.2	The City of St. Petersburg will continue to update the prioritized municipal drainage improvement projects based on current EPA, DEP and SWFWMD requirements.	4	Projects are ongoing to address flood prone areas. The Engineering and Stormwater Department lists priority storm water projects subject to change due to appropriations, permitting and actual costs.
D1.4	The City, St. Petersburg will continue to undertake special studies of drainage areas with specific problems. Recommendations from such studies may influence review criteria and design storm requirements for drainage systems in those areas.	1	The City periodically reviews areas in need of drainage improvement projects and implements necessary mitigation measures. Payment-in-lieu of site specific drainage improvements has been implemented in areas to transfer the responsibility of storm water improvements from developers to the City which allows the creation of an overall basin treatment program.
D2.2	The City will seek and consider the recommendations of regional, State and Federal agencies, and other City Departments in the design and construction of these project.	1	DFOT runoff standards and SWFWMD permit requirement are used for design criteria to limit storm water runoff.
D3.1	The City will continue to implement the storm water utility fee as a dedicated source of funding for the <i>Stormwater Management Master Plan</i> .	4	Since 1990, the City has collected a storm water utility fee from utility customers to implement the <i>Stormwater Management Master Plan</i> and construct drainage improvement projects.
D4.2	The City will continue perfecting the backflow prevention device to replace the flap gates where storm water outfalls into surface waters.	4	Backflow prevention vaults have been designed and patented by the City Engineering and Stormwater Department to hold tidal water and subsurface drainage pushed into the streets by high tide overflows. These vaults store water until the tide subsides.
D4.3	The City will continue an ongoing maintenance program for lakes, creeks, canals and other storm water retention and conveyance features in a manner which protects the natural drainage features and adjacent natural resources.	4	Aquatic weed control, machine and hand ditch cleaning programs improve the quantity of water retention which reduces flooding.
D5.3	Drainage improvements will utilize best management practices to reduce potential for adverse environmental impacts.	1	These management practices maximize water retention of drainage areas.
D5.4	Coordination among local, regional, state and federal environmental regulation agencies will continue to be sought by St. Petersburg in relation to drainage improvements.	1	Various local, State and Federal agencies are consulted on drainage improvements when necessary.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
D5.5	The City will continue to seek permits from appropriate regional, State and Federal agencies relating to dredge and fill, water quality, drainage system maintenance and other environmental issues.	1	Various local, State and Federal agencies are consulted on drainage improvements when necessary.
D6.1	The City shall require redeveloped sites, other than single family lots up to a quadruplex that are not part of a larger common plan of development, to incorporate water quantity and quality controls, recognizing case by case limitations or payments in lieu of improvements. All sites are required to retrofit for water quality to the degree it is being redeveloped.	1	The City requires either site specific drainage improvements or payments-in lieu.
D6.2	As a condition of site plan approval, applicants shall be required to obtain a SWFWMD surface water management system permit or letter of exemption.	1	The City requires the appropriate SWFWMD review for the design and construction of drainage projects to meet quantity standards.
D6.9	The City will continue to implement the street sweeping program to reduce debris entering the municipal drainage system.	4	The drainage system is at a higher capacity when debris is limited.
CM1.3	Mitigation and restoration sites shall be recorded as developed preservation or conservation easements within which no further development will be permitted.	5	Limits development in flood hazard area.
CM2.4	The City shall support the purchase and preservation of endangered waterfront lands, particularly those being considered for acquisition under the Pinellas County Endangered Lands program, including the Clam Bayou tracts.	5	Limits development in flood hazard area.
CM6.10	The City shall participate in the development and implementation, within watersheds of the City, of the Surface Water Improvement Management (SWIM) basin plans.	1	These plans intend to reduce the quantity of storm water runoff.
CM6.11	Natural drainage characteristics will be retained, restored and enhanced, where possible, for filtration of pollutants, control of runoff rates and aquifer recharge.	5	Maintains the holding capacity of natural drainage features.
CM6.16	The issuance of municipal development approval shall be conditioned upon the applicant securing a SWFWMD surface water management permit, where applicable.	1	SWFWMD permit requirements limit storm water runoff.
CM7.4	Dredging and filling below the mean high water line to create developable land shall only be permitted where the applicant can document an overriding public interest.	1	Eliminates or significantly reduces the development of new sites along coastal high hazard areas.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CM10.4	Expanded infrastructure in the coastal high hazard area shall only be permitted as is necessary to protect the public health, welfare and safety, including storm water and sewer improvements, and to service the demand generated by the plan for development identified on the Future Land Use Plan.	1	Reduces the intensity of development and vulnerability in the CHHA.
CM10.6	The City shall direct population concentrations away from known or predicted coastal high hazard areas by not locating water line extensions in the coastal high hazard area, beyond that which is necessary to service planned zoning densities as identified in the adopted Future Land Use Map	1	Reduces the intensity of development and vulnerability in the CHHA.
CM11.1	Variances to required flood elevations shall not be approved unless documented to be in the best interest of the public health, safety and welfare.	1	Limits the vulnerability of new development in the floodplain.
CM11.2	The City shall enforce applicable recommendations of Post- Disaster Hazard Mitigation plans, required under Section 406 of the Disaster Relief Act of 1974.	1	Intended to improve hazard mitigation.
CM11.3	The City shall minimize the disturbance of natural shorelines which provide stabilization and protect landward areas from storm impacts.	5	Reduces the proximity and intensity of development along coastal areas.
CM11.4	Comprehensive plan amendments shall consider the effect on hazard mitigation.	1	Intended to improve hazard mitigation.
CM11.5	Solid waste and commercial hazardous waste management facilities, including regional storage, treatment or transfer sites shall not be located in the hurricane vulnerability zone.	1	Reduces the storm vulnerability of waste facilities and contamination risk.
CM11.7	Site plan review criteria <u>shall</u> consider flood potential and hurricane hazards, including evacuation levels and sheltering, in a comprehensive manner.	1	Reduces the storm vulnerability of development.
CM11.11	The City shall maintain an inventory of repetitive loss properties and target hazard mitigation programs to these properties.	1	Repetitive loss properties are provided flood mitigation information.
CM12.3	Temporary building moratoriums may be declared in the Coastal High Hazard Area when 50% or more homes have been destroyed in order to assess impacts and feasibility of redevelopment.	1	The City intends to decrease future storm vulnerability through compliance with applicable State, County and regional coastal construction guidelines.
CM12.6	The City shall identify properties recommended for acquisition after a storm.	1	Reduces vulnerability of post-disaster development by not rebuilding on selected sites. These properties are not currently identified.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
C1.1	The City shall actively enforce minimum building standards identified in the adopted Flood Damage Prevention Ordinance for construction within the 100-year floodplain.	1	The City attempts to reduce the potential for property damage and safety hazards caused by storm flooding through complying with or exceeding minimum FEMA standards.
C1.2	The City will cooperate with the Federal Emergency Management Agency to regularly update the 100-year floodplain and to continue FEMA regulations.	1	The City attempts to reduce the potential for property damage and safety hazards caused by storm flooding through complying with or exceeding minimum FEMA standards.
C4	The City of St. Petersburg shall protect green open space areas and the native vegetation and wildlife in St. Petersburg in the manner identified in the Recreation/Open Space Element of the <i>Comprehensive Plan</i> so as to maintain a citywide total of 50% green permeable open space.	5	Reduces the intensity of development in all areas of the City including the floodplain and allows for natural drainage.
C6	The City of St. Petersburg shall conserve and protect preservation areas through implementation of Section 16.20.160 of the Land Development Regulations, as revised.	5	Reduces the intensity of development in all areas of the City including the floodplain and allows for natural drainage.
H4.1	The City shall review and issue permits for mobile homes that meet the requirements of the building code and zoning ordinance. and other applicable regulations.	1	The City allows mobile homes in existing mobile home parks, when vacancies exist, but does not allow mobile home parks to be developed or expanded in the Coastal High Hazard Area.
H5.1	Community-based residential care facilities licensed by the State of Florida Health Care Administration shall be permitted at convenient, adequate and non-isolated sites within the residential or institutional areas of the City, where there is adequate infrastructure; provided they meet all of the requirements of the Land Development Regulations, and are not within the Coastal High Hazard Area or susceptible to documented or anticipated flooding.	1	Reduces density in flood prone areas and the CHHA.
LU7.2	All approval of new proposed development will consider the hurricane evacuation level/location of the proposed development, and provide appropriate mitigation.	1	Reduces the storm vulnerability of new development.
LU7.3	Prohibit the new construction of hospitals, nursing homes and convalescent homes in Evacuation Level A Zone, discourage the siting or expansion of these facilities in Evacuation Level B Zone, and limit the expansion of existing sites to the boundaries of the currently developed lot.	1	Reduces the storm vulnerability of new and existing hospitals, nursing homes and convalescent homes.
LU7.4	The City will prohibit the siting of new mobile home parks within the Evacuation Level A Zone and limit the expansion of existing sites to the boundaries of the currently developed lot.	1	Reduces the storm vulnerability of new and existing mobile home parks.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
LU7.5	When establishing Future Land Use Plan designations through a Comprehensive Plan amendment for annexed properties located within the Coastal High Hazard Area there shall be no net increase in residential density as compared to the Future Land Use Plan of Pinellas County designation(s) existing at the time of annexation of a property without the prior written approval of DCA and Pinellas County.	1	Reduces the storm vulnerability of new residential development.
LU7.6	Opportunities to decrease residential development potentials on the remaining vacant tracts in the CHHZ through plan amendments to less intensive uses, land purchases or transfer of development rights shall be considered.	1	Reduces the storm vulnerability of new development.
LU7.7	The City will encourage the mitigation, reduction or elimination of uses that are inconsistent with any interagency hazard mitigation report recommendations that the City determines appropriate.	1	Reduces the storm vulnerability of new development.
<b>Land Development Regulations</b>			
City Code Chapter VIII, Article II	Building Code Adopts the Florida building Code as the building code for the City. Establishes minimum building standards for reducing damage from multiple hazards.	1	Minimum building standards reduce storm damage.
Section 16.40.050 of the Land Development Regulations	Floodplain Management	1	Minimizes public and private losses due to flood conditions in the Special Flood Hazard Area (SFHA) and the Coastal High Hazard Area (CHHA).
Section 16.40.00 of the Land Development Regulations	Drainage and surface water management	1	Regulates and controls the management and storage of all drainage and surface waters to reduce flooding.
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
St. Petersburg Floodplain Management Plan	The Development Services Department should publicize and help homeowners pursue flood mitigation grants available through the Florida Department of Community Affairs.	2	Reduces exposure of private property to natural hazards.

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
St. Petersburg Floodplain Management Plan	The Development Services Department will develop brochures providing a general overview of residential flood proofing construction methods and a list of resources and contacts who can further provide information.	6	Provides information to the public on how to reduce the risk of damage from a natural hazard.
St. Petersburg Floodplain Management Plan	The Environmental Enhancement Program will continue to designate preservation sites and habitat restoration projects in the floodplain where deemed appropriate.	5	Reduces the amount of developable land in the floodplain and reduces future risk of damage to private property.
St. Petersburg Floodplain Management Plan	The City will continue to implement the capital improvement plan for stormwater improvements.	4	Helps to reduce street flooding thereby reducing the risk to private property from flooding.
St. Petersburg Floodplain Management Plan	The Main Library should continue to make floodplain information available to the public. Development Services Staff will periodically update materials.	6	Provides a location for the public to view all types of material related to the risk of flooding and preventive measures.
St. Petersburg Floodplain Management Plan	The Development Services Department will continue to directly provide flood information to repetitive loss properties.	6	Provides direct information to owners of repetitive loss properties on retrofitting and elevation.
CRS: NFIP Number 125148	The City participates in the Community rating System. The City is verified as a class 6 community and receives discounted rates for National Flood Insurance based on the CRS rating.	1,2,3,4,5,6	Reduces potential property losses, increased public safety, and protects the environment.
<b>Emergency Management</b>			
The City Disaster Operations Plan (DOP)	The City Disaster Operations Plan (DOP) provides operational guidelines and suggested strategies for disaster management of "all hazards". It is a companion to the Pinellas County Comprehensive Plan and has a conceptual nexus to Florida Department of Emergency Management, FEMA, the National Incident Management System (NIMS) and other disaster management constituencies. All four components of emergency management are addressed in the City's program and are compliant with law, regulation, contingency plans and industry standards.	3	Provides operational guidelines and suggested strategies in the event of an emergency.
Planning and Economic Development "Greenhouse"	"Disaster Preparedness for Small Businesses" class conducted bimonthly as element of entrepreneurial development course. Participants are guided through the conceptualization and development of a continuity of business operations plan applicable to all hazards.	1	Contributes to the resiliency of the City's small business community from disaster events and improves the behaviors of small business re protection of assets; preservation and acquisition of emergency capital and participation in community disaster recovery.
<b>END OF LIST</b>			

# Pinellas County Local Mitigation Strategy

**Table 5- 25: St. Pete Beach Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan Future Land Development</b>			
Policy 1.8.1	Significant environmental features shall be protected through provisions contained in the land development regulations or other appropriate regulations.		Reduces flooding. Reduces erosion and runoff.
Policy 1.8.2	Development review criteria, as contained in the land development regulations, shall include soil suitability.		Ensures protection measured where unsuitable soils exist.
<b>Policy 1.8.6</b>	All applications for development approval within those areas identified as marine wetland and riverine floodplain shall be subject to site plan review as contained in the land development regulations.		Ensures new or redeveloped properties meet/implement flood protection measures.
<b>Policy 1.8.9</b>	The land development regulations shall ensure that land use planning and project development emphasize the preservation of coastal vegetative communities and wildlife habitats, stream corridors, and unique upland vegetation.		Natural function of these areas preserved.
<b>Policy 1.8.15</b>	The City shall protect the general public health, safety, and welfare by minimizing development in high risk areas such as the hurricane vulnerability.		Reduces loss of lives and property
<b>Policy 1.9.1</b>	The land development regulations shall contain provisions whereby the natural functions of the 100-year flood plain are protected.		Reduces loss of lives and property.
<b>Policy 1.9.2</b>	Residential areas within the 100-year flood plain shall be approved only if they are in conformance with National Flood Insurance Administration standards and adopted drainage plans for the area.		Ensures new or redeveloped properties meet/implement flood protection measures.
<b>Policy 1.9.3:</b>	The land development regulations shall contain provisions which encourage the use of native vegetation to the fullest extent possible to stabilize shorelines and protect upland areas from the hazards of flooding.		Reduces damage from manmade erosion control structures, (i.e. seawalls)
<b>Policy 1.9.4:</b>	The land development regulations shall contain provisions whereby, to the maximum extent legally possible, new development is not located in floodways, as defined by the Federal Emergency Management Agency (FEMA).		Reduce loss of lives and property. Minimize development in high risk areas.
<b>Policy 1.9.5:</b>	New development permitted in the flood fringe, the area of the floodplain outside the floodway, shall be required, through provisions contained in the land development regulations, to		Ensures new or redeveloped properties implement flood protection measures; reduces property loss.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
	meet flood hazard construction requirements.		
<b>Policy 1.9.7:</b>	The land development regulations shall contain provisions whereby the developer/owner of any new development or redevelopment site is responsible for the on-site management of stormwater runoff in a manner that shall ensure post-development runoff rates, volumes and pollutant loads do not exceed predevelopment conditions.		Ensures new and redeveloped properties implement flood protection measures; reduces property damage.
<b>Policy 1.9.8:</b>	The land development regulations shall contain provisions whereby impervious surface areas are minimized.		Reduces flooding
<b>Measure:</b>	Implementation of floodplain construction regulations consistent with FEMA regulations.		Ensures new and redeveloped properties implement flood protection measures; reduces property damage.
<b>Objective 1.10:</b>	As an ongoing objective, the City shall work with Pinellas County and the City of Clearwater to fully implement the planned improvements of the Pinellas County Master Drainage Plan, as amended.		Ensures new and redeveloped properties implement flood protection measures; reduces property damage.
<b>Policy 1.10.1:</b>	The implementation of the Pinellas County Master Drainage Plan shall be in cooperation with those local governments within the City's drainage basins.  Policy 1.10.3: Any stormwater management policies developed and implemented by the City shall, at a minimum, address the following: <ul style="list-style-type: none"> <li>•The identification of drainage problem areas;</li> <li>•The identification of those areas in need of immediate corrective action; and</li> <li>•The identification of corrective measures, listed by priority, and cost of the individual measure by problem area.</li> </ul>		Reduce loss of lives and property.
<b>Policy 1.10.4:</b>	By 1996, the City, in cooperation with the Pinellas County Engineering Department, shall survey and map those creek beds and floodways located within its municipal boundaries.		Reduce loss of lives and property.
<b>Policy 1.10.5:</b>	The City shall implement the recommendations of its Master Drainage Plan.		Ensures new and redeveloped properties implement flood protection measures; reduces property damage.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Objective 2.1:</b>	Recognizing its vulnerability to the effects of tropical storms, the City shall endeavor to protect the lives and property of its residents through implementation of the City's floodplain management and land development regulations, coordination with Pinellas County Emergency Management, the proper placement of allowable densities, through effective post-disaster redevelopment strategies, and through effective hazard mitigation techniques identified by interagency hazard mitigation report recommendations that the City considers appropriate.		Reduces investment in infrastructure.
<b>Policy 2.1.1 :</b>	The City shall limit public expenditures that subsidize development permitted in coastal high-hazard areas, except for restoration or enhancement of natural resources or recreation or open space areas.		Reduces investment in infrastructure.
<b>Policy 2.1.2:</b>	Through site plan review and the subdivision plat process, the City shall direct population concentrations away from the designated coastal high-hazard areas.		Reduces loss of lives and property.
<b>Policy 2.1.3:</b>	Maintain or reduce hurricane evacuation clearance times.		Reduce loss of lives.
<b>Policy 2.1.4:</b>	The risk of exposure of human life and public and private property to natural disasters shall be reduced through preparedness planning and implementation of hazard mitigation measures.		Reduces exposure through disaster planning and hazard mitigation.
<b>Policy 2.1.5:</b>	The City shall analyze proposed development and redevelopment in accordance with the recommendations contained in available hazard mitigation reports, and shall encourage the elimination of uses inconsistent with these reports.		Provides a guidance tool for the City from past experiences.
<b>COASTAL AND CONSERVATION ELEMENT</b>			
<b>Policy 1.2.1:</b>	New development or redevelopment approvals shall require that post-development runoff rates, volumes and pollutant loads do not exceed pre-development conditions.		Ensures new and redeveloped properties implement flood protection measures; reduces property damage.
<b>Policy 1.2.2:</b>	Recognizing that portions of the community are located within the 100-year flood plain, the City shall continue to strictly enforce all appropriate federal, state, and regional coastal construction codes and coastal setback regulations.		Ensures new and redeveloped properties implement flood protection measures; reduces property damage.
<b>Policy 1.2.3:</b>	The City shall protect the natural functions of the 100-year flood plain so that the flood-carrying and flood storage capacity are maintained including a requirement for compensatory storage in all non coastal flood hazard areas.		Ensures new and redeveloped properties implement flood protection measures; reduces property damage.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Policy 1.2.4:</b>	The City shall cooperate with State agencies to encourage the development of a strict flood plain management program by state and local governments to preserve hydrologically significant wetlands and other natural flood plain features.		Reduces loss from inappropriate development in a flood plain.
<b>Policy 1.2.5:</b>	The flood plain of all major drainage ways for a 100-year storm shall continue to be identified and the alteration of these flood plains shall remain subject to review.		Reduces loss from inappropriate development in a flood plain.
<b>Policy 1.2.6:</b>	In order to reduce non-point source pollutant loadings and improve the functioning of the City's drainage system, the City shall prohibit the dumping of debris of any kind (e.g., yard clippings and trimmings), into drainage ditches, canals and stormwater control structures.		Reduce pollutants to natural water source.
<b>Policy 1.2.7:</b>	The City shall participate in the National Flood Insurance Community Rating System program.		Provides incentive for voluntary programs to reduce loss and reduce cost of flood insurance.
<b>Policy 2.1.1:</b>	As of the effective date of this Comprehensive Plan, the City of Safety Harbor shall designate the Coastal High Hazard Area as the area defined by the Sea, Lake and Overland Surges from Hurricanes (SLOSH) model to be inundated from a category one hurricane, as reflected in the most recent Regional Evacuation Study, Storm Tide Atlas.		Provides geographic area for coastal high hazard area strategy.
<b>Policy 2.1.2:</b>	The City shall not support or finance new local transportation corridors which lie within the Coastal High Hazard Area, although existing corridors may be maintained or improved as necessary to protect the health, safety and welfare of existing residents.		Reduce loss of life and infrastructure.
<b>Policy 2.2.1:</b>	The City of Safety Harbor, recognizing its vulnerability to coastal hazards identifies the portion of the City within Evacuation Levels "A" and "B" as within the "Hurricane Vulnerability Zone", and in the absence of any specific plans for redevelopment or hazard mitigation shall maintain residential density increases below dwelling units per acre.		Maintains or reduces densities.
<b>Policy 2.2.2:</b>	The City shall maintain or reduce allowable density in the "Hurricane Vulnerability Zone" consistent with the Future Land Use Map of this Comprehensive Plan.		Maintains or reduces densities.
<b>Policy 2.2.3:</b>	The City of Safety Harbor shall continue to implement growth management directives which prohibit the intensification of development allowed by the Future Land Use Atlas within the Coastal High Hazard Area.		Maintains or reduces densities.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Policy 2.2.4:</b>	The City shall implement a program of public land acquisition and management for recreation, conservation and preservation areas within the Hurricane Vulnerability Zone.		Reduces amount of land area available for development in vulnerable areas.
<b>Public Safety/ Emergency Management</b>			
<b>Policy 2.3.1:</b>	Through the Pinellas Area Transportation Study (PATS) Metropolitan Planning Organization (MPO), the City shall support the efforts of state, regional and county agencies to ensure that major evacuation routes are adequately maintained and, when necessary, improved to facilitate an efficient and safe evacuation.		Reduce loss of lives.
<b>Policy 2.3.2:</b>	The City, in cooperation with the Pinellas County Department of Civil Emergency Services and the Upper Pinellas County Chapter of the American Red Cross shall participate in annual hurricane preparedness seminars to increase hurricane awareness.		Reduce loss of lives.
<b>Policy 2.3.3:</b>	City emergency response personnel and volunteers shall coordinate with county and state emergency response agencies in emergency planning, including communications, traffic control and warning operations, to affect a safe and efficient evacuation of the City.		Reduces loss of lives.
<b>Policy 2.4.3:</b>	The City shall adopt and strictly enforce all appropriate federal, state, and local coastal construction codes, coastal setback requirements and flood plain management regulations.		Preserves natural functions of floodplain and increases setbacks for structures along water bodies/wetlands.
<b>Policy 2.4.2:</b>	The City shall designate an emergency management coordinator who shall oversee the development/revision of a hurricane plan; act as a liaison between state, regional, county and city emergency response and planning agencies; and ensure coordination between emergency management and development management activities in the City.		Reduces loss of life and property.
<b>Policy 2.4.4:</b>	Special care facilities shall not be located in the Coastal High Hazard Area and shall be restricted from locating in the Hurricane Vulnerability Zone unless adequate provisions for safe and efficient evacuation and shelter are ensured.		Limits new facilities that are difficult to evacuate in hazardous areas.
<b>Policy 2.4.6:</b>	The City shall implement the following post disaster redevelopment policies consistent with the plans for Pinellas County and the Tampa Bay Regional Planning Council:  •The use of temporary moratoria and phased permitting to allow comprehensive damage assessment and proper redevelopment;		Implements post disaster mitigation policies to reduce future loss.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
	<ul style="list-style-type: none"> <li>•Utilize BOAF inspectors where necessary to assist with the redevelopment process;</li> <li>•Review the need for a “freeboard” requirement;</li> <li>•Utilize periodic audits of public facilities to determine the need for protection measures;</li> <li>•Review the need for additional shoreline protection measures;</li> <li>•Review damaged public facilities and infrastructure to determine if it should be replaced, upgraded or flood proofed to be made safer, relocated or discontinued;</li> <li>•Enforcement of the City’s flood and building regulations (50 % Rule) as they pertain to nonconforming structures and require redevelopment to meet current regulations;</li> <li>•Review the feasibility of acquiring properties subject to repeated storm damage;</li> <li>•Allow the transfer of development rights away from vulnerable areas;</li> <li>•Utilize conservation easements to protect vulnerable areas;</li> <li>•Review existing densities to determine if reductions are warranted;</li> <li>•Allow the clustering of development where feasible; and</li> <li>•Review the effectiveness of existing coastal setback requirements.</li> </ul>		
<b>Objective 3.1:</b>	The City's Damage Assessment Team will continue to investigate preliminary damage assessments and coordinate post-disaster recovery and redevelopment activities as the City's designated Recovery Task Force.		Ensure proper communication with outside entities including: FEMA, State, County and insurance carriers to properly assess the damage and needed resources.
<b>Policy 3.1.1:</b>	The Damage Assessment Team as the designated Recovery Task Force shall consist of the City Emergency Management Coordinator and staff of the Planning, Public Works, Building and Finance Departments and other members as appointed by the City Manager or his designate.		Knowledgeable and committed employees serving critical roles on the DAT.

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Policy 3.1.2:</b>	<p>The Damage Assessment Team as the designated Recovery Task Force shall fulfill the following responsibilities, as well as others deemed necessary:</p> <ul style="list-style-type: none"> <li>•Develop damage assessments.</li> <li>•Take necessary steps to seek financial assistance from the appropriate state and federal agencies through the designated County agency.</li> <li>•Authorize immediate clean-up and repairs necessary to protect the public health, safety and welfare;</li> <li>•Identify areas within the community where minor, moderate and major damage has occurred;</li> <li>•If necessary, recommend to the City Commission temporary building moratoria for building activities not essential to protect health, safety and welfare;</li> <li>•Recommend to the City Commission appropriate hazard mitigation policies which should be implemented in response to the disaster; and</li> <li>•Prepare a report evaluating post-disaster redevelopment response and make recommendations for necessary changes to this Comprehensive Plan.</li> </ul>		
<b>Policy 3.2.2:</b>	The City shall adopt a post-disaster procedure which will expedite permitting for minor repairs. The procedure shall include development plan review, engineering approval and building permitting and shall provide that all permitting is coordinated with the appropriate agencies and consistent with the objectives of this Comprehensive Plan.		Produce expedient procedure to re-build while ensuring proper permitting.
<b>Policy 3.3.1:</b>	Where feasible, property which has received recurring major hurricane damage from storm surge should be publicly acquired or designated preservation or conservation on the Future Land Use Map to prevent redevelopment of the property to its pre-hurricane land use.		Reduces future losses.
<b>Land Development Regulations</b>			
<b>Policy 4.1.1:</b>	Land development regulations shall be adopted which implement the requirements of the following Coastal and Conservation Element policies.		Reduces future losses.

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Policy 4.1.2	<p>The City shall adopt land development regulations that contain specific and detailed provisions to implement this Comprehensive Plan, which, at a minimum:</p> <ul style="list-style-type: none"> <li>• <i>Regulate the subdivision of land;</i></li> <li>• <i>Ensure that residential subdivisions are designed so that all individual lots have access to the internal street system and lots along the periphery are buffered from major roads and incompatible land uses;</i></li> <li>• <i>Protect those wetlands found in the community, floodplains, and those lands designated as Preservation on the Future Land Use Map and in the Coastal and Conservation Element;</i></li> <li>• <i>Regulate signage;</i></li> <li>• <i>Ensure that all development and/or redevelopment is consistent with Federal Flood Insurance Regulations;</i></li> <li>• <i>Ensure that all development, where appropriate, is consistent with those coastal construction regulations as may be adopted and/or amended by the State of Florida, Pinellas County, or the City of Safety Harbor;</i></li> <li>• <i>Esure the compatibility of adjacent land uses and provide for adequate and appropriate open space and buffering;</i></li> <li>• <i>Address historically significant properties meriting protection;</i></li> <li>• <i>Ensure that development orders and permits are issued only when it is documented that such development is consistent with the level of service standards for the affected public facilities adopted by this Comprehensive Plan;</i></li> <li>• <i>Provide for drainage and stormwater management, based on the minimum criteria established by the Florida Department of Environmental Regulation, the Southwest Florida Water Management District, as may be amended, the City of Safety Harbor, or other appropriate governmental agencies;</i></li> <li>• <i>Provide requirements for the provision of open space, and safe and convenient on- site traffic flow and parking requirements;</i></li> <li>• <i>Encourage the use of native vegetation in landscaping;</i></li> <li>• <i>Require the control of erosion and runoff from construction sites;</i></li> <li>• <i>Require development plan review for all commercial,</i></li> </ul>		Reduces loss of lives and property.

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
	<p><i>industrial, single family, multifamily, and mixed-use development proposals and specify the performance standards; and</i></p> <ul style="list-style-type: none"> <li><i>Establish specific performance standards that must be met by development projects in all areas of special concern as applicable (e.g., scenic and non-commercial highway corridors, creek beds, floodways, wetlands, other environmentally sensitive areas, shorelines, and neighborhoods with either historical or architectural significance).</i></li> </ul>		
<b>Intergovernmental Coordination Element</b>			
<b>Policy 1.2.1:</b>	The City of Safety Harbor shall, through the Pinellas County Metropolitan Planning Organization, work with FDOT and Pinellas County to attain and assure acceptable continued operational levels of service for state and county roadways within the City.		Coordination of roadway access.
<b>Policy 1.2.2:</b>	The City shall continue, through current interlocal agreements, to coordinate with Pinellas County and the City of Clearwater to ensure that future needs are considered in the expansion, acquisition and design of wastewater treatment and potable water facilities.		Ensure current and future water resource and waste water needs are met through coordination with local governments.
<b>Policy 1.2.3:</b>	The City will coordinate its levels of service, concurrency management methodologies, and land development regulations with the FDOT and Pinellas County, respectively, to encourage compatibility with the appropriate jurisdiction's level of service and access management standards for county and state maintained roadways.		Maintain communications for the good of all.
<b>Policy 1.2.4:</b>	The City will coordinate with service providers that have no regulatory authority over the use of land in the city to develop recommendations that address ways to improve coordination of the City's concurrency management methodologies and systems, and levels of service.		Seek outside guidance and best practice feedback on continual improvement and services.
<b>Policy 1.3.1:</b>	All appropriate agencies (federal, state, regional and local), jurisdictions, and the public shall be coordinated with during the designation of new dredge spoil disposal sites.		Compliance with all regulatory agencies to address spoil disposal sites.
<b>Policy 1.4.1:</b>	The City shall continue to communicate and coordinate with Pinellas County, including Pinellas County Utilities and the Metropolitan Planning Organization, the Pinellas County Planning Council, Pinellas County School Board, Tampa Bay Regional Planning Council,		Maintain communications for the good of all.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
	Tampa Bay Water, Southwest Florida Water Management District and other state agencies such as the Department of Community Affairs, Department of Environmental Protection, Department of Transportation and Health and Rehabilitative Services, and federal agencies on projects and programs that fall within their jurisdictions or are multi-jurisdictional in nature.		
<b>Policy 1.4.5:</b>	The City will review the Tampa Bay Regional Planning Council's (TBRPC) Hurricane Evacuation Study for issues that pertain to requests for residential density increases and the general application of residential future land use densities in coastal high hazard areas.		Reduces loss of lives and property.
<b>Policy 1.4.9:</b>	The City will coordinate the development of its stormwater management plan with Pinellas County and neighboring jurisdictions in shared drainage basins for comments pertaining to their respective plans.		Coordination to reduce future loss.
<b>Policy 1.4.12:</b>	The City will coordinate its hurricane recovery plans with the Pinellas County Disaster Advisory Committee, and development requests within hurricane vulnerability zones with Pinellas County Emergency Management Department staff.		Coordination to reduce future loss.
<b>Policy 1.4.15:</b>	The City will implement the countywide Local Hazard Mitigation Strategy, as adopted and amended, and shall continue to participate in the countywide workgroup.		Coordination to reduce future loss.
<b>Policy 1.6.11:</b>	The City will coordinate with the PPC, or the appropriate ad hoc committees, in the development, review, and recommendation of efficient countywide guidelines to coordinate the location of problematic land uses.		Reduces loss of lives and property,
<b>END OF LIST</b>			

# Pinellas County Local Mitigation Strategy

**Table 5- 26: Tarpon Springs Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element, Policy 2.3.1	The City shall prohibit future land use density increases within the Coastal High Hazard Area .	1	Reduces loss of lives and property.
Future Land Use Element, Policy 1.1.2	Protects the use of wetlands in accordance with the recommendations and policies of the Coastal/Conservation Element	1	Ensures new or redeveloped properties implement flood protection measures; reduces property loss.
Future Land Use Element , Policy 1.1.5	Requires infill development , redevelopment and new development to take into account the natural floodplain functions in order to minimize disruption	1	Ensures new or redeveloped properties implement flood protection measures; reduces property loss.
Coastal Planning Area and Conservation Element, Policy 1.3.2	Implement design alternatives in the Dames and Moore Master Drainage Plan to control urban run-off	1	Reduces threat of low level and street flooding during the rainy season.
Coastal Planning Area and Conservation Element, Policy 1.4.2	Requires that post development runoff shall not exceed pre-development runoff for the 25 year frequency storm, 24 hour duration in order to limit adverse impacts of water quantity and quality resulting from development or redevelopment	5	Ensures new or redeveloped properties meet/implement flood protection measures.
Utilities Element, Policy 3.2.3	The City shall ensure that stormwater management improvements meet all applicable goals, guidelines and regulations established to provide flood protection and pollution abatement.	2	Reduces property loss due to 100-year flood; insures consistency with NFIP policies.
Utilities Element, Policy 3.3.3	The City shall utilize natural and man-made wetlands as a means to provide stormwater management wherever possible and shall be maintained for hydrologic purposes.	1	Reduces threat of low level and street flooding during the rainy season.
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
Coastal Planning Area and Conservation Element, Policy 1.1.3	Requires a minimum 15 foot buffer zone adjoining all wetlands	1	Ensures new or redeveloped properties implement flood protection measures; reduces property loss.
Coastal Planning Area and Conservation Element, Policy 1.1.5	Requires wetland mitigation on a 1:1 basis using the same type or more productive vegetation with at least an 80-85% natural cover rate, over a 2-5 year period	5	Reduces loss due to flooding.
Coastal Planning Area and Conservation Element, Policy 1.3.3	Consult proposed schedule of drainage improvements in the Master Drainage Plan when preparing the City's annual CIP.	5	Reduces loss due to flooding.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Coastal Planning Area and Conservation Element, Policy 1.4.1	Utilize wetlands for stormwater filtering in accordance with the discussion under Section II.A. 2.d, FDEP, SWFWMD, and Chapter 17-25 requirements for water quality, quantity, and use.	4	Reduces threat of low level and street flooding during the rainy season.
Utilities Element, Policy 3.2.5	The City shall require stormwater facilities comply with Southwest Florida Water Management District (SWFWMD) policies and regulations.	4	Ensures a properly functioning drainage system.
Utilities Element, Policy 3.3.4	The City shall continue to provide multiple use facilities, such as recreation and open space uses, when appropriate.	4	Reduces property loss through accommodating drainage before development.
Utilities Element, Policy 3.2.2	The City shall continue to provide a stormwater management system throughout the City that will afford the most economically feasible protection to residents and property.	4	Reduces property loss through accommodating drainage before development.
Utilities Element, Policy 3.3.1	The City shall continue to provide a program of regular maintenance to the stormwater management system to ensure maximum efficiency and performance.	4	Reduces property loss through accommodating drainage before development.
Utilities Element, Policy 3.3.6	The City shall prohibit development where it is determined that such development will have an adverse impact on stormwater storage areas, increase flood prone areas, significantly increase rates of runoff, or cause other unfavorable drainage conditions.	5	Limits the exposure to flood damage.
Utilities Element, Policy 3.1.1	The adopted Level of Service standard for stormwater management retention facilities is the attenuation of the 25- year frequency storm, 24-hour duration. This standard for the City of Tarpon Springs shall be used in determining the availability of facility capacity and the demand created by new development and shall be applied to all new development, redevelopment and for all City stormwater facilities.	4	Limits the exposure to flood damage.
Utilities Element, Policy 3.2.2	The City shall continue to provide a stormwater management system throughout the City that will afford the most economically feasible protection to residents and property.	4	Reduces property loss through accommodating drainage before development.
Utilities Element, Policy 3.3.1	The City shall continue to provide a program of regular maintenance to the stormwater management system to ensure maximum efficiency and performance.	4	Reduces property loss through accommodating drainage before development.
Utilities Element, Policy 3.1.2	The City shall ensure that drainage calculations, signed and sealed by a registered Professional Engineer, are submitted during the site plan review process.	1	Ensures new or redeveloped properties meet/implement flood protection measures.
Utilities Element, Policy	The City shall ensure that development and redevelopment activities are compliant with all stormwater management design standards and criteria.	5	Reduces property loss due to 100-year flood; insures consistency with NFIP policies.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Utilities Element, Policy 3.2.6	The City shall continue to require new development retain stormwater on site and control quantity, quality and rate of flow being released into the receiving drainage systems.	5	Reduces loss due to flooding.
Utilities Element, Policy 3.3.2	The City shall ensure that stormwater facility maintenance include measures to remove trash, sedimentation and other debris which impede flow and incorporate structural and non- structural measures to reduce or eliminate the discharge of oil, grease, heavy metals and other suspended particles into the stormwater management systems.	1	Reduces property loss through accommodating drainage before development.
Utilities Element, Policy 3.3.7	The City shall continue to actively participate in the National Flood Insurance Program and cooperate with the Federal Emergency Management Agency for the purpose of recognizing flood prone areas, and establishing abatement programs that endeavor toward a reduction in damages and losses due to flooding.	1	Reduces property loss due to 100-year flood; insures consistency with NFIP policies.
Utilities Element, Policy 3.3.9	The City shall protect, when feasible, publicly owned jurisdictional wetlands and other prime recharge areas from development.	5	Reduces loss due to flooding.
Utilities Element, Policy 3.4.1	The City shall require sodding and appropriate landscaping as components of the drainage system for natural filtration.	4	Ensures a properly functioning drainage system.
Utilities Element, Policy 3.4.3	The City shall maximize water recharge potential in designing stormwater management improvements by utilizing natural wetland areas for stormwater storage.	4	Ensures a properly functioning drainage system.
Utilities Element, Policy 3.4.7	The City shall continue to upgrade and retrofit City-owned drainage system facilities and include stormwater treatment for water quality in accordance with local regulations.	1	Ensures a properly functioning drainage system.
Utilities Element, Policy 3.1.2	The City shall ensure that drainage calculations, signed and sealed by a registered Professional Engineer, are submitted during the site plan review process.	1	Ensures new or redeveloped properties meet/implement flood protection measures.
Utilities Element, Policy 3.2.6	The City shall continue to require new development retain stormwater on site and control quantity, quality and rate of flow being released into the receiving drainage systems.	5	Reduces loss due to flooding.
Utilities Element, Policy 3.3.2	The City shall ensure that stormwater facility maintenance include measures to remove trash, sedimentation and other debris which impede flow and incorporate structural and non- structural measures to reduce or eliminate the discharge of oil, grease, heavy metals and other suspended particles into the stormwater management systems.	1	Reduces property loss through accommodating drainage before development.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Utilities Element, Policy 3.3.7	The City shall continue to actively participate in the National Flood Insurance Program and cooperate with the Federal Emergency Management Agency for the purpose of recognizing flood prone areas, and establishing abatement programs that endeavor toward a reduction in damages and losses due to flooding.	1	Reduces property loss due to 100-year flood; insures consistency with NFIP policies.
Utilities Element, Policy 3.3.9	The City shall protect, when feasible, publicly owned jurisdictional wetlands and other prime recharge areas from development.	5	Reduces loss due to flooding.
Utilities Element, Policy 3.4.1	The City shall require sodding and appropriate landscaping as components of the drainage system for natural filtration.	4	Ensures a properly functioning drainage system.
Utilities Element, Policy 3.4.3	The City shall maximize water recharge potential in designing stormwater management improvements by utilizing natural wetland areas for stormwater storage.	4	Ensures a properly functioning drainage system.
Utilities Element, Policy 3.4.7	The City shall continue to upgrade and retrofit City-owned drainage system facilities and include stormwater treatment for water quality in accordance with local regulations.	1	Ensures a properly functioning drainage system.
Intergovernmental Coordination Element, Policy 1.5.9	Forward all proposed Comprehensive Plan amendments to the Pinellas County Local Planning Agency in advance of the adoption hearing. Consider the extra-jurisdictional impact of local planning decisions in such areas as land use, transportation, coastal management, recreation and utilities.	3	Reduces loss of lives and property.
Intergovernmental Coordination Element, Policy 1.4.5	Implements storm water quality considerations into land use planning and development activities, per the NPDES Permit Conditions. This includes requiring proper storm water management and erosion & sediment controls during construction to reduce pollutants from areas of development and redevelopment.	5	Limits exposure to flood damage.
Intergovernmental Coordination Element, Policy 1.4.8	The City shall work with the Pinellas County Emergency Management, the Tampa Bay Regional Planning Council and the State of Florida in the coordination and furthering of local emergency management plans and dissemination of information.	1	Aids in recovery after an emergency event.
Public Schools Facilities Element, Policy 2.1.5	The proposed location is well-drained and soils are suitable for development or are adaptable for development and outdoor educational purposes with drainage improvements.	1	Ensures new or redeveloped properties meet/implement flood protection measures.
Public Schools Facilities Element, Policy 4.1.1	The City of Tarpon Springs shall coordinate with the School District and Pinellas County on emergency preparedness issues, including the use of public school facilities for emergency shelters	3	Reduces loss of lives and property.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Public Schools Facilities Element, Policy 4.1.2	Future public school facilities that are not located within category 1,2, or 3 evacuation zones, shall be designed to serve the public as emergency shelters, consistent with Section 1013.372 F.S. These public school facilities shall be designed according to the public shelter criteria outlined in the Florida Building Code.	2	Reduces loss of lives and property.
Public Schools Facilities Element, Policy 4.1.3	The City of Taron Springs shall annually update its capital Improvements Element to ensure that the School District's capital needs are reflected in the Comprehensive Plan, enabling the coordination of existing and planned public school facilities with the required local capital projects needed to provide emergency shelter spaces, as identified by the Tampa Bay Regional Hurricane Evacuation Study, developed by the Tampa Bay Regional Planning Council.	3	Reduces loss of lives and property.
Future Land Use Element, Policy 2.3.1	The City shall prohibit future land use density increases within the Coastal High Hazard Area.	1	Aids in preventing development in the CHHA.
Intergovernmental Coordination Element, Policy 1.5.9	Forward all proposed Comprehensive Plan amendments to the Pinellas County Local Planning Agency in advance of the adoption hearing. Consider the extra-jurisdictional impact of local planning decisions in such areas as land use, transportation, coastal management, recreation and utilities.	3	Reduces loss of lives and property.
Intergovernmental Coordination Element, Policy 1.4.5	Implements storm water quality considerations into land use planning and development activities, per the NPDES Permit Conditions. This includes requiring proper storm water management and erosion & sediment controls during construction to reduce pollutants from areas of development and redevelopment.	5	Limits exposure to flood damage.
Intergovernmental Coordination Element, Policy 1.4.8	The City shall work with the Pinellas County Emergency Management, the Tampa Bay Regional Planning Council and the State of Florida in the coordination and furthering of local emergency management plans and dissemination of information.	1	Aids in recovery after an emergency event.
<b>Land Development Regulations</b>			
Article I, Section 6-1	Adoption of Building, Mechanical, Plumbing, Electrical, Fire Prevention, and Standard Housing Codes	1	Ensures new or redeveloped properties implement flood protection measures; reduces property loss.
Article VIII	Sets standards for hurricane protection.	3	Reduces loss of lives and property.
Article VIII	Sets the Level of Service Standard for stormwater facilities.	4	Reduces threat of low level and street flooding during the rainy season.
Article IX	Establishes design standards for stormwater systems.	4	Reduces threat of low level and street flooding during the rainy season.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
Article VIII	Sets forth the floodplain standards for the City of Tarpon Springs	1	Limits the exposure to flood damage .
Article I	Requires that development and use of property must be in compliance with the Comprehensive Plan.	1	Ensures new or redeveloped properties implement flood protection measures.
Article XII	Sets zoning standards for site plan review.	1	Ensures new or redeveloped properties implement flood protection measures.
Article III	Sets zoning standards for the placement and utilization of accessory structures.	1	Ensures new or redeveloped properties implement flood protection measures.
Article III	Sets zoning standards for performance and supplementary district regulations.	1	Ensures new or redeveloped properties implement flood protection measures.
Article XVI	Sets zoning standards for telecommunications towers and antennas.	1	Ensures new or redeveloped properties implement flood protection measures.
<b>CRS ACTIVITIES</b>			
CRS Activity 310	Maintain FEMA elevation certificates for all new construction.	1	Reduces property loss due to 100-year flood; insures consistency with NFIP policies.
CRS Activity 450	Regulate new development throughout the water shed to ensure that post-development runoff is no worse than pre- development runoff.	1	Reduces property loss through accommodating drainage before development.
CRS Activity 510	Prepare, adopt, implement and update a comprehensive plan using a standard planning process .	1	Ensures new or redeveloped properties meet implement flood protection measures+D119.
CRS Activity 540	Conduct periodic inspections of all channels and retention basins and perform maintenance as needed.	4	Ensures a properly functioning drainage system .
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 5- 27: Treasure Island Programs, Policies and Capabilities**

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Comprehensive Plan</b>			
Future Land Use Element (FLUE) Goal 1	<p>Ensure that the residential character of the City of Treasure island is maintained and protected.</p> <ul style="list-style-type: none"> <li>• Maximize the potential for economic benefit resulting from the tourist trade and professional services; and</li> <li>• Maximizing the quality of life through the enjoyment of natural and man-made resources by citizens and visitors alike; and</li> <li>• Minimize the threat to health, safety, and welfare posed by hazards, nuisances, incompatible land uses, and environmental degradation.</li> </ul>	1 thru 7	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources.
FLUE Objective 1.1	Ensure that redevelopment and new development occur in planned areas at the appropriate densities and intensities as indicated on, and consistent with the City of Treasure Island Future Land Use Map.	1	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources.
FLUE Objective 1.2	Future growth and development shall be managed through the implementation and enforcement of the land development regulations as codified in the City of Treasure Island <i>Land Development Regulations</i> consistent with the comprehensive plan.	1	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources.
FLUE Policy 1.2.2	The land development regulations shall recognize the limitations of development on a barrier island resulting from the effects of the Coastal High Hazard Area, 100-year floodplain, vulnerability to tropical storms, topography, and soil conditions.	1, 2, 3, 4	Assures compliance with applicable regulations, plans, programs, and initiatives.
FLUE Policy 1.2.3	The land development regulations shall include provisions for the subdivision of land, the use of land, the protection or environmentally sensitive lands, and flood hazard safety.	1, 2, 3	Assures compliance with applicable regulations, plans, programs, and initiatives
FLUE Policy 1.2.4	The land development regulations shall contain provisions for drainage and stormwater management, open space, safe convenient on-site traffic flow, parking, and signage.	1, 2, 3	Assures compliance with applicable regulations, plans, programs, and initiatives and minimizes the effect of development on natural resources.

## Pinellas County Local Mitigation Strategy

(Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
FLUE Policy 1.2.5	The land development regulations shall contain provisions for drainage and stormwater management based on the minimum criteria established by the Southwest Florida Water Management District and other governmental agencies with jurisdictional responsibilities.	1, 2, 4	Assures compliance with applicable regulations, plans, programs, and initiatives and reduces drainage problems in the community.
FLUE Policy 1.2.7	The land development regulations shall contain provisions ensuring that all development is consistent with National Flood Insurance Program regulations.	1, 2, 3, 4	Assures compliance with applicable regulations, plans, programs, and initiatives and reduces drainage problems in the community.
FLUE Policy 1.2.9	The land development regulations shall contain provisions ensuring that all development is consistent with those coastal construction regulations adopted and/or amended by the State of Florida, Pinellas County, and other agencies with jurisdictional authority.	1	Assures compliance with applicable regulations, plans, programs, and initiatives.
FLUE Policy 1.2.13	New development and redevelopment shall be required to comply fully with the locational and construction regulations of the Federal Emergency Management Agency and the National Flood Insurance Program, as well as those of the city, county and state.	1, 2, 3, 4	Assures compliance with applicable regulations, plans, programs, and initiatives and reduces drainage problems in the community.
FLUE Policy 1.3.6	The land development regulations shall contain provisions wherein residential land uses are located and designed to protect life and property from natural manmade hazards such as flooding, excessive traffic, subsidence, noxious odors and noise.	1 thru 7	Assures compliance with applicable regulations, plans, programs, and initiatives and reduces drainage problems in the community.
IE Goal 4	Stormwater shall be managed to provide flood protection for residents and businesses and to preserve, protect, and enhance the water quality of receiving water bodies.	1, 2, 3	Reduce drainage problems within the community and minimize adverse impacts from the quality of stormwater runoff.
IE Objective 4.1	The City shall implement the <i>Treasure Island Master Drainage Plan</i> shall be implemented through the cooperative efforts of the City of Treasure Island and Pinellas County.	1, 2, 3	Reduce drainage problems within the community.
IE Policy 4.1.2	Stormwater retention systems shall be designed to accommodate a 25-year, 24-hour storm event. Stormwater conveyance devices (e.g. drainage pipes) should be designed to accommodate a three year storm event.	1, 2, 3	Maintains the demand on public facilities and services within an acceptable level relative to the capacities of the facilities and services.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
IE Policy 4.1.3	The City shall require that the stormwater discharge rate for a post-developed or redeveloped site shall not exceed, in terms of peak flow and total volume, that which would occur from the site under existing conditions for the design storm.	1, 2, 3	Maintains the demand on public facilities and services within an acceptable level relative to the capacities of the facilities and services.
IE Policy 4.1.4	The City will continue to coordinate with Pinellas County regarding surface water management efforts including the implementation of and compliance with the National Pollution Discharge Elimination System permit program.	1, 2, 3	Provides for the protection of natural drainage systems as well as aquifer recharge areas.
IE Policy 4.1.7	<p>The land development regulations shall contain provisions which, at a minimum, protect natural drainage features found within the City as follows:</p> <ul style="list-style-type: none"> <li>• The existing flood-carrying and flood storage capacity of the 100-year flood plain shall be maintained;</li> <li>• Development along Boca Ciega Bay shall maintain adequate setbacks to maintain any existing areas of natural coastal/marine habitat;</li> <li>• The prevention of erosion, retardation of runoff, protection of natural functions, and values of the floodplain shall be considered while promoting public usage; and</li> <li>• The City shall require development or redevelopment proposals to be consistent with the performance standards regulating development within the designated floodplain.</li> </ul>	1, 2, 3	Limits development potential within coastal high hazard areas; minimizes the effect of development on floodplains and reduces the potential for damages and loss of life and property; minimizes the effect of siltation on wetlands and floodplains.
CE Goal 1	To ensure the highest environmental quality possible, the City of Treasure Island shall conserve, protect, and appropriately manage natural resources (aquatic, terrestrial, and air).	1, 2, 3, 5	Protects natural function of floodplains and wetland areas.
CE Objective 1.2	Regulations for development within the 100-year flood plain shall be strictly enforced.	1, 2, 3	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains.
CE Policy 1.2.1	New development or redevelopment approvals shall require that post-development runoff rates, volumes, and pollutant loads do not exceed predevelopment conditions.	1, 2, 3	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CE Policy 1.2.2	Recognizing that the community is located within the 100-year flood plain, the City shall strictly enforce all appropriate federal, state, and regional construction codes adopted pursuant to federal or state law.	1, 2, 3	Assures compliance with applicable regulations, plans, programs, and initiatives; reduces potential of flood losses and repetitive losses, and protects the natural system functions.
CE Policy 1.2.3	The City shall protect the natural functions of the 100-year flood plain so that the flood-carrying and flood storage capacity are maintained.	1, 2, 3	Provides for flood mitigation to minimize flood losses and repetitive losses, and protects the natural function of floodplains.
CE Policy 1.2.4	The City shall adhere to the impervious surface ratios defined in Objective 1.1 and associated policies of the <i>Future Land Use Element</i> , in order to minimize runoff and stabilize water quality.	1, 2, 3	Assures compliance with applicable regulations, plans, programs, and initiatives; reduces potential of flood losses and repetitive losses, and protects the natural system functions.
CE Policy 1.3.1	Mangroves and marsh areas shall be designated Preservation on <i>Map LU-4: Future Land Use</i> .	1 & 2	Mitigates potential property losses by maintaining natural system functions.
CE Policy 1.3.6	Marine wetlands and barrier island property containing native vegetative communities, and/or shoreline locations with limited habitat diversity shall be considered priorities for environmental protection.	1 & 2	Mitigates potential property losses by maintaining natural system functions.
CE Policy 1.4.3	Land development regulations shall encourage shorelines lacking wetland vegetation to be planted with native vegetation in order to minimize potential flood damage, stabilize the shoreline, trap sediments and other non-point source pollutants, and provide additional habitat for fish and wildlife.	1 & 2	Protects natural function of shoreline and reduces potential property losses.
CME Objective-1.2	The City of Treasure Island shall protect and restore its beaches, dunes, and natural systems and establish construction standards which minimize the impacts of man-made structures on these systems.	1 & 2	Protects natural function of shoreline and reduces potential property losses.
CME Policy 1.2.1	Construction seaward of the Coastal Construction Control Line shall be subject to the permitting procedures pursuant to Section 161.05, Florida Statutes.	1 & 2	Protects natural function of shoreline and reduces potential property losses.
CME Policy 1.2.3	A dune preservation zone shall be established in the land development regulations to protect the primary dunes, which shall address prohibitions on excavations, destruction of native vegetation, and activities which affect the natural fluctuation of the dunes.	1, 2, 5	Provides storm protection to minimize property loss.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CME Policy 1.2.4	The City shall continue its program for the restoration and maintenance of the coastal dune system which shall include stabilization projects utilizing native vegetation and development of an educational program emphasizing the need to protect the coastline.	1, 2, 5	Protects natural function of shoreline and reduces potential property losses.
CME Policy 1.2.5	The City shall continue its program for the restoration and maintenance of its beaches.	1 & 2	Basic governmental purpose to protect the health, safety and welfare of citizens.
CME Goal 1	The City shall provide a set of guidelines for development that protects the lives and property of its residents from the effects of natural disasters.	1 thru 7	Basic governmental purpose to protect the health, safety and welfare of citizens.
CME Objective 1.1	The City shall limit public expenditures that support development permitted in Coastal High Hazard Area delineated as Exhibit CM-1 except for restoration or enhancement of natural resources, <u>the</u> maintenance or repair of existing infrastructure, or facilities determined to be an overriding public benefit.	1 thru 7	Restrict public expenditure that may encourage increase future development; minimizes potential losses.
CME Policy 1.1.3	The City shall not support or finance new local transportation corridors which lie within the Coastal High Hazard Area, although existing corridors may be maintained or improved as necessary to protect the health, safety and welfare of existing residents, and those population densities anticipated by this comprehensive plan.	1, 2, 6	Restrict public expenditure that may encourage increased future development; minimizes potential losses.
CME Objective 1.3	The City shall not increase permanent population concentrations in the Coastal High Hazard Area except as anticipated in this comprehensive plan.	1, 2, 3	Reduces potential casualties and prevents the increase of evacuation times and shelter needs.
CME Policy 1.3.1	The City shall maintain or reduce allowable permanent population density within the Coastal High Hazard Area consistent with <i>Map LU-4: Future Land Use</i> , of this comprehensive plan.	1, 2, 3	Reduces potential casualties and prevents the increase of evacuation times and of shelter needs.
CME Policy 1.3.2	The City of Treasure Island shall continue to implement growth management directives which control development/redevelopment other than recreational purposes within the Coastal High Hazard Area consistent with <i>Map LU-4: Future Land Use</i> , of this comprehensive plan.	1, 2, 3	Provides for consistency among plans; reduces public expenditures that may increase the potential for development in areas where damage or loss from natural disaster is most likely to occur.
CME Policy 1.3.3	The City shall maintain its program of public land acquisition and management of recreation, conservation, and preservation areas.	1, 2, 3	Provides public disclosure of potential for damage or loss from natural disasters.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CME Policy 1.3.4	The City shall review federal and state development projects which are to be located within the city, and support those which are consistent with this plan.	1 thru 7	Basic governmental purpose to protect the health, safety and welfare of citizens.
CME Objective 1.5	The City shall coordinate with state, regional and county agencies to maintain or reduce hurricane clearance times.	1	Reducing evacuation times is important to reducing potential casualties.
CME Policy 1.5.1	The City shall coordinate with state, regional and county agencies to ensure that major evacuation routes are adequately maintained and, when necessary, improved to facilitate an efficient and safe evacuation.	1 thru 7	Provides for coordinated and consistent approach to evacuations; assures adequate capacity on evacuation routes.
CME Policy -1.5.2	The City, in cooperation with the Pinellas County Department of Emergency Management and the American Red Cross, shall provide for public awareness of preparedness seminars to increase hurricane and disaster awareness.	1	Public awareness campaign will assure that citizenry is informed about their responsibilities for safety and how to prepare property and family for emergency situations.
CME Policy 1.5.3	City emergency response personnel and volunteers shall coordinate pre- and post- events with county and state emergency response agencies in an effort to plan for safe and efficient evacuations and re-entries.	1	Coordinated training for emergency situations assures that the local responders are prepared for emergency events.
CME Objective 1.6	The City shall reduce the risk of exposure of human life and public and private property to natural disasters through preparedness planning and implementation of hazard mitigation measures.	1 thru 7	Coordinated public awareness campaign will assure that citizenry is informed about their responsibilities for safety and how to prepare property and family for emergency situations.
CME Policy 1.6.1	The City, in coordination with the Pinellas County Department of Emergency Management, shall continue to maintain and update the <i>Treasure Island Emergency Action Guide</i> , which addresses the four phases of comprehensive emergency management: preparedness, response, recovery, and mitigation.	1 thru 7	Serves to improve upon response plans in the short-term, mid-term, and long-term recovery and reconstruction after a disaster. Mitigation measures encourage preemptive approach to dealing with pending disasters.

# Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CME Policy 1.6.5	Recognizing the entire community is located within the Hurricane Vulnerability Zone and the 100-year floodplain, the City shall adopt and strictly enforce all appropriate federal, state, and local coastal construction codes, coastal setback requirements, special Coastal Construction Control Line facility siting restrictions, the enforcement of the 1968 Treasure Island Mean high Water Line and floodplain management regulations.	1, 2, 3, 4	Provide consistency in the implementation of the series of ordinances and plans intended to minimize the effects of development on natural resources.
CME Policy 1.6.6	Special care facilities including hospitals, nursing homes, and similar types of facilities established for the care of non- ambulatory patients, shall not be located in the Coastal High Hazard Area.	1	Restricts group facilities where large concentrations of people needing assistance would be required to evacuate and who would also need increase the need for specialized public shelter space.
CME Goal 2	The City shall expedite post-disaster recovery and reduce the future risk to human life, and public and private property from natural hazards, through recovery and redevelopment strategies.	1 thru 7	Provides for consistent application of steps from recovery to reconstruction.
CME Objective 2.1	The City shall maintain a system of post-disaster recovery procedures, including debris clearance, property damage assessment, and restoration of basic services, which shall be outlined in the <i>Treasure Island Disaster Recovery Planning Guide</i> .	1 thru 7	Crucial decisions need to be made in a timely manner to minimize losses. Plan will establish duties of individual and/or task forces.
CME Policy 2.1.1	The emergency management coordinator, as designated by the City manager, shall revise, as appropriate, the <i>Treasure Island Disaster Recovery Guide</i> , act as liaison between state, regional, county, and city emergency response and planning agencies; and ensure coordination between emergency management and development management activities in the City.	1 thru 7	Crucial decisions need to be made in a timely manner to minimize losses. Plan will establish duties of individual and/or task forces.
CME Objective 2.2	The City shall maintain procedures to guide short-term repair and cleanup activities following a disaster, in order to protect public health, safety, and welfare.	1 thru 7	Consistently applied procedures will assure steps to enhance recovery and minimize losses.
CME Policy 2.2.1	Following a major disaster, the City Commission may adopt a temporary post-disaster building moratorium to allow sufficient time for immediate damage assessment, the identification of redevelopment opportunities, and hazard mitigation policy implementation.	1, 2, 3, 4	Consistently applied procedures will assure steps to enhance recovery and minimize losses.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CME Policy 2.2.2	The City shall adopt post-disaster redevelopment procedures which will expedite permitting for minor repairs; include development plan review, engineering approval, and permitting while ensuring coordination with appropriate agencies and consistency with the objectives of this Comprehensive Plan.	1, 2, 3, 4	Procedures will gauge whether mitigation initiatives are effective, timely, feasible, and efficiently implemented in achieving the intended goal.
CME Objective 2.3	The City shall follow long-term redevelopment strategies, which will be used to promote hazard mitigation.	1, 2, 3, 4	Criteria will assist in decisions in rebuilding facilities and infrastructure <del>so</del> to avoid repetitive losses and reduce future service interruption.
CME Policy 2.3.1	Where feasible, property which has received recurring major hurricane damage from storm surge may be publicly acquired or designated Preservation on <i>Map LU-4: Future Land Use</i> , to prevent redevelopment of the property.	1, 2, 3, 4	Acquisition of properties that are left as open space may help reduce potential losses on adjoining properties as well as reduce the number of repetitive loss properties/areas.
CME Policy 2.3.2	The City may consider one or more of the following strategies in those areas which receive major or moderate damage: <ul style="list-style-type: none"> <li>• Reduction of permissible permanent residential in the area;</li> <li>• Reconstruction according to more stringent building and construction standards; and</li> <li>• Public acquisition of damaged areas.</li> </ul>	1, 2, 3, 4	Reconstruction to current higher standards will reduce the chances of future repetitive losses; acquisition of properties that may be left as open space may help reduce potential losses on adjoining properties as well as reducing the number of repetitive loss properties. Restricting permanent population densities reduces the number of lives and properties that are in harm's way.
CME Policy 2.3.3	The City shall interrelate hazard and non-hazard mitigation goals during reconstruction decision-making including the following objectives: <ul style="list-style-type: none"> <li>• Enhancement of local recreational and open space opportunities;</li> <li>• Enhancement of local public beach access;</li> <li>• Enhancement and restoration of local natural ecosystems;</li> <li>• Reduction of traffic congestion, noise, and other transportation related problems; and</li> <li>• Enhancement of the long-term economic vitality of the local commercial base.</li> </ul>	1, 2, 3, 4	Mitigation measures allow preventive approach to potential natural disasters; reduces the potential for repetitive loss and enhances or restores the function of natural system to further minimize future losses.

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
CME Policy 2.3.4	The City shall explore the potential for removal, relocation, or structural modification of any infrastructure damaged during a natural disaster, consistent with federal funding guidelines and public safety.	1, 2, 3, 4	Restrict public expenditure in area where damage or loss from natural disaster is most likely to occur.
CME Policy	Appropriate recommendations of interagency hazard mitigation reports, such as the <i>Pinellas County Local Mitigation Strategies</i> initiative, shall be incorporated into this comprehensive plan.	1 thru 7	Ensures consistency <u>and coordination</u> among plans and effectiveness of implementing programs and projects.
CIE Objective 1.4	Public expenditures that support development in Coastal High Hazard Areas shall be limited to those improvements included in this comprehensive plan and determined by the City Commission to be an overriding public benefit.	1, 2, 3, 4	But continue to provide basic governmental facilities and services to protect the health, safety and welfare of citizens.
CIE Policy 1.4.1	Funds shall not be expended in the Coastal High Hazard Area, except as may be deemed appropriate by the City to renew and replace public facilities in order to maintain adopted levels of service.	1, 2, 3, 4	Basic governmental purpose to protect the health, safety and welfare of citizens.
CIE Policy 1.4.2	Developers shall fund improvements in new developments if the City Commission determines that those improvements are in the best interest of the City.	1 thru 7	Basic governmental purpose to protect the health, safety and welfare of citizens.
<b>Land Development Regulations</b>			
City Code Chapter 8	Building Regulations and Fire Code	1, 2, 3, 4	Provides strict building standards to minimize storm damage.
City Code Chapter 66	Floodplain Management	1, 2, 3	Minimizes public/private losses due to flooding.
City Code Chapter 72	Resources, Vegetation, and Environmentally Sensitive Lands	1 & 2	Provides for shoreline protection.
City Code Chapter 75	Utilities (Article III, Drainage)	1, 2, 3	Manages drainage and surface waters,

## Pinellas County Local Mitigation Strategy

Source (Document, Number, Chapter, Section)	Text / Description	LMS Goal	Evaluation
<b>Floodplain Management/ Community Rating System/ Repetitive Loss Properties</b>			
Master Drainage Plan	City's existing drainage system and needed improvements.	1	Maintains and improves drainage system and LOS.
CRS Recertification	Annual Recertification 2013-2014_Most Recent - Rating <u>6</u>	1	Minimizes losses due to flooding.
<b>Emergency Management</b>			
Pinellas County Comprehensive Emergency Management Plan	Addresses strategic and operational elements of the county-wide emergency management program including preparedness, response, recovery, and mitigation components.	1 thru 7	Provides strategic and operational guidelines in the event of an emergency (all-hazards guide).
Emergency Operations Plan	City of Treasure Island Emergency Operations Plan	1 thru 7	Provides operational guidelines and suggested strategies in the event of an emergency (all-hazards guide).
Emergency Housing Ordinance	Treasure Island Ordinance No. 07-14 relating to the City Commission declaring a housing emergency; allowance for temporary housing options.	1	Provides for emergency housing provisions in the event of a declared emergency resulting in damage to property from a natural disaster.
<b>Other</b>			
Beach Management Plan	Although not part of the emergency management operations, the plan identifies local historic beach erosion problems, characterizes a "minimum beach condition," and outlines steps to maintain this "minimum beach condition."	1 & 2	Although not part of the Emergency Management operations, this report is intended to serve as a policy guide for future decision-making regarding beach management.
<b>END OF LIST</b>			

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**APPENDIX 6**  
**LOCAL DEPARTMENTAL RESPONSIBILITIES IN MITIGATION**  
**IMPLEMENTATION**

# Pinellas County Local Mitigation Strategy

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## APPENDIX 6: LOCAL DEPARTMENTAL RESPONSIBILITIES IN MITIGATION IMPLEMENTATION



### Overview

As presented in Appendix 5, Pinellas County and its municipalities currently have several programs and plans related to hazard mitigation and post-disaster redevelopment.

The primary programs and plans include the Comprehensive Emergency Management Plan (CEMP), the (25) Local Government Comprehensive Plans and Local Land Development Regulations, the National Flood Insurance Program Floodplain Management Plans and Community Rating System (CRS) Plans (participating communities) and Stormwater Management Plans.

This appendix presents the departments and agencies responsible for implementation of the mitigation strategies and an analysis of the county-wide ability to carry out mitigation activities. A full description of current efforts by each department is provided in the following pages. In addition to a description of the analysis, the tables serve to demonstrate the link between the vulnerability and risk analysis, the goals and objectives, and local departmental responsibilities.

Upon evaluation of the current policies and programs, the Pinellas County LMS Working Group has found them effective in reducing the overall impacts of hazards in the County; however, this exercise helped the local governments identify the specific departments and agencies responsible for the actual implementation of the programs, policies and regulations.

### Local Departmental Responsibilities for Mitigation Implementation

As part of the 2009 update process, the Working Group is responsible for reviewing all of the local agency activities and identifying all relevant programs and policies that have some impact on mitigation. To complete this task, members of the Working Group have conducted local and county-wide meetings and departmental interviews to identify mitigation programs and policies. As indicated in Appendix 5, these activities typically fall into the following general categories:

- A. Emergency Management – Preventive (development review), Planning, Training, Exercise, Response and Recovery
- B. Floodplain Management Programs – Preventive, Property Protection, Structural Projects
- C. Comprehensive Planning – Preventive activities
- D. Emergency Services – Prevention and Outreach
  - 1) Law Enforcement and Security Issues
  - 2) Fire Prevention, Response and Safety
  - 3) Hazardous Material Prevention, Response, and Safety
  - 4) EMS, Health Care Risk Assessment, Security, Response
- E. Critical Facilities and Infrastructure Vulnerability Assessment and Protection
- F. Communications – Outreach, Warning, Education

A listing of the county and municipal departments and agencies and a general description of their mitigation missions is provided in the following pages.

# Pinellas County Local Mitigation Strategy

**Table 6- 1: City of Belleair Beach Departmental Responsibilities**

Belleair Beach Department	Division/ Section/Bureau	Tasks	Loss Reduction
City Manager's Office	Administration-Charter Officer	Responsible for all administrative functions of the City.	Establishes and formalizes administrative policies, procedures, and budgeting for the City.
		Acts as the City's Emergency Manager	Is responsible for providing direction to all City Employees, updating the City Council, and providing information to the general public.
		Acts as a spokesperson for emergency preparedness and mitigation.	Disseminates vital information to the public and press to ensure public readiness and appropriate response to disaster events. Educates the public and increases awareness, thereby mitigating disaster-related issues with the city's residents.
		Acts as the City's PIO or delegates this responsibility to a qualified employee of the City.	Disseminates vital information to the public and press.
		Attends EM Coordinators and DAC Meetings as an alternate.	Protects the City's residents by participating in these emergency management related committees. Increases cooperation between the County and its municipal governments.
		Implements and maintains compliance with the National Flood Insurance Program (NFIP) and its related Community Rating System (CRS)	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; providing NFIP rate reductions based on CRS scores.
		Ensures the Flood Insurance Rate Maps are maintained and available for review.	Reduces loss through participation in the NFIP; provides accurate data when developing or redeveloping properties.
		Maintains the City's Comprehensive Plan.	Reduces threats to people and structures; reduces potential loss.
City Clerk's Office	Administration-Charter Officer	Maintains the City's records. Prepares agenda and emergency legislative documents for Council during emergency events	Reduces the potential loss of the City's Charter & Seal, municipal codes, contracts, and other vital records. This increases the City's ability to maintain/regain normal operations. Reduces the time necessary to enact

## Pinellas County Local Mitigation Strategy

Belleair Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Finance Officer's Office	Administration-Charter Officer	Maintains financial records.	Coordinates with various departments to provide timely scheduling and budgeting of capital projects. Ensures sufficient funds for recovery operations; provides quick return to operations after an emergency event.
		Oversees all City purchases	Ensures purchases meet legal requirements.
Community Services/ IT Director	Administration	Acts as the City's Emergency Management Coordinator.	Responsible for providing direction to all City employees to prepare for, respond to, and recover from all emergencies. Activates contracts as become necessary to address the City's needs in an expedient way during an emergency event to reduce the losses of life and structures.
		Provides overall management to the City's public works department.	Provides management to the public works department; assuring the efficient and effective use of resources to meet the needs of the City during emergency events.
		Attends EM Coordinators, DAC, and other emergency management related committee/workgroup meetings as the City's primary representative.	Protects the City's residents by participating in these emergency management related committees. Increases cooperation between the County and its municipal governments.
		Maintains the City's Comprehensive Emergency Management Plan (CEMP).	Reduces threats to people and structures; reduces potential loss by providing a systematic means for preparing for, responding to, and recovering from emergency events.
		Maintains contracts, agreements, and relationships with governmental agencies and private contractors to provide debris management services.	Speeds the process of clearing roadways to allow for emergency vehicles to operate and for the City to return to its normal state as quickly as possible.
		Maintains contracts, agreements, and relationships with governmental agencies and private contractors to ensure compliance and the provision of services.	Ensure compliance with the requirements of FDOT, FDEP, EPA, DCA, ACE, etc. Ensures that the City maintains overlapping service providers in case of competition for resources.
		Provides overall management to the City's information technology function.	Maintains or reduces downtime of computers and information used to provide city services and information during disasters, disaster recover, and normal operations.

## Pinellas County Local Mitigation Strategy

Belleair Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Community Services/ IT Director - continued	Administration - continued	Protects electronic data	Gathers vital information and files for on- and off-site storage.
		Ensures the operation of all telephone and communications equipment.	Ensures readiness of communications equipment before, during, and after an emergency event.
		Maintain ongoing coordination with the City's of Indian Rocks Beach, Indian Shores, and Belleair Shore individually and through a workgroup coordinated through the Pinellas Suncoast Fire/Rescue District.	Ensures the efficient and effective use of resources in responding to emergency events that effect the local area.
Public Works Department	Public Works	Maintain operating condition of all city-owned generators.	Ensures ability of City facilities to maintain operational.
		Inspect and maintain the city's municipal separate storm sewer system.	Reduces the threat of flooding.
		Identify and respond to sources of pollution.	Reduces the threat of contamination.
		Maintains the parks and city-owned properties and prepare for emergency situations.	Reduces the potential for flooding and flood related damage.
		Provide small scale roadway clearance. (if within our capabilities)	Speeds the process of clearing roadways to allow for emergency vehicles to operate and for the City to return to its normal state as quickly as possible.
		Maintains all streets within the City's jurisdiction.	Reduces the threat to public structures.
		Maintains all street signs within the City's jurisdiction.	Reduces manmade and natural hazards by providing a structured environment for safe transportation and travel.
		Provides sandbags to residents	Reduces potential flood damages.
		Provides City employees with regular weather reports.	Improves knowledge of the environment in which staff and volunteers will be working.
		Evaluates City Hall (including files, computers, equipment, and vehicles).	Ensures that vital records and resources are safely moved out of the affected area so that the City may regain operations as quickly as possible.
		Participates in NPDES; responds to and identifies sources of pollution.	Reduces the threat of contamination.
Maintains City's fleet	Ensures all fleet vehicles are in peak readiness to respond to emergency situations.		

## Pinellas County Local Mitigation Strategy

Belleair Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Administrative Assistant	Administration	Answers phones and provides prepared messages to the community. If a phone bank is operated, the Administrative Assistant will train and manage the phone bank.	Maintains a conduit for the public to obtain information related to the City.
		Assists the Emergency Management Coordinator by maintaining a log of activities.	This assists in creating a reference to be used in staff, media, and residents' updates. This is also very important in receiving reimbursement requests.
		Provides Evacuation Re-Entry Permits to employees and residents.	This allows residents to evacuate their homes knowing that they can return once the emergency is over.
		Provides a printed and online newsletter with emergency management related information.	Provides public education and information focused on mitigation and preparation.
		Assists the Emergency Management Coordinator in obtaining resources as become needed.	Ensures that resources needed by the Emergency Management Coordinator to respond to emergency events are obtained quickly and cost-effectively.
Code Enforcement Officer	Code Enforcement	Ensures that codes are followed for existing development.	Ensures that structures are properly maintained.
Cable TV Advisory Board	Boards and Committees	Schedules and airs programming on the City's government access channel (BBTV615). This is done during the hurricane season and during the threat of an emergency event.	Provides the community with public education and emergency information. Educates the public and increases awareness, thereby reducing vulnerability and risk from disasters.
Pinellas Suncoast Fire/Rescue District	Outside Agency	Provides fire and rescue services.	Provides fire, rescue, HAZMAT Services. Reduces threat life, structures, and property.
		Acts as a central point of communication/coordination between the municipal governments of Belleair Beach, Indian Rocks Beach, Indian Shores, and Belleair Shore.	Provides for effective and efficient use of resources during emergency events;
		Provides information and education programs on hazards to residents and employees.	Educates citizens on hazards and how to prepare for them. Educates employees on hazards and how to respond to them.
		Provides special needs evacuations.	Provides assistance to the general public and those with special needs; protects against the loss of life.

## Pinellas County Local Mitigation Strategy

Belleair Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Pinellas County Sheriff's Office	Outside Agency	Addresses daily civil security.	Provides for a secure, stable environment in which to live and work.
		Assist with evacuations for natural and manmade hazards/disasters.	Provides assistance to the general public and those with special needs; protects against the loss of life.
Pinellas County Building Department	Outside Agency	Implements the City's building codes under a contractual relationship.	Reduces threats to people and structures; reducing potential losses.
Pinellas County Utilities	Outside Agency	Maintains continuous operations and proper functioning of the Sanitary Sewer System.	Reduces the threat to people, structures, and property; reduces threat to infrastructure and ground water systems; reduces threats of contamination and possible illness due to lift station downtime or failure.
		Maintains lift station with associated telemetry.	Ensures compliance with water quality standards; reduces threat from hazardous materials.
		Monitors effluent discharges	Ensures compliance with water quality standards; reduces threat from hazardous materials.
		Maintains water reservoir structures and telemetry controlled pumping system.	Ensures sufficient water reserves and pressure are available to provide firefighting ability.
		Maintains bacteriological levels of the potable water system.	Reduces threat of contamination to and/or illness from the potable water supply.
		Provides for water conservation, flow reduction and use of reclaimed water.	Ensures that water is conserved during a drought.
Pinellas County Public Works	Outside Agency	Maintains traffic control devices and signals.	Reduces manmade and natural hazards by providing a structure environment for safe transportation and travel.
Progress Energy	Outside Agency	Maintains street lights.	Reduces manmade and natural hazards by providing a structure environment for safe transportation and travel.
		Respond to power outages, turn off power to the City if appropriate, and clear downed power lines.	Ensures prompt recovery once an emergency event is over.
FDOT	Outside Agency	Provide debris management services (if agreement is activated)	Provide debris management services during emergency recovery.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 2: Belleair Bluffs Departmental Responsibilities**

Belleair Bluffs Department	Division/ Section/ Bureau	Tasks	Loss Reduction
City Clerk's/Finance Director's Office	Administration-Charter Officer	Responsible for all administrative functions of the City.	Establishes and formalizes administrative policies, procedures, and budgeting for the City.
		Acts as a spokesperson for emergency preparedness and mitigation.	Disseminates vital information to the public and press.
		Ensures the Flood Insurance Rate Maps are maintained and available for review.	Reduces loss through participation in the NFIP; provides accurate data when developing or redeveloping properties.
		Maintains the City's Comprehensive Plan.	Reduces threats to people and structures; reduces potential loss.
		Maintains the City's records.	Reduces the potential loss of the City's Charter & Seal, municipal codes, contracts, and other vital records. This increases the City's ability to maintain/regain normal operations.
		Prepares agenda and emergency legislative documents for Council during emergency events	Reduces the time necessary to enact emergency legislation.
		Oversees all City purchases	Ensures purchases meet legal requirements.
		Maintains financial records.	Coordinates with various departments to provide timely scheduling and budgeting of capital projects. Ensures sufficient funds for recovery operations; provides quick return to operations after an emergency event.
		Maintains the City's Emergency Operations Plan (EOP).	Reduces threats to people and structures; reduces potential loss by providing a systematic means for preparing for, responding to, and recovering from emergency events.
Administrative Assistant	Administration	Answers phones and provides prepared messages to the community. If a phone bank is operated, the Administrative Assistant will train and manage the phone bank.	Maintains a conduit for the public to obtain information related to the City.
		Assists the Emergency Management Coordinator by maintaining a log of events	This assists in creating a reference to be used in staff, media, and residents' updates. This is so very important in receiving reimbursement requests.
		Provides Evacuation Re-Entry Permits to employees and residents	This allows residents to evacuate their homes knowing that they can return once the emergency is over.

## Pinellas County Local Mitigation Strategy

Belleair Bluffs Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Administrative Assistant-continued	Administration - continued	Provides a printed and online newsletter with emergency management related information under the direction of the City Clerk.	Provides public education and information focused on mitigation and preparation
		Assists the Emergency Management Coordinator in obtaining resources as they become needed and available.	Ensures that resources needed by the Emergency Management Coordinator to respond to emergency events are obtained quickly and cost-effectively.
Public Works Department	Public Works	Maintains contracts, agreements, and relationships with governmental agencies and private contractors to provide debris management services.	Speeds the process of clearing roadways to allow for emergency vehicles to operate and for the City to return to its normal state as quickly as possible.
		Maintains contracts, agreements, and relationships with governmental agencies and private contractors to ensure compliance and the provision of services.	Ensure compliance with the requirements of FDOT, FDEP, EPA, DCA, ACE, etc. Ensures that the City maintains overlapping service providers in case of competition for resources.
		Provides overall management to the City's information technology function.	Maintains or reduces downtime of computers and information used to provide city services and information during disasters, disaster recover, and normal operations.
		Protects electronic data	Gathers vital information and files for on- and off-site storage.
		Ensures the operation of all telephone and communications equipment.	Ensures readiness of communications equipment before, during, and after an emergency event.
		Acts as an Emergency Management Coordinator in conjunction with the Fire Chief.	Assists in providing direction to all City Employees to prepare for, respond to, and recover from all emergencies. Activates contracts as become necessary to address the City's needs in an expedient way during an emergency event to reduce the losses of life, structures and infrastructure.
		Attends EM Coordinators and DAC Meetings.	Protects the City's residents by participating in these emergency management related committees. Increases cooperation between the County and its municipal governments.
		Provides overall management to the City's public works department.	Provides management to the public works department; assuring the efficient and effective use of resources to meet the needs of the City during emergency events.

## Pinellas County Local Mitigation Strategy

Belleair Bluffs Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Public Works Department- continued	Public Works - continued	Maintain operating condition of all city-owned generators for City Hall and in the field.	Enables the City f to maintain operations and functions.
		Maintains contracts, agreements and relationships with governmental agencies and private contractors to ensure compliance and the provision of services	Ensure compliance with the requirements of FDOT, FDEP, EPA, DCA, ACE, etc. Ensures that the City maintains overlapping service providers in case of competition for resources.
		Implements and maintains compliance with the National Flood Insurance Program (NFIP).	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements.
		Inspect and maintain the city's municipal separate storm sewer system.	Reduces the threat of flooding.
		Participates in NPDES; responds to and identifies sources of pollution.	Reduces the threat of contamination.
		Identify and respond to sources of pollution.	Reduces the potential for flooding and flood related damage.
		Maintains the parks and city-owned properties and prepare for emergency situations.	Reduces the potential for flooding and flood related damage.
		Provide small scale roadway clearance. (if within our capabilities)	Speeds the process of clearing roadways to allow for emergency vehicles to operate and for the City to return to its normal state as quickly as possible.
		Maintains all city-owned streets within the City's jurisdiction.	Reduces the threat to public structures.
		Maintains all street signs within the City's jurisdiction.	Reduces manmade and natural hazards by providing a structured environment for safe transportation and travel.
		Provides sandbags to residents	Reduces potential flood damages.
		Provides City employees with regular weather reports.	Improves knowledge of the environment in which staff and volunteers will be working.
		Evaluates City Hall (including files, computers, equipment, and vehicles).	Ensures that vital records and resources are safely moved out of the affected area so that the City may regain operations as quickly as possible.
Maintains Public Work's fleet	Ensures all fleet vehicles are in peak readiness to respond to emergency situations.		

## Pinellas County Local Mitigation Strategy

Belleair Bluffs Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Public Works Department-continued	Public Works - continued	Provides information for the city's printed and online newsletter with emergency management related information.	Provides public education and information focused on mitigation and preparation.
		Ensures that codes are followed for existing development.	Ensures that structures are properly maintained.
		Reviews evacuation re-entry permitting to employees and residents.	This allows residents to evacuate their homes knowing that they can return once the emergency is over.
Belleair Bluffs Fire Rescue	Fire Department	Provides information for the city's printed and online newsletter with emergency management related information.	Provides public education and information focused on mitigation and preparation.
		Ensures that fire codes are followed for existing and new development.	Ensures that structures are meet life safety codes.
		Provides fire and rescue services.	Provides fire, rescue, HAZMAT Services. Reduces threat life, structures, and property.
		Acts as the City's Emergency Manager	Is responsible for providing direction to all City Employees, updating the City Council, and providing information to the general public.
		Provides information and education programs on hazards to residents and employees.	Educates citizens on hazards and how to prepare for them. Educates employees on hazards and how to respond to them.
		Provides special needs evacuations.	Protects the City's residents by participating in these emergency management related committees. Increases cooperation between the County and its municipal governments.
		Attends EM Coordinators, DAC, and other emergency management related committee/workgroup meetings as the City's primary representative.	Protects the City's residents by participating in these emergency management related committees. Increases cooperation between the County and its municipal governments.
		Acts as a spokesman for emergency preparedness and mitigation	Disseminates vital information to the public and press to ensure public readiness and appropriate response to disaster events. Educates the public and increases awareness, thereby mitigating disaster-related issues with the city's residents.
Maintains the City's Emergency Operation Plan (EOP)	Reduces threats to people and structures; reduces potential loss by providing a systematic means for preparing for, responding to, and recovering from emergency events.		

## Pinellas County Local Mitigation Strategy

Belleair Bluffs Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Belleair Bluffs Fire Rescue - continued	Fire Department	Assist with evacuations for natural and manmade hazards/disasters.	Provides assistance to the general public and those with special needs; protects against the loss of life.
Pinellas County Sheriff's Office	Outside Agency	Addresses daily civil security.	Provides for a secure, stable environment in which to live and work.
Pinellas County Building Department	Outside Agency	Implements the City's building codes under a contractual relationship.	Reduces threats to people and structures; reducing potential losses.
Pinellas County Utilities	Outside Agency	Maintains water reservoir structures and telemetry controlled pumping system.	Ensures sufficient water reserves and pressure are available to provide firefighting ability.
		Maintains bacteriological levels of the potable water system.	Reduces threat of contamination to and/or illness from the potable water supply.
		Provides for water conservation, flow reduction and use of reclaimed water.	Ensures that water is conserved during a drought.
		Maintains traffic control devices and signals.	Reduces manmade and natural hazards by providing a structure environment for safe transportation and travel.
		Maintains street lights.	Reduces manmade and natural hazards by providing a structure environment for safe transportation and travel.
		Respond to power outages, turn off power to the City if appropriate, and clear downed power lines.	Ensures prompt recovery once an emergency event is over.
		Maintains continuous operations and proper functioning of the Sanitary Sewer System.	Reduces the threat to people, structures, and property; reduces threat to infrastructure and ground water systems; reduces threats of contamination and possible illness due to lift station downtime or failure.
		Maintains lift station with associated telemetry.	Ensures compliance with water quality standards; reduces threat from hazardous materials.
		Monitors effluent discharges	Ensures compliance with water quality standards; reduces threat from hazardous materials.
Pinellas County Public Works	Outside Agency	Provide debris management services (if agreement is activated)	Provide debris management services during emergency recovery.

## Pinellas County Local Mitigation Strategy

Belleair Bluffs Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Progress Energy	Outside Agency	Maintains street lights.	Reduces manmade and natural hazards by providing a structure environment for safe transportation and travel
		Respond to power outages, turn off power to the City if appropriate, and clear downed power lines.	Ensures prompt recovery once an emergency event is over.
FDOT	Outside Agency	Provide debris management services (if agreement is activated)	Provide debris management services during emergency recovery.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 3: Town of Belleair Departmental Responsibilities**

Belleair Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Town Administrator's Office		Acquires property for mitigation measures.	Reduces threat through acquisition; implementation tool for mitigation projects, such as retention ponds.
		Maintains the Disaster Response and Recovery Plan.	Ensures plan coordination with Pinellas County.
		Responsible for all functions of the community.	Establishes and formalizes administrative policies and procedures of the Town.
		Attends EM Operations and DAC Meetings	Protects Town Citizens through participating in the advisory decision-making process to evacuate
		Performs outreach through printed material, informational and educational programs and other means to employees, citizens and businesses on emergency preparedness. (e.g., hurricanes, flooding, thunderstorms)	Educates the public and increases awareness, thereby reducing threat. Educates the public on potential hazards and how to prepare for them.
		Provides information to residents, media, business leaders and other agencies at all levels of local, county, state and federal governments to assure accurate and timely release of requested information	Educates the public and increases awareness, thereby reducing threat.
Town Clerk		Maintains Town records. Maintains electronic records. Maintains telephone and computer communications. Maintains emergency communications.	Reduces potential loss of critical data; increases ability to maintain/regain normal operations.
		Maintains reference area of hazard data, including preparation and response information.	Educates citizens, thereby increasing awareness and reducing potential threat.

## Pinellas County Local Mitigation Strategy

Belleair Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Support Services	Information Technology	Maintains integrity of systems for storage and retrieval of electronic records.	Reduces potential loss of critical data; increases ability to maintain/regain normal operations.
		Maintains integrity of telephone and computer communications systems.	Ensures readiness of communications equipment in the event of an emergency event; ensures quick recovery after an event.
	Human Resources	Assesses local hazards and liabilities; determines extent of exposure; maintains sufficient insurance coverage for the Town.	Reduces exposure and costs to the Town; allows the Town to return to normal operations more quickly after an event.
	Accounting	Maintains financial records.	Ensures sufficient funds reserved for recovery operations; provides quick return to operations after an event.
	Purchasing	Oversees all Town purchases; implements direct purchase procedure in times of emergency.	Ensures purchases meet legal requirements; allows Town to respond quickly to an event without a bid process.
	Finance	Develops annual budget and schedules capital improvement program	Provides for timely scheduling and coordination of capital projects.
Building Department		Implements the Building Codes.	Reduces threats to people and structures; reduces potential loss. Works to mitigate and eliminate repetitive loss.
		Implements the Floodplain Management Ordinance.	Reduces threats to people and structures; reduces potential loss.
		Implements Community Rating System (CRS)/ National Flood Insurance Program (NFIP) requirements.	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; reduces flood insurance costs.
		Ensures that Floodplain Insurance Rate Maps (FIRM) and drainage atlas are available for inspection or reference.	Reduces loss through participation in NFIP; provides accurate data when developing properties.
		Designs infrastructure, including some stormwater management facilities.	Provides for proper retention and reduced flooding.
		Maintains Comprehensive Plan.	Establishes policies for development and redevelopment.
		Coordinates local activities relative to the CRS/NFIP.	Educates citizens on flood hazards and means of protection; reduces flood insurance premium costs.
		Helps maintain, along with Town Administrator's Office, Town Clerk's Office, and IT, an Emergency Operations Center.	Ensures readiness to respond quickly and appropriately.
Implements the Land Development Code.	Reduces threats to people and structures; reduces potential loss.		

## Pinellas County Local Mitigation Strategy

Belleair Department	Division/ Section/ Bureau	Tasks	Loss Reduction
		Ensures that codes are followed for existing development.	Ensures that structures are properly maintained.
Parks & Recreation Department	Recreation	Responsible for messaging boards entering and exiting Town.	Educates the public and increases awareness, thereby reducing threat.
	Parks	Maintains parks and Town owned properties.	Reduces potential for flooding.
		Employees trained on hazardous materials.	Reduces potential for mishap; reduces costs of clean-up.
		Monitors effluent discharges.	Ensures compliance with water quality standards; reduces threat from hazardous materials.
Police Department		Addresses daily civil security and communication.	Provides for a secure, stable environment in which to live and work.
		Implements emergency response as part of Unified Command structure.	Reduces threat to public.
		Maintains emergency communications systems.	Ensures that communications are available during emergency situations if regular communications are not available; providing proper and coordinated responses during disasters.
		Maintains police works fleet readiness.	Ensures all fleet vehicles are in peak readiness to respond in emergency situations.
Public Works	Streets	Inspects and maintains Town's storm sewer system.	Reduces threat of flooding.
		Identifies and responds to sources of pollution.	Reduces threat of contamination.
		Monitors compliance with drainage requirements for municipal projects.	Ensures threat of flood risk does not increase.
		Maintains public works fleet readiness.	Ensures all fleet vehicles are in peak readiness to respond in emergency situations.
		Maintains all streets and alleys under Town's jurisdiction	Ensures proper maintenance; reduces flood threat.
		Maintains traffic control devices, signals, signs, and markings; maintains street lights.	Reduces manmade hazards by providing a structured environment for safe transportation and travel.
	Building Maintenance	Maintains operating condition of all emergency generators in Town.	Ensures ability of Town facilities to maintain operations.

## Pinellas County Local Mitigation Strategy

Belleair Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Public Works		Maintains shuttering systems in Town.	Reduces threat to public structures.
Solid Waste		Provides debris removal teams. Provides pre and post disaster solid waste removal.	Provides assistance in hazardous material identification, removal, and disposal problems attendant to any disaster. Provides debris removal mitigation, allowing the city to return to normal operation in a timely manner.
Water	Reclaimed Water Division - Provided by Pinellas County Utilities	Provides and promotes the use of reclaimed water.	Reduces consumption of potable water; especially useful during a drought.
	Sewer Division - Provided by Pinellas County Utilities	Maintains continuous operation and proper functioning of Sanitary Sewer System.	Reduces threat to people, structures, and property; reduces threat to infrastructure and ground water systems.
	Water Division	Maintains water reservoir structures and telemetry controlled pumping system.	Ensures sufficient water reserves and pressure are available to provide firefighting ability.
		Maintains bacteriological levels of the Potable Water System.	Reduces threat of contamination to and/ or illness from the potable water supply.
		Provides for water conservation, flow reduction and use of reclaimed water.	Ensures that water is conserved during a drought.
Fire Department	Provided by Largo	Addresses daily emergency management activation.	Provides fire, HAZMAT and EMS service. Reduces threat to people, structures and property.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 4: City of Clearwater Departmental Responsibilities**

Clearwater Department	Division/ Section/ Bureau	Tasks	Loss Reduction
City Manager		Coordinates mitigation policies with city commission.	Establishes mechanism for policy review and approval.
City Clerk		Preserves City records.	Mitigates loss of city records through microfilming and requesting that all departments develop a disaster plan for records in their departments.
Clearwater Gas		Coordinates policies and procedures for protecting lives and property against natural or propane gas releases or/other potential hazards.	Establishes policies and procedures for protecting natural and propane gas facilities from external damage caused by natural or man-made disaster.
Information Mgt.		Coordinates the protection of city computer systems and data. Provides public communications and marketing, broadcast public information via City cable television channel up to and after any disaster.	Establishes proper procedures. Provides communication equipment to city facilities, which assist in the relaying of more accurate information to both city/county governments as well as local citizens.
Police Dept.		Provides assistance to the fire department with evacuation areas in danger of sustaining substantial damage or loss of human life. Conducts traffic control along designated evacuation routes. Secures evacuated areas by establishing a perimeter and allowing access only to designated persons. Maintains security at designated evacuation shelters. Maintain the emergency operations center.	Established procedures to perform in a disaster type operation. Asst. in the Coordination of the city evacuation plans and procedures. Patrols the city for vandalism after evacuation, which could create additional loss to both citizens and the City of Clearwater.
Solid Waste/General Services	Solid Waste	Coordinates and implements mutual-aid agreements with the cities of St. Petersburg and the city of Largo. Provides debris removal teams. Performs pre and post disaster solid waste removal.	Provides debris removal mitigation, allowing the city to return to normal operation in a timely manner.

## Pinellas County Local Mitigation Strategy

Clearwater Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Fire & Rescue	Emergency Management	Provide emergency management planning and coordination and training including public education and coordinate all activities within the EOC. Helps coordinate the dept. /divisions preparation planning.	Reduces the effects of a disaster through preparedness, response within the EOC. Reviews the city in general through testing and evaluation of their action plan. Also reviews the city for any area of protection that may be identified prior to a disaster helping with damage and possible loss to city infrastructure.
Fire & Rescue		Provides response to fire, medical emergencies, and all other rescue operations. Performs initial evacuation procedures. Assist in staffing evacuation shelters with medical personnel and supplies. Establishes fire and live safety codes and code enforcement, hazardous materials and public education.	Protection against loss of Life and Property. Providing continuous EMS care and response. Performance of building inspections and damage assessments to help mitigate the hazard impact. Provides public education for mitigation initiatives.
Finance		Finance Department Maintains the financial aspect of an overall disaster program for the city that combines financial administration, accounting, treasury, purchasing, payroll, insurance, and safety. It incorporates the financial and assessment needs both during and after the disaster strikes. It includes a concerted effort to maintain and manage a disaster from the financial aspect.	Maintain proper accountability, funding availability. Provides a risk and business impact analysis, City-wide program of loss control, a series of emergency response procedures and insurance coverage tailored specifically to the City's needs.
Planning	Development Services	Coordinates policies and procedures for hazard mitigation efforts with the building and fire safety codes, flood plain management codes, land development codes, and comprehensive plan. Provides an inspection processes to ensure that each structure within the City is constructed to the standard building codes identified by the City of Clearwater. Provides inspectors that would review/oversee rehabilitation efforts and ensure the structure design mitigates hazard impacts.	Provides the review of developmental projects in the city to ensure the proposed plans meet the code requirements to mitigate hazard impacts. Also coordinates Inspections and corrective action of existing buildings, which are in poor condition to mitigate hazard impact. This process will provide the city with less of a loss in structural damage and loss of work time to its community.

## Pinellas County Local Mitigation Strategy

Clearwater Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Library Dept.		Coordinates the acquisition and distribution of food supplies to designated facilities for the feeding of City staff on duty during a hazard/emergency.	Provides the quality of ongoing service without interruption.
Marina		Oversees small fuel spills (less than 250 gal.), providing booms and diking material for control measures. Coordinates with a contractor the cleanup effort for those spills of more than 250 gallons. Also, provides video pre and post incident for damage assessment during a Disaster/emergency within the marina.	Provides a damage assessment and mitigates small fuel spills within the marina area.
City Auditors		Assist with the accumulation cost, etc. for submission to the Federal and State Governments for reimbursement.	Assist in the collection procedures of lost revenue to the City.
Engineering		The site plan review section of production assures that all new developments comply with traffic concurrency requirements. Also assures that finished floor elevations are in conformance with FEMA requirements and assure that flooding will not be increased. The design section (PD& Evaluation) designs all city facilities to the above criteria; plans & designs flood control projects; shoreline protection; bridge replacements; traffic improvements, and upgrade the airpark. PD& Evaluation also has hazmat expertise in case of spills, crashes, etc.	Provide plans and inspection to control possible loss too private and city facilities.
Public Services		Has provided a hurricane preparedness plan but is basically for pre & post activities by WPC Employees at the plants. Provided emergency back-up power supply's to maintain facility operation's required by FDEP.	Ensures continuous overall service operations.
Human Resources		Provide general information and explains the role that employees serve in the emergency plan in the event of an emergency (specifically, a hurricane).	Helps address the needs of the employee, in relation to their activities during a disaster.
Tourism Office		Serves as a point of contact/ liaison for certain business industries within the city.	Coordinates mitigation policies with hotel / motel industry related businesses.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 5: City of Dunedin Departmental Responsibilities**

Dunedin Department	Division/ Section/Bureau	Tasks	Loss Reduction
City Hall City Manager's Office  Mayor, Vice Mayor & Commissioners	Communications	Declares an emergency by executive order or proclamation. Submits to commission.  Approves emergency order.  Provides information to the residents of Dunedin on the emergency situation	Starts the process to notify city departments and City residents of Dunedin to prepare for an emergency.  Informs the public to be aware and on how to get prepared.
Fire Services		Fire Chief, Emergency Management Operations direction, EMS Services	Directs and monitors emergency response for the City of Dunedin
Planning & Development	Planning & Zoning	Maintains and enforces the Local Comprehensive Plan, Conservation and Coastal Management Element, CRS outreach programs & Land Development regulations.	Gets and enforces policies for development. Informs citizens on flood protection awareness.
Planning & Development	Building Division	Enforces Florida building Codes, NFIP regulations, Land Development regulations	Ensures safe structures to protect citizens from wind and flood damage
	Engineering	Enforces transportation, traffic, utilities & storm water regulations	Maintains roads, sidewalks, storm water drainage projects & maintenance.

## Pinellas County Local Mitigation Strategy

Dunedin Department	Division/ Section/Bureau	Tasks	Loss Reduction
Public Works		Oversees operations for water, wastewater, utilities, solid waste and Public Services.	Maintains all systems to ensure proper functions & safety of such for all citizens
Parks & Recreation Administration		To Maintain all city Parks, recreation areas and open space grounds.	Helps to reduce flooding through upgrading & maintaining parks and open space growth
Library		Maintains flood information maps and other reference material for Dunedin residents	Provides citizens with information to increase their awareness of flood & storm threats
Information Services		Maintains city computer and telephone communication systems and all electronic records	Maintains all systems to reduce loss of critical data. Provides records support for City employees.
Human Resources Risk Safety		Oversees all training programs for City employees. Manages risk safety policies.	Enlists education and safety courses for City employees. Maintains policies to keep employees aware of City requirements.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 6: City of Gulfport Departmental Responsibilities**

Gulfport Department	Division/ Section/ Bureau	Tasks	Loss Reduction
City Manager's Office		Responsible for all functions of the community.	Establishes and formalizes administrative policies, procedures, and budgeting of the City.
		Activates the City's EOC.	Disseminates vital information to the public and press to ensure public readiness and appropriate response to disaster events. Educates the public and increases awareness, thereby mitigating disaster-related issues with the City's citizens.
		Produces, issues advisories, and distributes information through the PIO to the public regarding preparedness, response, and recovery of disaster events.	Educates the public and increases awareness, thereby mitigating disaster-related issues with the City's citizens.
		Initiates the Citizen Phone Bank utilizing Administrative Services, City Clerk's Office, and Information Technology.	Educates the public and increases awareness, thereby mitigating disaster-related issues with the City's citizens.
	Information Technology	Ensures operation of all computer systems. Maintains telephone and computer communications.	Maintains or reduces downtime of computers and information used to provide city services and information during disasters, disaster recover, and normal operations. Gathers vital information and files for off-site storage. Ensures readiness of communications equipment between City buildings in the event of an emergency; ensures quick recovery after an event.
City Clerk's Office		Maintains City records.	Reduces potential loss of critical data; increases ability to maintain/regain normal operations.
Community Development	Building Division	Implements the Building Codes.	Reduces threats to people and structures; reduces potential loss.
		Implements the Floodplain Management Ordinance.	Reduces threats to people and structures; reduces potential loss.
		Implements Community Rating System (CRS)/ National Flood Insurance Program (NFIP) requirements.	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; reduces flood insurance costs.
		Acquires property for mitigation measures.	Reduces threat through acquisition; implementation tool for mitigation projects, such as retention ponds.
	Planning and Development	Maintains Comprehensive Plan. Maintains the Disaster Response and Recovery Plan.	Establishes policies for development and redevelopment. Ensures plan coordination with Pinellas County.

## Pinellas County Local Mitigation Strategy

Gulfport Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Community Development - continued	Planning and Development - continued	Ensures that current and historic Floodplain Insurance Rate Maps (FIRMs) are available for inspection or reference.	Reduces loss through participation in NFIP; provides accurate data when developing properties.
		Coordinates local activities relative to the CRS/NFIP.	Educates citizens on flood hazards and means of protection; reduces flood insurance premium costs.
		Performs outreach (through printed material) to employees, citizens and businesses on hazard preparedness and mitigation.	Educates businesses and increases awareness of hazards and how to mitigate, thereby reducing threat and downtime due to a disaster.
		Participates in outreach through GTV, the Annual Hurricane Workshop and multiple mailings to citizens and businesses on local threats (e.g., hurricanes, flooding, and thunderstorms) and how to mitigate hazards.	Educates the public and increases awareness, thereby reducing vulnerability and risk from disasters.
		Participates in the city's Emergency Operations Center at City Hall through coordination as the Public Information Officer with City Manager's Office, City Clerk's Office, PD, FD, Public Works, ITS, and Leisure Services.	Disseminates vital information to the public and press to ensure public readiness and appropriate response to disaster events.
		Assists Building Division in implementing the Land Development Codes and disaster recovery.	Reduces vulnerability and risk to people and structures; reduces potential loss.
	Responsible for distribution of hazard preparedness materials.	Educates the public and increases awareness, thereby reducing vulnerability and risk from disasters.	
	Code Enforcement	Ensures that codes are followed for existing development.	Ensures that structures are properly maintained.
Administrative Services	Accounting	Maintains financial records.	Coordinates with various departments to provide timely scheduling and budgeting of capital projects. Ensures sufficient funds for recovery operations; provides quick return to operations after an event.
	Purchasing	Oversees all City purchases; implements direct purchase procedure in times of emergency.	Ensures purchases meet legal requirements; ensures purchase card increase allowing City to respond quickly to an event without a bid process.
	Utility Billing	Maintains utility account records.	Provides for a quicker return of operations after an event.

## Pinellas County Local Mitigation Strategy

Gulfport Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Fire Department		Addresses daily emergency management activation.	Provides fire, HAZMAT response, and CERT and EMS service.
		Provides information and educational programs on hazards.	Educates citizens on hazards and how to prepare for them.
		Assist with evacuation order disseminations, "special needs" evacuations, general population evacuation, and support PD efforts.	Provides assistance to the general public and those with special needs. Protects loss of life.
		Serves as Emergency Manager in City's EOC.	Coordinates with Pinellas County EOC and coordinates disaster response efforts throughout City where needed.
Police Department		Addresses daily civil security and communication.	Provides for a secure, stable environment in which to live and work.
		Assist in activation of the City's EOC.	Assess the hazard/disaster. Establish a PIO who, in part, will disseminate vital information to the public and press to ensure public readiness and appropriate response to disaster events.
		Coordinates with PD for patrol use of a high ground clearance vehicle to permit high water patrol.	Provides assistance to the general public. Protects loss of life.
		Assist with evacuations for natural and man-made hazards/disasters.	Provides assistance to the general public and those with special needs. Protects loss of life.
Leisure Services Department	Technical Event Specialist	Schedules and airs programming on the City's government access channel, GTV, shows regarding disasters and disaster preparedness. Films and airs Annual Hurricane Workshop.	Educates the public and increases awareness, thereby reducing threat. Promotes hazard mitigation to reduce loss of life and property.
	Parks Division	Maintains parks and city-owned properties.	Reduces potential for flooding and flood damage.
		Assists Streets Division with debris management.	Coordinates with Streets Division to clear roadways from debris and provide temporary brush sites. Reduces potential hazardous risks for residents and businesses.
	Library	Maintains reference area of flood-related information and hazard data, including preparation and response information.	Educates citizens, thereby increasing awareness and reducing potential threats from exposure to vulnerability and risks.

## Pinellas County Local Mitigation Strategy

Gulfport Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Public Works Department	Building Maintenance Division	Maintains operating condition of all City buildings.	Ensures ability of City facilities to prepare, recover, and maintain operations.
		Maintains operating system of all shuttering systems in City.	Reduces threat to public structures.
	Streets Division	Maintains all streets and alleys under City's jurisdiction	Ensures proper maintenance; reduces flood threat. Clears roadways of debris. Reduces potential hazardous risks for residents and businesses.
		Coordinates with Pinellas County to maintain traffic control devices and signals. Maintains street signs, and markings; coordinates with Progress Energy to maintain street lights.	Reduces manmade and natural hazards by providing a structured environment for safe transportation and travel.
		Provides sandbags to residents.	Reduces potential flood damages.
	Stormwater Division	Participates in NPDES; responds to and identifies sources of pollution.	Reduces threat of contamination.
		Monitors compliance with drainage requirements for municipal and commercial projects.	Ensures threat of flood risk does not increase.
		Maintains the City's Stormwater Management Plan which includes infrastructure and stormwater management facilities.	Provides for proper retention and reduced flooding.
	Utilities Division (includes Water and Sewer)	Maintains continuous operation and proper functioning of Sanitary Sewer System.	Reduces threat to people, structures, and property; reduces threat to infrastructure and ground water systems; reduces threats of contamination and possible illness due to lift stations downtime or failure.
		Monitors effluent discharges.	Ensures compliance with water quality standards; reduces threat from hazardous materials.
		Maintains water reservoir structures and telemetry controlled pumping system.	Ensures sufficient water reserves and pressure are available to provide firefighting ability.
		Maintains bacteriological levels of the Potable Water System.	Reduces threat of contamination to and/ or illness from the potable water supply.
		Provides for water conservation, flow reduction and use of reclaimed water.	Ensures that water is conserved during a drought.
		Coordinates with and assists private utility companies.	Reduces risk/vulnerability to utility outages.
		Maintains operating condition of all emergency generators in City.	Ensures electrical power for the operation of the City's EOC and other critical facilities such as the lift stations.
	Fleet Maintenance Division	Maintains fire, police, and public works fleet readiness.	Ensures all fleet vehicles are in peak readiness to respond in emergency situations.
	END OF LIST		

# Pinellas County Local Mitigation Strategy

**Table 6- 7: City of Indian Rocks Beach Departmental Responsibilities**

Indian Rocks Beach Department/Division/Section/Bureau	Tasks	Loss Reduction
City Clerk's Office	Maintains City records.	Reduces potential loss of critical data; increases ability to maintain/regain normal operations.
City Manager's Office	Responsible for all functions of the community.	Establishes and formalizes administrative policies and procedures of the City.
	Produces and distributes information to the public regarding preparedness.	Educates the public and increases awareness, thereby reducing threat.
Building Development	Implements the Building Codes.	Reduces threats to people and structures; reduces potential loss.
Planning and Zoning, Building, Public Services and Administration	Implements the Floodplain Management Ordinance.	Reduces threats to people and structures; reduces potential loss.
	Implements Community Rating System (CRS)/ National Flood Insurance Program (NFIP) requirements.	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; reduces flood insurance costs.
	Acquires property for mitigation measures.	Reduces threat through acquisition; implementation tool for mitigation projects, such as retention ponds.
Planning and Zoning	Maintains Comprehensive Plan.	Establishes policies for development and redevelopment.
City Manager, Public Services, Finance and Planning and Zoning	Schedules the Capital Improvements Program.	Provides for timely scheduling and coordination of capital projects.
Public Services	Maintains the Disaster Response and Recovery Plan.	Ensures plan coordination with Pinellas County.
Public Services, Building Department and Planning and Zoning	Coordinates local activities relative to the CRS/NFIP.	Educates citizens on flood hazards and means of protection; reduces flood insurance premium costs.
	Performs outreach (through printed material) to employees, citizens and businesses on emergency preparedness.	Educates the public and increases awareness, thereby reducing threat.
Planning and Zoning, Building and Code Enforcement	Implements the Land Development Code.	Reduces threats to people and structures; reduces potential loss.
Finance Department	Maintains financial records.	Ensures sufficient funds for recovery operations; provides quick return to operations after an event.
City Manager	Oversees all City purchases; implements direct purchase procedure in times of emergency.	Ensures purchases meet legal requirements; allows City to respond quickly to an event without a bid process.
Finance Department	Maintains utility account records.	Provides for a quicker return of operations after an event.
Public Services	Responsible for distribution of hazard preparedness materials.	Educates the public and increases awareness, thereby reducing threat.

## Pinellas County Local Mitigation Strategy

Indian Rocks Beach Department/Division/Section/Bureau	Tasks	Loss Reduction
Public Services	Provides information and educational programs on hazards.	Educates citizens on hazards and how to prepare for them.
City Manager, City Attorney and Finance	Assesses local hazards and liabilities; determines extent of exposure; maintains sufficient insurance coverage for the City.	Reduces exposure and costs to the City; allows the City to return to normal operations more quickly after an event.
Library	Maintains reference area of hazard data, including preparation and response information.	Educates citizens, thereby increasing awareness and reducing potential threat.
City Manager, City Clerk and Finance	Maintains electronic records.	Reduces potential loss of critical data; increases ability to maintain/regain normal operations.
Public Services	Maintains telephone and computer communications.	Ensures readiness of communications equipment between City buildings in the event of an emergency event; ensures quick recovery after an event.
	Maintains emergency communications	Ensures that communications are available during emergency situations if regular communications are not available; allows for proper and coordinated responses during disasters.
Code Enforcement	Ensures that codes are followed for existing development.	Ensures that structures are properly maintained.
City Commission, City Manager and Finance	Develops annual budgets.	Provides for timely scheduling and coordination of capital projects.
Public Services	Maintains operating condition of all emergency generators in City.	Ensures ability of City facilities to maintain operations.
	Inspects and maintains City's storm sewer system.	Reduces threat of flooding.
	Responds to and identifies sources of pollution.	Reduces threat of contamination.
Planning and Zoning, Building and Public Services	Ensures that Floodplain Insurance Rate Maps (FIRM) and drainage atlas are available for inspection or reference.	Reduces loss through participation in NFIP; provides accurate data when developing properties.
Public Services	Monitors compliance with drainage requirements for municipal projects.	Ensures threat of flood risk does not increase.
	Maintains public works fleet readiness.	Ensures all fleet vehicles are in peak readiness to respond in emergency situations.
	Maintains parks and City-owned properties.	Reduces potential for flooding.
	Employees trained on hazardous materials.	Reduces potential for mishap; reduces costs of clean-up.

## Pinellas County Local Mitigation Strategy

Indian Rocks Beach Department/Division/Section/Bureau	Tasks	Loss Reduction
Public Services	Maintains continuous operation and proper functioning of Sanitary Sewer System.	Reduces threat to people, structures, and property; reduces threat to infrastructure and ground water systems.
	Monitors effluent discharges.	Ensures compliance with water quality standards; reduces threat from hazardous materials.
	Maintains all streets and alleys under City's jurisdiction	Ensures proper maintenance; reduces flood threat.
END OF LIST		

## Pinellas County Local Mitigation Strategy

**Table 6- 8: Town of Indian Shores Departmental Responsibilities**

Indian Shores Department	Division/ Section/ Bureau	Tasks	Loss Reduction	
Town Clerk's Office		Maintains Town records. Maintains electronic records. Maintains telephone and computer communications. Maintains emergency communications.	Reduces potential loss of critical data; increases ability to maintain/regain normal operations.	
	Deputy Clerk	Responsible for electronic messaging board at Town Hall.	Educates the public and increases awareness, thereby reducing threat.	
Information Technology Services		Maintains integrity of systems for storage and retrieval of electronic records.	Reduces potential loss of critical data; increases ability to maintain/regain normal operations.	
		Maintains integrity of telephone and computer communications systems.	Ensures readiness of communications equipment in the event of an emergency event; ensures quick recovery after an event.	
Town Administrator's Office		Responsible for all functions of the community.	Establishes and formalizes administrative policies and procedures of the Town.	
		Acquires property for mitigation measures.	Reduces threat through acquisition; implementation tool for mitigation projects, such as retention ponds.	
	Emergency Management Coordination		Maintains the Disaster Response and Recovery Plan.	Ensures plan coordination with Pinellas County.
			Attends EM Operations and DAC Meetings	Protects Town Citizens through participating in the advisory decision-making process to evacuate
	PIO	Performs outreach through printed material, informational and educational programs and other means to employees, citizens and businesses on emergency preparedness. (e.g., hurricanes, flooding, thunderstorms)	Educates the public and increases awareness, thereby reducing threat. Educates the public on potential hazards and how to prepare for them.	
	PIO	Provides information to residents, media, business leaders and other agencies at all levels of local, county, state and federal governments to assure accurate and timely release of requested information.	Educates the public and increases awareness, thereby reducing threat.	

## Pinellas County Local Mitigation Strategy

Indian Shores Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Building Department	Building Development	Implements the Building Codes.	Reduces threats to people and structures; reduces potential loss. Works to mitigate and eliminate repetitive loss.
		Implements the Floodplain Management Ordinance.	Reduces threats to people and structures; reduces potential loss.
		Implements Community Rating System (CRS)/ National Flood Insurance Program (NFIP) requirements.	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; reduces flood insurance costs.
		Ensures that Floodplain Insurance Rate Maps (FIRM) and drainage atlas are available for inspection or reference.	Reduces loss through participation in NFIP; provides accurate data when developing properties.
	Engineering Services	Designs infrastructure, including some stormwater management facilities.	Provides for proper retention and reduced flooding.
	Community Planning	Maintains Comprehensive Plan.	Establishes policies for development and redevelopment.
		Coordinates local activities relative to the CRS/NFIP.	Educates citizens on flood hazards and means of protection; reduces flood insurance premium costs.
		Helps maintain, along with Town Administrator's Office, Town Clerk's Office, and IT, an Emergency Operations Center.	Ensures readiness to respond quickly and appropriately.
	Zoning	Implements the Land Development Code.	Reduces threats to people and structures; reduces potential loss.
	Community Compliance	Ensures that codes are followed for existing development.	Ensures that structures are properly maintained.
Finance Department/Human Resources	Accounting	Maintains financial records.	Ensures sufficient funds reserved for recovery operations; provides quick return to operations after an event.
	Management and Budget	Develops annual budgets.	Provides for timely scheduling and coordination of capital projects.
		Schedules Capital Improvement Program.	Provides for timely scheduling and coordination of capital projects.
	Purchasing	Oversees all Town purchases; implements direct purchase procedure in times of emergency.	Ensures purchases meet legal requirements; allows Town to respond quickly to an event without a bid process.
Risk Management	Assesses local hazards and liabilities; determines extent of exposure; maintains sufficient insurance coverage for the Town.	Reduces exposure and costs to the Town; allows the Town to return to normal operations more quickly after an event.	

## Pinellas County Local Mitigation Strategy

Indian Shores Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Library and Recreation Services		Maintains reference area of hazard data, including preparation and response information.	Educates citizens, thereby increasing awareness and reducing potential threat.
Police Department		Addresses daily civil security and communication.	Provides for a secure, stable environment in which to live and work.
		Implements emergency response as part of Unified Command structure.	Reduces threat to public.
		Maintains emergency communications systems.	Ensures that communications are available during emergency situations if regular communications are not available; providing proper and coordinated responses during disasters.
	Fleet Maintenance	Maintains police works fleet readiness.	Ensures all fleet vehicles are in peak readiness to respond in emergency situations.
Public Works Department	Building Maintenance	Maintains operating condition of all emergency generators in Town.	Ensures ability of Town facilities to maintain operations.
		Maintains shuttering systems in Town.	Reduces threat to public structures.
	Drainage Maintenance	Inspects and maintains Town's storm sewer system.	Reduces threat of flooding.
		Identifies and responds to sources of pollution.	Reduces threat of contamination.
		Monitors compliance with drainage requirements for municipal projects.	Ensures threat of flood risk does not increase.
	Fleet Maintenance	Maintains public works fleet readiness.	Ensures all fleet vehicles are in peak readiness to respond in emergency situations.
	Parks Division	Maintains parks and Town owned properties.	Reduces potential for flooding.
		Employees trained on hazardous materials.	Reduces potential for mishap; reduces costs of clean-up.
		Monitors effluent discharges.	Ensures compliance with water quality standards; reduces threat from hazardous materials.
	Street Maintenance	Maintains all streets and alleys under Town's jurisdiction	Ensures proper maintenance; reduces flood threat.
	Traffic Division - Subcontracted to Pinellas County	Maintains traffic control devices, signals, signs, and markings; maintains street lights.	Reduces manmade hazards by providing a structured environment for safe transportation and travel.

## Pinellas County Local Mitigation Strategy

Indian Shores Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Public Works Department - continued	Reclaimed Water Division - Provided by Pinellas County Utilities	Provides and promotes the use of reclaimed water.	Reduces consumption of potable water; especially useful during a drought.
	Sewer Division - Provided by Pinellas County Utilities	Maintains continuous operation and proper functioning of Sanitary Sewer System.	Reduces threat to people, structures, and property; reduces threat to infrastructure and ground water systems.
	Water Division - Provided by Pinellas County Utilities	Maintains water reservoir structures and telemetry controlled pumping system.	Ensures sufficient water reserves and pressure are available to provide firefighting ability.
		Maintains bacteriological levels of the Potable Water System.	Reduces threat of contamination to and/ or illness from the potable water supply.
		Provides for water conservation, flow reduction and use of reclaimed water.	Ensures that water is conserved during a drought.
Fire Department	Provided by Pinellas Suncoast Fire Rescue	Addresses daily emergency management activation.	Provides fire, HAZMAT and EMS service. Reduces threat to people, structures and property.
<b>END OF LIST</b>			

**Table 6- 9: Kenneth City Departmental Responsibilities**

## Pinellas County Local Mitigation Strategy

**Table 6- 10: City of Largo Departmental Responsibilities**

Largo Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Community Development	Planning and Development Review Services	Implements the Land Development Code.	Reduces threats to people and structures; reduces potential loss; performs damage assessments, and implements policies and procedures for rebuilding and redevelopment.
		Maintains Comprehensive Plan.	Establishes policies for development and redevelopment.
		Coordinates City activities relative to the CRS/NFIP.	Educates citizens on flood hazards and means of protection; reduces flood insurance premium costs.
		Coordinates Logistics Group	Contributes staff to Logistics Group to coordinate procurement and distribution of resources to the public and other entities.
		Implements Land Development Codes governing development and redevelopment.	Reduces threats to people and structures; reduces potential loss; performs damage assessments, and implements policies and procedures for rebuilding and redevelopment.
		Implements Community Rating System (CRS)/ National Flood Insurance Program (NFIP) requirements.	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; reduces flood insurance costs.
		Acquires property for mitigation measures.	Reduces threat through acquisition; implementation tool for mitigation projects, such as retention ponds.
	Engineering	Designs infrastructure, including some stormwater management facilities.	Provides for proper retention and reduced flooding.
		Inspects and maintains City's storm sewer system.	Reduces threat of flooding.
		Ensures that Floodplain Insurance Rate Maps (FIRM) and drainage atlas are available for inspection or reference.	Reduces loss through participation in NFIP; provides accurate data when developing properties.
		Monitors compliance with drainage requirements for municipal projects.	Ensures threat of flood risk does not increase.
		Maintains traffic control devices, signals, signs, and markings; maintains street lights.	Reduces man-made hazards by providing a structured environment for safe transportation and travel.
		Maintains all streets and rights-of-ways under City's jurisdiction	Ensures proper maintenance; reduces flood threat; responsible of debris clearing

## Pinellas County Local Mitigation Strategy

Largo Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Police Department	All	Addresses daily civil security and communication.	Provides for a secure, stable environment in which to live and work.
Fire Department	All	First responders in fire and medical emergencies.	Reduces potential casualties and loss of property.
		Develops and monitors City disaster preparedness and recovery plans	Reduces potential casualties and loss of property, and enhances recovery.
		Operates the City's Emergency Operations Center	Reduces potential casualties and loss of property, and enhances recovery.
		Coordinates and manages citywide responses to natural and man-made disasters.	Reduces potential casualties and loss of property, and enhances recovery.
		Coordination point for federal disaster relief programs	Reduces potential casualties and loss of property, and enhances recovery.
		Develops and delivers public information and education programs about disaster preparedness.	Reduces potential casualties and loss of property, and enhances recovery.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 11: City of Madeira Beach Departmental Responsibilities**

Madeira Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Board of Commissioners	Legislative	Mayor and four Commissioners govern the City, set public policies, and declare local state of emergencies.	System in place to quickly declare emergencies, govern the City while under state of emergency, lift state of emergencies.
Administration/City Manager's Office	Chief Administrative Official	Chief Administrative officer and manager of all Departments' operations, and spokesperson.	Administrates and manages MBEOC operations, acts as the spokesperson official during and after an emergency or disaster, provides information to the media pertaining to disaster.
City Clerk	City Clerk	Coordinates removal of vital records to designated safe location; support to Commission and City Manager to draft and enact resolutions, proclamations, ordinances, declarations of state of local emergency, etc.	Assists in preparing Board of Commissioners' legislation and declarations as necessary; ensures retention of critical records; reduces exposure and costs to the City; allows the City to return to normal operations more quickly after an event.
Fire	Fire	Develops and Implements disaster preparedness public education program.	Increases individuals, households and special needs constituencies.
		Lead agency for emergency management.	Coordinates all MBEOC and emergency management activities.
		Conducts training and emergency management skill development for City employees.	Improved disaster management skills mean (1) more efficient response; (2) better use of resources, and, (3) expedited return to normalcy.
		Leads agency for search and rescue, hazard materials, EOC operations, mutual aid.	Coordinates recue services as well as evacuation and initial disaster assessment.
Finance	Finance, Human Resources, and Information Technology	Develops annual budget. Assesses local hazards and liabilities; determines extent of exposure; maintain sufficient insurance coverage for the City; MBEOC support.	Provides for timely scheduling and coordination of capital projects. Reduces exposure and costs to the City; allows the City to return to normal operations more quickly after an event. Educates the public and increases awareness, thereby reducing threat, and improving disaster resiliency.
		Computer operations especially for MBEOC; sets up "Emergency Action Home Page;" coordinates with news media; recovery information.	Reduces potential loss of critical data; increase ability to regain and maintain normal operations Ensures readiness and quick recovery of electronic data after an event or disaster
	Building	Implements the Building Codes.	Reduces threats to people and structures; reduces potential loss.

## Pinellas County Local Mitigation Strategy

Madeira Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Community Development	Planning, Zoning, And Floodplain Management	Maintains the Comprehensive Plan	Establishes policies for development and redevelopment.
		Implements Community Rating System (CRS)/ National Flood Insurance Program (NFIP) requirements.	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; reduces flood insurance costs.
Community Development continued	Planning, Zoning, and Floodplain Management	Coordinates local activities relative to CRS/NFIP.	Reduce loss through participation in NFIP; provides accurate data when developing properties.
		Floodplain Ordinance Administration	Reduces threats to people and structures; reduces potential loss.
		Implements the Land Development Code.	Improved disaster resiliency; expedited return to normalcy.
	Code Compliance	Performs outreach to employees, citizens and businesses on local threats (e.g., hurricanes, flooding, thunderstorms).  Ensures that Codes are followed for existing development.	Educates citizens on flood hazards and means of protection; reduces flood insurance premium costs.  Ensures that properties are properly maintained.
Gulf Beaches Public Library (Gulf Beaches Consortium / located in Madeira Beach)	Library	Maintains reference area of hazard data, including preparation and response information.	Educates citizens, thereby increasing awareness and reducing potential threat.
Central Services	Public Works, Grounds Beautification, Beach Improvement, Municipal Facilities, Marina, and Equipment/Vehicle Maintenance	Inspects and maintains City's storm sewer system.	Provides accurate data when developing properties.
		Monitors compliance with drainage requirements for municipal projects. NPDES coordination.	Ensures threat of flood risk does not increase.
		Maintains all streets and alleys under City's jurisdiction.	Ensures proper maintenance; reduces flood threat.
		Coordinates with Pinellas County with respect to the potable water system.	Coordinates with Pinellas County to ensure potable water after hazard event.
		Coordinates with Pinellas County with respect to the sanitary sewer system.	Coordinates with Pinellas County to ensure sanitary sewer systems availability after hazard event.
		Responsible for the clearance of debris and its removal.	The removal of sand and debris opens roadways and enables emergency repairs by utilities and finally the re-opening of the barrier island to its citizens.

## Pinellas County Local Mitigation Strategy

Madeira Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
		Notifies all owners of boats and recreational vehicles so they can properly secure their property.	Reduces property damage and potential losses, minimizes insurance costs.
Pinellas County Sheriff's Office	Outside Agency	Law enforcement, traffic/crowd control; restrict access/secure disaster areas; assist in evacuation; assist in search and rescue; coordinate re-entry.	Provides for public safety, reduces threats to people and structures, reduces potential loss; provides for orderly flow of people out of and onto the island during a hazard event.
Recreation Department	Parks and Recreation	Provides buses/drivers to assist evacuation of citizens; sets up post-disaster Recovery Center. Secure records and outside facilities, notifies parents.	Supports disaster plan operations; assists in reduction of threats to people; improved disaster resiliency; assist in return to normalcy post-disaster.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 12: Town of North Redington Beach Departmental Responsibilities**

North Redington Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Mayor's Office	Mayor	Responsible for all administrative functions of the Town.	Establishes and formalizes administrative policies, procedures, and budgeting for the Town.
		Acts as a spokesperson for emergency preparedness and mitigation.	Disseminates vital information to the public and press.
Town Clerk's Office	Town Clerk's Office	Ensures the Flood Insurance Rate Maps are maintained and available for review.	Reduces loss through participation in the NFIP; provides accurate data when developing or redeveloping properties.
		Maintains the Town's Comprehensive Plan.	Reduces threats to people and structures; reduces potential loss.
		Maintains the Town's records.	Reduces the potential loss of the Town's Charter & Seal, municipal codes, contracts, and other vital records. This increases the Town's ability to maintain/regain normal operations.
		Prepares agenda and emergency legislative documents for Council during emergency events	Reduces the time necessary to enact emergency legislation.
		Oversees all Town purchases	Ensures purchases meet legal requirements.
		Maintains financial records.	Coordinates with various departments to provide timely scheduling and budgeting of capital projects. Ensures sufficient funds for recovery operations; provides quick return to operations after an emergency event.
		Maintains the Town's Emergency Operations Plan (EOP).	Reduces threats to people and structures; reduces potential loss by providing a systematic means for preparing for, responding to, and recovering from emergency events.
		Answers phones and provides prepared messages to the community. If a phone bank is operated, the Administrative Assistant will train and manage the phone bank.	Maintains a conduit for the public to obtain information related to the Town.
		Provides Evacuation Re-Entry Permits to employees and residents	This allows residents to evacuate their homes knowing that they can return once the emergency is over.
		Provides a printed and online newsletter with emergency management related information under the direction of the Town Clerk.	Provides public education and information focused on mitigation and preparation

## Pinellas County Local Mitigation Strategy

North Redington Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Town Clerk's Office	Town Clerk's Office	Assists the Emergency Management Coordinator in obtaining resources as they become needed and available.	Ensures that resources needed by the Emergency Management Coordinator to respond to emergency events are obtained quickly and cost-effectively.
		Maintains contracts, agreements, and relationships with governmental agencies and private contractors to provide debris management services.	Speeds the process of clearing roadways to allow for emergency vehicles to operate and for the Town to return to its normal state as quickly as possible.
		Maintains contracts, agreements, and relationships with governmental agencies and private contractors to ensure compliance and the provision of services.	Ensure compliance with the requirements of FDOT, FDEP, EPA, DCA, ACE, etc. Ensures that the Town maintains overlapping service providers in case of competition for resources.
		Provides overall management to the Town's information technology function.	Maintains or reduces downtime of computers and information used to provide Town services and information during disasters, disaster recover, and normal operations.
		Protects electronic data	Gathers vital information and files for on- and off-site storage.
		Ensures the operation of all telephone and communications equipment.	Ensures readiness of communications equipment before, during, and after an emergency event.
		Implements and maintains compliance with the National Flood Insurance Program (NFIP).	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements.
		Provides Town employees with regular weather reports.	Improves knowledge of the environment in which staff and volunteers will be working.
		Evaluates Town Hall (including files, computers, equipment, and vehicles).	Ensures that vital records and resources are safely moved out of the affected area so that the Town may regain operations as quickly as possible.
		Provides information for the Town's printed and online newsletter with emergency management related information.	Provides public education and information focused on mitigation and preparation.
Reviews evacuation re-entry permitting to employees and residents.	This allows residents to evacuate their homes knowing that they can return once the emergency is over.		

## Pinellas County Local Mitigation Strategy

North Redington Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Civil Defense Coordinator	Civil Defense Coordinator	Attends EM Coordinators, DAC, and other emergency management related committee/workgroup meetings as the Town's primary representative.	Protects the Town's residents by participating in these emergency management related committees. Increases cooperation between the County and its municipal governments.
		Acts as a spokesman for emergency preparedness and mitigation	Disseminates vital information to the public and press to ensure public readiness and appropriate response to disaster events. Educates the public and increases awareness, thereby mitigating disaster-related issues with the Town's residents.
		Maintains the Town's Emergency Operation Plan (EOP)	Reduces threats to people and structures; reduces potential loss by providing a systematic means for preparing for, responding to, and recovering from emergency events.
		Acts as the Town's Emergency Manager	Is responsible for providing direction to all Town Employees, updating the Town Council, and providing information to the general public.
		Acts as an Emergency Management Coordinator in conjunction with the Fire Chief.	Assists in providing direction to all Town Employees to prepare for, respond to, and recover from all emergencies. Activates contracts as become necessary to address the Town's needs in an expedient way during an emergency event to reduce the losses of life, structures and infrastructure.
		Attends EM Coordinators and DAC Meetings.	Protects the Town's residents by participating in these emergency management related committees. Increases cooperation between the County and its municipal governments.
Public Works Department	Public Works	Provides overall management to the Town's public works department.	Provides management to the public works department; assuring the efficient and effective use of resources to meet the needs of the Town during emergency events.
		Maintain operating condition of all Town-owned generators for Town Hall and in the field.	Enables the Town to maintain operations and functions.
		Inspect and maintain the Town's municipal separate storm sewer system.	Reduces the threat of flooding.
		Participates in NPDES; responds to and identifies sources of pollution.	Reduces the threat of contamination.

## Pinellas County Local Mitigation Strategy

North Redington Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Public Works Department - continued	Public Works - continued	Identify and respond to sources of pollution.	Reduces the potential for flooding and flood related damage.
		Maintains the parks and Town-owned properties and prepare for emergency situations.	Reduces the potential for flooding and flood related damage.
		Provide small scale roadway clearance. (if within our capabilities)	Speeds the process of clearing roadways to allow for emergency vehicles to operate and for the Town to return to its normal state as quickly as possible.
		Maintains all Town-owned streets within the Town's jurisdiction.	Reduces the threat to public structures.
		Maintains all street signs within the Town's jurisdiction.	Reduces manmade and natural hazards by providing a structured environment for safe transportation and travel.
		Provides sandbags to residents	Reduces potential flood damages.
		Maintains Public Work's fleet	Ensures all fleet vehicles are in peak readiness to respond to emergency situations.
Pinellas County Building Department	Outside Agency	Ensures that codes are followed for existing development.	Ensures that structures are properly maintained.
Seminole, Madeira Beach and Suncoast Fire Rescue	Outside Agency	Ensures that fire codes are followed for existing and new development.	Ensures that structures are meet life safety codes.
		Provides fire and rescue services.	Provides fire, rescue, HAZMAT Services. Reduces threat life, structures, and property.
		Provides information and education programs on hazards to residents and employees.	Educates citizens on hazards and how to prepare for them. Educates employees on hazards and how to respond to them.
		Provides special needs evacuations.	Protects the Town's residents by participating in these emergency management related committees. Increases cooperation between the County and its municipal governments.
		Assist with evacuations for natural and manmade hazards/disasters.	Provides assistance to the general public and those with special needs; protects against the loss of life.
Pinellas County Sheriff's Office	Outside Agency	Addresses daily civil security.	Provides for a secure, stable environment in which to live and work.
Pinellas County Building Department	Outside Agency	Implements the Town's building codes under a contractual relationship.	Reduces threats to people and structures; reducing potential losses.

## Pinellas County Local Mitigation Strategy

North Redington Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Pinellas County Utilities	Outside Agency	Maintains water reservoir structures and telemetry controlled pumping system.	Ensures sufficient water reserves and pressure are available to provide firefighting ability.
		Maintains bacteriological levels of the potable water system.	Reduces threat of contamination to and/or illness from the potable water supply.
		Provides for water conservation, flow reduction and use of reclaimed water.	Ensures that water is conserved during a drought.
		Maintains traffic control devices and signals.	Reduces manmade and natural hazards by providing a structure environment for safe transportation and travel.
		Maintains street lights.	Reduces manmade and natural hazards by providing a structure environment for safe transportation and travel.
		Respond to power outages, turn off power to the Town if appropriate, and clear downed power lines.	Ensures prompt recovery once an emergency event is over.
		Maintains continuous operations and proper functioning of the Sanitary Sewer System.	Reduces the threat to people, structures, and property; reduces threat to infrastructure and ground water systems; reduces threats of contamination and possible illness due to lift station downtime or failure.
		Maintains lift station with associated telemetry.	Ensures compliance with water quality standards; reduces threat from hazardous materials.
		Monitors effluent discharges	Ensures compliance with water quality standards; reduces threat from hazardous materials.
Waste Services, Inc.	Outside Agency	Provide debris management services (if agreement is activated)	Provide debris management services during emergency recovery.
Progress Energy	Outside Agency	Maintains street lights.	Reduces manmade and natural hazards by providing a structure environment for safe transportation and travel
Progress Energy	Outside Agency	Respond to power outages, turn off power to the Town if appropriate, and clear downed power lines.	Ensures prompt recovery once an emergency event is over.
FDOT	Outside Agency	Provide debris management services (if agreement is activated)	Provide debris management services during emergency recovery.
END OF LIST			

## Pinellas County Local Mitigation Strategy

**Table 6- 13: City of Oldsmar Departmental Responsibilities**

Oldsmar Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Administrative Services	Finance Department	Maintains financial records.	Ensures sufficient funds for recovery operations; provides quick return to operations after an event.
		Develops annual budgets.	Provides for timely scheduling and coordination of budgetary process.
		Schedules the Capital Improvements Program.	Provides for timely scheduling and coordination of capital projects.
	Purchasing	Responsible for distribution of hazard preparedness materials.	Reduces threats and provides greater security to city facilities.
		Oversees all City purchases; implements direct purchase procedure in times of emergency.	Ensures purchases meet legal requirements; allows City to respond quickly to an event without a bid process.
	Utility Billing	Maintains utility account records.	Provides for a quicker return of operations after an event.
	Information Services	Maintains electronic records.	Reduces potential loss of critical data; increases ability to maintain/regain normal operations.
		Maintains telephone and computer communications.	Ensures readiness of communications equipment between City buildings in the event of an emergency event; ensures quick recovery after an event.
		Maintains emergency communications	Ensures that communications are available during emergency situations if regular communications are not available; allows for proper and coordinated responses during disasters.
	City Clerk's Office		Maintains City records.
City Manager's Office		Responsible for all functions of the community.	Establishes and formalizes administrative policies and procedures of the City.
	Communications and Marketing	Performs outreach (through local TV, festivals and speakers) to employees, citizens and businesses on local threats (e.g., hurricanes, flooding, thunderstorms).	Educates the public and increases awareness, thereby reducing threat.
Planning & Redevelopment	Building Development	Implements the Building Codes	Reduces threats to people and structures; reduces potential loss.
	Planning & Redevelopment	Implements the Floodplain Management Ordinance	Reduces threats to people and structures; reduces potential loss.

## Pinellas County Local Mitigation Strategy

Oldsmar Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Planning & Redevelopment - continued		Acquires property for mitigation measures.	Reduces threat through acquisition; implementation tool for mitigation projects, such as retention ponds.
		Maintains Comprehensive Plan.	Establishes policies for development and redevelopment.
		Coordinates local activities relative to the CRS/NFIP.	Educates citizens on flood hazards and means of protection; reduces flood insurance premium costs.
		Produces and distributes information to the public regarding flood preparedness.	Educates the public and increases awareness, thereby reducing flood threat.
		Ensures that Floodplain Insurance Rate Maps (FIRM) are available for inspection or reference	Reduces loss through participation in NFIP; provides accurate data when developing properties.
		Implements the Building Codes it references the FIRM maps	Educates the public and increases awareness, thereby reducing flood threat.
	Implements the Land Development Code.	Reduces threats to people and structures; reduces potential loss.	
	Code Enforcement	Ensures that codes are followed for existing development.	Ensures that structures are properly maintained.
Fire Department		Provides information to residents, media, business leaders and other agencies at all levels of local, county, state and federal governments to assure accurate and timely release of requested information.	Educates the public and increases awareness, thereby reducing threat.
		Maintains the city Emergency Operations Plan.	Ensures plan coordination with Pinellas County.
		Produces local TV spots on threats and disaster preparedness.	Educates the public and increases awareness, thereby reducing threat.
		Performs outreach (through printed material) to employees, citizens and businesses on emergency preparedness.	Educates the public and increases awareness, thereby reducing threat.
Leisure Services	Recreation	Maintains the City Employee Shelter.	Ensures readiness of local forces to respond quickly.
	Parks	Maintains city parks and implements disaster preparedness for park security.	Ensures safety at park facilities and reduces possible park flooding.

## Pinellas County Local Mitigation Strategy

Oldsmar Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Leisure Services	Facilities Division	Maintains operating condition of all emergency generators in City.	Ensures ability of City facilities to maintain operations.
		Maintains operating system of all shuttering systems in City.	Reduces threat to public structures.
Public Works Department	Streets and Drainage Division	Inspects and maintains City's storm sewer system.	Reduces threat of flooding.
		Responds to and identifies sources of pollution.	Reduces threat of contamination.
		Maintains all streets and alleys under City's jurisdiction	Ensures proper maintenance; reduces flood threat.
		Maintains traffic control devices, signals, signs, and markings; maintains street lights.	Reduces manmade hazards by providing a structured environment for safe transportation and travel.
	Technical Services Division	Ensures that Floodplain Insurance Rate Maps (FIRM) and drainage atlas are available for inspection or reference.	Reduces loss through participation in NFIP; provides accurate data when developing properties.
		Monitors compliance with drainage requirements for municipal projects.	Ensures threat of flood risk does not increase.
		Implements the Building Codes.	Reduces threats to people and structures; reduces potential loss.
		Designs infrastructure, including some stormwater management facilities.	Provides for proper retention and reduced flooding.
	Fleet Maintenance Division	Maintains city fleet and equipment readiness.	Ensures all fleet vehicles and equipment are in peak readiness to respond in emergency situations.
	Water Reclamation Division	Maintains and operates the wastewater treatment plant and produces reclaimed water.	Reduces threat to people, structures, and property; reduces threat to infrastructure and ground water systems.
		Monitors effluent discharges.	Ensures compliance with water quality standards; reduces threat from hazardous materials.
	Water Division	Maintains water reservoir structures and telemetry controlled pumping system.	Ensures sufficient water reserves and pressure are available to provide firefighting ability.
		Maintains and operates the reverse osmosis water plant and the two 1-million-gallon ground storage tanks	Monitors water distribution system pressure and water quality.
		Maintains bacteriological levels of the Potable Water System.	Reduces threat of contamination to and/ or illness from the potable water supply.
		Provides for water conservation, flow reduction and use of reclaimed water.	Ensures that water is conserved during a drought.
	<b>END OF LIST</b>		

## Pinellas County Local Mitigation Strategy

**Table 6- 14: Pinellas County Departmental Responsibilities**

Pinellas County Department	Division/ Section/Bureau	Tasks	Loss Reduction
Board of County Commissioners		The elected governing body providing overall direction and authority of emergency management situations.	Authority to establish State of Emergency and order evacuation procedures. BCC is the policy group in the Emergency Operations Center (EOC)
County Administrator's Office		Responsible for all functions of the County government.	Establishes and formalizes administrative policies and procedures (including emergency management) of the County (under the BCC).
Planning and Development Services	Building Division	Implements the Building Codes.	Reduces threats to people and structures; reduces potential loss; performs damage assessments, and implements policies and procedures for rebuilding and redevelopment.
	Planning and Development Review Division	Manages the site plan review process.	Reduces threats to people and structures; reduces potential loss; performs damage assessments, and implements policies and procedures for rebuilding and redevelopment.
		Maintains and monitors implementation of the Comprehensive Plan.	Establishes policies for development and redevelopment, with specific policies restricting densities and critical facilities <u>within the most hazardous coastal areas.</u>
		Helps coordinates county activities with the Natural Resources Section of DEI relative to the CRS and NFIP programs.	Educates citizens on flood hazards and means of protection; reduces flood insurance premium costs.
		Coordinates County planning and initiatives in response to sea level rise and climate change.	Reduces exposure of public infrastructure and private property to the long-term consequences of rising sea levels and other impacts from climatic changes.
Economic Development	Works with business community to improve economic environment to attract new businesses and retain existing businesses.	Works via SBDC with business community in developing "Continuity of Operations Plans" ("COOP) and with emergency preparations and recovery. Mans ESF 18 in Emergency Operations Center. Communicates business preparedness best practices via online communications and social media. Promotes Association of Contingency Planners Tampa Bay Chapter to the business community.	

## Pinellas County Local Mitigation Strategy

Pinellas County Department	Division/ Section/Bureau	Tasks	Loss Reduction
Communications		Performs outreach (through printed material) to employees, citizens and businesses on emergency preparedness.	Educates the public and increases awareness, thereby reducing potential loss of property and minimizes casualties.
		Produces and distributes information to the public regarding preparedness.	Educates the public and increases awareness, thereby reducing potential loss of property and minimizes casualties.
		Performs outreach (through PCC-TV, local commercial TV, radio, festivals and speakers bureau) to employees, citizens and businesses on local threats (e.g., hurricanes, flooding, thunderstorms).	Educates the public and increases awareness, thereby reducing potential loss of property and minimizes casualties.
		As the Public Information Officer (PIO) in the EOC, distributes information regarding emergency warnings and situations to local media.	Educates the public and increases awareness, thereby reducing potential loss of property and minimizes casualties.
Parks and Conservation Resources		Maintains parks and County -owned properties.	Open spaces maintains natural drainage to alleviate potential flooding. Personnel are responsible for operating "Points of Distribution" (POD) and Central Staging Area (CSA) for providing water and other necessities for recovering public.
Convention & Visitors Bureau		Works with tourism industry in promoting Pinellas County	Works with tourism and hospitality industry in developing COOPs, and disseminates information to potential visitors and tourists about status of tourist accommodations.

## Pinellas County Local Mitigation Strategy

Pinellas County Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Safety and Emergency Services	EMS	First responders in fire and medical emergencies.	Reduces potential casualties and loss of property.
	Emergency Communications	Responsible for 911 communications; dispatch for all emergency situations.	Reduces potential casualties and loss of property.
	Emergency Management	Develops and monitors County disaster preparedness and recovery plans	Reduces potential casualties and loss of property, and enhances recovery.
		Operates the County's Emergency Operations Center	Reduces potential casualties and loss of property, and enhances recovery.
		Coordinates and manages countywide responses to natural and man-made disasters.	Reduces potential casualties and loss of property, and enhances recovery.
		Coordination point for federal disaster relief programs	Reduces potential casualties and loss of property, and enhances recovery.
	Develops and delivers public information and education programs about disaster preparedness.	Reduces potential casualties and loss of property, and enhances recovery.	
Health & Community Services	Provides, coordinates, and advocates for health and human services in the County.	Provides and coordinates, with public and private providers, for health and human services to meet public needs in the aftermath.	
Office of Management and Budget		Develops annual budgets.	Provides for timely scheduling and coordination of capital projects.
		Schedules the Capital Improvements Program	Provides for timely scheduling and coordination of capital projects.
		Maintains financial accounts for FEMA/State reimbursements	Reduces potential loss of critical data; assures accountability of emergency transactions.

## Pinellas County Local Mitigation Strategy

Pinellas County Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Environment and Infrastructure – Transportation and Stormwater	Natural Resources Section	Maintains the County’s open conveyance and storage systems	Reduces threat of flooding.
		Ensures that Floodplain Insurance Rate Maps (FIRM) and drainage atlas are available for inspection or reference.	Reduces loss through participation in NFIP; provides accurate data when developing properties.
		Monitors compliance with drainage requirements for municipal projects and private development.	Ensures threat of flood risk does not increase.
		Designs infrastructure, including stormwater management facilities with support from Engineering and Technical Support Services.	Provides for proper retention and reduced flooding and improve water quality.
		Implements Community Rating System (CRS)/ National Flood Insurance Program (NFIP) requirements.	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; reduces flood insurance rate impacts on residents.
		Acquires property for mitigation measures.	Reduces threat through acquisition; implementation tool for mitigation projects, such as retention ponds.
		Implements the Floodplain Management Ordinance.	Reduces threats to people and structures; reduces potential loss.
		Responds to and identifies sources of pollution.	Reduces threat of contamination.
		Regulates mangrove trimming	Provides shoreline protection and reduces the threat of flooding.
		Implements the County’s Coastal Management Program	Reduces the impacts from tidal flood threats
	Infrastructure Section, Traffic Section	Inspects the County stormwater system	Reduces threat of flooding
		Maintains the County’s closed conveyance system	Reduces threat of flooding
		Maintains the County’s bridges	Provides access during times of flooding
		Maintains traffic control devices, signals, signs, and markings; maintains street lights.	Reduces manmade hazards by providing a structured environment for safe transportation and travel.
		Maintains all streets and rights-of-ways under County’s jurisdiction	Ensures proper maintenance; reduces flood threat; responsible of debris clearing

## Pinellas County Local Mitigation Strategy

Pinellas County Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Purchasing		Responsible for procurement of goods and services for County	Contributes staff to Logistics Group; responsible for procurement of goods and services for distribution in emergency recovery. Maintains master listing of vendors that helps reduce delay of obtaining goods and services
Real Estate Management	Facility Operations	Maintains operating system of all systems in County structures.	Reduces threat to public structures, and maintains function of buildings..
	Lease Management	Responsible for leasing property and space for County functions.	Contributes staff to Logistics for any leasing arrangements that need to be made to enhance recovery from a disaster.
	Real Property	Responsible for purchase negotiations for property for County functions.	Contributes staff to Logistics for any property purchasing arrangements that need to be made to enhance recovery from a disaster.
	Fleet Management	Maintains fleet readiness for County departments; stockpiles fuel.	Ensures all fleet vehicles are in peak readiness to respond in emergency situations.
Maintains operating condition of all emergency generators in County.		Ensures ability of County facilities to maintain operations.	
Risk Management		Assesses local hazards and liabilities; determines extent of exposure; maintains sufficient insurance coverage for the County.	Reduces exposure and costs to the City; allows the City to return to normal operations more quickly after an event.
Sheriff's Office		Addresses daily civil security and communication.	Provides for a secure, stable environment in which to live and work.
Environment and Infrastructure - Utilities	Water and Sewer	Maintains water reservoir structures and telemetry controlled pumping system.	Ensures sufficient water reserves and pressure are available to provide fire-fighting ability.
		Maintains bacteriological levels of the Potable Water System.	Reduces threat of contamination to and/ or illness from the potable water supply.
		Provides for water conservation, flow reduction and use of reclaimed water.	Ensures that water is conserved during a drought.
		Maintains continuous operation and proper functioning of Sanitary Sewer System.	Reduces threat to people, structures, and property; reduces threat to infrastructure and ground water systems.
		Monitors effluent discharges.	Ensures compliance with water quality standards; reduces threat from hazardous materials.
		Provides and promotes the use of reclaimed water.	Reduces consumption of potable water; especially useful during a drought.
	Solid Waste / Resource Recovery	Responsible for maintaining solid waste disposal and recycling.	Responsible for initiating the Debris Clearance Plan in the aftermath of a disaster.

## Pinellas County Local Mitigation Strategy

Pinellas County Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Environment and Infrastructure - Utilities	Solid Waste / Resource Recovery Cont.	Manage operation of the County's waste to energy facility	Reduces requirements for landfill disposal, net improvement in AQ over landfill, generate electricity to support the community and provide system revenues
		Responsible for management of debris cleanup and debris monitoring contracts/services	Facilitates clearing roadways to allow access after a storm event and clearing / disposal of all related debris
		Provide free disposal of household chemical and electronic waste plus paid service for businesses	Reduce potential for pollutants being improperly disposed or dumped; reduce potential for fire/explosion in haul vehicles, the WTE Facility and the landfill
		Identify, inspect and educate hazardous waste generators for proper hazardous waste disposal	Reduce potential for pollutants being improperly disposed or dumped; reduce potential for fire/explosion in haul vehicles, the WTE Facility and the landfill
		Manage operation of the County landfill	Reduce potential for environmental impacts associated with illegal dumping or other improper disposal
		Operation water treatment plant treating site waters to provide supply to WTE Facility	Reduce potential for environmental impact associated with offsite discharge of site waters, reduce demand on reclaim water system to improve availability to other customers
		Promote proper waste management including recycling and waste reduction	Reduce volume of material to be disposed and reduce impact on natural resources through repurposing or recycling rather than using virgin materials
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 15: City of Pinellas Park Departmental Responsibilities**

Pinellas Park Department	Division/ Section/ Bureau	Tasks	Loss Reduction
City Clerk's Office		Maintains City records.	Reduces potential loss of critical data; increases ability to maintain/regain normal operations.
City Manager's Office		Responsible for all functions of the community.	Establishes and formalizes administrative policies and procedures of the City.
		Produces and distributes information to the public regarding preparedness.	Educates the public and increases awareness, thereby reducing threat.
Community Development	Building Development	Implements the Building Codes.	Reduces threats to people and structures; reduces potential loss.
		Implements the Floodplain Management Ordinance.	Reduces threats to people and structures; reduces potential loss.
		Implements Community Rating System (CRS)/ National Flood Insurance Program (NFIP) requirements.	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; reduces flood insurance costs.
		Acquires property for mitigation measures.	Reduces threat through acquisition; implementation tool for mitigation projects, such as retention ponds.
	Community Planning	Maintains Comprehensive Plan.	Establishes policies for development and redevelopment.
		Schedules the Capital Improvements Program.	Provides for timely scheduling and coordination of capital projects.
		Maintains the Disaster Response and Recovery Plan.	Ensures plan coordination with Pinellas County.
		Coordinates local activities relative to the CRS/NFIP.	Educates citizens on flood hazards and means of protection; reduces flood insurance premium costs.
		Performs outreach (through printed material) to employees, citizens and businesses on emergency preparedness.	Educates the public and increases awareness, thereby reducing threat.
		Performs outreach (through local TV, festivals and speakers) to employees, citizens and businesses on local threats (e.g., hurricanes, flooding, thunderstorms).	Educates the public and increases awareness, thereby reducing threat.
		Helps maintain, along with City Manager's Office, City Clerk's Office, and MIS, an Emergency Operations Center at City Hall.	Ensures readiness to respond quickly and appropriately.
	Zoning	Implements the Land Development Code.	Reduces threats to people and structures; reduces potential loss.

## Pinellas County Local Mitigation Strategy

Pinellas Park Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Finance Department	Accounting	Maintains financial records.	Ensures sufficient funds for recovery operations; provides quick return to operations after an event.
	Purchasing	Oversees all City purchases; implements direct purchase procedure in times of emergency.	Ensures purchases meet legal requirements; allows City to respond quickly to an event without a bid process.
	Utility Billing	Maintains utility account records.	Provides for a quicker return of operations after an event.
Responsible for distribution of hazard preparedness materials.		Educates the public and increases awareness, thereby reducing threat.	
Fire Department		Addresses daily emergency management activation.	Provides fire, HAZMAT and EMS service.
		Provides information and educational programs on hazards.	Educates citizens on hazards and how to prepare for them.
Government Relations		Provides information to residents, media, business leaders and other agencies at all levels of local, county, state and federal governments to assure accurate and timely release of requested information.	Educates the public and increases awareness, thereby reducing threat.
		Produces local TV shows on threats and disaster preparedness.	Educates the public and increases awareness, thereby reducing threat.
		Responsible for electronic messaging boards on Park Boulevard.	Educates the public and increases awareness, thereby reducing threat.
Human Resources	Risk Management	Assesses local hazards and liabilities; determines extent of exposure; maintains sufficient insurance coverage for the City.	Reduces exposure and costs to the City; allows the City to return to normal operations more quickly after an event.
Library and Recreation Services	Library	Maintains reference area of hazard data, including preparation and response information.	Educates citizens, thereby increasing awareness and reducing potential threat.
	Recreation	Maintains the City Employee Shelter.	Ensures readiness of local forces to respond quickly.
Management Information Services		Maintains electronic records.	Reduces potential loss of critical data; increases ability to maintain/regain normal operations.
		Maintains telephone and computer communications.	Ensures readiness of communications equipment between City buildings in the event of an emergency event; ensures quick recovery after an event.

## Pinellas County Local Mitigation Strategy

Pinellas Park Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Management Information Services - continued		Maintains emergency communications	Ensures that communications are available during emergency situations if regular communications are not available; allows for proper and coordinated responses during disasters.
Neighborhood Services	Community Compliance	Ensures that codes are followed for existing development.	Ensures that structures are properly maintained.
Office of Management and Budget		Develops annual budgets.	Provides for timely scheduling and coordination of capital projects.
Police Department		Addresses daily civil security and communication.	Provides for a secure, stable environment in which to live and work.
Public Works Department	Building Maintenance Division	Maintains operating condition of all emergency generators in City.	Ensures ability of City facilities to maintain operations.
		Maintains operating system of all shuttering systems in City.	Reduces threat to public structures.
	Drainage Maintenance Division	Inspects and maintains City's storm sewer system.	Reduces threat of flooding.
		Responds to and identifies sources of pollution.	Reduces threat of contamination.
	Engineering Services Division	Ensures that Floodplain Insurance Rate Maps (FIRM) and drainage atlas are available for inspection or reference.	Reduces loss through participation in NFIP; provides accurate data when developing properties.
		Monitors compliance with drainage requirements for municipal projects.	Ensures threat of flood risk does not increase.
	Fleet Maintenance Division	Maintains fire, police, and public works fleet readiness.	Ensures all fleet vehicles are in peak readiness to respond in emergency situations.
	Parks Division	Maintains parks and City-owned properties.	Reduces potential for flooding.
		Employees trained on hazardous materials.	Reduces potential for mishap; reduces costs of clean-up.
	Reclaimed Water Division	Provides and promotes the use of reclaimed water.	Reduces consumption of potable water; especially useful during a drought.
	Sewer Division	Maintains continuous operation and proper functioning of Sanitary Sewer System.	Reduces threat to people, structures, and property; reduces threat to infrastructure and ground water systems.
		Monitors effluent discharges.	Ensures compliance with water quality standards; reduces threat from hazardous materials.
Street Maintenance Division	Maintains all streets and alleys under City's jurisdiction	Ensures proper maintenance; reduces flood threat.	

## Pinellas County Local Mitigation Strategy

Pinellas Park Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Public Works Department - continued	Traffic Division	Maintains traffic control devices, signals, signs, and markings; maintains street lights.	Reduces manmade hazards by providing a structured environment for safe transportation and travel.
	Utilities Design Division	Designs infrastructure, including some stormwater management facilities.	Provides for proper retention and reduced flooding.
	Water Division	Maintains water reservoir structures and telemetry controlled pumping system.	Ensures sufficient water reserves and pressure are available to provide firefighting ability.
		Maintains bacteriological levels of the Potable Water System.	Reduces threat of contamination to and/ or illness from the potable water supply.
		Provides for water conservation, flow reduction and use of reclaimed water.	Ensures that water is conserved during a drought.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 16: Redington Beach Departmental Responsibilities**

Redington Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Mayor's Office	Mayor	Responsible for all administrative functions of the Town.	Establishes and formalizes administrative policies, procedures, and budgeting for the Town.
		Acts as a spokesperson for emergency preparedness and mitigation.	Disseminates vital information to the public and press.
Town Clerk's Office	Town Clerk's Office	Ensures the Flood Insurance Rate Maps are maintained and available for review.	Reduces loss through participation in the NFIP; provides accurate data when developing or redeveloping properties.
		Maintains the Town's Comprehensive Plan.	Reduces threats to people and structures; reduces potential loss.
		Maintains the Town's records.	Reduces the potential loss of the Town's Charter & Seal, municipal codes, contracts, and other vital records. This increases the Town's ability to maintain/regain normal operations.
		Prepares agenda and emergency legislative documents for Commission during emergency events	Reduces the time necessary to enact emergency legislation.
		Oversees all Town purchases	Ensures purchases meet legal requirements.
		Maintains financial records.	Coordinates with various departments to provide timely scheduling and budgeting of capital projects. Ensures sufficient funds for recovery operations; provides quick return to operations after an emergency event.
		Maintains the Town's Emergency Operations Plan (EOP).	Reduces threats to people and structures; reduces potential loss by providing a systematic means for preparing for, responding to, and recovering from emergency events.
		Answers phones and provides prepared messages to the community. If a phone bank is operated, the Deputy Clerk will train and manage the phone bank.	Maintains a conduit for the public to obtain information related to the Town.
Provides a printed and online newsletter with emergency management related information under the direction of the Town Clerk.	Provides public education and information focused on mitigation and preparation		

## Pinellas County Local Mitigation Strategy

Redington Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Town Clerk's Office	Town Clerk's Office	Acts as the Emergency Management Coordinator in obtaining resources as they become needed and available.	Ensures that resources needed by the Emergency Management Coordinator can respond to emergency events are obtained quickly and cost-effectively.
		Maintains contracts, agreements, and relationships with governmental agencies and private contractors to provide debris management services.	Speeds the process of clearing roadways to allow for emergency vehicles to operate and for the Town to return to its normal state as quickly as possible.
		Maintains contracts, agreements, and relationships with governmental agencies and private contractors to ensure compliance and the provision of services.	Ensure compliance with the requirements of FDOT, FDEP, EPA, DCA, ACE, etc. Ensures that the Town maintains overlapping service providers in case of competition for resources.
		Provides overall management to the Town's information technology function.	Maintains or reduces downtime of computers and information used to provide Town services and information during disasters, disaster recover, and normal operations.
		Protects electronic data	Gathers vital information and files for on- and off-site storage.
		Ensures the operation of all telephone and communications equipment.	Ensures readiness of communications equipment before, during, and after an emergency event.
		Implements and maintains compliance with the National Flood Insurance Program (NFIP).	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements.
		Provides Town employees with regular weather reports.	Improves knowledge of the environment in which staff and volunteers will be working.
		Evaluates Town Hall (including files, computers, equipment, and vehicles).	Ensures that vital records and resources are safely moved out of the affected area so that the Town may regain operations as quickly as possible.
		Provides information for the Town's printed and online newsletter with emergency management related information.	Provides public education and information focused on mitigation and preparation.

## Pinellas County Local Mitigation Strategy

Redington Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Mayor's Office	Mayor's Office	Attends EM Coordinators, DAC, and other emergency management related committee/workgroup meetings as the Town's primary representative.	Protects the Town's residents by participating in these emergency management related committees. Increases cooperation between the County and its municipal governments.
		Acts as a spokesman for emergency preparedness and mitigation	Disseminates vital information to the public and press to ensure public readiness and appropriate response to disaster events. Educates the public and increases awareness, thereby mitigating disaster-related issues with the Town's residents.
		Maintains the Town's Emergency Operation Plan (EOP)	Reduces threats to people and structures; reduces potential loss by providing a systematic means for preparing for, responding to, and recovering from emergency events.
		Acts as the Town's Emergency Manager	Is responsible for providing direction to all Town Employees, updating the Town Council, and providing information to the general public.
		Acts as an Emergency Management Coordinator in conjunction with the Fire Chief.	Assists in providing direction to all Town Employees to prepare for, respond to, and recover from all emergencies. Activates contracts as become necessary to address the Town's needs in an expedient way during an emergency event to reduce the losses of life, structures and infrastructure.
		Attends EM Coordinators and DAC Meetings.	Protects the Town's residents by participating in these emergency management related committees. Increases cooperation between the County and its municipal governments.
Public Works Department	Public Works	Provides overall management to the Town's public works department.	Provides management to the public works department; assuring the efficient and effective use of resources to meet the needs of the Town during emergency events.
		Maintain operating condition of all Town-owned generators for Town Hall and in the field.	Enables the Town to maintain operations and functions.
		Inspect and maintain the Town's municipal separate storm sewer system.	Reduces the threat of flooding.
		Participates in NPDES; responds to and identifies sources of pollution.	Reduces the threat of contamination.

# Pinellas County Local Mitigation Strategy

Redington Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Public Works Department - continued	Public Works - continued	Identify and respond to sources of pollution.	Reduces the potential for flooding and flood related damage.
		Maintains the parks and Town-owned properties and prepare for emergency situations.	Reduces the potential for flooding and flood related damage.
		Provide small scale roadway clearance. (if within our capabilities)	Speeds the process of clearing roadways to allow for emergency vehicles to operate and for the Town to return to its normal state as quickly as possible.
		Maintains all Town-owned streets within the Town's jurisdiction.	Reduces the threat to public structures.
		Maintains all street signs within the Town's jurisdiction.	Reduces manmade and natural hazards by providing a structured environment for safe transportation and travel.
		Provides sandbags to residents	Reduces potential flood damages.
		Maintains Public Work's fleet	Ensures all fleet vehicles are in peak readiness to respond to emergency situations.
Pinellas County Building Department	Outside Agency	Ensures that codes are followed for existing development.	Ensures that structures are properly maintained.
Seminole, Madeira Beach and Suncoast Fire Rescues	Outside Agency	Ensures that fire codes are followed for existing and new development.	Ensures that structures are meet life safety codes.
		Provides fire and rescue services.	Provides fire, rescue, HAZMAT Services. Reduces threat life, structures, and property.
		Provides information and education programs on hazards to residents and employees.	Educates citizens on hazards and how to prepare for them. Educates employees on hazards and how to respond to them.
		Provides special needs evacuations.	Protects the Town's residents by participating in these emergency management related committees. Increases cooperation between the County and its municipal governments.
		Assist with evacuations for natural and manmade hazards/disasters.	Provides assistance to the general public and those with special needs; protects against the loss of life.
Pinellas County Sheriff's Office	Outside Agency	Addresses daily civil security.	Provides for a secure, stable environment in which to live and work.
Pinellas County Building Department	Outside Agency	Implements the Town's building codes under a contractual relationship.	Reduces threats to people and structures; reducing potential losses.

## Pinellas County Local Mitigation Strategy

Redington Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Pinellas County Utilities	Outside Agency	Maintains water reservoir structures and telemetry controlled pumping system.	Ensures sufficient water reserves and pressure are available to provide firefighting ability.
		Maintains bacteriological levels of the potable water system.	Reduces threat of contamination to and/or illness from the potable water supply.
		Provides for water conservation, flow reduction and use of reclaimed water.	Ensures that water is conserved during a drought.
		Maintains traffic control devices and signals.	Reduces manmade and natural hazards by providing a structure environment for safe transportation and travel.
		Maintains continuous operations and proper functioning of the Sanitary Sewer System.	Reduces the threat to people, structures, and property; reduces threat to infrastructure and ground water systems; reduces threats of contamination and possible illness due to lift station downtime or failure.
		Maintains lift station with associated telemetry.	Ensures compliance with water quality standards; reduces threat from hazardous materials.
		Monitors effluent discharges	Ensures compliance with water quality standards; reduces threat from hazardous materials.
Progressive Waste Solutions	Outside Agency	Provide debris management services (if agreement is activated)	Provide debris management services during emergency recovery.
Duke Energy	Outside Agency	Maintains street lights.	Reduces manmade and natural hazards by providing a structure environment for safe transportation and travel
Duke Energy	Outside Agency	Respond to power outages, turn off power to the Town if appropriate, and clear downed power lines.	Ensures prompt recovery once an emergency event is over.
FDOT	Outside Agency	Provide debris management services (if agreement is activated)	Provide debris management services during emergency recovery.
END OF LIST			

## Pinellas County Local Mitigation Strategy

**Table 6- 17: Redington Shores Departmental Responsibilities**

Redington Shores Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Town Clerk's Office		Maintains Town records. Maintains electronic records. Archives records. Oversees all purchases. Updates our Public Television station. Performs outreach through printed material, informational and educational programs and other means to employees, citizens and businesses on emergency preparedness. Maintains the Disaster Response and Recovery Plan.	Reduces potential loss of critical data; increases ability to sustain operations during a disaster.
	Deputy Clerk	Maintains communications with residents. Assists the Town Clerk with maintaining Town records, archiving, public television and emergency communications.	Educates the public and increases awareness, thereby reducing threat.
Building Department	Building Development	Implements the Building Codes.	Reduces threats to people and structures; reduces potential loss. Works to mitigate and eliminate repetitive loss.
		Implements the Floodplain Management Ordinance.	Reduces threats to people and structures; reduces potential loss.
		Implements Community Rating System (CRS)/ National Flood Insurance Program (NFIP) requirements.	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; reduces flood insurance costs.
	Ensures that Floodplain Insurance Rate Maps (FIRM) and drainage atlas are available for inspection or reference. Assesses all hazards and risks.	Reduces loss through participation in NFIP; provides accurate data when developing properties.	
	Engineering Services	Manage infrastructure, including some storm water management facilities	Provides for proper retention and reduced flooding.

## Pinellas County Local Mitigation Strategy

Redington Shores Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Building Department - continued	Community Planning	Maintains Comprehensive Plan.	Establishes policies for development and redevelopment.
		Coordinates local activities relative to the CRS/NFIP.	Educates citizens on flood hazards and means of protection; reduces flood insurance premium costs.
		Helps maintain, along with Town Administrator's Office, Town Clerk's Office, and IT, an Emergency Operations Center.	Ensures readiness to respond quickly and appropriately.
	Zoning	Implements the Land Development Code.	Reduces threats to people and structures; reduces potential loss.
	Community Compliance	Ensures that codes are followed for existing development.	Ensures that structures are properly maintained.
Risk Management	Risk Management	Assesses local hazards and liabilities; determines extent of exposure; maintains sufficient insurance coverage for the Town.	Reduces exposure and costs to the Town; allows the Town to return to normal operations more quickly after an event.
Police Department	Contracted with Indian Shores Police Department	Addresses daily civil security and communication.	Provides for a secure, stable environment in which to live and work.
		Implements emergency response as part of Unified Command structure.	Reduces threat to public.
		Maintains emergency communications systems.	Ensures that communications are available during emergency situations if regular communications are not available; providing proper and coordinated responses during disasters.
	Fleet Maintenance	Maintains police works fleet readiness.	Ensures all fleet vehicles are in peak readiness to respond in emergency situations.
Public Works Department	Building Maintenance	Maintains operating condition of all emergency generators in Town.	Ensures ability of Town facilities to maintain operations.
		Maintains shuttering systems in Town.	Reduces threat to public structures.
	Drainage Maintenance	Inspects and maintains Town's storm sewer system.	Reduces threat of flooding.
		Identifies and responds to sources of pollution.	Reduces threat of contamination.
		Monitors compliance with drainage requirements for municipal projects.	Ensures threat of flood risk does not increase.

## Pinellas County Local Mitigation Strategy

Redington Shores Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Public Works Department - continued	Fleet Maintenance	Maintains public works fleet readiness.	Ensures all fleet vehicles are in peak readiness to respond in emergency situations.
	Parks Division	Maintains parks and Town owned properties.	Reduces potential for flooding.
		Employees trained on hazardous materials.	Reduces potential for mishap; reduces costs of clean-up.
		Monitors effluent discharges.	Ensures compliance with water quality standards; reduces threat from hazardous materials.
	Street Maintenance	Maintains all streets and alleys under Town's jurisdiction	Ensures proper maintenance; reduces flood threat.
	Traffic Division - Subcontracted to Pinellas County	Maintains traffic control devices, signals, signs, and markings; maintains street lights.	Reduces manmade hazards by providing a structured environment for safe transportation and travel.
	Reclaimed Water Division - Provided by Pinellas County Utilities	Provides and promotes the use of reclaimed water.	Reduces consumption of potable water; especially useful during a drought.
	Sewer Division	Maintains continuous operation and proper functioning of Sanitary Sewer System.	Reduces threat to people, structures, and property; reduces threat to infrastructure and ground water systems.
	Water Division - Provided by Pinellas County Utilities	Maintains water reservoir structures and telemetry controlled pumping system.	Ensures sufficient water reserves and pressure are available to provide firefighting ability.
		Maintains bacteriological levels of the Potable Water System.	Reduces threat of contamination to and/ or illness from the potable water supply.
Provides for water conservation, flow reduction and use of reclaimed water.		Ensures that water is conserved during a drought.	
Fire Department	Provided by Seminole Fire and Madeira Beach Fire	Fire protection and addresses daily emergency management activation.	Provides fire, HAZMAT service. Reduces threat to people, structures and property.
Emergency Services	Provided by Pinellas Suncoast Fire and rescue	Emergency rescue services and emergency evacuation assistance.	Provides EMS and evacuation services. Reduces threat to people.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 18: City of Safety Harbor Departmental Responsibilities**

Safety Harbor Department	Division/ Section/Bureau	Tasks	Loss Reduction
City Hall City Manager's Office  Mayor, Vice Mayor & Commissioners	Communications	<p>Declares an emergency by executive order or proclamation. Submits to commission.</p> <p>Approves emergency order.</p> <p>Provides information to the residents of Safety Harbor on the emergency situation</p>	<p>Starts the process to notify city departments and City residents of Safety Harbor to prepare for an emergency.</p> <p>Informs the public to be aware and on how to get prepared.</p>
City Clerk		Maintains City Records	Reduces potential loss of critical data; increases ability to maintain/regain normal operations.
Fire Services		Fire Chief, Emergency Management Operations direction, EMS Services	Directs and monitors emergency response for the City of Safety Harbor
Finance Department		Maintains financial records; Maintains utility account records.	Ensures sufficient funds for recovery operations; provides quick return to operations after an event.
	Information Services	Maintains city computer and telephone communication systems and all electronic records	Maintains all systems to reduce loss of critical data. Provides records support for City employees.
Community Development	Planning & Zoning	Maintains and enforces the Local Comprehensive Plan, Conservation and Coastal Management Element, CRS outreach programs & Land Development regulations.	Gets and enforces policies for development. Informs citizens on flood protection awareness.

## Pinellas County Local Mitigation Strategy

Safety Harbor Department	Division/Section/Bureau	Tasks	Loss Reduction
	Building Division	Enforces Florida building Codes, NFIP regulations, Land Development regulations	Ensures safe structures to protect citizens from wind and flood damage
	Engineering	Enforces transportation, traffic, utilities & storm water regulations	Maintains roads, sidewalks, storm water drainage projects, & maintenance.
Public Works		Oversees operations for water, wastewater, utilities, solid waste and Public Services.	Maintains all systems to ensure proper functions & safety of such for all citizens
Parks & Recreation Administration		To Maintain all city Parks, recreation areas and open space grounds.	Helps to reduce flooding through upgrading & maintaining parks and open space growth
Library		Maintains flood information maps and other reference material for Safety Harbor residents	Provides citizens with information to increase their awareness of flood & storm threats
Human Resources Risk Safety		Oversees all training programs for City employees. Manages risk safety policies.	Enlists education and safety courses for City employees. Maintains policies to keep employees aware of City requirements.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 19: City of Seminole Departmental Responsibilities**

Seminole Department	Division/ Section/ Bureau	Tasks	Loss Reduction
City Manager		Responsible for all functions of the community.	Establishes and formalizes administrative policies and procedures of the City; increases ability to maintain/regain normal operations.
City Clerk		Maintains City records.	Reduces potential loss of critical data; increases ability to maintain/regain normal operations.
Community Development	Building	Implements the Building Codes.	Reduces threats to people and structures; reduces potential loss; implements policies and procedures for rebuilding and redevelopment.
		Coordinates local building activities relative to the National Flood Insurance Program (NFIP).	Maintains consistency with NFIP requirements; reduces flood insurance costs.
		Ensures that codes are followed for existing development.	Ensures that structures are properly maintained.
	Planning/Zoning	Maintains Comprehensive Plan.	Establishes policies for development and redevelopment.
		Coordinates local land development relative to the NFIP.	Maintains consistency with NFIP requirements; reduces flood insurance costs.
		Implements the Land Development Code.	Reduces threats to people and structures; reduces potential loss; implements policies and procedures for rebuilding and redevelopment.
Administration	Finance	Maintains financial records.	Ensures sufficient funds for recovery operations; provides quick return to operations after an event.
		Oversees all City purchases; implements direct purchase procedure in times of emergency.	Ensures purchases meet legal requirements; allows City to respond quickly to an event.
		Contracts for quick removal of solid waste in the event of an emergency.	Bids and executes contracts according to FEMA requirements prior to an emergency.
		Provides Citywide risk management services by addressing local hazards and liabilities; determining extent of exposure; and maintaining sufficient insurance coverage for the City.	Reduces exposure and costs to the City; allows the City to return to normal operations more quickly after an event.
		Develops annual budgets in cooperation with the other Departments/Divisions.	Provides for timely scheduling and coordination of capital projects.
	Library	Maintains sources of information.	Provides a telephone bank and information assistance in an emergency.

## Pinellas County Local Mitigation Strategy

Seminole Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Administration - continued	Management Information Services	Maintains electronic records.	Reduces potential loss of critical data; increases ability to maintain/regain normal operations.
		Maintains telephone and computer communications.	Ensures readiness of communications equipment between City buildings in an emergency event; ensures quick recovery after an emergency.
	Recreation	Coordinates and manages park/recreation facilities and programs.	Provides a point of distribution for recovering public in the event of an emergency through cooperation with other agencies.
Fire Rescue	Administration	Coordinates and manages the Emergency Operations Center in cooperation with other City offices.	Reduces potential casualties and loss of property, and enhances recovery.
		Coordinates and manages all Fire Rescue components.	Reduces potential casualties and loss of property, and enhances recovery.
		Attends the Governor's Hurricane Conference along with other staff members.	Educates the fire/rescue personnel, thereby providing more expertise in responding to emergencies.
	Operations	Provides response to calls for assistance to medical problems, fires, hazardous materials incidents, technical rescue incidents and other mitigation efforts as requested.	Reduces potential casualties and loss of property.
		Participates in two county-wide response teams - the Technical Rescue Team and the Pinellas County Hazardous Materials Response Team.	Reduces potential casualties and loss of property.
	Live Safety Services	Maintains and monitors the City's Emergency Management Plan.	Reduces potential casualties and loss of property, and enhances recovery.
		Provides information and classes on fire prevention, disaster (hurricane) planning, and emergency preparedness.	Educates the public and increases awareness, thereby reducing potential loss of property and minimizing casualties.
		Responsible for fire investigations and inspections.	Potentially reduces further casualties and loss of property.
	Vehicle Maintenance	Ensures safe vehicles and equipment.	Ensures all fleet vehicles are in peak readiness when responding to emergency situations.
	Training	Develops programs and classes to maintain fire/rescue personnel expertise in fire service, mitigation of hazardous situations, and emergency medical services.	Educates the fire personnel, thereby providing more expertise in responding to emergencies.

## Pinellas County Local Mitigation Strategy

Seminole Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Public Works	Administration	Coordinates and manages all Public Works components.	Reduces potential casualties and loss of property, and enhances recovery.
		Coordinates and manages collection and removal of solid waste.	Maintains an environment free from hazards.
	Facilities	Ensures safe and clean building conditions.	Ensures ability of City to maintain operations in the event of an emergency and reduces threats to public structures.
Public Works	Transportation	Responsible for construction, maintenance and repair of City storm drains, as well as monitors the City's storm water system.	Reduces threat of flooding.
		Responsible for construction, maintenance and repair of City streets and sidewalks.	Provides for better access to sites in the event of an emergency.
		Provides safe and effective flow of traffic and safe and effective vehicular/pedestrian signs and signals.	Reduces manmade hazards by providing a structured environment for safe transportation and travel in the event of an emergency.
	Parks	Responsible for repair and maintenance of parks.	Provides additional personnel support within Public Works in the event of an emergency.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 20: City of South Pasadena Departmental Responsibilities**

South Pasadena Department	Division/ Section/ Bureau	Tasks	Loss Reduction
City Commission	Legislative	Mayor and four Commissioners govern the City, set public policies, and declare local states of emergency when appropriate.	System in place to quickly declare emergencies, governs the City while under state of emergency, and lift state of emergencies.
Administration/City Clerk	Legislative	Support to Commission and City Manager to draft and enact resolutions, proclamations, ordinances, declarations of state of local emergency, etc.	Assists in preparing legislation and declarations as necessary.
Administration/City Clerk's Office	Legislative	Maintains the City's Comprehensive Plan.	Reduces threats to people and structures; reduces potential loss.
Administration/City Clerk's Office	Records Management & Retention	Coordinates preservation of vital records.	Ensures retention of critical records; Allows the City to return to normal operations more quickly after an event, reducing costs.
Administration/City Clerk's Office	Public Access	Schedules and airs programming on the City's government access channel (Bright House channel 615).	Provides the community with public education and emergency information. Educates the public and increases awareness, thereby reducing vulnerability and risk from disasters.
Administration/City Clerk's Office	Public Access	Develops and maintains City's Web Page with information and links to preparedness and mitigation information, including special needs registration.	Provides the community with public education and emergency information. Educates the public and increases awareness, thereby reducing vulnerability and risk from disasters.
Administration/City Clerk's Office	Contract Administration	Coordinates with other departments to maintain contracts, agreements, and relationships with private contractors and other governmental agencies to ensure compliance and the provision of services.	Ensure compliance with the requirements of various agencies and regulations. Ensures that the City maintains overlapping service providers in case of competition for resources.
Public Safety Department	Emergency Management	Provide emergency management planning and coordination and training including public education and coordinate all activities within the EOC. Helps coordinate other city dept. /divisions preparation planning.	Reduces the effects of a disaster through preparedness, response within the EOC. Reviews the city in general through testing and evaluation of the Emergency Action plan. Also reviews the city for any area of protection that may be identified prior to a disaster helping with damage and possible loss to city infrastructure.
Public Safety Department	Emergency Management	Assesses local hazards and determines extent of exposure; develops and maintains mitigation and response strategies.	Enables reduced exposure to hazards and streamlines response; Allows the City to return to normal operations more quickly after an event.

## Pinellas County Local Mitigation Strategy

South Pasadena Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Public Safety Department	Emergency Management	Public Safety Director functions as the City's Emergency Manager, and as Commander-in-Chief during declared emergencies. Develops and maintains city Emergency Action Guide under the aegis of County Comprehensive Emergency Plan (CEMP).	Disseminates hazard identification, mitigation & response information to all city depts.; Integrates city plans with County and State requirements and guidelines; Reduces potential loss by providing a systematic means for preparing for, responding to, and recovering from emergency events.
Public Safety Department	Emergency Management	Director or designee attends County Emergency Management meetings and Response Operations Committee (ROC) meetings.	Protects the City's residents by participating in emergency management related committees. Enhances cooperation between the County and City government.
Public Safety Department	Emergency Management	Director or designee attends County Local Mitigation Strategy (LMS) Working Group meetings with CID Director.	Coordinates mitigation policies, goals & objectives with County, other municipalities, and other stakeholders. Establishes mechanism for policy review and approval.
Public Safety Department	Fire Rescue	Provides fire and rescue services. Public Safety Director is the Fire Chief, and is known primarily by that title rather than Public Safety Director or Emergency Manager.	Provides fire, rescue, and EMS Services. Reduces threat to life, health, structures, and property.
Public Safety Department	Fire Rescue	Provides special needs evacuations in conjunction with County, School Board, and PSTA.	Provides assistance to the general public and those with special needs in evacuations; protects against the loss of life.
Public Safety Department	Fire Rescue	Assist in staffing evacuation shelters with medical personnel and supplies.	Provides continuous EMS care and response to evacuees in shelters.
Public Safety Department	Fire Rescue	Establishes fire and live safety codes and code enforcement, hazardous materials and public education.	Performance of building inspections and damage assessments to help mitigate the hazard impact. Provides public education for mitigation initiatives.
Public Safety Department	Fire Rescue Fleet Maintenance	Maintains City's Public Works fleet, ensuring all public works vehicles are ready and capable to respond to emergency and urgent situations.	Enables rapid response of all fire and EMS emergency apparatus, protecting lives and property and enhancing public health and safety.
Public Safety Department	Liaison	Provides liaison with Pinellas County Sheriff's Office, which functions as City's law enforcement agency.	Liaise with agency responsible for police functions in City, including assistance with traffic flow during evacuation and property security immediately following a disaster, as well as routine safety and security for citizens.
Public Safety Department	Liaison	Provides liaison with FDOT and Pinellas County Transportation / Storm Water Division.	Liaise with agencies responsible for maintaining emergency evacuation routes through City (Pasadena Ave. is FDOT road, Gulfport Blvd. is County road) and associated traffic signals.

## Pinellas County Local Mitigation Strategy

South Pasadena Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Public Safety Department	Contract Administration	Coordinates with Administration / City Clerk's Office to maintain contracts, agreements, and relationships with private contractors and other governmental agencies to ensure compliance and the provision of services, relating to EMS First Response, law enforcement and traffic signal maintenance.	Ensures maintenance of these services and infrastructures that enhance public safety and well-being, such as evacuation route maintenance and traffic flow, law enforcement services, etc.
Pinellas County Sheriff's Office	Outside Agency providing law enforcement services to City	Provides assistance with evacuation; Provides traffic control along designated evacuation routes. Secures evacuated areas by establishing a perimeter and allowing access only to designated persons. Patrols the city for vandalism after evacuation and during re-entry.	Enhances smooth and safe evacuation operations reducing likelihood of injury or death to citizens. Reduces additional loss to both citizens and the City during post-disaster and recovery.
Pinellas County 911 / Computer Aided Dispatch (CAD) System	Outside Agency providing fire & EMS dispatch services to City	Cooperates with County CAD/911 system for efficient and timely response to emergencies by the Fire Department.	Enhances Fire department's capability to protect life and property by ensuring timely and appropriate response to calls for emergency assistance.
Pinellas County Transportation / Storm Water Division	Outside Agency providing road and traffic signal maintenance.	Maintains traffic signals throughout the City, and maintains Gulfport Blvd.	Ensures proper functioning of evacuation routes preceding hurricane or similar pre-warning-type disaster.
Florida Department of Transportation	Outside Agency providing road maintenance for Pasadena Avenue.	Maintains Pasadena Avenue; provides debris management services in coordination with City Public Works Dept.	Ensures proper functioning of evacuation routes preceding hurricane or similar pre-warning-type disaster; and road clearing for post-disaster access for citizens, utility crews, fire & EMS response, law enforcement response, etc.
Duke Energy	Outside Agency	Provides electricity and related maintenance & repair services, including maintenance of street lights.	Reduces manmade and natural hazards by providing safer transportation along roads and energy to structures for operation and post-disaster repairs, enhancing recovery and reducing threats to life and property.
Pinellas County Utilities - Reclaimed Water Division	Outside Agency	Provides reclaimed water for gardening and lawn maintenance, and additional fire hydrants. Maintains reclaimed water system.	Reduces consumption of potable water; especially useful during a drought. Provides additional water for fire suppression enhancing the fire department's capability to protect life and property.

## Pinellas County Local Mitigation Strategy

South Pasadena Department	Division/ Section/ Bureau	Tasks	Loss Reduction
City of St. Petersburg Water Department	Outside Agency	Provides and maintains distribution system of potable water for human consumption and use, which is necessary for both life and health, and provides sufficient water reserves and pressure for fire suppression. Maintains bacteriological levels of the Potable Water System.	Enhances fire department's capability to protect life and property. Provides water for cleaning and for waste removal, enhancing public health and reducing threat of disease. Identifies potential mitigation needs relative to water distribution system.
City of St. Petersburg Sewer Department	Outside Agency	Maintains continuous operation and proper functioning of Sanitary Sewer System, in coordination with City Public Works Department.	Reduces threat of illness from buildup of human waste. Protects ground water from contamination. Identifies potential mitigation needs relative to sanitary sewer system.
Public Works	Sewage	Maintains continuous operation and proper functioning of Sanitary Sewer System, in coordination with St. Petersburg Sewer Department. Inspect and maintain the city's municipal storm sewer system.	Reduces threat of illness from buildup of human waste. Protects ground water from contamination. Identifies potential mitigation needs relative to sanitary sewer system.
Public Works	Water	Works to identify and control disruptions to potable water supply in coordination with St. Petersburg Water Department.	Assists in maintenance of potable water distribution system, minimizing disruption and loss, enhancing life and health pre- and post-disaster. Identifies potential mitigation needs relative to water distribution system.
Public Works	Land Development and Littoral Zone	Participates in NPDES, including training and public education. Responds to sources of pollution, particularly relating to public property, parks, and submerged lands and waterways. Responds to and identifies sources of pollution. Inspects, maintains and repairs City storm sewer system.	Reduces the threat of contamination. Identifies potential mitigation needs relative to public land and the littoral zone.
Public Works	Roads & Transportation	Maintains all streets and street signs within the City's jurisdiction. Provides small-scale roadway clearance and debris removal. Coordinates and assists with large-scale roadway clearance and debris removal with FDOT, Pinellas Transportation Division, Duke Energy, etc.	Ensures access to evacuation routes preceding hurricane or similar pre-warning-type disaster, and re-entry access to occupancies during post-disaster and recovery. Identifies potential mitigation needs relative to public roadway access and travel.
Public Works	Fleet Maintenance	Maintains City's Public Works fleet, ensuring all public works vehicles are ready and capable to respond to emergency and urgent situations.	Enables maintenance and repair of all infrastructure relative to City roadway maintenance and debris clearance, potable water distribution and sanitary and storm sewer operation, including lift stations, enhancing public health and safety.

## Pinellas County Local Mitigation Strategy

South Pasadena Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Public Works	Contract Administration	Coordinates with Administration / City Clerk's Office to maintain contracts, agreements, and relationships with private contractors and other governmental agencies to ensure compliance and the provision of services, relating to garbage collection and recycling, debris management and removal, large tree maintenance, roadway paving and maintenance, etc.	Ensure compliance with the requirements of FDOT, FDEP, EPA, DCA, ACE, NPDES, etc. Ensures that the City maintains overlapping service providers in case of competition for resources.
Community Improvements Department	Building Permits and Inspection	Implements the Building Codes and City Ordinances.	To follow the established rules and regulations for the construction, alteration, removal, demolition, equipment, use, occupancy, location and maintenance of building structures, the provision of this chapter shall govern the administration and enforcement of the Florida Building Code. This code hereby declared to be remedial and shall be construed to be the minimum standards necessary to secure the beneficial interests and purposes thereof, which are public safety, health and general welfare through structural strength, stability, sanitation, adequate light and ventilation, and safety to life and property from fire and other hazards attributed to the built environment, including alteration, repair, removal, demolition, use and occupancy of buildings and structures, per City Code section 83-32
Community Improvements Department	CITY PLANNER /C.I.D. DIRECTOR	To establish a precise and detailed plan for the use of land in the City of South Pasadena based on the Comprehensive Plan	To preserve land resources and to mandate appropriate land use by designating zoning districts in accordance with the principles of City planning and to assure that adequate consideration is given to the impact of land use on the availability of land, water and other natural resources. To create a climate for investment and to protect the character, stability and property values. To prevent overcrowding and congestion by providing appropriate density and spatial standards for new development. To provide safe and convenient traffic circulation and parking. To provide protection against fire, explosion, noxious fumes and other hazards where the potential for hazards conditions exist. To preserve and improve the ecological environment of the City.

## Pinellas County Local Mitigation Strategy

South Pasadena Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Community Improvements Department	Community Rating System (CRS) / Floodplain Management	Ensures the Flood Insurance Rate Maps are maintained and available for review.	Reduces loss through participation in the NFIP; provides accurate data when developing or redeveloping properties and follow the City Code section 108-3. The purpose of this chapter Floodplain Management, are to regulate the flood load and flood-resistant construction requirements of the Florida Building Code and to establish minimum requirements to safeguard the public health, safety, and general and to minimize public and private losses due to flooding through regulation of development in flood hazard areas.
Community Improvements Department	Community Rating System (CRS) / Floodplain Management	Director represents City to LMS Working Group, ISO, and other agencies relative to maintaining and potentially improving City's CRS rating.	Enhances pre-disaster mitigation efforts and economic well-being of the community in general. Ensures accurate representation for insurance purposes of City property owners, thus enhancing post-disaster recovery.
Community Improvements Department	Community Rating System (CRS) / Floodplain Management	Implements and maintains compliance with the National Flood Insurance Program (NFIP).	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements.
Community Improvements Department	Community Rating System (CRS) / Floodplain Management	Maintains records of repetitive loss properties as required by FEMA.	Enhances mitigation efforts and identifies mitigation needs.
Community Improvements Department	Community Rating System (CRS) / Floodplain Management	Coordinates local activities relative to the CRS/NFIP.	Educates citizens on flood hazards and means of protection; reduces flood insurance premium costs.
Community Improvements Department	Land Use / Land Management	Ensures compliance with City's land use plan.	Prevents inadequate pre-disaster land use or non-compliance with various CRS and Floodplain Management issues.
Community Improvements Department	Code Enforcement	Ensures that codes are followed for existing development. Ensures that structures and other property are properly maintained.	Enhances disaster readiness and mitigation efforts; prevents inadequate construction and maintenance that would increase post-disaster recovery costs and/or repetitive loss properties.
Finance Department	Administrative Record Keeping	Maintains City financial records.	Coordinates with City departments to provide timely scheduling and budgeting of capital projects. Ensures sufficient funds for recovery operations; provides quick return to operations after an emergency event.

## Pinellas County Local Mitigation Strategy

South Pasadena Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Finance Department	Administrative Record Keeping	Maintains disaster financial records as required by FEMA etc.	Ensures reimbursement for disaster expenses in presidentially declared disasters, protecting the City's financial viability and thus protecting the citizens' property and economic well-being.
Finance Department	Emergency Fund	Maintains adequate liquid cash assets available on very short notice.	Ensures sufficient funds for pre-disaster operation, including all expenses necessary to maintain City EOC operations and immediate post-disaster response and recovery operations prior to restoration of financial and banking services in the community.
Finance Department	Financial Management	Oversees all City purchases.	Ensures purchases meet legal requirements, protecting the economic well-being of the community.
Finance Department	Financial Management	Ensures adequate reserve of funds for continued operation of City departments and functions during recovery until normalcy can be restored.	Enhances economic well-being of community. Ensures continuity of operations for restoration and maintenance of infrastructure and City services that promote/enhance health and safety such as fire & EMS, sanitary sewers, potable water, etc.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 21: City of St. Petersburg Departmental Responsibilities**

St. Petersburg Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Marketing and Communications	Marketing and Communications	Produces and distributes information to the public regarding preparedness.	Educates the public and increases awareness, thereby reducing threat.
Development Services	Construction Services and Permitting	Implements the Building Codes.	Reduces threats to people and structures; reduces potential loss.
		Implements the Floodplain Management Ordinance.	Reduces threats to people and structures; reduces potential loss.
		Implements Community Rating System (CRS)/ National Flood Insurance Program (NFIP) requirements.	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; reduces flood insurance costs.
	Planning Programs	Maintains Comprehensive Plan.	Establishes policies for development and redevelopment.
		Coordinates local activities relative to the CRS/NFIP.	Educates citizens on flood hazards and means of protection; reduces flood insurance premium costs.
		Performs outreach to employees, citizens and businesses on local threats (e.g., hurricanes, flooding, thunderstorms).	Educates the public and increases awareness, thereby reducing threat.
	Development Review Services	Implements the Land Development Code.	Reduces threats to people and structures; reduces potential loss.
Billing and Collections	Utility Billing	Responsible for distribution of hazard preparedness materials.	Educates the public and increases awareness, thereby reducing threat.
Human Resources	Risk Management	Assesses local hazards and liabilities; determines extent of exposure; maintains sufficient insurance coverage for the City.	Reduces exposure and costs to the City; allows the City to return to normal operations more quickly after an event.
Library Department	Library Department	Maintains reference area of hazard data, including preparation and response information.	Educates citizens, thereby increasing awareness and reducing potential threat.
Budget and Management		Develops annual budgets.	Provides for timely scheduling and coordination of capital projects.
Stormwater, Pavement and Traffic Operations	Stormwater Division	Inspects and maintains City's storm sewer system.	Reduces threat of flooding.
	Pavement Division	Maintains all streets and alleys under City's jurisdiction	Ensures proper maintenance; reduces flood threat.

## Pinellas County Local Mitigation Strategy

St. Petersburg Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Engineering and Capital Improvements Department	Engineering	Ensures that drainage atlas maps are available for inspection or reference.	Provides accurate data when developing properties.
		Monitors compliance with drainage requirements for municipal projects.	Ensures threat of flood risk does not increase.
Parks Department	Parks Department	Maintains parks and City-owned properties.	Reduces potential for flooding.
Water Resources Department		Provides maintenance of potable water systems.	Ensures potable water after hazard event.
Fire Department	Emergency Management	Develops and Implements disaster preparedness public education program	Increases individuals, households and special needs constituencies
		Conducts training and emergency management skill development for City employees.	Improved disaster management skills mean (1) more efficient response; (2) better use of resources, and, (3) expedited return to normalcy
		Partners with City Business Assistance Center to aid businesses, particularly minority-owned, small businesses in continuity plans and disaster management strategies.	Improved disaster resiliency of small business community mitigates impact of disaster redevelopment.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 22: St. Pete Beach Departmental Responsibilities**

St. Pete Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
City Commission	Legislative	Mayor and four Commissioners govern the City, set public policies, declare local state of emergencies.	System in place to quickly declare emergencies, govern the City while under state of emergency, lift state of emergencies.
Administration/City Manager's Office	Executive Director of Emergency Management (SPBEOC)	Director of all emergency operations.	Improved disaster management skills mean (1) more efficient response; (2) better use of resources, and, (3) expedited return to normalcy
City Clerk	Director part of SPBEOC	Coordinate removal of vital records to designated safe location; support to Commission and City Manager to draft and enact resolutions, proclamations, ordinances, declarations of state of local emergency, etc.	Assists in preparing City Commission legislation and declarations as necessary; ensures retention of critical records; reduces exposure and costs to the City; allows the City to return to normal operations more quickly after an event.
Finance Department	Administration	Develops annual budget.	Provides for timely scheduling and coordination of capital projects.
Recreation Department		Arrange for food/supplies at SPBEOC; provide buses/drivers to assist evacuation of citizens; set up post-disaster Recovery Center.	Supports SPBEOC operations; assists in reduction of threats to people; improved disaster resiliency; assist in return to normalcy post-disaster.
Information Technology Department	Information Technology/Public Information Officer	Computer, video, telephone, and website operations.	Educates the public and increases awareness, thereby reducing threat; improved disaster resiliency.
Police Department	Pinellas County Sherriff's Office	Law enforcement, traffic/crowd control; restrict access/secure disaster areas; assist in evacuation; assist in search and rescue; coordinate re-entry.	Provides for public safety, reduces threats to people and structures, reduces potential loss; provides for orderly flow of people out of and onto the island during a hazard event.
Community Development	Building	Provides site inspection services	Reduces threats to people and structures; reduces potential loss.
		Implements the Floodplain Management Ordinance.	Reduces threats to people and structures; reduces potential loss.

## Pinellas County Local Mitigation Strategy

St. Pete Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Community Development	Building	Provides expeditious building plan review in accordance with relevant Federal, State and City construction standards and building codes.	Reduces threats to people and structures; reduces potential loss.
		Implements Community Rating System (CRS)/ National Flood Insurance Program (NFIP) requirements.	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; reduces flood insurance costs.
	Planning	Maintains Comprehensive Plan.	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; reduces flood insurance costs.
		Implements the Land Development Code.	Establishes policies for development and redevelopment.
		Administers the Historic Preservation Program	Establishes policies for development and redevelopment.
		Providing for inter-governmental coordination through the development of strategies that improve communication between federal agencies, state agencies, municipal agencies, businesses organizations, and citizens.	Improved disaster resiliency; expedited return to normalcy.
		Performs outreach to employees, citizens and businesses on local threats (e.g., hurricanes, flooding, thunderstorms).	Improved disaster resiliency; expedited return to normalcy.
		Enforces the Code of Ordinances and Land Development Code.	Educates the public and increases awareness, thereby reducing threat.
	Code Enforcement	Maintains documentation on all persons and volunteers committed to the Emergency.	Reduces threats to people and structures; reduces potential loss.
Human Resources Department	City Manager's Office/Administration	Maintains sufficient insurance coverage for the City.	Reduces exposure and costs to the City; allows the City to return to normal operations more quickly after an event.
		Maintains reference area of hazard data, including preparation and response information.	Reduces exposure and costs to the City; allows the City to return to normal operations more quickly after an event.
Library	General public information.	Inspects and maintains City's storm sewer system.	Educates citizens, thereby increasing awareness and reducing potential threat.
Public Works		Monitors compliance with drainage requirements for municipal projects.	Provides accurate data when developing properties.

## Pinellas County Local Mitigation Strategy

St. Pete Beach Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Public Works		Maintains all streets and alleys under City's jurisdiction	Ensures threat of flood risk does not increase.
		Coordinates with Pinellas County to ensure potable water systems.	Ensures proper maintenance; reduces flood threat.
		Coordinates with City of St. Petersburg to ensure sanitary sewer systems.	Ensures potable water after hazard event.
		Assists in island-wide evacuation.	Ensures sanitary sewer systems availability after hazard event.
		Responsible for the clearance of debris and its removal.	Assists in ensuring that all citizens are evacuated from the barrier island before an event.
		Develops and implements disaster preparedness public education program	The removal of sand and debris opens roadways and enables emergency repairs by utilities and finally the re- opening of the barrier island to its citizens.
Fire Department	Emergency Management	Lead agency for emergency management.	Increases individuals, households and special needs constituencies
		Conducts training and emergency management skill	Coordinates all SPBEOC and emergency management activities.
		Lead agency for search and rescue, hazard materials, EOC operations, mutual aid.	Improved disaster management skills mean (1) more efficient response; (2) better use of resources, and, (3) expedited return to normalcy
		Partners with City Business Assistance Center to aid businesses, particularly minority-owned, small businesses in continuity plans and disaster management	Improved disaster management skills mean (1) more efficient response; (2) better use of resources, and, (3) expedited return to normalcy
		Partners with City Business Assistance Center to aid businesses, particularly minority-owned, small businesses in continuity plans and disaster management strategies.	Improved disaster resiliency of small business community mitigates impact of disaster redevelopment.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 23: City of Tarpon Springs Departmental Responsibilities**

Tarpon Springs Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Mayor, City Commissioners		The elected governing body providing overall direction and authority of emergency management situations.	Authority to declare Local State of Emergency. BCC is the policy group in the Emergency Operations Center (EOC)
Emergency Management Director (Fire Rescue)		Activate and conduct operations of the EOC, represent City at Pinellas County DAC	Reduces the effects of natural hazards through preparedness. Promote mitigation plans and initiatives
Building/Development Review Services	Building Division	Implements the Building Codes.	Reduces threats to people and structures; reduces potential loss; performs damage assessments, and implements policies and procedures for rebuilding and redevelopment.
	Development Review Services	Implements the Land Development Code.	Reduces threats to people and structures; reduces potential loss; performs damage assessments, and implements policies and procedures for rebuilding and redevelopment.
Communications - Management Information		Performs outreach (through printed material) to employees, citizens and businesses on emergency preparedness.	Educates the public and increases awareness, thereby reducing potential loss of property and minimizes casualties.
		Produces and distributes information to the public regarding preparedness.	Educates the public and increases awareness, thereby reducing potential loss of property and minimizes casualties.
		Performs outreach (through Local TV Channel 615, AM 1610 radio, speaker's bureau to employees, citizens and businesses on local threats (e.g., hurricanes, flooding, thunderstorms).	Educates the public and increases awareness, thereby reducing potential loss of property and minimizes casualties.
		As the Public Information Officer (PIO) in the EOC, distributes information regarding emergency warnings and situations to local media.	Educates the public and increases awareness, thereby reducing potential loss of property and minimizes casualties.
Building Maintenance		Maintains parks and City-owned properties.	Open spaces maintains natural drainage to alleviate potential flooding. Personnel are responsible for operating "Points of Distribution" for providing water and other necessities for recovering public.

## Pinellas County Local Mitigation Strategy

Tarpon Springs Department	Division/ Section/ Bureau	Tasks	Loss Reduction
		Works with business community to improve economic environment to attract new businesses and retain existing businesses.	Works with business community in developing "Continuity of Operations Plans" ("COOP) and with emergency preparations and recovery. Man's ESF 18 in Emergency Operations Center.
		Works with tourism industry in promoting Pinellas County	Works with tourism and hospitality industry in developing COOPs, and disseminates information to potential visitors and tourists about status of tourist accommodations.
EMS/Fire Administration		First responders in fire and medical emergencies.	Reduces potential casualties and loss of property.
Emergency Management		Develops and monitors City disaster preparedness and recovery plans	Reduces potential casualties and loss of property, and enhances recovery.
		Operates the City's Emergency Operations Center	Reduces potential casualties and loss of property, and enhances recovery.
		Coordinates and manages citywide responses to natural and man-made disasters.	Reduces potential casualties and loss of property, and enhances recovery.
		Coordination point for federal disaster relief programs	Reduces potential casualties and loss of property, and enhances recovery.
		Develops and delivers public information and education programs about disaster preparedness.	Reduces potential casualties and loss of property, and enhances recovery.
Environmental Management/ Engineering		Responds to and identifies sources of pollution.	Reduces threat of contamination.
Fleet		Maintains fleet readiness for City departments; stockpiles fuel.	Ensures all fleet vehicles are in peak readiness to respond in emergency situations.
		Maintains operating condition of all emergency generators in City.	Ensures ability of County facilities to maintain operations.
Planning		Maintains Comprehensive Plan.	Establishes policies for development and redevelopment.
			Educates citizens on flood hazards and means of protection; reduces flood insurance premium costs.
		Maintains the Department COOP.	Ensures plan coordination and department recovery after a disaster.

## Pinellas County Local Mitigation Strategy

Tarpon Springs Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Planning - continued		Coordinates Logistics Group	Contributes staff to Logistics Group to coordinate procurement and distribution of resources to the public and other entities.
	Zoning	Implements Land Development Codes governing development and redevelopment.	Reduces threats to people and structures; reduces potential loss; performs damage assessments, and implements policies and procedures for rebuilding and redevelopment.
Public Works	Engineering: Surface Water	Inspects and maintains City's storm sewer system.	Reduces threat of flooding.
		Ensures that Floodplain Insurance Rate Maps (FIRM) and drainage atlas are available for inspection or reference.	Reduces loss through participation in NFIP; provides accurate data when developing properties.
		Monitors compliance with drainage requirements for municipal projects.	Ensures threat of flood risk does not increase.
		Designs infrastructure, including some stormwater management facilities.	Provides for proper retention and reduced flooding.
		Implements Community Rating System (CRS)/ National Flood Insurance Program (NFIP) requirements.	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; reduces flood insurance costs.
		Acquires property for mitigation measures.	Reduces threat through acquisition; implementation tool for mitigation projects, such as retention ponds.
		Implements the Floodplain Management Ordinance.	Reduces threats to people and structures; reduces potential loss.
	Engineering: Traffic	Maintains traffic control devices, signals, signs, and markings; maintains street lights.	Reduces manmade hazards by providing a structured environment for safe transportation and travel.
Highway	Maintains all streets and rights-of-ways under City's jurisdiction	Ensures proper maintenance; reduces flood threat; responsible of debris clearing	
Purchasing		Responsible for procurement of goods and services for City	Contributes staff to Logistics Group; responsible for procurement of goods and services for distribution in emergency recovery. Maintains master listing of vendors that helps reduce delay of obtaining goods and services.
	Facility Operations	Maintains operating system of all systems in County structures.	Reduces threat to public structures, and maintains function of buildings..
	Lease Management	Responsible for leasing property and space for County functions.	Contributes staff to Logistics for any leasing arrangements that need to be made to enhance recovery from a disaster.

## Pinellas County Local Mitigation Strategy

Tarpon Springs Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Purchasing - continued	Real Property	Responsible for purchase negotiations for property for County functions.	Contributes staff to Logistics for any property purchasing arrangements that need to be made to enhance recovery from a disaster.
Risk Management		Assesses local hazards and liabilities; determines extent of exposure; maintains sufficient insurance coverage for the City.	Reduces exposure and costs to the City; allows the City to return to normal operations more quickly after an event.
Police Department		Addresses daily civil security and communication.	Provides for a secure, stable environment in which to live and work.
Utilities Department		Maintains bacteriological levels of the Potable Water System.	Reduces threat of contamination to and/ or illness from the potable water supply.
		Provides for water conservation, flow reduction and use of reclaimed water.	Ensures that water is conserved during a drought.
	Sewer Division	Maintains continuous operation and proper functioning of Sanitary Sewer System.	Reduces threat to people, structures, and property; reduces threat to infrastructure and ground water systems.
		Monitors effluent discharges.	Ensures compliance with water quality standards; reduces threat from hazardous materials.
	Reclaimed Water Division	Provides and promotes the use of reclaimed water.	Reduces consumption of potable water; especially useful during a drought.
	Solid Waste/Resource Recovery	Responsible for maintain solid waste disposal and recycling.	Responsible for initiating the Debris Clearance Plan in the aftermath of a disaster.
<b>END OF LIST</b>			

## Pinellas County Local Mitigation Strategy

**Table 6- 24: City of Treasure Island Departmental Responsibilities**

Treasure Island Department	Division/ Section/ Bureau	Tasks	Loss Reduction
City Commission	Legislative	Mayor and four Commissioners govern the City, set public policies, and declare local state of emergencies.	System in place to quickly declare emergencies, govern the City while under state of emergency, lift state of emergencies.
Administration/City Manager's Office	Executive Director of Emergency Management (TIEOC)	Commander-In-Chief of all emergency operations.	Improved disaster management skills mean (1) more efficient response; (2) better use of resources, and, (3) expedited return to normalcy
City Clerk	Director part of TIEOC	Coordinate removal of vital records to designated safe location; support to Commission and City Manager to draft and enact resolutions, proclamations, ordinances, declarations of state of local emergency, etc.	Assists in preparing City Commission legislation and declarations as necessary; ensures retention of critical records; reduces exposure and costs to the City; allows the City to return to normal operations more quickly after an event.
Personnel Department	Director part of TIEOC	Assesses local hazards and liabilities; determines extent of exposure; maintains sufficient insurance coverage for the City; TIEOC support.	Reduces exposure and costs to the City; allows the City to return to normal operations more quickly after an event.
Finance Department	Director part of TIEOC	Develops annual budget.	Provides for timely scheduling and coordination of capital projects.
Recreation Department	Director part of TIEOC	Arrange for food/supplies at TIEOC; provide buses/drivers to assist evacuation of citizens; set up post-disaster Recovery Center.	Supports TIEOC operations; assists in reduction of threats to people; improved disaster resiliency; assist in return to normalcy post-disaster.
Information Technology Department	Information Technology/Public Information Officer	Computer operations especially for TIEOC; set up "Emergency Action Home Page;" coordinate with news media; recovery information.	Educates the public and increases awareness, thereby reducing threat; improved disaster resiliency.
Police Department	Chief part of TIEOC	Law enforcement, traffic/crowd control; restrict access/secure disaster areas; assist in evacuation; assist in search and rescue; coordinate re-entry.	Provides for public safety, reduces threats to people and structures, reduces potential loss; provides for orderly flow of people out of and onto the island during a hazard event.
Community Improvement Department	Building -- Director part of TIEOC/Damage Assessment/Building Permits	Implements the Building Codes.	Reduces threats to people and structures; reduces potential loss.
		Implements the Floodplain Management Ordinance.	Reduces threats to people and structures; reduces potential loss.
		Implements Community Rating System (CRS)/ National Flood Insurance Program (NFIP) requirements.	Reduces threat to people, structures, and property; maintains consistency with NFIP requirements; reduces flood insurance costs.
		Maintains Comprehensive Plan.	Establishes policies for development and redevelopment.

# Pinellas County Local Mitigation Strategy

Treasure Island Department	Division/Section/Bureau	Tasks	Loss Reduction
Community Improvement Department - continued	Planning -- Director part of TIEOC/Assist in Damage Assessment; Post Disaster Redevelopment	Coordinates local activities relative to the CRS/NFIP.	Educates citizens on flood hazards and means of protection; reduces flood insurance premium costs.
		Implements the Land Development Code.	Improved disaster resiliency; expedited return to normalcy.
		Performs outreach to employees, citizens and businesses on local threats (e.g., hurricanes, flooding, thunderstorms).	Educates the public and increases awareness, thereby reducing threat.
	Code Enforcement	Enforces the Land Development Code.	Reduces threats to people and structures; reduces potential loss.
Personnel Department	Director part of TIEOC	Assesses local hazards and liabilities; determines extent of exposure; maintains sufficient insurance coverage for the City.	Reduces exposure and costs to the City; allows the City to return to normal operations more quickly after an event.
Library (Consortium with other Beach Communities -- physically located in Madeira Beach)	General public information.	Maintains reference area of hazard data, including preparation and response information.	Educates citizens, thereby increasing awareness and reducing potential threat.
Public Works	Director/Assistant Director/Foremen part of TIEOC. Includes grounds beautification, beach improvement, municipal facilities, causeway, and equipment/vehicle maintenance divisions.	Inspects and maintains City's storm sewer system.	Provides accurate data when developing properties.
		Monitors compliance with drainage requirements for municipal projects.	Ensures threat of flood risk does not increase.
		Maintains all streets and alleys under City's jurisdiction	Ensures proper maintenance; reduces flood threat.
		Coordinates with Pinellas County to ensure potable water systems.	Coordinates with Pinellas County to ensure potable water after hazard event.
		Coordinates with City of St. Petersburg to ensure sanitary sewer systems.	Coordinates with St. Petersburg to ensure sanitary sewer systems availability after hazard event.
		Assists in island-wide evacuation.	Assists in ensuring that all citizens are evacuated from the barrier island before an event.
		Responsible for the clearance of debris and its removal.	The removal of sand and debris opens roadways and enables emergency repairs by utilities and finally the re-opening of the barrier island to its citizens.
		Implements FDOT Bascule Bridge Plan for Causeway Bridge.	Ensure smooth flow of traffic to mainland to facilitate orderly evacuation of barrier island.

## Pinellas County Local Mitigation Strategy

Treasure Island Department	Division/ Section/ Bureau	Tasks	Loss Reduction
Fire Department	Emergency Management	Develops and Implements disaster preparedness public education program	Increases individuals, households and special needs constituencies
		Lead agency for emergency management.	Coordinates all TIEOC and emergency management activities.
		Conducts training and emergency management skill development for City employees.	Improved disaster management skills mean (1) more efficient response; (2) better use of resources, and, (3) expedited return to normalcy
		Lead agency for search and rescue, hazard materials, EOC operations, mutual aid.	Improved disaster management skills mean (1) more efficient response; (2) better use of resources, and, (3) expedited return to normalcy
		Partners with City Business Assistance Center to aid businesses, particularly minority-owned, small businesses in continuity plans and disaster management strategies.	Improved disaster resiliency of small business community mitigates impact of disaster redevelopment.
<b>END OF LIST</b>			

**APPENDIX 7**  
**COMMUNITY PARTICIPATION AND OUTREACH**

# Pinellas County Local Mitigation Strategy

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## List of Attachments

Attachment 7- 1: Pinellas LMS Website ( <a href="http://www.pinellaslms.org">www.pinellaslms.org</a> ), LMS Flyer, LMS Fact Sheet	
Attachment 7-2: Pinellas County Emergency Management Website ( <a href="http://www.pinellascounty.org/emergency">www.pinellascounty.org/emergency</a> )	
Emergency Management Home Page	
Know Your Zone (Evacuation Zone Lookup and link to Flood Zone)	
Hurricane Preparedness (English)	
Hurricane Preparedness (Spanish)	
Business Solutions	
Home Healthcare Providers/ Healthcare Facility Disaster Planning: Criteria, Statutes and Rules	
Hotel/Motel/RV Parks/ Transient Accommodations Information	
Flood Information Home	
Flood Warning System	
Flood Property Protection	
Flood Mitigation	
Flood Information FAQ	
The Cost of Flooding (Link to <a href="http://www.floodsmart.gov">www.floodsmart.gov</a> )	
Pinellas County All-Hazard Guide	
Hurricane Video Library	
Stay Connected (ALERT PINELLAS, E-Lert, Watch PCC-TV, Speakers and Presentations, Weather Alert Radio)	
Outreach Toolbox (includes Busting Hurricane Myths, Hurricanes for Kids, and      Becoming Storm Savvy)	
Other Hazard Resources	
Attachment 7-3: Sample Municipal Flood Outreach (City of Clearwater)	
Attachment 7-4: County Facebook Page with Citizen Survey	
Attachment 7-5: Findings of Focus Groups	
Attachment 7-6: Pinellas County Program for Public Information (PPI)	

## APPENDIX 7: COMMUNITY PARTICIPATION AND OUTREACH

### Overview

Pinellas County has developed an extensive emergency preparedness and mitigation educational/outreach program over the with input and support from state, regional, county and municipal governments and public and private stakeholders.

Pinellas County and its municipalities have multiple outreach programs designed to encourage preparedness and mitigation activities primarily through the floodplain management programs and hurricane awareness programs. Spreading the word about the cost-effectiveness of mitigation is a challenge in these economic times. Nevertheless, in partnership with the State (Florida Division of Emergency Management), the private sector and organizations such as the Federal Alliance for Safe Homes (FLASH), our communities have taken advantage of opportunities to encourage residents and businesses to “do their part” to minimize the risk to their families as well as their property.



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The program has evolved with the use of creative and innovative tools providing two-way communication between county and municipalities, volunteer and civic organizations, the business community and the public. The challenge of the Local Mitigation Strategy was to assemble all of the activities, opportunities and materials in a concise and coordinated document. This provided the opportunity to identify collaborative partnerships as well as any gaps in our public warning and education campaign, to track outreach efforts and identify successful best practices.

### Public Outreach Subcommittee

In preparation for the 5-year Update of the Pinellas LMS, the LMS Committee identified a Public Outreach Subcommittee which included representatives from the Pinellas County Marketing & Communications Department and Public Safety PIO Group, the County Economic Development Department, municipal planning and floodplain management including the barrier island communities, the American Red Cross and the Tampa Bay Regional Planning Council.

The subcommittee met bi-monthly during the update of the Pinellas LMS to (1) identify goals and objectives; (2) identify additional stakeholders; and (3) review activities and materials to ensure effective and consistent messaging to targeted populations.

The Public Outreach Subcommittee of the LMS identified specific strategies to accomplish the following goals:

1. Solicit input from the community in the drafting of the LMS and continue to encourage representation from non-governmental stakeholders in the planning process on the LMS Working Group;
2. Develop key mitigation topics, messages and desired outcomes;
3. Inventory existing outreach activities and networks/ target audiences/ key messages throughout the county; and
4. Identify any gaps in our communications capability and make adjustments to improve our ability to “market” the message of mitigation to our residents and businesses in the community.

# Pinellas County Local Mitigation Strategy

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## Public Participation

The following policies were adopted by the LMS Working Group as part of the planning process:

- The workgroup adheres to “Sunshine Regulations” for Open Meetings. Florida is renowned for putting a high priority on the public's right of access to governmental meetings and records. In fact, the principles of open government are embodied not only in Florida statutes, but also guaranteed in the state Constitution. Reference Florida's *Government in the Sunshine* Manual.
- Documents (except those sections deemed protected under security provisions or privacy issues) are public and made available at Pinellas County Emergency Management's Office, the local municipalities and the website ([www.pinellaslms.org](http://www.pinellaslms.org)). See screen capture of website in Attachment 7- 1.

Pinellas County invited many organizations via email and mailings to help in the LMS planning process. Specific invitations were extended to additional members of agencies, associations, businesses, and committees who have newly formed (such as Recover Pinellas, the Pinellas County Citizen Corps. Council and the Pinellas County Health Care Preparedness Coalition, etc.), additional public and private sector organizations partnering in preparedness activities including Pinellas Suncoast Transit Authority (PSTA) and the Urban Sustainability Program at the UF/IFAS Extension Office, as well as those which have not attended recently.

The Pinellas Local Mitigation Strategy Committee also reached out to the stakeholders who participated in the ***Pinellas County Post-Disaster Redevelopment Plan (PDRP, 2011)***. The working subcommittees included representatives from the following areas:

- Public Outreach (Marketing & Communications Department, PIO Group, etc.)
- Financial Administration (Financial and purchasing departments, Public Works, etc.)
- Land Use, Housing and Mitigation (Planning Dept., Community Development, Communities Association, Neighborhood Assoc., Mobile Home owners, etc.)
- Construction, Permitting and Historic Preservation (Contractors Licensing Board, Permitting Dept., Historic Preservation Committee)
- Economic Redevelopment (Economic Development Dept., Chambers of Commerce, CVB, Hotel Association)
- Infrastructure Restoration (Clearwater Gas, Duke Power, FDOT, MPO, PIE Airport)
- Environmental Restoration (Tampa Bay Estuary Program, Environmental Management)
- Health and Human Services (ESF 8 /Health Preparedness Coalition, Pinellas Recovers, Residential Living Facilities, child care, Juvenile Welfare Board, etc.)

The Pinellas LMS Committee also coordinated with the Pasco, Hillsborough and Manatee County Emergency Management and LMS Coordinators, and scheduled joint meetings with the CRS Coordinators in the Region to ensure better coordination with the LMS Update and the CRS/ floodplain management programs.

In addition, the Pinellas County Marketing & Communications Department, stakeholders and local governments developed a comprehensive outreach strategy using their websites, surveys, electronic newsletters, the countywide PIO Network to solicit input from the public. Specifically, the public was informed of the LMS Update and its importance to the community. In addition, they were asked for input regarding the hazard and vulnerability assessment, flood/risk mapping, insurance issues, and mitigation initiatives.

## Target Audiences

The Pinellas LMS Committee identified the following target audiences for mitigation outreach:

- The entire Pinellas County including all municipalities:

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- All areas in the county need to be aware of the flooding hazard as past flooding events have demonstrated. In addition, all areas are vulnerable to severe weather (hurricane force winds, thunderstorms and tornadoes)
- 100-year and 500-year Floodplain (Residents (owner and renter) and Businesses):
  - All residents and businesses within the FEMA flood zones must be aware of their increased risk, the need for flood insurance and ways to mitigate their potential losses.
- Repetitive Loss Areas (Residents (owner and renter) and Businesses):
  - Properties in these areas have been hit more often by flooding, so they have a greater need for flood protection information as well as options for mitigation. There are 1501 structures in the repetitive loss areas (See Appendix 13)
- Hurricane Evacuation Zones (Residents (owner and renter) and Businesses) :
  - Pinellas County is especially vulnerable to storm surge and residents who are susceptible are identified in the Hurricane Evacuation Zones.
- Wildfire Interface Areas (Residents (owner and renter) and Businesses):
  - Due to the urban nature of the county, the wildfire threat is not extensive; however, there are neighborhoods adjacent to parks and conservation areas which need to be informed of the potential threat of wildfire, safety measures and mitigation opportunities.
- Seniors
  - Pinellas County has a significant number of seniors who because of age or disability may be at higher risk and have special needs.
- Contractors, real estate, lending and insurance companies
  - These companies are key to conveying information about flood hazard and flood insurance. The Committee wants to make sure that they understand and have all the information they need about these topics.
- Business Community
  - Businesses are a vital part of our economic and community. It is imperative that businesses are prepared for emergencies.
- Spanish Speaking Population
  - Pinellas County has a growing Hispanic population. Approximately 8% of the population is listed as “Hispanic or Latino origin” (2010 Census) representing a 73% increase since 2000. Obviously, it is important that information is provided to this population in Spanish.

## Messages and Outcomes

One of the first steps in determining the level of knowledge and interest in mitigation was to conduct a survey of residents. Pinellas County conducted a web-based survey in 2014. The survey and results of this survey are presented in Attachment 7-4. This survey provided information for the Marketing & Communications Department in better crafting the mitigation message.

### Priority Topics of Messages:

1. Know your risk
2. Insure your property for your hazard(s)
3. Public Safety Information
4. Protect your property from the hazard(s)
5. Build Responsibly
6. Protect natural functions (floodplain, habitat, etc.)

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**Table 7- 1: Key Messages and Outcomes**

Message	Outcome
Know Your Risk <ul style="list-style-type: none"> <li>• Flooding</li> <li>• Hurricane Evacuation Level</li> <li>• Wind Vulnerability</li> <li>• Other (Sinkholes, Wildfire, Technological and Human-caused events, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• More Map info/ Zone Inquiries (EM/ Floodplain)</li> <li>• More hits on Look up Website(s)</li> <li>• More hits on mitigation videos/ website info</li> <li>• Greater Attendance at Mitigation Workshops/ Events and Webinars</li> <li>• Greater Demand for Publications</li> </ul>
Insure your business and home against losses	<ul style="list-style-type: none"> <li>• Increase in the number of flood insurance policies</li> <li>• Increase in number of policies in Preferred Risk</li> </ul>
Keep waterways clean: Stormwater	<ul style="list-style-type: none"> <li>• Reduced amount of debris removed by public works</li> </ul>
Safety Information <ul style="list-style-type: none"> <li>• Turn Around; Don't Drown</li> <li>• Public Health impacts including floodwater contamination and boil water orders; mold)</li> <li>• Tornado (safe room), Hurricane Safety (disaster supplies), Wildfire ("Firewise), Hazardous Material Releases (Shelter-in-place), etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Greater Demand for Hurricane Guide</li> <li>• Greater Demand for Disaster Planning Guide (Spanish)</li> <li>• Fewer water rescues/ citations</li> <li>• More families have prepared Family Disaster Plans</li> </ul>
All construction projects must meet Floodplain Management Regulations, Building Code and Stormwater Rules	<ul style="list-style-type: none"> <li>• Fewer building code violations</li> <li>• Inspections</li> </ul>
Learn how to protect your home/ business from flood, wind, wildfire	<ul style="list-style-type: none"> <li>• More hits on mitigation videos/ website info</li> <li>• Attendance at Mitigation Workshops/ Events and Webinars</li> <li>• Greater Demand for Publications</li> <li>• Increase in the number of home improvement permits that include mitigation features</li> </ul>
Prepare Ahead Make your Family/ Business Disaster Plan	<ul style="list-style-type: none"> <li>• More families have prepared Family Disaster Plans</li> </ul>

## Outreach Projects

The County-wide public information strategy includes:

- Distribution of the official all-hazard guide for Pinellas County, ***"Surviving the Storm": It's Everyone's Responsibility.*** Approximately 85,000 copies were printed and distributed in 2016 through local libraries, fire stations, all public buildings and Walgreens. The Guide (on the website and available for review) provides residents and visitors with information on how to "stay connected" in emergencies including
  - How to get alerts through the weather alert radio or a wireless emergency alert equipped cell phone.

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- How to sign up for the free, award winning Pinellas County E-Lert electronic newsletter; where to get addition information on PCC-TV,
  - How to contact the Citizens Information Center
  - How to request a speaker or information for your organization, school or place of employment;
  - How to follow breaking news and information through social media (Twitter, Facebook, NextDoor, and YouTube)
  - How to prepare your home and mitigate damage from floods and wind
  - Understanding your insurance for owners, renter and business
  - Safety after a flood or severe weather (Food, Generator, Driving (Turn around; don't drown), Chainsaw safety, Drinking water, etc.)
- *Disaster Planning Guide* in Spanish (on the website and available for review) is distributed throughout the County through faith-based organizations, family centers, clinics, the library CO-OP, senior service providers and 211 Referral Services. Table 7-2 provides the distribution strategy for the Disaster Planning Guide in Spanish. This information is also provided on the regional website, [www.tampabayprepares.org](http://www.tampabayprepares.org) and the county website, [www.pinellascounty.org/emergency](http://www.pinellascounty.org/emergency).

**Table 7- 2: Spanish Information Distribution Strategy**

Community Partners	Quantity Distributed
Area Agency on Aging - Service Providers	400
American Red Cross - South County	800
American Red Cross - North County	600
Marketing & Communications Dept.	3,900
Library Co-Op	800
211 Tampa Bay Cares	1,200
Catholic Charities	400
Guadalupana Clinica	200
High Point Family Center	200
Salvation Army	200
Trinity Presbyterian	200
Turley Family Center	400
Union Street United Methodist	200
YMCA - Hispanic Outreach	400
TBRPC	100
Total	10,000

- Distribution of an electronic Emergency Management Newsletter, ***“E-lert: Surviving the Storm”*** prepared by Pinellas County Emergency Management. The newsletter provides information on emergency preparedness and mitigation including risk information (evacuation zones, flood risk zones, etc.), shelters, safety tips, etc. See Attachment 7-2 (screen capture of newsletter).
- **Video Library:** A series of videos available online at a county website (See Attachment 7-2 for screen capture.) They are prepared and presented by the Pinellas County Marketing & Communications Department and can be accessed and presented through municipal governments, businesses, schools or organizations. The e-Series includes 15 minute presentation which covers variety of topics, including:
  - How to secure your home for flood and wind
  - Special needs evacuation and sheltering (Seniors and Disabled)
  - Pet preparedness

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- How to prepare your business
- What does insurance cover – and not cover
  
- LMS Working Group meetings are announced on the **County Community Calendar** and web site ([www.pinellascounty.org](http://www.pinellascounty.org)). In addition, the website ([www.pinellaslms.org](http://www.pinellaslms.org)) provides announcement, agendas and minutes of all meetings . Both of these calendars are linked to municipal and partner websites throughout the county. See Attachment 7-1.
- Pinellas County Marketing & Communications Department, through **County Connections**, solicited input from local residents through three Focus Groups in 2010. The groups were established and each met with County Emergency Management personnel and LMS Working Group members to present the draft documents including the goals and objectives, existing programs and policies, prioritized projects and accomplishments. An effort was made to hold the meetings in the northern, southern and central parts of the county where municipal interests could also participate. The findings of the Focus Groups were consolidated and are provided in Attachment 7-5.
- In addition, the Marketing & Communications Department sent out an electronic survey through Facebook and newsletters to citizens requesting their input in to the mitigation strategy.

In addition to the county-wide efforts, each jurisdiction has a communication program for their residents and neighboring communities. The “culture of preparedness” in the county expands not just to specific public safety forums, workshops and expos, but to the provision of this information at other community events. Types of outreach at the jurisdictional level include the following:

- Community Events
- News Letters
- Presentations to Governing Bodies
- Questionnaires/Surveys
- Roundtables/ Forums
- Webinars/ E-Town Hall Meetings
- Social Media/ Email
- NextDoor
- Area-Specific Meetings
- Websites
- Interviews
- Brochures/Publications
- Mailings

An Outreach Matrix was developed to attempt to capture the efforts of the county, its municipalities and community partners. Please see Table 7-9.

In addition, Examples of county and municipal outreach projects are included in the back of the report. See List of Attachments.

## Other Public Information Initiatives

### Program for Public Information (PPI)

The Program for Public Information (PPI) was introduced by the Federal Emergency Management Agency (FEMA) as a planning tool to provide a step-by-step coordinated approach to flood hazard outreach. The County and some of the municipalities have developed PPIs using this approach for their jurisdictions to improve communication with citizens, and to provide information about flood hazards, flood safety, flood insurance, and ways to protect property and natural floodplain functions to those who can benefit from it. Although this information is being

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effectively shared throughout the County, these programs better coordinate messages and materials and standardize the information being shared. Much of the flood hazard component of this LMS Community Participation and Outreach plan has been vetted through the PPIs.

## PUBLIC WARNING

As stated in the Pinellas County Comprehensive Emergency Management Plan (CEMP, Basic Plan, pg. 36-37 and Marketing & Communications Annex, 2013), notification and warning involve the notification of emergency response personnel, as well as notifying the affected public. Pinellas County uses a combination of e-mail, telephone, radio, fax, and paging services to notify and activate its emergency response personnel. Pinellas County may use all available public warning systems to notify and warn Pinellas residents. This can include the Emergency Alert System (EAS), the National Weather Radio system, and Alert Pinellas, a computer and cell phone notification system activated by the county as well as using local media outlets and social media. . The PCEM is responsible for activating the appropriate notification and public warning systems when an emergency occurs or threatens the county.

The National Weather Service (NWS) re-certified Pinellas County as Storm Ready in 2009, in recognition of the county's commitment to maintaining an effective notification and warning system. Storm Ready is a program sponsored by the NWS to recognize those communities that enhance their weather action plan, and demonstrate readiness before, during, and after severe weather events.

### 1) County Warning Point (CWP)

The County Watch Office (CWO) is the 9-1-1 Emergency Communications Center, located in the Public Safety Complex. Trained communications personnel staff the CWO 24 hours per day.

Communications systems available include:

- EMNet
- EMNet was upgraded in 2011 to replace the outdated Emergency Satellite Communications System (ESATCOM). EMNet supports secure text messaging and point to point voice communications between the State Watch Office and Pinellas County EOC/County Warning Point, as well as, counties throughout Florida. The EMNet system is designed to provide redundant communications capabilities by using an existing network connection to the Internet as its primary path, with the satellite system operating as a back up to the terrestrial patch.
- 800 MHz radios, Telephones, Faxes, Pagers (alpha and numeric), and
- Emergency contact lists with key telephone numbers
- The CWO is supplied auxiliary power by an on-site 400kw generator. This generator senses a loss of power and starts up automatically. Facility maintenance staff load test the generator weekly and in case of an impending storm. The generator's fuel capacity is 16,000 gallons and consumes approximately 20 gallons per hour. County Fleet Management has a maintenance agreement with several fuel companies to supply fuel for the generator continuously during a loss of power. The CWP is also wired to receive a portable generator should the primary fail.

### 2) EM Staff Notification

The PCEM compares the type, size, and severity of the emergency with resources needed, to decide who needs to be notified, and what type of team activation is needed. Once the director requests or authorizes activation of the EOC, the appropriate department emergency management representatives are notified. In turn, department emergency management coordinators and team members continue to notify their support staff in a pyramid

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fashion. If a person on the list cannot be contacted, his or her successor(s) will be contacted until someone is reached to assume the responsibility.

## 3) Organizational Notification

- The PCEM maintains and updates master emergency contact lists, with after hours and alternate telephone numbers, for each municipality and fire district, department, agency and their personnel.
- When a no-notice emergency occurs or is imminent, the CWO will obtain the necessary information on the incident and notify the PCEM. In turn, PCEM will notify the representatives appropriate for immediate response to the incident.
- The CWO will also notify the State Watch Office (SWO) of the incident and provide the pertinent information. If the incident involves hazardous materials, the CWO notifies the SWO. The SWO is notified as soon as possible of events not requiring state assistance.
- The primary means to notify the SWO is by telephone. The CWO can use EMNet Voice Manager or text messaging as an alternate method of communicating with the SWO. See the CWO SOP for details.
- The primary representative for each EOC function will contact the supporting agencies. All agencies will notify their personnel to begin activation procedures as described in their local procedures, or standard operating guidelines.
- Each municipal Emergency Management Coordinator (EMC) will alert the municipal/fire control district in his/her community and supervise the dissemination of warnings in their jurisdiction.
- Pinellas County staff and registered residents are also notified via Alert Pinellas, an automated emergency notification system providing updates by calling land lines and cell phones, as well as email and text messages.

## 4) Public Warning

There are no siren systems in Pinellas County, but it has a wide array of commercial broadcast coverage that can disseminate information quickly. Pinellas County will attempt to provide the public with sufficient advance warning time for effective preparation and emergency plans to be implemented.

## 5) Emergency Alert System (EAS)

- EAS is designed to permit government officials to issue up-to-date and continuous emergency information, and instructions to the public in case of a threatened or actual emergency. During times of emergency, Pinellas County will access local TV and radio stations using EAS access points and will provide residents emergency information
- Other systems available to disseminate warning information to the public:
  - Tampa Bay television broadcast stations
  - Tampa Bay radio broadcast stations
  - Pinellas Cable Channel
  - Municipal Cable Channels
  - National Weather Radio (Ruskin Office)
  - Media Alert
  - Alert Pinellas notification system to registered citizens' cell phones and / or email.<sup>1</sup>

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<sup>1</sup> Pinellas County's new Mass Notification System: **Alert Pinellas** is free to county residents and gives emergency managers multiple ways to get the word out whenever an emergency situation arises. Subscribers will receive a notification on each contact method they provide – phone, text and/or email Alert Pinellas allows emergency managers to send out alerts to the county as a whole or to smaller, more specific geographic areas. (See Attachment 7-2)

# Pinellas County Local Mitigation Strategy

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- Public address systems on police and fire vehicles
  - Amateur Radio Emergency Service and Auxiliary Communication Services
  - Facsimiles
  - Mass e-mail capability
  - 911 Emergency Communications Paging System
  - ReadyAlert
  - RNS – Ready Alert Notification System – a reverse 911 citizen call system
  - Social media/website
- For purposes of transmitting warnings, the county will use the fastest and most appropriate means of dissemination. The National Weather Service (NWS) has agreed to activate the National Weather Radio Alert for both weather and non-weather emergencies. This makes the National Weather Radio an ideal alert and notification tool. The weather radios can also be accessed through HazCollect directly from the EOC.
  - All communication centers have capabilities to receive incoming calls from the hearing impaired. The CIC also can provide information to hearing impaired citizens. Pinellas County also maintains a cadre of employees that speak additional languages that can respond quickly. Local telephone companies provide translation services to non-English speaking and hearing impaired citizens.

## Repetitive Loss Properties

As a special target population, all property owners with repetitive flood losses (or severely repetitive losses) are contacted at least annually by their local jurisdictions. This special mailing includes the (1) identification of their property as a repetitive loss property as defined by FEMA, (2) the recommendation to purchase flood insurance to cover future losses, and (3) mitigation strategies and financial assistance opportunities to reduce their future losses.

## Implementation, Monitor and Evaluation of the Program

In addition to the major 5- year update, the ***Pinellas County Local Mitigation Strategy*** is updated annually. As part of that update, efforts are made to evaluate public participation in preparedness and mitigation. The outreach and communications programs evolve based upon citizen input (focus groups and surveys, etc.), stakeholder engagement, and new technologies including social media. Activities for continued public participation include the periodic presentation on the plan's progress to elected officials, schools and other community groups. Programs are continued throughout the year with postings on social media and websites, special events, media events, webinars, etc.

It is recognized that the success of the preparedness/mitigation message depends on the partnerships built in the planning process and the collaboration and sharing of best practices. Quarterly meetings of the LMS Committee allow for presentations of current issues, opportunities for outreach and public information, increased stakeholder participations and the sharing of "lessons learned" from training, exercises or events.

Pinellas County, in an effort to spearhead efforts to further improve communication with citizens, and to provide information about flood hazards, flood safety, flood insurance and ways to protect property and natural floodplain

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# Pinellas County Local Mitigation Strategy

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functions, has embarked on a Program for Public Information (PPI). Introduced by the Federal Emergency Management Agency (FEMA) as a new planning tool, the PPI provides a step-by-step coordinated approach to flood hazard outreach. See Attachment 7-6.

**Pinellas County  
Local Mitigation Strategy  
2018 Appendix 7, Table 7- 3  
Pinellas County (County-wide) Outreach Matrix**

Name of Event/Outreach	Description of Event / Outreach	Outreach Method	Target Audience	Target Message	Estimated Population Reached	Date Entered on this Table	Date Last Reviewed	Date Last Updated	Update Comments	Name of Last Reviewer
Hurricane Expo	Redington Shores Expo	Community Event	Municipality	Public Safety Information (ex. Turn Around Don't Drown)	25	8/25/2014	1/10/2018	10/25/2017	No updates (PPI, Annual event, County staff present)	Lisa Foster
Hurricane Expo	Home Depot-Palm Harbor	Community Event	County-wide	Public Safety Information (ex. Turn Around Don't Drown)	85	8/25/2014	1/10/2018	10/30/2017		Mary Burrell
Hurricane Expo	Gulfport	Community Event	Hurricane Vulnerable Seniors	Public Safety Information (ex. Turn Around Don't Drown)	60	8/25/2014	1/10/2018	10/30/2017		Mary Burrell
Hurricane Expo	Seminole Expo	Community Event	Municipality	Public Safety Information (ex. Turn Around Don't Drown)	150	8/25/2014	1/10/2018	10/30/2017		Mary Burrell
PCC-TV	Aging on the Suncoast for July-August	Interview	Hurricane Vulnerable Seniors	Make your Family/ Business Disaster Plan		8/25/2014	1/10/2018	10/30/2017		Mary Burrell
Other-Speaking Engagement	Largo Hurricane Event	Roundtable/ Forum	Municipality	Make your Family/ Business Disaster Plan	30	8/25/2014	1/10/2018	10/30/2017		Mary Burrell
Other-Speaking Engagement	Talk to residents of The Hampton at Clearwater	Presentation	Hurricane Vulnerable Seniors	Make your Family/ Business Disaster Plan	30	8/25/2014	1/10/2018	10/30/2017		Mary Burrell
Cable Television Programming	PCC-TV	Pinellas County Cable TV Interviews	County-wide	Topics vary from Insurance issues, preparedness, securing property, mitigation opportunities	200,000	9/5/2014	1/10/2018	10/25/2017	No updates (PPI, ongoing)	Lisa Foster
County Speakers Bureau	Bank of SME Speakers (Volunteers and County/Municipal Employees)	Area-Specific Meeting (see list)	County-wide	All messages addressed during the year	400	9/5/2014	1/10/2018	10/25/2017	No updates (PPI, ongoing, program currently being implemented)	Lisa Foster
Connect Pinellas	Electronic County Newsletter	Newsletter	County-wide	All messages addressed during the year	8,000	9/5/2014	1/10/2018			Betti Johnson
E-LERT	Electronic Emergency Information Newsletter	Newsletter	County-wide	All messages addressed during the year	5,677	9/5/2014	1/10/2018	10/25/2017	No updates (ongoing)	Lisa Foster
Alert Pinellas	Opt-In Alert System (Email, FB, Twitter, Text)	Social Media/ Email	County-wide	Know your risk/ Emergency Communications/ Warning		9/5/2014	1/10/2018	10/25/2017	No updates (ongoing program, name updated since development of this document)	Lisa Foster
Pinellas County EM Website	Other Hazard Resources	Website	County-wide	All messages addressed during the year		9/5/2014	1/10/2018	10/30/2017	Revised - Hurricane and flood info are listed as individual topics in the table	Mary Burrell
Pinellas County EM Website	Surviving the Storm	Website	County-wide	All messages addressed during the year		9/5/2014	1/10/2018	10/30/2017	Revised - EM department has multiple pages, which are identified as separate items on this table	Mary Burrell
Pinellas County EM Website	Hurricane Preparedness: Know Your Zone - look up evacuation levels, shelters, current evacuation information, by location	Website	County-wide	Know your risk; Prepare Ahead		9/5/2014	1/10/2018	10/30/2017	Revised description:	Mary Burrell
Pinellas County EM Website	Shelter Options	Website	County-wide	Prepare Ahead; Make your Family/ Business Disaster Plan		9/5/2014	1/10/2018	10/30/2017	Revised description: <a href="http://www.pinellascounty.org/emergency/shelteroptions.htm">http://www.pinellascounty.org/emergency/shelteroptions.htm</a>	Mary Burrell
Pinellas County EM Website	Hurricane Preparedness: Información en Español	Website	Spanish Speaking Residents	Prepare Ahead; Make your Family/ Business Disaster Plan		9/5/2014	1/10/2018	10/30/2017	No updates - Current: <a href="http://www.pinellascounty.org/emergency/spanish.htm">http://www.pinellascounty.org/emergency/spanish.htm</a>	Mary Burrell
Pinellas County EM Website	FEMA - Federal Emergency Management Agency	Website	County-wide	Insure your property for your hazard(s)		9/5/2014	1/10/2018	10/30/2017		Mary Burrell
Pinellas County EM Website	FEMA for Mobile Phones	Website	County-wide	Make your Family/ Business Disaster Plan		9/5/2014	1/10/2018	10/30/2017		Mary Burrell
Pinellas County EM Website	Healthcare Facilities Disaster Planning: Criteria, Statutes and Rules	Website	Health Care Facilities/ Business	Make your Family/ Business Disaster Plan		9/5/2014	1/10/2018	10/30/2017	Revised description: <a href="http://www.pinellascounty.org/emergency/healthcare_facilities.htm">http://www.pinellascounty.org/emergency/healthcare_facilities.htm</a>	Mary Burrell

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Name of Event/Outreach	Description of Event / Outreach	Outreach Method	Target Audience	Target Message	Estimated Population Reached	Date Entered on this Table	Date Last Reviewed	Date Last Updated	Update Comments	Name of Last Reviewer
Pinellas County EM Website	Hurricane Preparedness: Prepare Ahead	Website		Prepare Ahead; Make your Family/ Business Disaster Plan		9/5/2014	1/10/2018	10/30/2017	Revised description: <a href="http://www.pinellascounty.org/emergency/prepareahead.htm">http://www.pinellascounty.org/emergency/prepareahead.htm</a>	Mary Burrell
Pinellas County EM Website	Hurricane Guide	Website	County-wide	All messages are addressed		9/5/2014	1/10/2018	10/30/2017	Updated guide: <a href="http://www.pinellascounty.org/emergency/allhazardguide.htm">http://www.pinellascounty.org/emergency/allhazardguide.htm</a>	Mary Burrell
Pinellas County EM Website	Hurricane Video Library	Website	County-wide	Library includes a host of 15 minutes videos which provide disaster/ safety/mitigation "how-to" instruction		9/5/2014	1/10/2018	10/30/2017	No updates - Current: <a href="http://www.pinellascounty.org/emergency/hurricane_videos.html">http://www.pinellascounty.org/emergency/hurricane_videos.html</a>	Mary Burrell
Pinellas County EM Website	Hurricane Publications	Website/ Publications	County-wide	All messages are addressed		9/5/2014	1/10/2018	10/30/2017	No updates - Current: <a href="http://www.pinellascounty.org/emergency/publications_links.html">http://www.pinellascounty.org/emergency/publications_links.html</a>	Mary Burrell
Pinellas County EM Website	Información en Español	Website/ Publications	Spanish Speaking Residents	All messages are addressed		9/5/2014	1/10/2018	10/30/2017	No updates - Current: <a href="http://www.pinellascounty.org/emergency/publications_links.html">http://www.pinellascounty.org/emergency/publications_links.html</a>	Mary Burrell
Pinellas County EM Website	Public Shelter Options - Host Homes	Website	County-wide	Prepare Ahead; Make your Family/ Business Disaster Plan		9/5/2014	1/10/2018	10/30/2017	Updated: <a href="http://www.pinellascounty.org/emergency/hosthomes.htm">http://www.pinellascounty.org/emergency/hosthomes.htm</a>	Mary Burrell
Pinellas County EM Website	Pet Preparedness	Website	County-wide	Prepare Ahead; Make your Family/ Business Disaster Plan		9/5/2014	1/10/2018	10/30/2017	Updated: <a href="http://www.pinellascounty.org/emergency/petpreparedness.htm">http://www.pinellascounty.org/emergency/petpreparedness.htm</a>	Mary Burrell
Pinellas County EM Website	Recovery	Website	County-wide	Public Safety Information (ex. Turn Around Don't Drown)		9/5/2014	1/10/2018	10/30/2017	No updates - Current: <a href="http://www.pinellascounty.org/emergency/afterthestorm.htm">http://www.pinellascounty.org/emergency/afterthestorm.htm</a>	Mary Burrell
Pinellas County EM Website	Sandbags	Website	County-wide	Protect your property from the hazard(s)		9/5/2014	1/10/2018	10/30/2017	Updated: <a href="http://www.pinellascounty.org/emergency/sandbags.htm">http://www.pinellascounty.org/emergency/sandbags.htm</a>	Mary Burrell
Pinellas County EM Website	Special Needs Information	Website	Hurricane Vulnerable Seniors/ Disabilities	Prepare Ahead; Make your Family/ Business Disaster Plan		9/5/2014	1/10/2018	10/30/2017	Updated online forms: <a href="http://www.pinellascounty.org/emergency/specialneeds.htm">http://www.pinellascounty.org/emergency/specialneeds.htm</a>	Mary Burrell
Pinellas County EM Website	Transportation - traffic info	Website	County-wide	Prepare Ahead; Make your Family/ Business Disaster Plan		9/5/2014	1/10/2018	10/30/2017	No updates - Current: <a href="http://www.pinellascounty.org/emergency/afterthestorm.htm">http://www.pinellascounty.org/emergency/afterthestorm.htm</a>	Mary Burrell
Pinellas County EM Website	Learn about texting during emergencies	Website/ Social Media	County-wide	Emergency Communications/ Warning		9/5/2014	1/10/2018	10/30/2017		Mary Burrell
Pinellas County EM Website	Subscribe to E-news, Emergency News Service	Website/ Social Media/ Email	County-wide	Emergency Communications/ Warning		9/5/2014	1/10/2018	10/30/2017	ongoing	Mary Burrell
Pinellas County Social Media	Social media: Twitter, Facebook, NextDoor	Social Media	County-wide	Emergency Communications/ Warning		9/5/2014	1/10/2018	10/30/2017	<a href="http://www.pinellascounty.org/emergency/s tayconnected.htm">http://www.pinellascounty.org/emergency/s tayconnected.htm</a>	Mary Burrell
Pinellas County EM Website	Amateur Radio Operator Links	Website	County-wide	Emergency Communications		9/5/2014	1/10/2018	10/30/2017	<a href="http://www.pinellascounty.org/emergency/r adio.htm">http://www.pinellascounty.org/emergency/r adio.htm</a>	Mary Burrell
Pinellas County EM Website	Weather Links	Website	County-wide	Know your risk		9/5/2014	1/10/2018	10/30/2017	<a href="http://www.pinellascounty.org/emergency/ weather.htm">http://www.pinellascounty.org/emergency/ weather.htm</a>	Mary Burrell
Media Partnerships	Sharing of data and Interviews including newspaper, television and radio	Interview	County-wide	All key messages are addressed throughout the year.		9/5/2014	1/10/2018	10/30/2017	No updates (ongoing)	Mary Burrell

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Pinellas County (County-wide) Outreach Matrix**

Name of Event/Outreach	Description of Event / Outreach	Outreach Method	Target Audience	Target Message	Estimated Population Reached	Date Entered on this Table	Date Last Reviewed	Date Last Updated	Update Comments	Name of Last Reviewer
Pinellas County Flood Information Website	Pages include: Build Smart, Flood Elevation Certificate, Flood Information- FAQ, Floodplain Protection, Flood Mitigation, Flood Insurance, Flood Maps & Zones, Flood Warning System/Notifications/Safety, Flood Resources/Contacts/Publications	Website	County-wide	All key messages are addressed throughout the year.		10/31/2016	1/10/2018	10/25/2017	Content updated as needed and reviewed annually; links checked monthly	Lisa Foster
Pinellas County Flood Map Service Center	Flood Map Service Center searchable by address includes flood related information including: FEMA FIRM data, Storm surge, evacuation zones, National Wetland Inventory, Current Water Levels	Website	County-wide	All key messages are addressed throughout the year.		10/31/2016	1/10/2018	10/25/2017	Pinellas County Flood Hazard Areas added, Storm Surge and Evacuation Zones data updated.	Lisa Foster
Pinellas County Program for Public Information (PPI)	Flood related messages, target audiences, projects, and initiatives	Program	Unincorporated residents, includes some County-wide projects and initiatives	All key messages are addressed throughout the year, before, during and after flood or hurricane events		10/31/2016	1/10/2018	10/25/2017	Three Committee meetings per year, Content updated as needed and reviewed annually.	Lisa Foster
Sea Level Rise: What's Your Role?	Sea level rise and storm surge outreach and education	Community Event	Pinellas County community leaders	Educating community leaders on understanding risks associated with sea level rise and storm surge	50	12/12/2016	1/10/2018	12/12/2016		Kelli Levy
Repetitive Loss Information	Letter and flood information brochure	Mailing	Repetitive Loss Area Properties	Informational	1,500	11/28/2016	1/10/2018	10/25/2017	Letter and Flood Information Brochure sent to Rep Loss areas in July 2017.	Lisa Foster

**Pinellas County  
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Municipal Outreach Matrix**

Municipality / Entity	Name of Event/Outreach	Description of Event/Outreach	Outreach Method	Target Audience	Target Message	Estimated Population Reached	Date Entered on this Table	Date Last Reviewed	Date Last Updated	Review Comments	Name of Last Reviewer
Belleair Beach	Hurricane Newsletter	Mailed to all property owners in June 1 of each year	Mailing	All property owners	Protect your property from the hazard(s)	1,560	10/2/2014	1/10/2018	8/16/2016		Nancy Gonzalez
Belleair Beach	Flood and Hurricane Awareness	Brochures are kept in magazine rack located in lobby	For residents coming in to the community center	All property owners	Protect your property from the hazard(s)	several hundred	10/2/2014	1/10/2018	8/16/2016		Nancy Gonzalez
Belleair Beach	Flood Facts Brochure	Mailed to all property owners, Realtors, Mortgage Companies, Financial Institutions and Insurance Companies	Mailing	All property owners, Realtors, Mortgage Companies, Financial Institutions and Insurance Companies.	Flood Information	1,000	8/16/2016	1/10/2018	8/16/2016		Nancy Gonzalez
Belleair Beach	Guide	Pinellas County All Hazards Preparedness Guide	Publication	For residents coming in to the community center and in welcome packets for new residents	Steps to preparedness, storm surge, special needs, evacuation zones, during & after the storm	Several hundred	8/17/2017	1/10/2018			Nancy Gonzalez
Belleair Bluffs	Post Disaster Consumer Tips	Publication	Brochure/ Publication	Municipality	Protect your property from the hazard(s)	2,200	10/2/2014	1/10/2018			Robert David
Belleair Bluffs	Know Where You Grow	Publication	Brochure/ Publication	Municipality	Know your risk	2,200	10/2/2014	1/10/2018			Robert David
Belleair Bluffs	Extreme Weather Info Sheet	Publication	Brochure/ Publication	Municipality	Protect your property from the hazard(s)	2,200	10/2/2014	1/10/2018			Robert David
Belleair Bluffs	Surviving the Storm	Publication	Brochure/ Publication	County-wide	Insure your property for your hazard(s)	2,200	10/2/2014	1/10/2018			Robert David
Belleair Bluffs	Belleair Area Neighborhood	Publication	Newsletter	Municipality	Protect natural functions (floodplain; habitat; etc.)	2,200	10/2/2014	1/10/2018			Robert David
Belleair Bluffs	Belleair Bluffs	Publication	Newsletter	Municipality	Protect natural functions (floodplain; habitat; etc.)	2,200	10/2/2014	1/10/2018			Robert David
Belleair Bluffs	Belleair Bluffs	Publication	Newsletter	Municipality	Protect natural functions (floodplain; habitat; etc.)	2,200	10/2/2014	1/10/2018			Robert David
Belleair Bluffs	Belleair Bluffs	Publication	Newsletter	Municipality	Protect natural functions (floodplain; habitat; etc.)	2,200	10/2/2014	1/10/2018			Robert David
Belleair Bluffs	Belleair Bluffs	Website/Publication	Social Media/ Email	Municipality	Protect your property from the hazard(s)	2,200	10/2/2014	1/10/2018			Robert David
Clearwater	Repetitive Loss Area Letter	Sent to 1,251 residences in repetitive loss areas	Mailing	Repetitive Loss Area	Evaluating flood protection measures, flood insurance, be prepared, only rain down the drain, buy flood insurance, know your flood zone	3% of residences	10/4/2016	1/10/2018	10/4/2016		Sarah Kessler
Clearwater	My Clearwater Magazine – Flood Program article	Magazine article – mailed to residences and available at municipal buildings	Mailing					43110	10/4/2016		Sarah Kessler

\*Yellow highlight signifies new project.

**Pinellas County  
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2018 Appendix 7, Table 7-4  
Municipal Outreach Matrix**

Municipality / Entity	Name of Event/Outreach	Description of Event/Outreach	Outreach Method	Target Audience	Target Message	Estimated Population Reached	Date Entered on this Table	Date Last Reviewed	Date Last Updated	Review Comments	Name of Last Reviewer
Clearwater	Handout	All residents		75% of residences	Know your flood risk, purchase flood insurance, register to receive warnings, Only Rain Down the Drain, get building permits, illegal dumping, make an emergency plan, how sea level rise affects your property	10/4/2016 Sarah Kessler			43110	10/4/2016	Sarah Kessler
Clearwater	Extensive Social Media Posts	City post to several accounts on Facebook (City of Clearwater, Clearwater Police Department, Clearwater Fire and Rescue), Twitter (CLW Public Safety), and Instagram (Clearwater Police, Clearwater Fire Rescue)	Social Media	All residents	Turn around don't drown, make a plan, Only Rain down the drain, prepare for the storm, protect your property	30% of residents	10/4/2016	1/10/2018	10/4/2016		Sarah Kessler
Clearwater	Press release – Secure Chemicals before storm	Press release sent out to news agencies	Press release	All residents	Be prepared	10% of residents	10/4/2016	1/10/2018	10/4/2016		Sarah Kessler
Clearwater	Sunshine Line article – Stream Dumping Regulations	Sunshine Lines is a utility stuffer, included with the bill.	Newsletter article	All residents	Only Rain Down the Drain	100% of residents	10/4/2016	1/10/2018	10/4/2016		Sarah Kessler
Clearwater	Sunshine Lines article – Safe Storage During Storm Season	Sunshine Lines is a utility stuffer, included with the bill.	Newsletter article	All residents	Be prepared	100% of residents	10/4/2016	1/10/2018	10/4/2016		Sarah Kessler
Clearwater	Sunshine Lines article – Keep Clearwater Bright and Beautiful	Sunshine Lines is a utility stuffer, included with the bill.	Newsletter article	All residents	Only Rain Down the Drain	100% of residents	10/4/2016	1/10/2018	10/4/2016		Sarah Kessler
Clearwater	Sunshine Lines article – City Offers Flood Protection Assistance	Sunshine Lines is a utility stuffer, included with the bill.	Newsletter article	All residents	Protect property from flood damage	100% of residents	10/4/2016	1/10/2018	10/4/2016		Sarah Kessler
Clearwater	Insurance brochure provided by Florida Department of Emergency Management	Two sided brochure available at City Hall, Municipal Service Building, Main Library, and Fire Station 45.	Brochure	All residents	Purchase flood insurance	5% of residents	10/4/2016	1/10/2018	10/4/2016		Sarah Kessler
Clearwater	Flood Safety brochure provided by Florida Department of Emergency Management	Two sided brochure available at City Hall, Municipal Service Building, Main Library, and Fire Station 45.	Brochure	All residents	Be prepared, Turn around Don't Drown, Know your Hazard	5% of residents	10/4/2016	1/10/2018	10/4/2016		Sarah Kessler
Clearwater	Flood Mitigation brochure provided by Florida Department of Emergency Management	Two sided brochure available at City Hall, Municipal Service Building, Main Library, and Fire Station 45.	Brochure	All residents	Protect floodplains and natural areas, protect dunes, Only Rain Down the Drain, Build responsibly	5% of residents	10/4/2016	1/10/2018	10/4/2016		Sarah Kessler

\*Yellow highlight signifies new project.

**Pinellas County  
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Municipal Outreach Matrix**

Municipality / Entity	Name of Event/Outreach	Description of Event/Outreach	Outreach Method	Target Audience	Target Message	Estimated Population Reached	Date Entered on this Table	Date Last Reviewed	Date Last Updated	Review Comments	Name of Last Reviewer
Clearwater	Storm Drain markers	Storm drain markers are on every storm drain in the City. They are replaced as needed.	Sign	All residents	Only Rain Down the Drain	100% of residents	10/4/2016	1/10/2018	10/4/2016		Sarah Kessler
Clearwater									43110		
Clearwater	Skycrest Neighborhood Association	Community Meeting	Area-Specific Meeting	Municipality	Public Safety Information (ex. Turn Around Don't Drown)	50	8/26/2014	1/10/2018	10/4/2016		Scott Ehlers
Clearwater	Villas of Sunset Grove	Community Meeting	Area-Specific Meeting	Municipality	Public Safety Information (ex. Turn Around Don't Drown)	50	8/26/2014	1/10/2018	10/4/2016		Scott Ehlers
Clearwater	Monthly EM Meetings	Emergency Management Meetings	Roundtable/Forum	Municipality	EM Coordination	25	8/26/2014	1/10/2018	10/4/2016		Scott Ehlers
Clearwater	Hurricane Season Information	City Website Information	Website	Municipality	Know your risk	5,000	8/26/2014	1/10/2018	10/4/2016		Scott Ehlers
Clearwater	Surge Level Signs	Clearwater Beach Newsletter	Newsletter	Floodplain Residents	Public Safety Information (ex. Turn Around Don't Drown)	1,000	8/26/2014	1/10/2018	10/4/2016		Scott Ehlers
Clearwater	Floodplain Management Information	City Website Information	Website	Municipality	Know your risk	5,000	8/26/2014	1/10/2018	10/4/2016		Sarah Josuns
Clearwater	Flooding Information	City Website Information	Website	Municipality	Know your risk	5,000	8/26/2014	1/10/2018	10/4/2016		Sarah Josuns
Clearwater	Flood Flyer	Inform about flood hazards	Mailing	Repetitive Loss Properties, Floodplain Residents, Insurance	Know your risk	14,980	8/26/2014	1/10/2018	10/4/2016		Sarah Josuns
Clearwater	Flood Flyer	Inform about protective measures	Mailing	Repetitive Loss Properties, Floodplain Residents, Insurance	Public Safety Information (ex. Turn Around Don't Drown)	14,980	8/26/2014	1/10/2018	10/4/2016		Sarah Josuns
Clearwater	Loss Mitigation	Utility newsletter	Mailing	Municipality	Make your Family/ Business Disaster Plan	49,000	8/26/2014	1/10/2018	10/4/2016		Sarah Josuns
Clearwater									43110		
Dunedin	Flood Awareness	Color 2-pg insert in Dunedin Beacon	Home delivery to all residents	Municipality	Informational	36,000	8/29/2014	1/10/2018			Joan McHale
Dunedin	Map Information Services	Postcard	Mailing	Banks, Insurance, Realtors	Know your risk	148	8/29/2014	1/10/2018			Joan McHale
Dunedin	Flood Preparation	Letter	Mailing	Facilities with flammable/toxic storage	Protect your property from the hazard(s)	30	8/29/2014	1/10/2018			Joan McHale
Dunedin	Flood Preparation	Letter	Mailing	Realtors	Purchase of Flood Insurance	11	8/29/2014	1/10/2018			Joan McHale
Dunedin	Repetitive Loss Information	Letter	Mailing	Repetitive Loss Properties	Informational	210	8/29/2014	1/10/2018			Joan McHale
Dunedin	Website	On-going information on Flood Awareness	Website (Both Fire & Planning Dept.)	Municipality	Informational	36,000	8/29/2014	1/10/2018			Joan McHale
Dunedin	Flood Insurance Info	Meeting to discuss Flood Insurance	Community Event Advertised on City website	Floodplain Residents	Insure your property for your hazard(s)	35	8/29/2014	1/10/2018			Joan McHale
Dunedin	BRACE for the Storm	Internet based information	Internet based information	Municipality	Storm preparation	200	8/29/2014	1/10/2018			Joan McHale
Dunedin	Flood zone lookup	Internet based information	Website - City GIS	Municipality	Know your risk	36,000	8/29/2014	1/10/2018			Joan McHale

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Dunedin	Website	Map determination revision notice	Website, Newspaper (Tampa Bay Times)	Bella Costa Condominiums/ Mediterranean Manor	LOMR for targeted area	300	8/29/2014	1/10/2018			Joan McHale
Gulfport	Annual Hurricane Seminar	Community venue	Community-wide event and later aired on GTV Channel 615	Municipality	Property and family protection from hazards	14,000	9/10/2014	1/10/2018			Michael Taylor, AICP
Gulfport	Flood Hazard Information Brochure	Brochure insert with utility bills	Brochure/Publication	Municipality	Protect your property from the hazard(s)	11,400	9/10/2014	1/10/2018			Michael Taylor, AICP
Gulfport	Flood Protection Newsletter	Separate mail out to all floodplain properties	Mailing	Floodplain Residents	Protect your property from the hazard(s)	8,400	9/10/2014	1/10/2018			Michael Taylor, AICP
Gulfport	Flood Protection Newsletter	Separate mail out to all repetitive loss areas	Mailing	Repetitive Loss Areas	Protect your property from the hazard(s)	200	9/10/2014	1/10/2018			Michael Taylor, AICP
Gulfport	Flood Protection Newsletter	Separate mail out to all repetitive loss properties	Mailing	Repetitive Loss Properties	Protect your property from the hazard(s)	30	9/10/2014	1/10/2018			Michael Taylor, AICP
Gulfport	Mail out to banks, insurance companies, real estate companies, & contractors located within the City	Letter focusing on available hazard information and City services for mitigation	Mailing	Businesses	Insure your property for your hazard(s)	1,000	9/10/2014	1/10/2018			Michael Taylor, AICP
Gulfport	GTV Channel 615	Gulfport television station	Hazard protection television programming	Municipality	Hazard mitigation for property and family	14,000	9/10/2014	1/10/2018			Michael Taylor, AICP
Gulfport	Storm surge high water mark signage	6 high water, storm surge markers placed in areas of known flooding throughout the City	Signage	Municipality	Know your risk	14,000	9/10/2014	1/10/2018			Michael Taylor, AICP
Gulfport	Gulfport City Library	Hazard and mitigation reference materials, and FIRMs on-file for review	Books, brochures, information sheets, and FIRMs for patrons to review	Municipality	Property and family protection from hazards	14,000	9/10/2014	1/10/2018			Michael Taylor, AICP
Gulfport	Gulfport website: www.mygulfport.us	Flood and hazard mitigation information	Website	Municipality	Build Responsibly	14,000	9/10/2014	1/10/2018			Michael Taylor, AICP
Gulfport	Surviving The Storm	Distribution of publication in City facilities and Annual Hurricane Seminar	Publication	County-wide	Public Safety Information (ex. Turn Around Don't Drown)	14,000	9/10/2014	1/10/2018			Michael Taylor, AICP
Gulfport	Public Outreach Strategy	City staff and residents participate on a committee focusing on outreach for hazard mitigation	Community Event	Municipality	Build Responsibly	14,000	9/10/2014	1/10/2018			Michael Taylor, AICP

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Gulfport	City staff site visits	City staff will meet with property owners upon request to assist with property hazard mitigation	Area-Specific Meeting	Municipality	Protect your property from the hazard(s)	8,400	9/10/2014	1/10/2018			Michael Taylor, AICP
Gulfport	Annual LMS Report to City Council	City staff presents the annual LMS, floodplain management planning update to City Council	Presentation to Governing Body	Municipality	Comprehensive hazard risk identification and mitigation	14,000	9/10/2014	1/10/2018			Michael Taylor, AICP
Indian Rocks Beach	Brochures in City Hall lobby	Numerous brochures related to flooding, natural benefits of floodplains, stormwater, etc.	Brochures for pick-up by visitors	Entire Community	10 CRS Topics from 2013 CRS Manual.		9/2/2014	1/10/2018	10/9/2017		Dean Scharmen
Indian Rocks Beach	Flood-related materials cataloged in IRB Library	Documents, booklets, brochures, etc. available at library	General Outreach	Entire Community	10 documents listed in 2013 CRS Manual and numerous other documents		9/2/2014	1/10/2018	10/9/2017		Dean Scharmen
Indian Rocks Beach	City of Indian Rocks Beach website	Flood information on City website	website	Entire Community	10 CRS Topics from 2013 CRS Manual		9/2/2014	1/10/2018	10/9/2017		Dean Scharmen
Indian Rocks Beach	City Newsletter to Repetitive Loss Areas	Information in City Newsletter mailed to properties in repetitive loss areas	Newsletter mailed to every address in IRB	repetitive loss properties identified by FEMA and neighboring properties susceptible to same flood hazards	Property Protection, Flood Hazard, flood safety, financial assistance	4800	9/2/2014	1/10/2018	10/9/2017		Dean Scharmen
Indian Rocks Beach	Bi-monthly Indian Rocks Beach Times newsletter	Flood-related articles	Newsletter mailed to every address in IRB	Entire Community	10 CRS Topics	4,800	9/2/2014	1/10/2018	10/9/2017		Dean Scharmen
Indian Rocks Beach	Belleair Bee Newspaper	Articles	General	Entire Community	Natural functions of floodplains/Build Responsibly	4,800	10/9/2017	1/10/2018			Dean Scharmen
Indian Rocks Beach	Social Media Posts	Social Media	Web	Entire Community	9 Topics (all except Natural Functions of Floodplains)	4,800	10/9/2017	1/10/2018		City and Stakeholder social media posts	Dean Scharmen
Indian Rocks Beach	Rotary Club Presentations	Presentation at Member Meeting	General	Business Community	9 Topics (all except Natural Functions of Floodplains)	50	10/9/2017	1/10/2018			Dean Scharmen
Indian Rocks Beach	Welcome Packet	Brochures in new resident welcome packet	General	Entire Community	10 Topics	30	10/9/2017	1/10/2018			Dean Scharmen
Indian Rocks Beach	Brochures for pickup in Public Services Office	Brochures on display	Informational	Entire Community	10 Topics	50	10/9/2017	1/10/2018			Dean Scharmen
Indian Shores	Brochures in City Hall	Numerous brochures related to the National Flood Insurance Program[1],	Brochures/Publications	Walk-in visitors to Town Hall	Preparation and awareness	1,423	9/16/2014	1/10/2018			Michelle Tidwell
Indian Shores	Town of Indian Shores website	2007 - 2008 Winter NFIP, CRS Update, Annual Progress Report 510, 2008 [2]	Website	Indian Shores Residents	Preparation and awareness	1,423	9/16/2014	1/10/2018			Michelle Tidwell

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Indian Shores	Hurricane Awareness Party	Guest Speakers: Meteorologist; Brian McClure from Bay News 9 and Pinellas County Emergency Management	Community Event	County-wide	Preparation and awareness	1,423	9/16/2014	1/10/2018			Michelle Tidwell
Indian Shores	Newsletter	Newsletter with flood information twice per year	Newsletter	Indian Shores Residents	Know your risk	2,500	9/16/2014	1/10/2018			Michelle Tidwell
Largo	Imperial Palms Hurricane Preparedness (6/11/14)	Neighborhood meeting to discuss hurricane preparedness	Community Event	Municipality	Risk Assessment/ Preparation and Recovery Planning	100	8/20/2014	1/10/2018	9/19/2016		Doug Swartz
Largo	Preparing Business for disasters and recovery (6/18/14)	Meet with Central Pinellas Chamber of Commerce to discuss steps for businesses to take for planning and preparation as well as recovery.	Roundtable/Forum	Businesses	Make your Family/ Business Disaster Plan	200	8/20/2014	1/10/2018	9/19/2016		Doug Swartz
Largo	HomeBanc Belleair (5/27/14)	Meeting with Business to discuss preparedness	Community Event	Business	Risk Assessment/ Preparation and Recovery Planning	10	10/31/2014	1/10/2018	9/19/2016		Betti Johnson
Largo	Royal Palms Hurricane Preparedness (6/24/14)	Neighborhood meeting to discuss hurricane preparedness	Community Event	Municipality	Risk Assessment/ Preparation and Recovery Planning	250	8/20/2014	1/10/2018	9/19/2016		Doug Swartz
Largo	Palm Hill MHP Hurricane Preparedness (6/18/14)	Neighborhood meeting to discuss hurricane preparedness	Community Event	Municipality	Risk Assessment/ Preparation and Recovery Planning	150	8/20/2014	1/10/2018	9/19/2016		Doug Swartz
Largo	Community Awareness Campaign (ongoing)	Video series links on City web site	Website	Municipality	Risk Assessment/ Preparation and Recovery Planning		8/20/2014	1/10/2018	9/19/2016		Doug Swartz
Largo	BRACE for the Storm (May 6, 2014)	Internet based workshop to provide homeowners with an understanding of how to make their home safe from the next Hurricane and other disaster that threaten Florida residents.	Community Event	Municipality	Protect your property from the hazard(s)	1,600	8/21/2014	1/10/2018	9/19/2016		Johan Hendricks on
Largo	Annual Flood Mailing	Mail out to properties within the SFHA regarding risks, flood insurance benefits, natural and beneficial floodplains, development permit requirements and City of Largo Flood Zone map.	Mailing	Floodplain Residents	Know your risk	2,200	8/21/2014	1/10/2018	9/19/2016		Johan Hendricks on
Largo	Largo Fire Open House	Open House to provide homeowners with an understanding of how to make their home safe from the next Hurricane and other disaster that threaten Florida residents.	Community Event	Municipality	Risk Assessment/ Preparation and Recovery Planning	1500	10/31/2014	1/10/2018	9/19/2016		Betti Johnson

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Largo	Repetitive Loss Mailing	Mail out to Repetitive Loss properties within City regarding risks, flood insurance benefits, natural and beneficial floodplains, development permit requirements and City of Largo Flood Zone map.	Mailing	Repetitive Loss Properties	Know your risk	7	8/26/2014	1/10/2018	9/19/2016		Johan Hendricks on
Largo	Central Pinellas Business Showcase	Business-to-Business and Business-to-Consumer Expo. Provided NFIP brochures.	Community Event	Businesses	Insure your property for your hazard(s)	1,500	8/26/2014	1/10/2018	9/19/2016		Johan Hendricks on
Largo	Emergency Preparedness City of Largo Website	Preparation/Checklists/NHC Videos/Evacuation/Shelters/Pet Safety/Links to other Resources	Website	Municipality	Public Safety Information (ex. Turn Around Don't Drown)		8/26/2014	1/10/2018	9/19/2016		Johan Hendricks on
Largo	Floodplains: City of Largo Website	Terms & Definitions/Links to Resources/CRS Annual Floodplain Management Plan Update/FEMA link to FIRM's/View Elevation Certificates online	Website	Municipality	Protect your property from the hazard(s)		8/26/2014	1/10/2018	9/19/2016		Johan Hendricks on
Largo	Guide	2014 Pinellas County Hurricane Guide	Brochure/Publication	Municipality	All-Hazard Preparedness, Recovery Guide		8/26/2014	1/10/2018	9/19/2016		Johan Hendricks on
Largo	Flood: Are You Protected From The Next Disaster?	FEMA/NFIP Brochure- Flood Insurance	Brochure/Publication	Municipality	Insure your property for your hazard(s)		8/27/2014	1/10/2018	9/19/2016		Johan Hendricks on
Largo	NFIP/CRS Saving: Lives, Property, Money	NFIP/CRS Brochure - What is NFIP, CRS? Community participation and benefits of CRS.	Brochure/Publication	Municipality	Insure your property for your hazard(s)		8/27/2014	1/10/2018	9/19/2016		Johan Hendricks on
Largo	Annual Lakes & Ponds Education Day (April 12, 2014)	Workshop for volunteers and citizens interested in the health and management of our water resources, specifically community lakes and stormwater ponds. (67 participants)	Community Event	County-wide	Protect natural functions (floodplain; habitat; etc.)		8/27/2014	1/10/2018	9/19/2016		Johan Hendricks on
Largo	Stress Relievers – Hurricane Recovery Focus (May 20, 2015)	Condo Association Managers Luncheon	Community Event	Condominium Management	Disaster Recovery	20	9/19/2016	1/10/2018	9/19/2016		David Mixson
Largo	Largo Annual Hurricane Expo (May 28, 2015)	Workshop followed by an ask the experts panel	Live presentation	Largo residents and business owners	Hurricane Preparedness	25 Citizens	9/19/2016	1/10/2018	9/19/2016		David Mixson
Largo	National Hurricane Week	Educational outreach utilizing Ready.gov	Social Media (Facebook and Twitter)	Citywide	Hurricane Preparedness	Unlimited	9/19/2016	1/10/2018	9/19/2016		David Mixson

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Largo	Emergency Management for Businesses (June 1, 2015)	Information letter sent to all city businesses from EM	Direct Mailing	Largo Business	Emergency Management	4,000	9/19/2016	1/10/2018	9/19/2016		David Mixson
Largo	Largo V News (2015 Hurricane Season)	Video clips recorded for citizen access on city website	www.largo.com	Citywide	Hurricane Preparedness	Unlimited	9/19/2016	1/10/2018	9/19/2016		David Mixson
Largo	Hurricane Preparation	Educational outreach	Community presentation	Imperial Palms Residents	Hurricane Preparedness	44	9/19/2016	1/10/2018	9/19/2016		David Mixson
Largo	Largo Fire Rescue Open House (October 17, 2015)	Informational display staffed by EM professionals. Handouts provided	Community Event	Largo residents	Disaster Preparedness	2,500	9/19/2016	1/10/2018	9/19/2016		David Mixson
Largo	Largo Small Business event (November 4, 2015)	Informational display staffed by EM professionals. Handouts provided.	Community Event	Largo Businesses	Disaster Plan for Business	20	9/19/2016	1/10/2018	9/19/2016		David Mixson
Largo	Active Shooter Awareness (December 21, 18 2015)	Information provided and mini tent card for Active Shooter event	City Bulletin (Electronic)	City of Largo Employees	Active Shooter Training	800	9/19/2016	1/10/2018	9/19/2016		David Mixson
Largo	Emergency Management Updates/News and Notice Items (Feb 08, 2016-Sep. 19 2016) Continuously Updated	Educational Outreach via web links infographics, and videos.	www.largo.com	Largo Residents-City Wide		1,606	9/19/2016	1/10/2018	9/19/2016		Summer Mahr
Largo	Facebook/Twitter outreach (Feb 08, 2016-Sep. 19 2016) Continuously Updated	Educational Outreach via web links, infographics, and videos.	Facebook	County-Wide	El Nino, Zika Awareness, Alert Pinellas, Hurricane Prep, Floods, Heatstroke, National Prep Month	20,949	9/19/2016	1/10/2018	9/19/2016		Summer Mahr
Largo	Hurricane Preparation / Public Education (April 17, 2016)	Educational outreach	Community presentation	Ranch MHP	Hurricane Preparedness	45	9/19/2016	1/10/2018	9/19/2016		Summer Mahr
Largo	Hurricane Preparation / Public Education (May 6, 2016)	Educational outreach	Community presentation	Imperial Palms Residents	Hurricane Preparedness	50	9/19/2016	1/10/2018	9/19/2016		Summer Mahr
Largo	Hurricane Preparation / Public Education (May 10, 2016)	Educational outreach	Community presentation	Teakwood East	Hurricane Preparedness	100	9/19/2016	1/10/2018	9/19/2016		Summer Mahr
Largo	Largo Annual Hurricane Expo (May 26, 2016)	Educational outreach/Workshop followed by ask the expert panel	Community presentation	Largo Residents and Business Owners-at Largo Public Library	Hurricane Preparedness	50	9/19/2016	1/10/2018	9/19/2016		Summer Mahr
Largo	Hurricane Preparation / Public Education (May 27, 2016)	Educational outreach	Community presentation	Pinellas Heights	Hurricane Preparedness	20	9/19/2016	1/10/2018	9/19/2016		Summer Mahr
Largo	Hurricane Preparation / Public Education (June 7, 2016)	Educational outreach	Community presentation	Teakwood West	Hurricane Preparedness	80	9/19/2016	1/10/2018	9/19/2016		Summer Mahr
Largo	Hurricane Preparation / Public Education (June 18, 2016)	Educational outreach	Community presentation	Oak Crest MHP	Hurricane Preparedness	60	9/19/2016	1/10/2018	9/19/2016		Summer Mahr
Largo	Hurricane Preparation / Public Education (June 22, 2016)	Educational outreach	Community presentation	Pelican Place Condos	Hurricane Preparedness	20	9/19/2016	1/10/2018	9/19/2016		Summer Mahr
Largo	Hurricane Preparation / Public Education (June 30, 2016)	Educational outreach	Community presentation	The Barrington	Hurricane Preparedness	25	9/19/2016	1/10/2018	9/19/2016		Summer Mahr
Largo	Hurricane Preparation / Public Education (September 14, 2016)	Educational outreach	Community presentation	Four Seasons	Hurricane Preparedness	40	9/19/2016	1/10/2018	9/19/2016		Summer Mahr

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Largo	Hurricane Door Hanger Project Aug-Present (continuous project)	Educational Door hanger	Canvas of door hangers to residents in different evacuation zones (starting with "A")	City Residents	Hurricane Preparedness	5000	9/19/2016	1/10/2018	9/19/2016		Summer Mahr
Largo	Pinellas County All Hazards Guide Distribution	Educational Newspaper Guide	Various Educational Outreach Events and Expos	City Residents	Hurricane Preparedness	800	9/19/2016	1/10/2018	9/19/2016		Summer Mahr
Largo	The Barrington Health and Safety Fair (October 6, 2016)	Distributed All Hazards Guides and hurricane safety information	Community Event	Barrington Residents	Hurricane Preparedness	25	10/24/2017	1/10/2018			Summer Mahr
Largo	Largo Fire Rescue Open House (October 17, 2016)	Pinellas County Emergency Management and Largo Public Education had a table set up distributing Hurricane Preparedness Information	Community Event	Citizens of Largo and nearby municipalities	Hurricane Preparedness-knowing what to do before during and after the storm	600	10/24/2017	1/10/2018			Summer Mahr
Largo	Largo Business Night (November 2, 2016)	Distributed Hurricane Preparedness information as well as FL Get a Plan! Info, for business preparedness plans.	Community Event	City of Largo Business Owners	Hurricane Preparedness for Business Owners	35	10/24/2017	1/10/2018			Summer Mahr
Largo	Veteran's Day Celebration (11/11/16)	Had a safety table set up and distributed hurricane preparedness information	Community Event	Largo Citizens	Hurricane Preparedness	50	10/24/2017	1/10/2018			Summer Mahr
Largo	Largo Police Department Safety Day (11/12/16)	Had a safety table set up and distributed hurricane preparedness information	Community Event	Largo Citizens	Hurricane Preparedness	100	10/24/2017	1/10/2018			Summer Mahr
Largo	Duke Energy Safety Fair (11/17/16)	Had a safety table set up and distributed hurricane preparedness information	Community Event	Duke Energy Employees	Hurricane Preparedness	100	10/24/2017	1/10/2018			Summer Mahr
Largo	Fairway Village Safety Fair (2/21/17)	Had a safety table set up and distributed hurricane preparedness information	Community Event	Fairway Village Residents	Hurricane Preparedness	400	10/24/2017	1/10/2018			Summer Mahr
Largo	Hurricane Preparation Presentation Teakwood Village East (4/11/17)	Educational outreach to give preparedness information for before, during, and after the storm	Community Presentation	Teakwood Village East	Hurricane Preparedness	120	10/24/2017	1/10/2018			Summer Mahr
Largo	Hurricane Preparation Presentation Pinellas Heights (5/18/17)	Educational outreach to give preparedness information for before, during, and after the storm	Community Presentation	Pinellas Heights	Hurricane Preparedness	25	10/24/2017	1/10/2018			Summer Mahr
Largo	SCC Software Health Fair (5/19/16)	Had a safety table set up and distributed hurricane preparedness information	Community Event	SCC Software Employees	Hurricane Preparedness	200	10/24/2017	1/10/2018			Summer Mahr

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Largo	Hurricane Preparation Presentation Palm Hill North (5/22/17)	Educational outreach to give preparedness information for before, during, and after the storm	Community Presentation	Palm Hill North	Hurricane Preparedness	80	10/24/2017	1/10/2018			Summer Mahr
Largo	Hurricane Preparation Presentation Palm Hill South (5/24/17)	Educational outreach to give preparedness information for before, during, and after the storm	Community Presentation	Palm Hill South	Hurricane Preparedness	60	10/24/2017	1/10/2018			Summer Mahr
Largo	Annual Hurricane Preparedness Event at Largo Public Library (5/26/17)	Educated citizens and business owners on how to prepare before, during and after a hurricane. Guests had the opportunity to visit table vendors as well. Pinellas County Emergency Mangement and State of Florida EM joined the event on the ask the expert panel	Community Presentation	Citizens County Wide-invited to join	Hurricane Preparedness	100	10/24/2017	1/10/2018			Summer Mahr
Largo	Hurricane Preparation Presentation Imperial Palms Senior Apartments (6/02/17)	Educational outreach to give preparedness information for before, during, and after the storm	Community Presentation	Imperial Palms Residents	Hurricane Preparedness	50	10/24/2017	1/10/2018			Summer Mahr
Largo	Hurricane Preparation Presentation Glenwood Estates Mobile Home Park (6/10/17)	Educational outreach to give preparedness information for before, during, and after the storm	Community Presentation	Glenwood Estates Residents	Hurricane Preparedness	60	10/24/2017	1/10/2018			Summer Mahr
Largo	Hurricane Preparation Presentation The Barrington ALF (6/28/17)	Educational outreach to give preparedness information for before, during, and after the storm	Community Presentation	The Barrington Residents	Hurricane Preparedness	30	10/24/2017	1/10/2018			Summer Mahr
Largo	Hurricane Preparedness Preparation Presentation for Retired Employees of Pinellas County at Applebees on East Bay (7/10/17)	Educational outreach to give preparedness information for before, during, and after the storm	Community Presentation	Pinellas County Residents	Hurricane Preparedness	30	10/24/2017	1/10/2018			Summer Mahr
Largo	Hurricane Preparation Presentation El Dorado Village Mobile Home Park (7/11/17)	Educational outreach to give preparedness information for before, during, and after the storm	Community Presentation	El Dorado Village Residents	Hurricane Preparedness	40	10/24/2017	1/10/2018			Summer Mahr
Largo	Hurricane Preparation Presentation Four Seasons Mobile Home Park (7/19/17)	Educational outreach to give preparedness information for before, during, and after the storm	Community Presentation	Four Seasons Residents	Hurricane Preparedness	60	10/24/2017	1/10/2018			Summer Mahr

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Largo	FarmShare Event (7/28/17)	Had a safety table set up and distributed hurricane preparedness information	Community Event	Pinellas County and Largo Residents	Hurricane Preparedness	400	10/24/2017	1/10/2018			Summer Mahr
Largo	After the Storm-Post Irma Hurricane Q and A El Dorado Village Mobile Home Park (9/21/17)	Distributed educational information and resources for post storm assistance. Educated on lessons learned from the storm, safety tips learned during the storm, and post storm analysis discussion.	Community Presentation	El Dorado Village Residents	Hurricane Preparedness-Post Storm Discussion	60	10/24/2017	1/10/2018			Summer Mahr
Largo	Largo Fire Rescue Open House (October 14, 2017)	Pinellas County Emergency Management and Largo Public Education had a table set up distributing Hurricane Preparedness Information	Community Event	Citizens of Largo and nearby municipalities, County-Wide	Hurricane Preparedness-knowing what to do before during and after the storm	1200	10/24/2017	1/10/2018			Summer Mahr
Largo	Facebook/Twitter outreach (Sep 19, 2016-Oct 24 2017) Continuously Updated	Educational Outreach via web links, infographics, and videos.	Facebook, Twitter	Citizens of Largo and nearby municipalities, County-wide	El Nino, Alert Pinellas, Zika, Hurricane Preparedness, Heatstroke, Floods, National Prep Month, Hurricane Irma Updates	Over 20,000	10/24/2017	1/10/2018			Summer Mahr
Largo	Hurricane Door Hanger Project, Aug-Present, (continuous project)	Educational Door hanger	Canvas of door hangers to residents in different evacuation zones (starting with "A")	City Residents	Hurricane Preparedness	5000	10/24/2017	1/10/2018			Summer Mahr
Largo	Pinellas County All Hazards Guide Distribution	Educational Newspaper Guide	Various Educational Outreach Events and Expos	City Residents	Hurricane Preparedness	800	10/24/2017	1/10/2018			Summer Mahr
Madeira Beach	Annual "Flood Facts" Full Page Ad in Beach Beacon Newspaper	Newspaper Outreach Citywide	Delivered to every home and business in Madeira Beach. Extras in racks around town.	Citywide and rest of Beach Beacon circulation area. Residents and visitors.	Protect your property from the hazard(s)	4,300	9/19/2014	1/10/2018	9/19/2016		Michelle Orton
Madeira Beach	FEMA FMA 2016 Grant Cycle Outreach	Outreach meeting with State DEM to encourage FMA grant applications for Severe and Repetitive Loss Properties.	Delivered to every home and business in Madeira Beach. Extras in racks around town.	Cities of Madeira Beach and Redington Beach - owners of property.	Outreach to encourage and assist owners of vulnerable properties in seeking FMA Grants.	7,500	9/19/2014	1/10/2018	9/19/2016		Michelle Orton

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Madeira Beach	The Wave - Newsletter	Quarterly City Newsletter - Various Articles	Delivered to every home and business in Madeira Beach. Extras in racks around town. Posted on City Website. Mailed to seasonal residents upon request.	Citywide - owners of property, residents, visitors.	Varied - CRS, NPDES, Drainage and Stormwater repairs, Flooding Issues, Stormwater Runoff, for example.	4,300	9/19/2014	1/10/2018	9/19/2016		Michelle Orton
Madeira Beach	Letters to owners of properties within repetitive loss areas.	Annual outreach. Education and where to go for more information.	USPS - First Class Mail	Owners of property that is located within areas of high risk of flooding.	Insure your property for your hazard(s)	4,300	9/19/2104	1/10/2018	9/19/2016		Michelle Orton
Madeira Beach	Letters to lenders and insurance agents regarding Madeira Beach and Flood Insurance.	Annual outreach. Educational and where to go for more information.	USPS - First Class Mail	Lenders and Insurance agents letting them know about Madeira Beach's efforts relative to special flood hazard areas.	Insure your property for your hazard(s)	4,300	9/19/2014	1/10/2018	9/19/2016		Michelle Orton
Madeira Beach	Hurricane Workshop by the MB Fire Department	Annual outreach. Education on where to go and what to do during a tropical event.	Posted on City Website, bulletin board and flyers are placed in racks around town.	Owners of property that is located within areas of high risk of flooding.	Flooding issues, emergency preparedness, and evacuation. Access to property after the event.	4,300	10/6/2016	1/10/2018	10/6/2016		Michelle Orton
Madeira Beach	Flyers – A Guide to Flood Mitigation	Informational flyers	Displayed in (5) public locations around town.	All residents in high risk flooding and tourist.	What is Mitigation, Build responsibly and protect Natural Floodplain Resources	4,300	10/6/2016	1/10/2018	10/6/2016		Michelle Orton
Madeira Beach	Flyers – Did you know homeowner’s insurance does not cover a flood?	Informational flyers	Displayed in (5) public locations around town	All residents in high risk flooding and tourists.	Did you know homeowner’s insurance does not cover a flood? Insure your property against flooding.	4,300	10/6/2016	1/10/2018	10/6/2016		Michelle Orton
Madeira Beach	Flyers – A guide to flood safety.	Informational flyers	Displayed in (5) public locations around town	All residents in high risk flooding and tourists	A guide to flood safety. Know your hazard. Turn around, don’t drown. Flood watch vs. flood warning, flood safety tips.	4,300	10/6/2016	1/10/2018	10/6/2016		Michelle Orton
Madeira Beach	Education at local school	Annual outreach. Presenting students with information regarding flooding and natural disasters.	Displayed on schools outside reader board, city website, city reader board, schools website and flyers at the school.	All students in high risk flooding.	Flooding, natural disasters, how to stay safe, Turn around don’t drown. How to stay safe and what to do and what not to do during a natural disaster		10/6/2016	1/10/2018	10/6/2016		Michelle Orton

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North Redington Beach	NRB News	Annual Newsletter	Mailing	Municipality	Protect your property from the hazard, know your risk, insure your property, public safety information, build responsibility, protect natural functions, make your family/ business disaster plan, hurricane information	1,150	8/20/2014	1/10/2018			Renee Schmader
North Redington Beach	You live in a Special Flood Hazard Area	Annual Flyer	Mailing	Municipality	Protect your property from the hazard, know your risk, insure your property, public safety information, build responsibility, protect natural functions, make your family/ business disaster plan, hurricane information	1,150	8/20/2014	1/10/2018			Renee Schmader
North Redington Beach	Town Website	Website	Website	Municipality	Protect your property from the hazard, know your risk, insure your property, public safety information, build responsibility, protect natural functions, make your family/ business disaster plan, hurricane information	1,150	8/20/2014	1/10/2018			Renee Schmader
North Redington Beach	After the Flood	Door Flyer	Hand Delivery after a flood event	Municipality	Protect your property from the hazard, know your risk, insure your property, public safety information, build responsibility, protect natural functions, make your family/ business disaster plan, hurricane information.	1,150	8/20/2014	1/10/2018			Renee Schmader
Oldsmar	Building permit brochure with SFHA map	Information for construction within the SFHA	Brochure/Publication	Floodplain Residents	Build Responsibly	8,500	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Surviving the Storm - Pinellas County Hurricane Guide	Hurricane Guide available at City facilities	Brochure/Publication	County-wide	Public Safety Information (ex. Turn Around Don't Drown)	920,000	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Flood information in Community News	Hurricane Guide printed in newspaper	Brochure/Publication	Residents in North County	Public Safety Information (ex. Turn Around Don't Drown)	50,000	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Storm Surge Banner	Storm Surge banner hanging in Library	Visible to Library patrons	Municipality	Know your risk	112,335	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Flood information links on website	Links to flood information such as FEMA and Pinellas County	Website	Municipality	Protect your property from the hazard(s)	14,000	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Flood Zone Map Flyer	Map of the flood zones in the City	Mailing	Floodplain Residents	Know your risk	8,500	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Mandatory Purchase of Insurance Flyer	Information about who is obligated under law to purchase flood insurance	Mailing	Floodplain Residents	Insure your property for your hazard(s)	8,500	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Flood flyers included in utility bill	Flood zone map flyer and mandatory insurance flyer	Mailing	Municipality	Insure your property for your hazard(s)	14,000	10/16/2014	1/10/2018	12/15/2017		Steven Everitt

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Oldsmar	Code Red notice on utility bills	Service that notifies residents of disaster warnings	Mailing	Municipality	Public Safety Information (ex. Turn Around Don't Drown)	14,000	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	NOAA Extreme Weather information sheet	Information about extreme weather	Brochure/Publication	Municipality	Public Safety Information (ex. Turn Around Don't Drown)	14,000	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Hurricane Season signs on Welcome to Oldsmar signs	Signs placed so motorists know it is hurricane season	Signage	Motorists	Make your Family/ Business Disaster Plan	70,000	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Hurricane planning sign on City Hall sign	Sign placed for motorists to remind them to get an evacuation plan	Signage	Motorists	Make your Family/ Business Disaster Plan	55,000	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Hurricane season notice in Oldsmar Community Online News	General hurricane season begins information	Newsletter	Municipality	Public Safety Information (ex. Turn Around Don't Drown)	20,000	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Information distributed through Upper Tampa Bay Chamber of Commerce	Hurricane information given to business owners	Newsletter	Businesses	Make your Family/ Business Disaster Plan	350	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Elevation Certificates on website	All available elevation certificates on website for download	Website	Floodplain Residents	Build Responsibly	8,500	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Letter sent to all lenders in City	Flood zone map flyer and mandatory insurance flyer included	Mailing	Lending	Know your risk	8	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Letter sent to all real estate agents in City	Flood zone map flyer and mandatory insurance flyer included	Mailing	Real Estate Agents	Know your risk	42	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Letter sent to all insurance companies doing business in the City	Flood zone map flyer and mandatory insurance flyer included	Mailing	Insurance	Insure your property for your hazard(s)	200	10/16/2014	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Citizens Academy	Floodplain presentation to students participating in Citizens Academy	In-person	City Residents	Know your risk	23	10/31/2016	1/10/2018	12/15/2017		Steven Everitt
Oldsmar	Citizens Academy	Floodplain presentation to students participating in Citizens Academy	In-person	City Residents	Know your risk	23	10/31/2016	1/10/2018	12/15/2017		Steven Everitt
Pinellas Park	Country in the Park	Annual Music Festival and Business Exposition. City distributes about 2,200 floodplain and emergency management marketing pieces and brochures annually at this event.	Community Event	County-wide	Hurricane, Storm, and Emergency Preparedness; Protect your family and property from the hazard(s) and to consider insurance	9,000	3/15/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gadamer

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Pinellas Park	FloodWatch	Annual city-wide outreach to ALL businesses and residences in the community by placing and delivering 20,000 inserts into the Pinellas Park Beacon AND placement in newsstands. Done In cooperation with the local newspaper the delivery of a 4 page newspaper insert with color evacuation map.	In cooperation with the local newspaper the delivery of a 4 page newspaper insert with color evacuation map.	Municipality	Target message is flood, storm surge, hurricane, and pollution of waterways (illegal dumping of trash and chemicals) and to consider flood insurance.	City Population is 52,713	5/1/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	SFHA Mailing	Mailing of a letter and a Tip Sheet regarding living within a SFHA	Mailing	Special Flood Hazard Area Residents	Know your hazard (flood) and to consider insurance		6/1/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park						2,568 letters		43110			
Pinellas Park	RLA Mailing	Mailing of a letter and a Tip Sheet regarding living within a RLA	Mailing	Repetitive Loss Areas	Know your hazard (flood) and to consider insurance	283	6/1/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	How to read Flood Maps	Link to National Flood Insurance Program website	Website	Municipality	Insure your property for your hazard(s)	City website experiences about 440,062 hits annually	8/14/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	Elevation Certificates and other Forms	City of Pinellas Park Website	Website	Municipality	Insure your property for your hazard(s)	City website experiences about 440,062 hits annually	8/14/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	Mandatory Insurance Purchase	City of Pinellas Park Website	Website	Insurance	Insure your property for your hazard(s)	City website experiences about 440,062 hits annually	8/14/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	Look Up your Flood Zone	City of Pinellas Park Website	Website	Municipality	Protect your property from the hazard(s)	City website experiences about 440,062 hits annually	8/14/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	Flood Terms	City of Pinellas Park Website	Website	Municipality	Know your risk	City website experiences about 440,062 hits annually	8/14/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	(Prevent Flooding: Only Rain Down the Drain) Illegal Dumping	City of Pinellas Park Website	Website	Municipality	Protect natural functions (floodplain; habitat; etc.)	City website experiences about 440,062 hits annually	8/14/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer

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Pinellas Park	The NFIP Status Book	City of Pinellas Park Website	Website	Municipality	Know your risk	City website experiences about 440,062 hits annually	8/14/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	Grandfathering Rule	City of Pinellas Park Website	Website	Municipality	Insure your property for your hazard(s)	City website experiences about 440,062 hits annually	8/14/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	FloodSmart.Gov	City of Pinellas Park Website	Website	Municipality	Know your risk	City website experiences about 440,062 hits annually	8/14/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	Know Your Evacuation Zones	City of Pinellas Park WebsiteLink to Pinellas County website	Website	County-wide	Know your risk	City website experiences about 440,062 hits annually	8/14/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	Change my flood Zone Designation	City of Pinellas Park Website	Website	Municipality	Insure your property for your hazard(s)	City website experiences about 440,062 hits annually	8/14/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	Hurricanes and Tropical Storms	City of Pinellas Park Website	Website	Municipality	Know your risk	City website experiences about 440,062 hits annually	8/14/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	Thunderstorms &Lightning	City of Pinellas Park Website	Website	Municipality	Know your risk	City website experiences about 440,062 hits annually	8/14/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	Tornadoes	City of Pinellas Park Website	Website	Municipality	Know your risk	City website experiences about 440,062 hits annually	8/14/2014	1/10/2018	10/4/2016		S. Boisvert / K. Gademer
Pinellas Park	Pinellas Park Home Depot Home Preparedness Event	One of the Home Depot periodic educational events to bring first responders and citizens together. City Emergency Management, Fire, Police and others such as American Red Cross had booths and demonstrations. . Children’s workshop, booth with handouts, and laptop with links to emergency topics.	Community Event: Children’s Workshop. Booth with handouts and laptop with links to Emergency Topics	Gneral public	Protect your property from the hazard(s), storm preparedness and evacuation plan(s)	250 attendees	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer

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Pinellas Park	National Hurricane Preparedness Week Campaign	Media campaign, daily posts on Facebook, Nextdoor, and City website, Chamber of Commerce Meetings and brochure distribution	Municipality; Business Event	Municipality, Pinellas Park Business Owners/Chamber Members	City website experiences about 440,062 hits annually, 100 flyers/brochures were distributed to Chamber members	100 members in attendance	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Presentation to Clearwater Cascade MHP, Mainlands #1, 5, & 6	Presentation on Penny for Pinellas capital improvements presentation. This included a discussion of mitigation projects and hurricane preparedness	Presentation by City Staff to mobile home residents	Mobile Home Park Residents	Mitigation Project Discussion and hurricane preparedness	350 attendees	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Floodplain Management Ordinance	City of Pinellas Park Website	Website	Municipality	Protect your property from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Emergency Phone Numbers and Websites	City of Pinellas Park Website	Website	Municipality	Protect your family and property from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Flood Insurance Advocates Program	City of Pinellas Park Website	Website	Municipality	Protect your property from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Homeowners Flood Insurance Affordability Act of 2014	City of Pinellas Park Website	Website	Municipality	Protect your property from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Sand Bag Pick-Up Locations	City of Pinellas Park Website	Website	Municipality	Protect your property from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Power Outage Map	City of Pinellas Park Website	Website	Municipality	Protect your family and property from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	E-Alerts and Staying Connected	City of Pinellas Park Website	Website	Municipality	Protect your family and property from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	NOAA	City of Pinellas Park Website	Website	Municipality	Storm Preparedness	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer

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Pinellas Park	FEMA	Link to Federal Emergency Management Agency Website	Website	Municipality	Hazard, mitigation and flood map information	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Emergency Preparedness Checklist	City of Pinellas Park Website	Website	Municipality	Protect your family and property from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Checklist for People with Mobility Problems	City of Pinellas Park Website	Website	People with Mobility Problems	Protect your family from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Your Family Disaster Plan	City of Pinellas Park Website	Website	Municipality	Protect your family from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Family Disaster Supply Kit	City of Pinellas Park Website	Website	Municipality	Protect your family from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Disaster Preparedness Coloring Book	City of Pinellas Park Website	Website	Parents and Children	Protect your family from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Emergency Preparation for for Businesses	Link to Pinellas County website	Website	Commercial and Industrial Businesses	Protect your employees and property from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Surviving the Storm	City of Pinellas Park Website	Website	Municipality	Protect your family and property from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Avoiding Flood Damage	City of Pinellas Park Website	Website	Municipality	Protect your property from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer
Pinellas Park	Avoiding Hurricane Damage	City of Pinellas Park Website	Website	Municipality	Protect your property from hazard(s)	City website experiences about 440,062 hits annually	10/3/2016	1/10/2018	10/3/2016		S. Boisvert / K. Gademer

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Pinellas Park	National Night Out Event	Annual local educational event to bring first responders and citizens together. The City is participating and distributed FloodWatch brochure, floodplain management, and emergency preparedness brochures at the event.	Community Event	Municipality	Protect your property from the hazard(s)	City population is about 52,713	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	National Hurricane Preparedness Week Campaign	Media Campaign, daily posts on Facebook, NextDoor, and City Website, Chamber of Commerce meeting brochure distribution	Municipality, local businesses	City-wide	Hurricane preparation	City website experiences about 440,062 hits annually, 100 Chamber of Commerce members present	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	National Hurricane Preparedness Week Proclamation and Storm Ready Certification Presentation	Presentation by City staff in front of televised City Council on hurricane preparedness and storm safety	Presentation by City Staff to municipality	Municipality	Hurricane Preparedness and Storm Safety	City population is 52,713	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Quarterly Municipal Emergency Management Coordinators' Meeting	Presentation and discussion of local emergency management topics, best practices, and recommendations for improvements.	Attendance at quarterly meetings	City and Fire District, emergency management coordinators in Pinellas County	Storm Preparation and Safety	50 persons	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Praise Cathedral	Outdoor Storm Preparation and Safety Event	Outdoor Event at Church	City-wide	Storm Preparation and Safety	500 persons	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	4th of July Event, Kenneth City Parade and Park	Discussion and handouts of emergency management brochures	Attendance at 4th of July Festival	County-wide	Storm Preparation and Safety	10,000 persons	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Sacred Heart School Tornado Preparedness Presentation	Presentation by City Emergency Management to the staff at Sacred Heart School	Presentation by City Emergency Management to staff at Sacred Heart School	School Staff	Tornado Preparedness	10 persons	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park									43110		/ K. Gademer
Pinellas Park	Severe Weather Awareness Week Campaign	Media Campaign, daily posts on Facebook, NextDoor, and City Website	Municipality	City-wide	Severe Weather Awareness and Safety	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Storm Preparedness, St. Giles 2	Presentation by City Emergency Management to the residents of St. Giles 2 on hurricane preparedness	Presentation by City Emergency Management to St. Giles 2 residents	Residents of St. Giles 2	Hurricane Preparedness	25 persons	10/16/2017	1/10/2018	10/23/2017		S. Boisvert

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Pinellas Park	Storm Preparedness, St. Giles Manor	Presentation by City Emergency Management to the residents of St. Giles Manor on hurricane preparedness	Presentation by City Emergency Management to St. Giles Manor residents	Residents of St. Giles Manor	Hurricane Preparedness	20 persons	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	St. Petersburg College Job Fair	Emergency Management discussed storm preparedness with and handed out flashlight fobs to job seekers.	Attendance at Job Fair	Job Seekers	Storm Preparation and Safety	200 persons	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Table Top Hurricane Preparedness	Discussion of hurricane preparedness	Table Top Discussion	City Departments	Hurricane Preparedness for the City	50 persons	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Tornado Drill	City Staff participated in the Statewide Tornado Drill	Active Tornado Drill Exercise	City Departments	Tornado Preparedness	534 employees	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Hurricane Preparedness Flyers	Media campaign on hurricane preparedness	Mailing	Municipality	Hurricane Preparedness	34,509 utility billing City residents	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Your Guide to Floodzones	City of Pinellas Park website	Website	Municipality	Insure your property for your hazard(s)	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	All Hazards Preparedness Guide .pdf		Website	Municipality	All hazards, emergency management and preparedness	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	FEMA Application Checklist (English/Spanish) .pdf		Website	Municipality	Storm Preparation	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Post-Disaster Consumer Tips (English/Spanish) .pdf		Website	Municipality	After the storm	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	FEMA Assistance Flyer (English/Spanish) .pdf		Website	Municipality	Assistance for after the storm	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	SBA Disaster Loans-3 Step Process .pdf		Website	Municipality	Business assistance for after the storm	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Twitter	Tweets	Social Media	Municipality	Communication about road closures, flooding, storm updates, evacuation information	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert

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**Pinellas County  
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Municipal Outreach Matrix**

Municipality / Entity	Name of Event/Outreach	Description of Event/Outreach	Outreach Method	Target Audience	Target Message	Estimated Population Reached	Date Entered on this Table	Date Last Reviewed	Date Last Updated	Review Comments	Name of Last Reviewer
Pinellas Park	Facebook	Posts to City of Pinellas Park's Facebook public page	Social Media	Municipality	Communication about road closures, flooding, storm updates, evacuation information	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Nextdoor	Posts to City of Pinellas Park's Nextdoor neighborhoods' public page	Social Media	Municipality	Communication about road closures, flooding, storm updates, evacuation information	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Pinellas County Emergency Management	Link to website Pinellas County website	Website	County-Wide	General website for all hazards public safety informaiton, websites, links, know your risk, sheltering, preparedness, illegal dumping, natural envionmental functions, and build responsibly	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	www.disasterassistance.gov	Link to Federal Emergency Management Agency website	Website	Municipality	Disaster assistance	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Florida Division of Emergency Management	Link to Florida Division of Emergency Management website	Website	Municipality	All hazards, emergency management and preparedness	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Hurricanes and Tropical Storms	Link to Ready.gov website	Website	Municipality	Know Your Risk	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Thunderstorms and Lightning	Link to Ready.gov website	Website	Municipality	Know Your Risk	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	NFIP/CRS	Link to National Flood Insurance Program website	Website	Municipality	Flood insurance information	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Flood Insurance Rate Maps	Link to National Flood Insurance Program website	Website	Municipality	Flood insurance information	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Flood Proofing Certificate	Link to National Flood Insurance Program website	Website	Municipality	Flood proofing information	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert

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Pinellas Park	Standard Flood Hazard Determination Form	Link to National Flood Insurance Program website	Website	Municipality	Know your flood zone	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	All Hazards NOAA Weather Radio	Link to National Oceanic and Atmospheric Administration website.	Website	Municipality	Tracking storms	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	National Weather Service	Link to National Weather Service website,	Website	Municipality	Tracking storms	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	When Flooded Turn Around Don't Drown Link to the NWS	Link to National Weather Service website,	Website	Municipality	Link to NWS	City website experiences about 440,062 hits annually	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Pinellas Park	Fire Department Open House	Open house event EM outreach materials "Kids Get A Plan" literature and game area. Sponsored by Florida Department of Emergency Management	Event	Municipality	Preparedness; Kids get prepared	Approximately 400	10/16/2017	1/10/2018	10/23/2017		S. Boisvert
Redington Beach	Quarterly Newsletter	Workshops	Town Website / Newsletter	Residents	Protect your property from the hazard(s)	1,427 - per 2010 census	14th August 2014		43110	8/19/2016	Andrea Gamble
Redington Shores	Town of Redington Shores Hurricane preparedness video conference	Video broadcast with community	Webinar/E-Town Hall Meeting	Floodplain Residents	Make your Family/ Business Disaster Plan	2,500	8.25/2014		43110	8/30/2016	Brad Dykens
Redington Shores	Annual Newsletter	Newsletter with flood info 2X per year	Distributed by local paper to all residents	Town residents	What Town residents should know about flood ins. & safety	2,200	8/25/2014	1/10/2018	8/30/2016		Traci Cain
Redington Shores	Repetitive loss letters	Letters to all property owners in flood area (twice a year)	Individual mailings	residents in areas where floods occurred	Contact town with mitigation or grant requests	600	8/25/2014	1/10/2018	8/30/2016		Steve Andrews
Redington Shores	Hurricane Table	Table of over 50 Informative Brochures	Table set up in lobby during Hurricane season	Anyone who enters town hall	Preparation for, awareness of, mitigation, insurance for flood events	1,000	8/25/2014	1/10/2018	8/30/2016		Steve Andrews
Redington Shores	Letters to Realtors, Insurance agents	Letter and insert informing local realtors and insurance agents about town's help	Individual mailings to local agents, realtors	clients of these realtors & agents	Town's assistance available to new clients or buyers	unknown	8/25/2014	1/10/2018	8/30/2016		Steve Andrews
Redington Shores	Revising Website Flood Pages	Website Flood Info: "Brace for the Storm"	Link to "Brace for the Storm" Workshop by City of Largo	any interested residents	Preparation for hurricanes	unknown	8/25/2014	1/10/2018	8/30/2016		Steve Andrews
Redington Shores	Town Hall Flood/Hurricane Preparation Table	During Hurricane Season, a table is set in our lobby offering guides, brochures, fliers, etc.....	List of Publications at Local Library	Residents, interested parties	Various pub. for mitigation, facts, grants, etc.	unknown	8/25/2014	1/10/2018	8/30/2016		Steve Andrews

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Redington Shores	Program for Public Information (PPI)	Six meetings to create an Outreach Program	Multi-Media	Municipality	All Subjects Multi-Hazard (ex. Turn around Don't Drown)	5,000	8/30/2016	1/10/2018	8/30/2016		Steve Andrews
Safety Harbor	Know your hurricane evacuation zone/route	Website GIS Application	Website	Municipality	Make your Family/ Business Disaster Plan	17,200	8/28/2014	1/10/2018	10/21/2016		Debbie Drees
Safety Harbor	Quarterly newsletter	Outreach to residents	Newsletter	Municipality	Protect your property from the hazard(s)	17,200	8/28/2014	1/10/2018	10/21/2016		Debbie Drees
Safety Harbor	Know your flood zone	Website GIS Application	Website	Municipality	Protect natural functions (floodplain; habitat; etc.)	17,200	8/28/2014	1/10/2018	10/21/2016		Debbie Drees
Seminole	Hurricane EXPO 6.7.14	Large venue Community Exposition	Community Event	County-wide	Be prepared, informed and take appropriate actions	2,000	8/25/2014	1/10/2018			Brad Dykens
Seminole	Home Depot Seminole Be Prepared 3.13.14	Large venue Community Exposition	Community Event	Municipality	Make your Family/ Business Disaster Plan	500	8/25/2014	1/10/2018			Brad Dykens
Seminole	Hurricane preparedness 5.29.14	Large group Presentation and table display	Area-Specific Meeting	Hurricane Vulnerable Seniors	Make your Family/ Business Disaster Plan	100	8/25/2014	1/10/2018			Brad Dykens
Seminole	Redington Shores Hurricane preparedness discussion 5.29.14	Large group Presentation and discussion video conference with community	Webinar/E-Town Hall Meeting	Municipality	Make your Family/ Business Disaster Plan	2,500	8/25/2014	1/10/2018			Brad Dykens
Seminole	Neighborly Senior Center 6.16.14	Group presentation	Area-Specific Meeting	Hurricane Vulnerable Seniors	Make your Family/ Business Disaster Plan	50	8/25/2014	1/10/2018			Brad Dykens
Seminole	Heritage Presbyterian Village 6.17.14	Group Presentation	Area-Specific Meeting	Hurricane Vulnerable Seniors	Make your Family/ Business Disaster Plan	200	8/25/2014	1/10/2018			Brad Dykens
Seminole	Seminole ELKS 8.17.14	Group Presentation	Area-Specific Meeting	Floodplain Residents	Make your Family/ Business Disaster Plan	300	8/25/2014	1/10/2018			Brad Dykens
South Pasadena	Health Awareness at new Wal-Mart neighborhood market	Took blood pressures & distributed Hurricane Guides at the store's Health Awareness event	Community Event on 4/26/14	Municipality	Know your risk for BP & Hurricane Preparedness	30	7/29/2014	1/10/2018			Dayton Saltsman
South Pasadena	Hurricane Preparedness PowerPoint & talk	Presentation to residents of large condominium complex - Bay Islands	Area-Specific Meeting on 5/15/14	Hurricane Vulnerable Seniors	Make your Family/ Business Disaster Plan	58	7/29/2014	1/10/2018			Dayton Saltsman
South Pasadena	Hurricane Preparedness PowerPoint & talk	Presentation to residents of large apartment complex - Lutheran residence	Area-Specific Meeting on 5/28/14	Hurricane Vulnerable Seniors	Make your Family/ Business Disaster Plan	14	7/29/2014	1/10/2018			Dayton Saltsman
South Pasadena	Pinellas Economic Development Meeting of 6/26/14	Accompanied Bob Bray for talk to group about LMS and its importance for business community	Other (special interest group meeting)	Businesses	Other (representation on LMS Working Group for stakeholders in post-event recovery)	27	7/29/2014	1/10/2018			Dayton Saltsman
South Pasadena	City Clerk's Assoc. meeting 7/09/14	Value of LMS Working Group representation for cities	Other (special interest group meeting)	Other (city clerks)	Other (representation on LMS Working Group for stakeholders)	10	7/29/2014	1/10/2018			Dayton Saltsman
South Pasadena	Hurricane Presentation	Presentation to residents of large	Area-Specific Meetin	Hurricane Vulnerable Seniors	Make your Family/ Business Disast	75	10/10/2017	1/10/2018	10/10/2017	New Entry	David Mixs
South Pasadena	Hurricane Presentation	Presentation to residents of large	Area-Specific Meetin	Hurricane Vulnerable Seniors	Make your Family/ Business Disast	11	10/10/2017	1/10/2018	10/10/2017	New Entry	David Mixs
South Pasadena	Hurricane Presentation	Presentation to residents of large	Area-Specific Meetin	Hurricane Vulnerable Seniors	Make your Family/ Business Disast	63	10/10/2017	1/10/2018	10/10/2017	New Entry	David Mixs
South Pasadena	Website Outreach	Video – "When the Waves Swell"	Website	Municipality	Hurricane Preparedness	5,100	10/10/2017	1/10/2018	10/10/2017	New Entry	David Mixs

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South Pasadena	Website Outreach	Digital message – “Storm Surge W Website		Municipality	Hurricane Preparedness	5,100	10/10/2017	1/10/2018	10/10/2017	New Entry	David Mixs
South Pasadena	Website Outreach	Digital message – “Evacuation Infoc Website		Municipality	Hurricane Irma Evacuation Informa	5,100	10/10/2017	1/10/2018	10/10/2017	New Entry	David Mixs
St. Pete Beach	Repetitive Loss Areas	Letter	Direct Mailing	Properties located within 1.3	General information about	269	10/3/2016	1/10/2018	10/3/2017		Bruce
St. Pete Beach	Flood Awareness	Website	Website	Municipality	General information regarding all aspects of Flood Protection and	10,000	10/3/2016	1/10/2018	10/3/2017		Bruce Cooper
St. Pete Beach	St Pete Beach is Subject to	Paradise News Insert	Direct Mailing	Municipality	Assistance available, Flood	10,000	10/3/2016	1/10/2018	10/3/2017		Bruce
St. Pete Beach	Lenders, Insurance and Real Estate Agents	Letter	Direct Mailing	Agents	Grant information, Historic Flood Information, Flood Protection	30	10/3/2016	1/10/2018	10/3/2017		Bruce Cooper
St. Petersburg	Flood Brochure	Sent to all residents in Utility Bill	Brochure/Publication	Municipality	Know your risk	91,142	8/18/2014	1/10/2018	9/26/2016		Noah Taylor
St. Petersburg	Flood Brochure	Residents in SFHA	Brochure/Publication	Municipality	Know your risk	46,474	8/18/2014	1/10/2018	9/26/2016		Noah Taylor
St. Petersburg	Website		Website	Municipality	Know your risk	6,555	8/18/2014	1/10/2018	9/26/2016		Noah Taylor
St. Petersburg	Guide	Retrofitting from Flooding	Brochure/Publication	Contractors	Build Responsibly	1	8/18/2014	1/10/2018	9/26/2016		Noah Taylor
St. Petersburg	Guide	Protecting Your Home from Flood Damage	Brochure/Publication	Municipality	Protect your property from the hazard(s)	1	8/18/2014	1/10/2018	9/26/2016		Noah Taylor
St. Petersburg	Guide	Federal Disaster Assistance and National Flood Insurance	Brochure/Publication	Municipality	Insure your property for your hazard(s)	1	8/18/2014	1/10/2018	9/26/2016		Noah Taylor
St. Petersburg	Guide	Emergency Preparedness Guide	Brochure/Publication	Municipality	Know your risk	250	8/18/2014	1/10/2018	9/26/2016		Noah Taylor
St. Petersburg	Hurricane Preparedness Public Education	Hurricane preparedness education provided to neighborhood/ homeowner associations.	In-person Presentation	Residents – Homeowners associations	Be prepared for a hurricane and/or flood event.	300	9/15/2016	1/10/2018	9/15/2016		Amber Boulding
St. Petersburg	Hurricane Preparedness Public Education	Hurricane preparedness education provided to churches	In-person Presentation	Residents – faith-based organizations	Be prepared for a hurricane and/or flood event.	300	9/15/2016	1/10/2018	9/15/2016		Amber Boulding
St. Petersburg	Hurricane Preparedness Public Education	Hurricane preparedness education provided to school groups	Seminar/Classroom Instruction	Students (grade school and college)	Be prepared for a hurricane and/or flood event.	150	9/15/2016	1/10/2018	9/15/2016		Amber Boulding
St. Petersburg	EM Business Education Program	Disaster Preparedness for Small Businesses – offered quarterly	Seminar/Classroom Instruction	Businesses	Make your Business Disaster Plan	100	9/15/2016	1/10/2018	9/15/2016		Amber Boulding
St. Petersburg	Emergency Management Fair	City of St. Petersburg Emergency Management Disaster Preparedness	In-person Presentation	Residents, Students	Emergency Management activities (preparedness, mitigation, and response) in the City of St. Petersburg	150	9/15/2016	1/10/2018	9/15/2016		Amber Boulding
St. Petersburg	Evacuation Program for Residents	WRXB radio interview to go over evacuation and preparedness plans for South St. Pete residents	Radio Interview	Residents	How to be prepared and successfully evacuate if ordered.	2000	9/15/2016	1/10/2018	9/15/2016		Amber Boulding
St. Petersburg	Executive/Policy Group ICS Training	Provide high level NIMS/ICS training to City Leaders	Seminar/Classroom Instruction	Staff	How to manage an emergency at the executive/policy group level	30	9/15/2016	1/10/2018	9/15/2016		Amber Boulding

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Tarpon Springs	Notice to Repetitive Loss Properties	Direct mail annually	Mailing	Repetitive Loss Properties	Know your risk	124	10/10/2014	1/10/2018	9/7/2017		Vicki Russo
Tarpon Springs	Publication Distribution	Surviving the Storm Publication	Publication, Website	Municipality	Know your risk	20,000	10/10/2014	1/10/2018	9/7/2017		Vicki Russo
Tarpon Springs	Hurricane Preparedness	Presentation to Board of Commissioners	Presentation to Governing Body, Website, Facebook	Municipality	Public Safety Information (ex. Turn Around Don't Drown)	25,000	10/10/2014	1/10/2018	9/7/2017		Rick Butcher
Tarpon Springs	Hurricane Preparedness	Emergency Management Plan	Presentation to Governing Body	Municipality	Protect your property from the hazard(s)	15,000	10/10/2014	1/10/2018	9/7/2017		Rick Butcher
Tarpon Springs	Hurricane Preparedness	Handout	Brochure, Publication, Website	Municipality	Public Safety Information (ex. Turn Around Don't Drown)	2,500	10/10/2014	1/10/2018	9/7/2017		Vicki Russo
Tarpon Springs	Pinellas County Emergency Management	Website	Website	County-wide	Other (Please enter TARGET MESSAGE directly into cell)	949,827	10/10/2014	1/10/2018	9/7/2017		Vicki Russo
Tarpon Springs	First Call	Program to contact residents for any type of emergency via cell phone, landline, text and email	Website	Municipality	Public Safety Information (ex. Turn Around Don't Drown)	20,000	10/10/2014	1/10/2018	9/7/2017		Vicki Russo
Tarpon Springs	Emergency Preparedness	Adoption of LMS update: Presentation to Governing Body	Presentation to Governing Body Website	Municipality	LMS Update	1,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Emergency Preparedness	Handout	Brochure / Publication	Municipality	Flood Preparation and Safety	5,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Hurricane Preparedness	Handout	Brochure / Publication	Municipality	Coping with a Flood-Before, During and After	5,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Flood Insurance Information	Handout	Brochure / Publication	Municipality	Why You Need Flood Insurance	5,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Flood Insurance Information	Handout	Brochure / Publication	Municipality	National Flood Insurance Program Nothing Could Dampen the Joy of Home Ownership...	5,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Emergency Preparedness	Handout	Brochure / Publication	Municipality	Who is at Risk for Flooding?	5,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Emergency Preparedness	Handout	Brochure / Publication	Municipality	Flood: Are You Protected from the Next Disaster?	5,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Flood Insurance Information	Handout	Brochure / Publication	Municipality	National Flood Insurance Program: How the NFIP Works	5,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Flood Insurance Information	Handout	Brochure / Publication	Municipality	National Flood Insurance Program: Mandatory Purchase of Flood Insurance Guidelines	5,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo

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Tarpon Springs	Hurricane Preparedness	Handout	Brochure / Publication	Municipality	Be Prepared Checklist	20,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs			Website						43110	9/7/2017	
Tarpon Springs	Hurricane Preparedness	Website	Website	Municipality	Know Your Evacuation Zone, Pinellas County	20,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Hurricane Preparedness	Website	Website	Municipality	Storm Preparation for Debris Removal	20,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Hurricane Preparedness	Website	Brochure	Municipality	Hurricane Services for Elderly and Special Needs Residents	20,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs			Publication						43110	9/7/2017	
Tarpon Springs			Website						43110	9/7/2017	
Tarpon Springs	Emergency Preparedness	Website	Publication	Municipality	Survival Kit Checklist	20,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs			Website						43110	9/7/2017	
Tarpon Springs	Emergency Preparedness	Link to website on Emergency Management Page	Website	Municipality	Pinellas County Emergency Management	20,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Emergency Preparedness	Link to website on Emergency Management Page	Website	Municipality	Florida Department of Emergency Management	20,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Emergency Preparedness	Link to website on Emergency Management Page	Website	Municipality	Federal Emergency Management Agency	20,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Flood Insurance Information	Link to website on Emergency Management Page	Brochure / Publication	Municipality	National Flood Insurance Program	20,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Hurricane Preparedness	Link to website on Emergency Management Page	Website	Municipality	National Hurricane Center	20,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Emergency Preparedness	Link to website on Emergency Management Page	Website	Municipality	Tampa Bay Regional Planning Council Emergency Management	20,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Touch A Truck Event	City event, education on flood zones, evacuation maps, building code	Brochures, Website, Facebook, Twitter	Municipality	FEMA information for residents, building code question availability, evacuation map and flood zone info request availability	25,279	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	

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Tarpon Springs	Hurricane Preparedness	Handout	Publication, Website, Facebook, Twitter	Municipality	Storm Savvy	20,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Twitter	Tweets	Social Media	Municipality	Communication about road closures, flooding, storm updates, evacuation information	20,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Facebook	Posts to City of Tarpon Springs Facebook public page	Social Media	Municipality	Communication about road closures, flooding, storm updates, evacuation information	20,000	10/19/2016	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Flood Insurance Information	Handout	Brochure / Publication	Municipality	NFIP FloodSmart.gov Know Your Risk	20,000	9/7/2017	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Tarpon Springs	Flood Insurance Information	Handout	Brochure / Publication	Municipality	NFIP Non-Engineered Opening Guide	20,000	9/7/2017	1/10/2018	9/7/2017	Annual Hurricane Outreach	Vicki Russo
Treasure Island	Notice to Severe Repetitive Loss	Direct mailing once each year	Mailing	Severe Repetitive Loss Properties	Know your risk, mandatory flood ir	30	5/18//2017	43110	5/18/2017	Area-wide r	R.G. Bray, J
Treasure Island	Notice to Repetitive Loss Propert	Direct mailing once each year	Mailing	Repetitive Loss Properties	Know your risk, mandatory flood ir	88	5/18//2017	43110	5/18/2017	Area-wide r	R.G. Bray, J
Treasure Island	Flood Facts	1 page advertisement in the Beach Weekly Newspaper	Weekly Newspaper	N. Redington Beach, Redington Sh	Know your risk; protect your prope	25,279	8/18/2017	1/10/2018	10/31/2017	Printed in th	R.G. Bray, J
Treasure Island	FEMA's 50% Rule & How It May /	Handout	Brochure/Publicatio	Municipality	Build Responsibly	6,782	8/18/2014	1/10/2018	10/15/2017		R.G. Bray, J
Treasure Island	Preparing Your Home Before Dis	Handout	Brochure/Publicatio	Municipality	Protect your property from the ha	6,782	8/18/2014	1/10/2018	10/15/2017		R.G. Bray, J
Treasure Island	2017 - Pinellas County Hurricane	Handout	Brochure/Publicatio	County-wide	Know your risk, sheltering, prepare	929,048	8/18/2017	1/10/2018	10/15/2016		R.G. Bray, J
Treasure Island	Re-entry Decals	Video	Sign up	Municipality	Public Safety Information (ex. Turn	6,782	8/26/2014	1/10/2018	10/15/2017		Paula Cohe
Treasure Island	Red Cross Repairing Your Floode	Video	Website	Municipality	Build Responsibly	6,782	8/26/2014	1/10/2018	10/5/2017		R.G. Bray, J
Treasure Island	Protecting Your Home from Floo	Video	Website	Municipality	Build Responsibly	6,782	8/26/2014	1/10/2018	10/5/2017		R.G. Bray, J
Treasure Island	Hurricane Mitigation Videos	Video	Website	Municipality	Know your risk	6,782	8/26/2014	1/10/2018	10/5/2017		R.G. Bray, J
Treasure Island	Flood Insurance	Video	Website	Municipality	Insure your property for your haza	6,782	8/26/2014	1/10/2018	10/15/2017		Paula Cohe
Treasure Island	Pinellas County Emergency Man	Website	Website	County-wide	General website of all hazards pub	929,048	8/26/2014	1/10/2018	10/5/2017		R.G. Bray, J
Treasure Island	Home Builders Guide To Coastal	.pdf	Website	Municipality	Build Responsibly	6,782	8/26/2014	1/10/2018	10/5/2017		R.G. Bray, J
Treasure Island	Wind Retrofit Guide for Resident	.pdf	Website	Municipality	Build Responsibly	6,782	8/26/2014	1/10/2018	10/5/2017		R.G. Bray, J
Treasure Island	Home - Elevation a Reliable Floor	.pdf	Website	Municipality	Build Responsibly	6,782	8/26/2014	1/10/2018	10/5/2017		R.G. Bray, J
Treasure Island	Ways to protect your home from	.pdf	Website	Municipality	Build Responsibly	6,782	8/26/2014	1/10/2018	10/5/2017		R.G. Bray, J
Treasure Island	FEMA Map Service Center	website	Website	Municipality	Know your risk	6,782	8/26/2014	1/10/2018	10/5/2017		R.G. Bray, J
Treasure Island	Flooding and Flood Risks	.pdf	Website	Municipality	Know your risk	6,782	8/26/2014	1/10/2018	10/5/2017		R.G. Bray, J
Treasure Island	Recovering from a Disaster	video	Website	Municipality	Public Safety Information (ex. Turn	6,782	8/26/2014	1/10/2018	10/5/2017		R.G. Bray, J
Treasure Island	FEMA's Homeowners' Guide to F	.pdf	Website	Municipality	Build Responsibly	6,782	8/26/2014	1/10/2018	10/5/2017		R.G. Bray, J
Treasure Island	FEMA's Protecting Building Utiliti	.pdf	Website	Municipality	Build Responsibly	6,782	8/26/2014	1/10/2018	10/5/2017		R.G. Bray, J
Treasure Island	Ready.gov	informational link	Website	Municipality	Purchase of Flood insurance, FEM	6,782	5/26/2017	1/10/2018	5/26/2017		R.G. Bray, J
Treasure Island	Hurricane Preparedness	Website - Fire Department	Website	Municipality	Prepare, during and after the storn	6,782	10/30/2017	1/10/2018	10/30/2017		R.G. Bray, J

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Local Mitigation Strategy  
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Treasure Island	Community Emergency Response Team	website description	Website	Municipality	Community involvement in response	6,782	10/30/2017	1/10/2018	10/30/2017		R.G. Bray, Jr.
Treasure Island	First Call	program to contact residents for assistance	Sign-up / website / telephone	Municipality	Direct contact to the residents for assistance	6,782	8/26/2014	1/10/2018	5/5/2017		Paula Cohen
Treasure Island	Hazardous Waste	website	Website	Municipality	Proper disposal of hazardous waste	6,782	8/26/2014	1/10/2018	5/5/2017		R.G. Bray, Jr.
Treasure Island	Illicit Discharge	website	Website	Municipality	Protect natural functions (floodplains)	6,782	8/26/2014	1/10/2018	5/5/2017		R.G. Bray, Jr.
Treasure Island	Preventing Urban Runoff Pollution	Handout	Brochure/Publication	Municipality	Illicit discharge	6,782	9/16/2014	1/10/2018	5/5/2017		R.G. Bray, Jr.
Treasure Island	Clean Water - Everybody's Business	Handout	Brochure/Publication	Municipality	Illicit discharge	6,782	9/16/2014	1/10/2018	5/5/2017		R.G. Bray, Jr.
Treasure Island	Handout – FEMA - Every Business	Brochure/Publication, Static Display	Brochure/Publication	Municipality, Business	Prepared Ahead, Know your risk	6,782	10/30/2017	1/10/2018	10/30/2017		R.G. Bray, Jr.
Treasure Island	Handout – FEMA - Emergency Supplies	Brochure/Publication, Public Meeting	Brochure/Publication	Municipality, Individuals, Families	Prepared Ahead, personal response	6,782	10/30/2017	1/10/2018	10/30/2017		R.G. Bray, Jr.
Treasure Island	Hurricane Awareness Public Meeting	Public Meetings	Public Meetings	Municipality, Business	Prepared Ahead, Know your Risk	6,782	10/30/2017	1/10/2018	10/30/2017		R.G. Bray, Jr.
Treasure Island	Bay News 9 handout	Brochure/Publication, Static Display	Brochure/Publication	Municipality, Business	Prepared Ahead, Know your Risk	6,782	10/30/2017	1/10/2018	10/30/2017		R.G. Bray, Jr.
Treasure Island	Handout – FEMA Spanish Language	Brochure/Publication, Static Display	Brochure/Publication	Municipality, Business	Prepared Ahead, Know your Risk	6,782	10/30/2017	1/10/2018	10/30/2017		R.G. Bray, Jr.
Treasure Island	Handout – FEMA – Brochure for English	Brochure/Publication, Static Display	Brochure/Publication	Municipality, Business	Prepared Ahead	6,782	10/30/2017	1/10/2018	10/30/2017		R.G. Bray, Jr.
Treasure Island	Handout – FEMA Spanish Language	Brochure/Publication, Static Display	Brochure/Publication	Municipality, Business	Prepared Ahead	6,782	10/30/2017	1/10/2018	10/30/2017		R.G. Bray, Jr.
Treasure Island	Handout - FEMA – Brochure for English	Brochure/Publication, Static Display	Brochure/Publication	Municipality, Business	Prepared Ahead	6,782	10/30/2017	1/10/2018	10/30/2017		R.G. Bray, Jr.
Treasure Island	Handout – FEMA – for Emergency	Brochure/Publication, Static Display	Brochure/Publication	Municipality, Business	Prepared Ahead	6,782	10/30/2017	1/10/2018	10/30/2017		R.G. Bray, Jr.
Treasure Island	Handout – FEMA -Prepare for Emergency	Brochure/Publication, Static Display	Brochure/Publication	Municipality, Business	Prepared Ahead, Know your Risk	6,782	10/30/2017	1/10/2018	10/30/2017		R.G. Bray, Jr.
American Red Cross	Pinellas County Senior Expo	General Disaster Preparedness, Senior Health Issues, Hand out brochures and Presentation 1/14/14	Community Event	County-wide	Preparedness for seniors, Health Issues, Special Needs Shelters, Planning in Disasters	200	10/30/2014	1/10/2018			Mark Hendricks on
American Red Cross	Health & Safety Fair	Disaster Preparedness, Health Issues. Hampton Inn 1/24/14	Community Event	Municipality	Disaster Preparedness & What to do to save a life	50	10/30/2014	1/10/2018			Mark Hendricks on
American Red Cross	Touch a Truck	Show Red Cross vehicle & talk about Disaster Preparedness. Largo Central Park 1/30/14	Community Event	County-wide	What the Red Cross vehicle does and what to do to prepare for a disaster and after a disaster	1,200	10/30/2014	1/10/2018			Mark Hendricks on
American Red Cross	Health & Safety Fair	Disaster Preparedness, Health Issues. Pinellas Central Elementary 1/30/2014	Community Event	Municipality	Disaster Preparedness & What to do to save a life	40	10/30/2014	1/10/2018			Mark Hendricks on
American Red Cross	Health & Safety Fair	Disaster Preparedness, Health Issues. St Patrick's Church, Largo 2/18/2014	Community Event	Municipality	Disaster Preparedness & What to do to save a life	60	10/30/2014	1/10/2018			Mark Hendricks on
American Red Cross	Health & Safety Fair	Disaster Preparedness, Health Issues. Largo Central Park 2/22/2014	Community Event	County-wide	Disaster Preparedness & What to do to save a life	30	10/30/2014	1/10/2018			Mark Hendricks on
American Red Cross	Spring Market - Table event	Disaster Preparedness. Lake Seminole Pres Church 3/1/2014	Community Event	Municipality	Make your Family/ Business Disaster Plan	200	10/30/2014	1/10/2018			Mark Hendricks on
American Red Cross	St. Petersburg Saturday Market- Table event	Disaster Preparedness. St. Petersburg 3/8/2014	Community Event	Municipality	Make your Family/ Business Disaster Plan	150	10/30/2014	1/10/2018			Mark Hendricks on

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American Red Cross	Sheltering & Preparedness for disasters	Providing a Shelter to the community & Disaster Preparedness. Palm Harbor United Methodist 3/18/14	Community Event	Church members	How to become a Shelter for Red Cross & Disaster Preparedness	35	10/30/2014	1/10/2018			Mark Hendricks on
American Red Cross	Women's History Month - Disaster Presentation	How to prepare for disasters. St Petersburg College, Clearwater 3/26/2014	Community Event	College Students/staff	Make your Family/ Business Disaster Plan	42	10/30/2014	1/10/2018			Mark Hendricks on
American Red Cross	Fire Safety & Disaster Preparedness	Fire safety, preparing for disasters, Special Needs Shelters. Four Seasons MHP, 3/26/14	Community Event	Mobile Home Park Residents	Make your Family/ Business Disaster Plan	100	10/30/2014	1/10/2018			Mark Hendricks on
American Red Cross	Caregivers Table top & Citizen CPR	Disaster preparedness & Citizen CPR, St Petersburg Hospice	Roundtable/Forum	Hospice Volunteers & Staff	Make your Family/ Business Disaster Plan and Citizen CPR instruction	40	10/30/2014	1/10/2018			Mark Hendricks on
Eckerd College	Email to faculty/staff (May 2016) and distribution of annual hurricane guide to students (August 2016)	Distribution/posting of annual hurricane preparedness information	Brochure/Publication	Eckerd College community	Make your Family/ Business Disaster Plan	3,000	10/3/2014	1/10/2018	10/5/2016		Lisa Mets
Pinellas County Extension - UF/IFAS									43110		
Pinellas County Extension - UF/IFAS	Coastal Resilience Index	Consultation/Facilitated Assessment of Preparedness	Presentation to Governing Body	Municipality	Other- All of the above, Assessment of ability to recover post-disaster		9/18/2014	1/10/2018			Ramona Madhosingh/Libby Carnahan
Pinellas County Extension - UF/IFAS	Pinellas County Ext Website	Online education	Website	County-wide	Other- All of the above		9/18/2014	1/10/2018			Ramona Madhosingh/Libby Carnahan
Pinellas County Extension - UF/IFAS	Florida Homeowner Handbook to Prepare for Natural Disasters	New Publication, Co-authored and printed by UF/IFAS Extension, distributed in Pinellas County facilities	Brochure/Publication	County-wide	Protect your property from the hazard(s)		9/18/2014	1/10/2018			Ramona Madhosingh/Libby Carnahan
Pinellas County Extension - UF/IFAS	Hurricane Preparedness Workshop	Community workshop	Community Event	County-wide	Protect your property from the hazard(s)		9/18/2014	1/10/2018			Ramona Madhosingh/Libby Carnahan
Pinellas County Extension - UF/IFAS	Regional Floodplain Management Workshop	Workshop for professionals (urban planners, floodplain managers) on NFIP and new CRS.	Roundtable/Forum	Other: Regional, Pinellas, Pasco, Hillsborough, Manatee, Sarasota	Other - Changes to NFIP, CRS, legal implications		9/18/2014	1/10/2018			Ramona Madhosingh/Libby Carnahan
Pinellas County Extension - UF/IFAS	Timely Topics Blog	Online education	Newsletter	County-wide	Public Safety Information (ex. Turn Around Don't Drown)		9/18/2014	1/10/2018			Ramona Madhosingh/Libby Carnahan

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Pinellas County Extension - UF/IFAS	Thinking Green Blog	Online education	Newsletter	County-wide	Public Safety Information (ex. Turn Around Don't Drown)		9/18/2014	1/10/2018			Ramona Madhosin gh/Libby Carnahan
Pinellas County Extension - UF/IFAS	Water Column e-Newsletter	Online education	Newsletter	County-wide	Protect your property from the hazard(s)		9/18/2014	1/10/2018			Ramona Madhosin gh/Libby Carnahan
Pinellas County Extension - UF/IFAS	Factsheet: Preparing your Pets for Hurricane Season	General education - printed	Brochure/Publication	County-wide	Public Safety Information (ex. Turn Around Don't Drown)		9/18/2014	1/10/2018			Ramona Madhosin gh/Libby Carnahan
Pinellas County Extension - UF/IFAS	Factsheet: Preparing your Boats for Hurricane Season	General education - printed	Brochure/Publication	County-wide	Know your risk		9/18/2014	1/10/2018			Ramona Madhosin gh/Libby Carnahan
Pinellas County Extension - UF/IFAS	Factsheet: Staying Connected during Hurricane Season	General education - printed	Brochure/Publication	County-wide	Public Safety Information (ex. Turn Around Don't Drown)		9/18/2014	1/10/2018			Ramona Madhosin gh / Libby Carnahan
Pinellas County Extension - UF/IFAS	Wind and Trees Display	General education	Tabletop Display	County-wide	Insure your property for your hazard(s)		9/18/2014	1/10/2018			Ramona Madhosin gh/Libby Carnahan
Pinellas County Extension - UF/IFAS	Disaster Preparedness for Residents	General education	Tabletop Display	County-wide	Make your Family/ Business Disaster Plan		9/18/2014	1/10/2018			Ramona Madhosin gh/Libby Carnahan
Pinellas County Extension - UF/IFAS	Coastal Cleanups	Hands-on events where participants learn about impacts to local ecosystem	Community Event	County-wide	Protect natural functions (floodplain; habitat; etc.)		9/18/2014	1/10/2018			Ramona Madhosin gh/Libby Carnahan
Pinellas County Extension - UF/IFAS	Going Coastal: Estuary-Friendly Living	Hands-on training where participants learn about impacts to local ecosystem	Community Event	County-wide	Protect natural functions (floodplain; habitat; etc.)		9/18/2014	1/10/2018			Ramona Madhosin gh/Libby Carnahan
Pinellas County Extension - UF/IFAS	Sustainable Floridians	Training for residents on behaviors and impacts to environment - water, land use etc.	7-week Training Program	County-wide	Protect natural functions (floodplain; habitat; etc.)		9/18/2014	1/10/2018			Ramona Madhosin gh/Libby Carnahan
Pinellas County Extension - UF/IFAS	Clean Marina Workshops	Training and education for marina and boat owners/operators	Presentation to Industry	Businesses	Make your Family/ Business Disaster Plan		9/18/2014	1/10/2018			Ramona Madhosin gh/Libby Carnahan

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Tarpon Springs Housing Authority	Resident Notice	Annual Update of Evacuation Levels	Door-to-Door Distribution	Residents of Tarpon Springs Housing Authority	Public Safety Information (ex. Turn Around Don't Drown)	405	8/25/2014	1/10/2018	9/21/2016		Deb Amon
Tarpon Springs Housing Authority	Publication Distribution	"Surviving the Storm" Publication	Door-to-Door Distribution	Residents of Tarpon Springs Housing Authority	Public Safety Information (ex. Turn Around Don't Drown)	405	8/25/2014	1/10/2018	9/21/2016		Deb Amon
Tarpon Springs Housing Authority	Disaster/ Emergency Preparedness	Annual Update of Disaster/Emergency Preparedness Plan	Staff Master Document Distribution	Residents of Tarpon Springs Housing Authority	Make your Family/Business Disaster Plan	405	10/31/2014	1/10/2018	9/21/2016		Deb Amon
Tarpon Springs Housing Authority	Pinellas County Emergency Management	TSHA's website	Website	County-wide	Make your Family/Business Disaster Plan	929,028	10/31/2014	1/10/2018	9/21/2016		Deb Amon
Tampa Bay Regional Planning Council	Website	The www.tampabayprepares.org website was developed to provide families and businesses with information on how to prepare for all hazards, safety tips, and mitigation. The website also has guidance to businesses on how to develop their BCP and protect themselves from economic losses. Also includes the most recent Disaster Planning Guide for Families and Businesses.	Website	County-wide (Residents and Businesses); Spanish speaking	All Target Messages are addressed	12,000	8/22/2014	1/10/2018			Betti Johnson
Tampa Bay Regional Planning Council	Disaster Planning Guide - Spanish	A county-specific All-Hazards printed guide which preparedness and mitigation information including floodplain management strategies in Spanish	Brochure/ Publication	Spanish Speaking Residents	All Target Messages are addressed	10,000	8/22/2014	1/10/2018			Betti Johnson
Tampa Bay Regional Planning Council	Presentations to Regional Council Members	Staff briefs the Regional Council members on Emergency Management/ Floodplain Management issues throughout the year at the monthly meetings. These include the importance of the Local Mitigation Strategies, CRS and Flood Insurance, available mitigation workshops, hurricane evacuation planning and domestic security.	Presentation to Governing Body	Council members represent the (4) County Commissioners, municipalities and gubernatorial appointees.	All Target Messages are addressed	35	8/22/2014	1/10/2018			Betti Johnson
Tampa Bay Regional Planning Council	Community Presentations	Preparedness / Mitigation Talks to Homeowner Groups	Area-Specific Meeting	Hurricane Vulnerable Seniors	Make your Family/ Business Disaster Plan	50	8/22/2014	1/10/2018			Betti Johnson

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Tampa Bay Regional Planning Council	Presentations to Planners	Briefing to LMS Members on Climate Change and Sea Level Rise	Area-Specific Meeting	County-wide	Know your risk	35	8/22/2014	1/10/2018			Betti Johnson
Tampa Bay Regional Planning Council	Participation in Public Safety Events	Booths at NOAA Hurricane Hunter Expo	Community Event	Students and Citizens	Know your risk	200	8/22/2014	1/10/2018			Betti Johnson
Palm Harbor Fire Rescue	Facebook Page	Updates on Palm Harbor Fire Rescue Facebook Page	Social Media/ Email	Municipality	Public Safety Information (ex. Turn Around Don't Drown)	Unknown	8/14/2014	1/10/2018			Bob Markford
Palm Harbor Fire Rescue	New E-Flash	Updates sent via e-mail in the form of an E-Flash	Social Media/ Email	Those that subscribe and are on the e-flash e-mailing list	Public Safety Information (ex. Turn Around Don't Drown)	100-150	8/14/2014	1/10/2018			Bob Markford
Palm Harbor Fire Rescue	Hurricane Preparedness	Talks to various Homeowners Groups in PH	Area-Specific Meeting	Municipality	Know your risk	100-200	8/14/2014	1/10/2018			Bob Markford

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**Attachment 7-1**

**Pinellas County LMS Website ([www.pinellaslms.org](http://www.pinellaslms.org))**  
**LMS Flyer**  
**LMS Fact Sheet**





## Pinellas LMS Local Mitigation Strategy

PINELLAS COUNTY, FLORIDA

### LMS Resources

#### [Meetings](#)

[FEMA Approved LMS Plan](#) 

[Executive Summary](#) 

[LMS Members](#) 

[LMS Presentation](#) 

[LMS Fact Sheet](#) 

[Emergency Housing](#)

[CRS Mitigation Strategies](#)

[Contact Us](#)

[LMS Home](#)

Following a major disaster, the long process of recovery and rebuilding begins. A natural human response is to question "Why did this happen?" Then, ultimately we begin to ask "How can we prevent this from happening again?" In Emergency Management, this is called mitigation - actions that we can take before a disaster or when we rebuild after a disaster - that will reduce our risk of property damage or loss of life in the future.



In 2000, the State of Florida Division of Emergency Management (DEM) contracted with the cities and counties to prepare a county-wide Local Mitigation Strategy or LMS. Through the local emergency management agency, a committee was established, composed of representatives from throughout the county charged with creating the LMS which would ultimately be adopted by every community in the county.

### Assessing Our Risk

The LMS is composed of four major sections. The first is the Vulnerability Assessment which identifies the hazards that each community could face and the probability of that hazard. Hurricanes and tropical storms pose the greatest risk to potential loss of life, devastating property damage and economic and environmental impacts. However, in terms of greater probability, in the Tampa Bay Region, the number one hazard is flooding which causes more damage than all other hazards combined. Second, is the risk of a hazardous material incident. Although major chemical emergencies are extremely rare, there always remains a chance that one will occur despite the precautions that have been taken by the chemical users/ producers/ carriers and emergency responders. Placing third are severe winds from tropical storms, hurricanes and tornadoes. Wildfires, lightning, droughts, freezes, and sink holes are also on the list.



The events of September 11, 2001 demonstrated tragically that we are not immune to violence and terrorism. While these types of "man-made" disasters were addressed in the LMS and the emergency management community, the threat has increased and initiated changes in security and policy. This is particularly true with regard to the airports, sea ports, military bases and utilities in the Tampa Bay Region.

### Strategies to Reduce our Risk

The second step is to identify ways to minimize our risk and potential loss from these hazards. Guiding Principals — those policies, regulations and procedures used by local officials to make decisions related to safety — were earmarked and evaluated to determine their true effectiveness and where, if appropriate, changes were needed. Based on this evaluation, Mitigation Strategies were identified and the movement toward a safer community was made a top priority.



### Actions To Take

The fourth step in the process was to identify Mitigation Projects as part of the overall County Mitigation



Strategy. The Mitigation Projects represent a prioritized list of projects aimed at making our community safer.



Because of the serious public shelter shortfall in the Tampa Bay Region one of the top priorities was "fortifying" or strengthening our schools so they can serve as shelters in a severe weather emergency. "Fortifying" or "hardening" a structure usually means protecting the windows and doors, and reinforcing the roof and walls. The lists of Mitigation Projects also include the hardening of other critical facilities like fire stations, city hall, the courthouse, and community centers. Also on the list are drainage improvements and other flood mitigation projects as well as public education and training.

### Recovery & Rebuilding

While the counties have worked with the State of Florida and the Federal Emergency Management Agency (FEMA) to fund some of these projects over the last two years, the project list also has another purpose. After a major disaster, mitigation funds are made available to affected communities to assist in recovery and redevelopment. These mitigation funds, administered by FEMA, can be directed toward specific projects - that will reduce future risk - if the community has the project identified and "ready to go." One purpose of the LMS is to give the state and local governments that advantage in the aftermath of a disaster.



### Where to Find More Information

The true value of the LMS is that it is a dynamic document which is updated and revised annually as goals are reached or priorities shifted. For more information about preparedness and mitigation, or the LMS, residents can visit the following web sites:

- o [Pinellas County Emergency Management](#)
- o [FEMA](#)
- o [Florida Floodplain Managers Association](#)
- o [Hillsborough County](#)
- o [Pasco County](#)
- o [Manatee County](#)

#### National Hurricane Center - Live RSS Feeds

[Atlantic Tropical Weather Outlook](#)

nhcwebmaster@noaa.gov (IHC Webmaster)

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[Privacy](#) | [Disclaimer](#) | [Webmaster](#)

## Recovery and Rebuilding

While Pinellas County has worked with the State of Florida and the Federal Emergency Management Agency (FEMA) to fund some of these projects over the last several years, the project list also has another purpose. After a major disaster the LMS provides communities with a guide for recovery and redevelopment. The LMS represents a consensus to break the cycle of destruction. Disaster recovery funds can be directed toward specific projects that will reduce future risk to the community.

### How can you mitigate the risk to you and your family, business, or neighborhood?

- 1) Find out ways to reduce the risk of floods, wind and wildfire damage to your home and business.
- 2) Prepare your Family Disaster Plan.
- 3) Prepare your Business Disaster Plan.
- 4) Find out more about the Community Emergency Response Team (CERT) training, the Citizens Corp. Council or the Red Cross Disaster Resistant Communities Program.

## Where to Find More Information

The true value of the LMS is that it is not a stagnant plan sitting on a shelf collecting dust. It is a dynamic document which must be updated and revised annually as goals are reached or priorities shifted. Public input and participation is a key component in this planning process.

If you would like to find out more about preparedness and mitigation or the LMS, contact your local planning department, County Emergency Management Agency or log onto:

[www.pinellaslms.org](http://www.pinellaslms.org)

[www.pinellascounty.org/emergency](http://www.pinellascounty.org/emergency)

[www.tampabayprepares.org](http://www.tampabayprepares.org)

[www.flash.org](http://www.flash.org)

# The Local Mitigation Strategy...

## Our Guide to a Safer Community



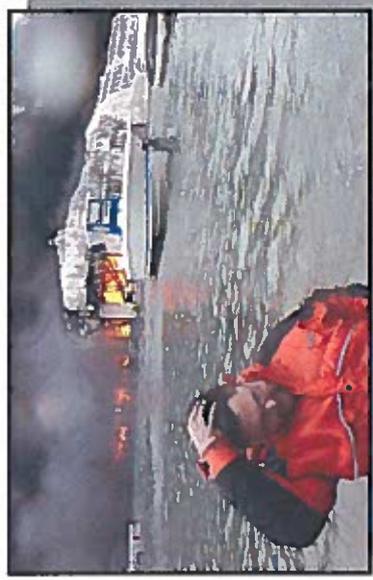
Produced by

Tampa Bay Regional Planning Council

[www.tbrpc.org](http://www.tbrpc.org)

## The Local Mitigation Strategy

Following a major disaster, the long process of recovery and rebuilding begins. A natural human response is to question, "Why did this happen?" Then, ultimately, we begin to ask, "How can we prevent this from happening again?" In Emergency Management this is called **mitigation**, actions that we can take before a disaster or when we rebuild after a disaster that will reduce our risk of property damage or loss of life in the future.

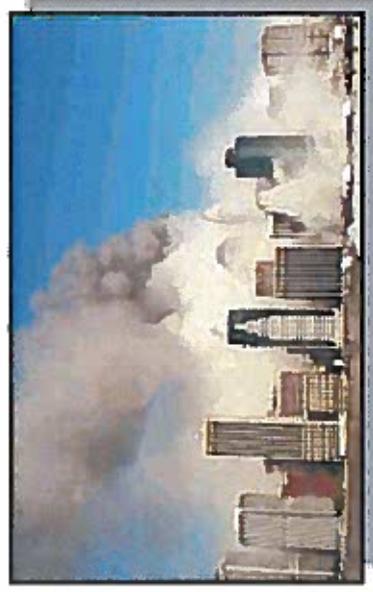


In 2000 the State of Florida Division of Emergency Management (DEM) contracted with your city and county to prepare a county-wide **Local Mitigation Strategy** or LMS. A committee composed of representatives from agencies and businesses throughout the county was established. The LMS will ultimately be adopted by every community in the county.

### Assessing our Risk

The LMS has four major steps. The first is the **Vulnerability Assessment**, which identifies the hazards each community could face and the probability of that hazard. In the Tampa Bay Region the number one hazard is flooding, which causes more damage than all other hazards combined.

The second highest risk is hazardous material accidents. Although major chemical emergencies are extremely rare, there is always a chance that one will occur despite the precautions taken by the chemical users/producers/carriers and emergency responders. Ranking third on the risk assessment are the severe winds from tropical storms, hurricanes and tornadoes. Wildfires, lightning, droughts, freezes, and sink holes are also on the list.



The events of September 11, 2001, tragically demonstrated that we are not immune to violence and terrorism. While these types of "man-made" disasters were addressed in the LMS and the emergency management plans, the threat has increased and security and policy were initiated. This is particularly true for airports, sea ports, military bases and utilities in the Tampa Bay Region.

### Strategies to Reduce Our Risk

The second step is to identify the **Guiding Principles**, those policies, regulations and procedures used by local officials to make safety decisions. The existing policies and regulations were earmarked and evaluated to determine their true effectiveness and where, if appropriate, changes

were needed. Based on this evaluation, the committee moved to step three. **Mitigation Strategies** were identified and the movement toward a safer community was made a top priority.

### Actions to Take

The fourth step in the process was to identify **Mitigation Projects** as part of the overall Local Mitigation Strategy. The Mitigation Projects represent a prioritized list of projects aimed at making our community safer. Because of the serious public shelter shortfall in the Tampa Bay Region, one of the top priorities was "fortifying" or strengthening our schools so they can serve as shelters in a severe weather emergency. "Fortifying" or "hardening" a structure usually means protecting the windows and doors and reinforcing the roof and walls. The lists of Mitigation Projects also include hardening of other critical facilities like fire stations, city hall, the courthouse, and community centers. Also on the list are drainage improvements and other flood mitigation projects, as well as public education and training.



# Local Mitigation Strategy Fact Sheet

## ***Who we are...***

- The LMS is a voluntary steering group comprised of public and private members of our community that prioritize and/or endorse project recommendations to the State for multiple mitigation funding opportunities.
- This group created a guiding document, the LMS Plan, which identifies ways to mitigate our community against hazards identified within the plan.
- The LMS helps guide our community by taking an all-natural hazards approach to the "big picture" planning - from providing educational and public speaking engagements to guiding actual mitigation construction.
- We are always open to the public for participation, membership, and contributions. We encourage participation at all levels of our community.

## ***What is "Mitigation"?***

Mitigation is the effort to reduce or eliminate the risks of injury and damage, to both people and property, against potential disaster events. This mitigation can be through mitigation construction type projects or through educational outreach programs to our community.

## ***Some types of mitigation:***

- Hurricane shutters for a home, business, hospital or public building.
- Hurricane roof clips or re-enforcement.
- Installation of tornado safe rooms.
- Elevation of a flood vulnerable building or home.
- Flood proofing a home or business.
- Drainage improvement projects that reduce or eliminate local flooding.
- Public infrastructure, such as, strengthening fire stations and installing shutters on public schools that serve as community shelters.
- Installation of shutters in public schools that serve as shelters.
- Educational programs to educate our community on methods they can use to protect and reduce the impacts to families, businesses, their employees, and property from potential disaster through mitigation.

## ***Mitigation in Our Community:***

More than \$8 million in mitigation projects have been endorsed by the LMS - since its inception in 1998 - in efforts to minimize or eliminate the risks to natural hazards in Pinellas County (to date).



## Attachment 7-2

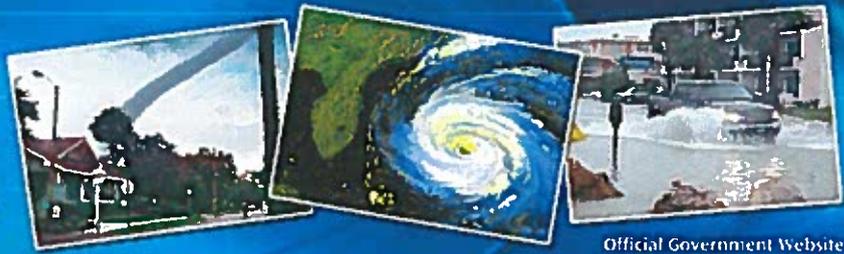
### **Pinellas County Emergency Management Website** **([www.pinellascounty.org/emergency](http://www.pinellascounty.org/emergency))**

- Emergency Management Home Page
- Know Your Zone (Evacuation Zone Lookup and link to Flood Zone)
- Hurricane Preparedness (English)
- Hurricane Preparedness (Spanish)
- Business Solutions
- Home Healthcare Providers / Healthcare Facility Disaster Planning Criteria, Statutes and Rules
- Hotel / Motel / RV Parks / Transient Accommodation Information
- Flood Information Page
- Flood Warning Systems
- Flood Property Protection
- Flood Mitigation
- Flood Information FAQ
- The Cost of Flooding (Link to [www.floodsmart.gov](http://www.floodsmart.gov))
- “Surviving the Storm: The Official All-Hazards Guide for Pinellas County”
- Hurricane Video Library
- Stay Connected (E-Lert, Cell Phone, Watch PCC-TV, Speakers and Presentations, Weather Alert Radio)
- Outreach Toolbox (includes Hurricane 101, Busting Hurricane Myths, Hurricanes for Kids, and Becoming Storm Savvy)
- Other Hazard Resources





## Emergency Management



Official Government Website

Emergency Mgmt. Home

- Hurricane Information ▾
- For Emergencies Only ▾
- Other Hazards
- Resources ▾

**HurricaneGuide**  
 Official Hurricane Guide  
 For Pinellas County

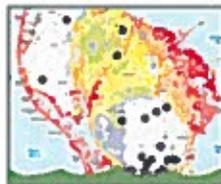
**HurricaneVideos**  
 Variety of Hurricane  
 Educational Videos

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[gmap](#)

### SURVIVING THE STORM...IT'S EVERYONE'S RESPONSIBILITY



**Know Your Zone**  
 Evacuation Zone Lookup  
 & Maps  
[more >>](#)



**Prepare Ahead**  
 Family/Home/Auto/  
 Checklists/For Kids  
[more >>](#)



**Special Needs**  
 Elderly/Disabled  
 Transportation  
[more >>](#)



**Pet Preparedness**  
 Pet Shelters/  
 Checklists  
[more >>](#)



**Shelter Options**  
 Where to Go - Public  
 Shelters/Hotels/Motels  
[more >>](#)



**Host Homes**  
 Temporary Shelter -  
 How to Organize  
[more >>](#)



**It's Coming...**  
 Now What? - What to Do,  
 When to Act  
[more >>](#)



**After the Storm**  
 Recovery Info & Links  
 For Assistance  
[more >>](#)

#### Prepare to Survive:

- **Evacuation Level Lookup** - Enter your address and you will be provided information not only your evacuation level, but also the closest shelter, the closest special needs shelter and the closest hotel accommodations.
- **Storm Surge Protector Application** - Pinellas County Emergency Management's online tool for viewing potential storm surge levels for Pinellas County properties.
- [Storm Surge Information](#)
- [The Cost of Flooding](#)
- [Flooding Information](#)
- [Sign-up for FirstCall Emergency Notification Service](#)
- [E-lert Newsletter](#)
- [Hurricane Guide - 2014 now online](#)
- [Hurricane & Prepare to Survive Videos](#)
- [Información en Español](#)
- [Healthcare Facilities](#)



**Additional Information:**

- [FEMA](#)  - Federal Emergency Management Agency
  - [FEMA App](#) / [FEMA Blog](#) / [FEMA for Mobile phones](#)
- [Pinellas Prepares](#) - New facilities designed to withstand hurricane winds and storm surge.
- [Post Disaster Redevelopment Plan](#) 
- [If You See Something, Say Something](#) - a national public awareness campaign to encourage citizens to report suspicious activity.
- [Learn about texting during emergencies](#) 



Emergency weather informational links, current local weather conditions, local media stations, gulf temperature and tide information.

**National Hurricane Center - Live RSS Feeds**

[Atlantic Tropical Weather Outlook](#)  
nhcwebmaster@noaa.gov (IHC Webmaster)

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- Know Your Zone
- Prepare Ahead
- Special Needs
- Pet Preparedness
- Shelter Options
- Host Homes
- It's Coming-Now What?
- After the Storm-Recovery
- Información en Español
- Business & Professional
- Business
- Home Healthcare Providers
- Healthcare Facilities
- Hotels/Motels/RV Parks
- For Emergencies Only ▾
- Other Hazards
- Resources ▾

Hurricane Preparedness



In order to know when to evacuate for hurricane surge flooding, you must KNOW YOUR ZONE! Keep in mind, you evacuate to avoid deadly surge flooding.

[Click Here to find your Evacuation Zone](#)

- ▾ [Many Ways to Learn Your Zone](#)
- ▾ [Surge Flooding Kills](#)
- ▾ [Should You Stay or Should You Go?](#)
- ▾ [How Do Flood Zones and Evacuation Zones Differ](#)
- ▾ [Mandatory and Recommended Evacuations](#)

EVACUATION GUIDELINES (mobile homes MUST always evacuate)	
EVACUATION ZONES	<b>A</b> 4' to 8' Evacuate red areas and all mobile homes
	<b>B</b> 8' to 14' Evacuate red and orange areas and all mobile homes
	<b>C</b> 14' to 18' Evacuate red, orange and yellow areas and all mobile homes
	<b>D</b> 18' to 26' Evacuate red, orange, yellow and green areas and all mobile homes
	<b>E</b> 26' to 29' Evacuate red, orange, yellow, green and purple areas and all mobile homes
Areas shown in white are non-evacuation zones.	

▸ There are many ways to learn your zone.

- ▀ [Check out Pinellas County's Evacuation Level Lookup.](#) Enter your address and you will be provided not only information on your evacuation level, but also the closest shelter, the closest special needs shelter and the closest hotel accommodation.





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- Call the Pinellas County Interactive Hurricane Evacuation Inquiry Line at (727) 453-3150 and key in your home phone number without the area code to hear your home's evacuation zone.
- Call Pinellas County Emergency Management at (727) 464-3800 for help looking up your home's evacuation level. Regular business hours are from 7:30 a.m. until 4:30 p.m. Monday through Friday.
- Your evacuation zone is printed on your [Pinellas County Utility bills](#) and the [Truth in Millage \(TRIM\) Notices](#) sent by the Property Appraiser.
- To learn more, go to the [Evacuation Level FAQ page](#)
- View Maps:
  - [County Evacuation Map](#)
  - [GIS Evacuation Level Maps](#)



#### Remember....

**All residents living in mobile homes/manufactured homes must evacuate, even if their homes are located in a non-evacuation area.**

#### ▶ Surge Flooding Kills

The greatest killer of people during hurricanes is storm surge – the dome of water pushed ashore by powerful hurricane winds. Storm surge isn't a gradual rising of water. It rushes in and out sweeping anything not secured back out to sea, people included. During Hurricane Katrina, residents of coastal Mississippi were caught off guard by storm surge flood waters. Entire buildings were moved, and some of the people who didn't evacuate are still among the missing. Pinellas County is extremely vulnerable to surge flooding because of its coastal and low-lying geography.



[play video](#)

In fact, a Category 3 storm could flood 42 percent of the county's households.

**Staying safe from surge flooding is easy.**

**Here's how....**

- If a hurricane is predicted for Pinellas County and you live in a zone that has been ordered to evacuate, get out.
- Do not stay in an area at risk for surge flooding.
- Do not plan to escape to higher floors and do not wait until the last minute. Leave for higher ground and survive the storm.
  - [Hurricane Katrina Historic Storm Surge Video](#)  
(Pinellas County Government is in no way endorsing or sponsoring any commercial products, services, or the use of any trade, firm, or corporation by providing the link to the above website. The link is provided solely for the information and convenience to the website visitors, and does not constitute endorsement, recommendation, or favoring by the Office of Emergency Management or Pinellas County Government.)
  - [What if a Category 5 was to hit Pinellas County](#)
  - [Storm Surge Protector Application](#) - Pinellas County Emergency Management's online tool for viewing potential storm surge levels for Pinellas County properties.
  - For more information on flooding, flood insurance, safety visit our [Flooding information website](#).

#### ▶ Should I Stay or Should I Go?

When it comes to evacuating, there are many decisions to make. One of those decisions is



whether to stay in Pinellas County or drive hundreds of miles to an out-of-town location.

Finding high ground in Pinellas County is possible. The green areas on the map to the right are high enough to not be impacted by surge flooding from any hurricane. Even for a Category 5 storm, a structure in these areas that is hardened to withstand high winds can provide safe shelter.

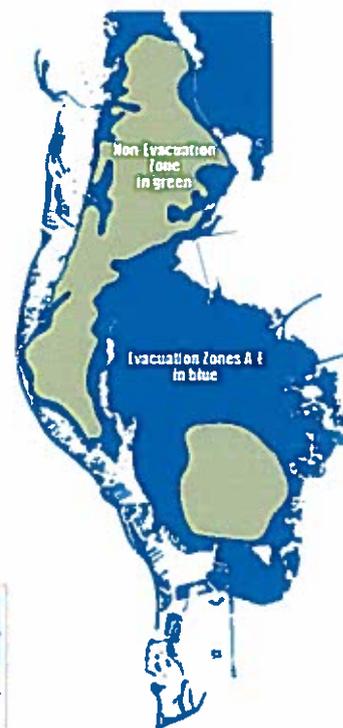
Evacuating to a shelter within the county has its advantages. You can avoid traffic jams and the uncertainty that comes with driving the crowded highways as other counties evacuate along with Pinellas. You can avoid going elsewhere in the state only to find that the storm has shifted and you are now in harm's way. And you will avoid the crowds when it comes time to head home.

If staying in Pinellas seems like a good decision, plan ahead to find safe shelter by asking friends, relatives or coworkers if they are willing to

host you and your family during a storm or find a hotel or motel in the area in a non-evacuation zone.



[play video](#)



### ► How Do Flood Zones and Evacuation Zones Differ

Flood zones and evacuation zones are different. They measure different conditions that may not occur at the same time.

Flood zones are areas mapped by FEMA for use in the National Flood Insurance Program. Each flood zone designation, represented by a letter or letters, tells homeowners exactly what the risk is for flooding at their property over a period of years, regardless of the cause. By law, all homes in high-risk zones carrying a mortgage must be covered by flood insurance.

Evacuation zones, on the other hand, are based on hurricane storm surge zones determined by the National Hurricane Center using ground elevation and the area's vulnerability to storm surge from a hurricane. The evacuation zones are marked from A through E, plus non-evacuation zones.

The **flood zones** and **evacuation zones** are determined by different methods and have different purposes. A home may be located in a non-evacuation zone, yet still be located in a flood zone because of a nearby stream or pond.

Residents must check both zones.

An important thing to remember is that flood losses are not covered by homeowners insurance policies. The National Flood Insurance Program makes federally backed flood insurance available to residents and business owners. Any flooding damage covered under the policy – whether or not a federal disaster declaration is made – will be reimbursed per the policy limits, which can include structural damage or the loss of contents.

For more information on flood zones, visit the National Flood Insurance Program at [www.floodsmart.gov](http://www.floodsmart.gov) or call (888) CALL-FLOOD (225-5356).

### ▶ Mandatory and Recommended Evacuations

Should a hurricane threaten the Tampa Bay area, an evacuation order may be issued. What exactly does that mean?

An evacuation order is given to get people away from the deadliest part of a hurricane – storm surge. Evacuation levels are based on elevation above ground that could be inundated by the surge driven ashore during a storm. There is one notable exception to this: all mobile homes, regardless of their elevation, must be evacuated. They are vulnerable to the high winds of a hurricane and flying debris.

There are two types of evacuations that can be ordered. The first is a **recommended evacuation**. In the event of the approach of a tropical storm or a hurricane crossing the state and exiting over Pinellas, the potential for storm surge may not be as great. In these cases, emergency managers may recommend that residents in mobile homes and historically flood-prone areas that frequently flood consider evacuating to higher ground and/or sturdier structures than they have available at home. This is done for the safety of those in areas known to be vulnerable.

The second type is a **mandatory evacuation**. Mandatory evacuations are issued when the probability of storm surge is high, and loss of life could occur if residents don't leave. These evacuations will be ordered up to a certain letter zone and will always include mobile homes. It is incredibly important that if your home is in an evacuation level, you know your level, plan for a 'stay' and 'go' option and, if your level is ordered to go, move quickly but safely outside of the evacuation area.

It is illegal to stay in a home under a mandatory evacuation order. Under Florida Statute 252.38, the local authority has the ability to take necessary steps to provide for the health and safety of people and property. Chapter 252.50 sets refusal to follow an evacuation order as a second-degree misdemeanor.

Does this mean the police will drag you out of your property? No. They will be too busy helping those who will be following the evacuation order, although they will likely ask for next of kin or an emergency contact. However, this does provide law enforcement the basis to remove anyone who is impeding the flow of an evacuation.

Remember, emergency managers are counting on you to be prepared and do the right thing to keep yourself and your family out of dangerous situations. Please know your evacuation zone and have a plan for where you will go should something happen this hurricane season.

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Pinellas County Emergency Operations Center  
Department of Emergency Management  
Citizen Information Center  
(727) 464-3800  
**(during an emergency activation call (727) 464-4333)**

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**Hurricane Preparedness**



**Making sure you and your loved ones will survive the storm is a year-round task that requires attention to your personal business, your family members, your home and your vehicles. It is not a task that can be done in just 24 hours, so start your planning now!**

Complete a disaster plan BEFORE the chaos of an approaching hurricane to be sure you have time to do it right. Do home improvements during the cooler days of the year. Pack your [Emergency Survival Kits](#) before June 1st to be sure you have what you need. Organize important papers so you can grab them quickly.

The information below and links to resources will assist you in your planning, but how well you do it is up to you. Take the time to prepare ahead, you'll be glad you did.

**You & Your Family**

- ▾ [Make Sure You Have a Plan](#)
- ▶ [Know Your Evacuation Zone](#)
- ▶ [Know Where You Will Go](#)
- ▶ [Know What to Do During A Storm](#)
- ▶ [Education for Children](#)
- ▶ [Volunteer to Be a Host Home](#)
- ▶ [Assist Friends and Family](#)
- ▶ [Pets & Animals](#)
- ▶ [Know When to Act](#)
- ▾ [What To Do in the Workplace](#)
- ▾ [Insurance Information](#)
- ▾ [Medication Information](#)
- ▾ [Important Documents](#)
- ▾ [Transportation to a Shelter](#)
- ▾ [Personal Transportation - Traffic Info](#)

**Your Home**

- ▾ [Windows & Doors](#)
- ▾ [Roof](#)
- ▾ [Garage Door](#)
- ▾ [Set Up A Safe Room](#)
- ▾ [Mobile & Manufactured Homes](#)
- ▾ [Condo Preparedness](#)
- ▾ [Renters](#)
- ▾ [Yard](#)

**Checklists**

**Your Vehicles**

- ▾ [Boat](#)
- ▾ [Retrofit Guides and Info](#)
- ▶ [Sandbag Information](#)

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Official Hurricane Guide  
For Pinellas County

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Variety of Hurricane  
Educational Videos

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phone alerts, speakers

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### Make Sure You Have a Plan

The below links can help you create your own personal plan.

Getting Ready for  
 Disaster  
 get a hurricane plan

[play video](#)

- [Create a Hurricane Plan at Floridadisaster.org](#)
- [Family Plan - Do it yourself with these questions](#)
- [Home Inventory made easy](#)
- [Settling Insurance Claims After a Disaster](#)
- [Learn about texting during emergencies](#)

### ▶ What To Do In the Workplace:

Be sure you know what to do when an evacuation order is issued during the work day. Both you and your employer should have a plan that is talked about in advance.

#### Things to do:

- Keep a list of emergency numbers at your work site
- Have a family plan that assigns who picks up the children, other relatives or pets
- Select a meeting place in case you are unable to get home
- Be sure to tell your boss if you need to evacuate and where you are going
- Learn your employer's policy about releasing employees and returning to work
- Learn your employer's plans for securing your workstation and work supplies
- Ask if there is an emergency phone number to contact your employer after a storm

If you do not need to evacuate, offer to [host a co-worker](#) who must evacuate

### ▶ Insurance Information:

#### Is your insurance ready?

Getting your insurance ready for hurricane season is an important preparedness step. Not only having insurance – but having the right amount and the right kind – can mean the difference between a smooth recovery and one full of challenges. That's why it's important to check with your insurance agent to discuss the type of coverage you need and the amounts you should have.

If you have specific questions about your policy, be sure to speak with your agent, or visit these online resources.

- [Florida Office of Insurance Regulation](#)
- [The Insurance Information Institute](#)
- [Insuring Florida blog](#)
- [Know your stuff with a home inventory](#)
- Watch video: [How to prepare your insurance for hurricane season](#)

Don't wait another minute! Review your homeowner's or renter's insurance policy and review exactly what coverage you have.

#### Ask yourself these four important questions:

- What is my deductible?
- What is my hurricane deductible?
- Do I need flood insurance?

- **Do I have enough coverage to replace my home and belongings?**

Homeowners should check with their insurance agents to determine what improvements could offer discounts on their hurricane insurance premium. Some companies offer rate reductions for reinforcements to the roof, garage, windows and doors.

Homeowners can find a great deal of information about their insurance policies by checking with the state's Department of Financial Services. Call (800) 342-2762 or visit [www.flds.com](http://www.flds.com)

- **[Flooding Information](#)**

- **[National Flood Insurance Program Claims Information](#)**

- **[Buy Flood Insurance](#)**

- **[Floods - What You Should Know](#)**

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▶ **Medication Information:**

One of the most important things to include in your emergency survival kit is your prescription medications. But, what happens when an emergency is declared and your insurance company claims it is too early for you to get a refill? In 2006, the Legislature passed the Emergency Prescription Refill bill (Florida Statute 252.358 and 462.0275). This law requires all insurers and managed-care organizations to suspend refill-too-soon restrictions when a patient seeks a refill in a county:



[play video](#) ▶

- currently under a hurricane warning issued by the National Weather Service; or
- declared to be under a state of emergency in an executive order issued by the Governor; or
- has activated its Emergency Operations Center and its emergency management plan.

This law also allows patients outside of these areas to get an emergency 72-hour refill if the pharmacist is unable to readily obtain refill authorization from the doctor. Please talk with your doctor and pharmacist now about how this new law can affect your prescriptions. Make sure you are ready this hurricane season. In addition to having a supply of your medications on hand, keep a list of each one you take, including the name of the doctor who wrote the prescription, the name of the drug, dosage instructions and the name of the pharmacy where you had it filled.

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▶ **Important Documents: [Document Checklist](#)**

If you were ordered to evacuate from your home for a hurricane, could you easily and quickly collect all of your important documents for transport? Your important papers include everything from your driver's license to your homeowner's insurance policy. By spending some time now, you can ensure that you will have everything you need if you must evacuate. Personal papers to take with you:

- Driver's license or personal identification cards
- Important numbers and emergency contacts
- Credit cards
- Medical records and blood type
- Prescription information (list of medications, dosage, prescription numbers, etc.)
- Doctors' name, address and telephone number
- Cash for emergencies

- Bank account numbers
- List of savings and investments, including CDs, stocks, bonds and mutual funds
- Household inventory - either a paper copy, videotape or computer disk
- List of insurance policies with name of company, type of policy and policy number
- Copy of wills, trust documents and living wills
- Titles for your house, car and other property
- Birth, marriage, divorce, death and adoption certificates
- Passports
- List of family advisors: accountant, attorney, banker, doctors, dentist, employer, financial adviser, insurance agents and religious leader
- Educational and military records
- Other special papers that would be difficult or impossible to replace if lost

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### ▶ Your Home:

Preparing your home to withstand high winds can mean the difference between minor and major repairs after a hurricane. That's why it's so important to strengthen your home to resist high winds.

#### Some key tips:

- Check your [garage door](#). If your door needs replacing, look for a reinforced, wind-rated model.
- [Shutter your windows](#). Glass can be broken by flying debris. Protecting your windows can keep storm winds and rain out. **Duct tape provides no protection.** Check weather stripping and caulking around windows and doors, replacing if necessary.
- If your [roof](#) needs replacement, a new one can be installed to meet stronger building codes first adopted in 2002, which will better protect your home.
- Research these online resources for additional home improvement information.
  - **Federal Alliance for Safe Homes**  
[www.FLASH.org](http://www.FLASH.org)
  - **Institute for Business and Home Safety**  
[www.ibhs.org](http://www.ibhs.org)
  - **Hurricane Retrofit Guide for Homes can be found at**  
[www.floridadisaster.org/mitigation/rcmp/hrg/index.asp](http://www.floridadisaster.org/mitigation/rcmp/hrg/index.asp)



[play video](#)

### ▶ Windows And Doors:

- Windows and doors are particularly vulnerable to wind and rain damage. Window films, tempered glass and other products may not withstand wind-borne debris felt during a hurricane.
- **Plywood: [How To Shutter Your Home](#)** (30 minute video on how to shutter your windows and doors...and how much it costs!)
  - Don't risk long lines and limited supplies if you plan to shutter with plywood. Buy and cut early.
  - Use a minimum of 5/8ths inch thick exterior grade plywood to withstand flying debris.



[play video](#)

- For masonry buildings, use masonry screws that cut their own thread in concrete, or use lag shields inserted into predrilled holes. Wood screws can be used for wood-framed homes.

#### ■ Hurricane Shutters

Typically made of metal, vinyl or polycarbonate, these shutters come in many designs. Check options with a licensed installer and be sure they meet the current Florida Building Code.

#### ■ Hurricane Screens

Some of the newest options available are permanently attached metal mesh screens or flexible woven polypropylene netting. Both are approved for use throughout Florida.



### ► Roof:

- Your home's roof is the first line of defense against rain. And, it is very vulnerable to a hurricane's fury. High wind can tear shingles, underlayment and even the roof sheathing off.
- Before a storm threatens, take a good look at your roof. Are the shingles in good condition? Is there any damage that you might need to have repaired? Remember, any leaks you may already have could be made worse by wind-driven rain and the impact of storm debris.
- A quick inspection of the underside of your roof from inside the attic can also tell you a great deal about its structure. Look along the rafters or the tops of the roof trusses. Are there large nails driven through the sheathing, not secured into the framing? That could mean the roofers misnailed the roof deck when they installed it. One or two may be OK, but more than that, and your roof's strength could be compromised.
- If you need to have your roof redone, be sure to ask the roofer to re nail your sheathing to ensure it is properly secured, and specify wind-resistant shingles.

### ► Garage Door:

- Garage doors deserve extra attention because of their large size. And, statistics prove that's true. According to the Federal Alliance for Safe Homes (FLASH), about 80 percent of wind damage in homes starts with wind coming through the garage door.
- **State regulations mean stronger doors**  
Since 2002, Florida building codes have required significantly stronger garage doors on all homes in Pinellas County. If your garage door was installed before 2002, call the manufacturer to determine the strength of the door. Or, have a building inspector check the door to determine its wind-worthiness.
- For safety's sake, older garage doors should either be replaced or retrofitted with more bracing.

### ► Set Up A Safe Room:

#### FEMA websites on Safe Rooms:

- [Safe Rooms Information](#) 
- [Safe Room Plans](#) 

If you don't have to evacuate and plan to weather a hurricane at home, set up a safe room for you and your family in case your home is damaged. This is also a good place to store emergency supplies, important papers and battery-powered radios.

Make sure the room has a solid-core door with heavy duty hinges for greater protection. Use long screws to ensure the hinges are anchored securely. Installing a deadbolt lock, like those found on entry doors, will further help protect you and your family.

Where your safe room should be located depends upon how many levels are in your home or building.

- In a one-story house, the ideal safe room is in the center of your home with few or no windows.
- In a two-story house, seek out an interior first-floor room such as a bathroom, closet or space under the stairs.
- In a multiple-story building, go to the first or second floors and take refuge in halls or other interior rooms away from windows. Interior stairwells and areas around elevators shafts are generally the strongest parts of a building.

#### ▶ **Mobile & Manufactured Homes:**

While mobile and manufactured homes are great places to call home, **they are NEVER good shelters during a hurricane.** Mobile and manufactured homes can be severely damaged from the hurricane-force winds and flying debris. This was proved true again during the storms of 2004 and 2005 when homes built after 1994, to the tougher standards, sustained damage when they were flipped off their foundations or damaged by flying debris. No matter the category of storm, **whenever an evacuation order is given, all mobile and manufactured home residents must evacuate.** Mobile and manufactured home residents need to have an evacuation plan in case a hurricane threatens. One word of caution – most mobile home park recreation centers are not rated to withstand high winds, either. Ask your park's management what plans – if any – are in place for sheltering options and for evacuation notification.



- **Why anyone in a mobile home must evacuate!**

**Annual maintenance should include checking your tie down and anchoring system to help keep debris down during a storm.**

- Look for possible rusting of anchors and connections.
- Tighten the straps if necessary.
- Add anchors and straps where possible.
- **Check for wood rot and termite damage at connections, joists and trusses.** Investigators have found that failures at these points allowed air to penetrate the home's air-tight envelope and led to structure failure.

#### **Mobile homes are not safe havens**

Back in 1992, Floridians got a rude wake-up call from Hurricane Andrew about the vulnerability of mobile homes to a hurricane's ferocious winds. After that storm, **fully 90% of southern Miami-Dade County's mobile homes destroyed in that powerful Category 5 storm.**

In 1994, shortly after the damage of Hurricane Andrew, the federal Housing and Urban Development program mandated tougher building standards for mobile homes. Since then, these newer homes have been bought and installed in other counties around Florida. How well did they survive?

Hurricane Charley in 2004 visited similar damage on the mobile homes in Charlotte County. Older mobile homes failed in similar ways to those in

Andrew, and many newer homes were flipped onto their sides when their tie downs failed in the 145 mph wind.

That is why – regardless of the level called – all mobile home residents must evacuate when an order is given. Mobile home residents can visit [www.pinellascounty.org/emergency/mobiletips.htm](http://www.pinellascounty.org/emergency/mobiletips.htm) or call (727) 464-3800 for more information on how to prepare for a hurricane.

#### ▶ **Condo owners should prepare for an approaching storm:**

Condo owners should prepare for an approaching storm.

If a hurricane sets its sights on Pinellas County, condominium owners need to be ready to weather the storm. [Click here for more information.](#)



- [Condominium Owners](#) 

#### ▶ **Renters Need A Plan Too:**

As a storm approaches, homeowners are urged to prepare their homes to withstand heavy winds. But, what should you do if you rent? If you rent, here are some steps that you can take to prepare yourself for a hurricane:

- The first step in hurricane preparedness is to know your evacuation zone. Pinellas County government offers several outlets to [locate your zone](#). Remember, be ready to evacuate when ordered.
- Prepare yourself for the possibilities of damage to your personal property. Flood insurance and renter's insurance can help to replace your belongings should they be damaged. In conjunction with your insurance policy, take an inventory of your possessions to help during the recovery.
- Ask questions of your landlord. Will your landlord take steps to protect the windows? If not, you will need to find another place to ride out the storm, even if you live in a non-evacuation zone.

Just as with homeowners, you have a responsibility to create a personal hurricane plan. By finding out now what you will need to do, you may save your life when a storm threatens.

#### ▶ **Yard: Debris Cleanup - Before & After brochure**

Getting your yard ready to weather the storm can help keep you and your home safe. High winds can turn even the heaviest items into deadly projectiles that can break through your windows, doors and even walls. To prepare:

- Properly prune trees and shrubs before any storms threaten. Do not leave piles of branches that can become missiles in high winds.
- Keep your gutters and down spouts clear and in good repair.
- Replace rock mulch with shredded bark.
- When a hurricane warning is issued, bring in all yard items such as furniture, toys, bird baths/feeders and barbecue grills.
- Do not drain your pool. Super chlorinate the water and turn off all electricity to the pool for the duration of the storm.
- For more information see [Trees and Hurricanes](#) 

#### ▶ **Vehicles:**

During a weather emergency, you will rely on your vehicle to get supplies, provide a cool blast of air-conditioning and recharge your cell phone. Vehicle maintenance tips:

- Check your tires, belts, hoses, filters, oil and air-conditioning.
- Make sure you have jumper cables, road flares or reflectors, a first aid kit and a can of non-flammable inflatable tire repair compound.
- Have car chargers for phones, laptops and/or a small power inverter to convert the car's DC battery power into a AC plug.
- Pack an empty gas can in case you need to get more gasoline.
- Remove all non-essential items from your vehicle to keep the interior space ready for evacuation items.

#### ▶ **Boats:**

Boat owners need to have a plan to secure and protect their boats from hurricanes. [See boat safety page.](#)



[play video](#)

- [Marina Owners/Operators](#)

#### ▶ **Checklist - Printable:**

- [Important Documents Checklist](#)
- [Evacuation Kit Checklist](#)
- [Shelter-in-place Emergency Survival Kit Checklist](#)
- [Pets Checklist](#)

#### ▶ **Retrofit Guides and Info:**

- [Disaster Safety](#)
- [Federal Alliance for Safe Homes](#)

#### ▶ **Transportation:**

For those who need to evacuate, but don't have their own transportation, a hurricane can cause anxiety. Pinellas County officials want to make sure that everyone can get to safe shelter.

If you don't require special needs transport, PSTA buses will run nearly all their routes until it's no longer safe to travel. PSTA will attempt to operate all routes until winds reach tropical storm force (40mph). Routes may be modified. During an evacuation, buses will also run from transfer stations to local shelters. All rides are free during an evacuation. Be prepared in advance by locating your nearest bus stop. Some people may not qualify for special needs transport, cannot ride the bus and have no other means of transportation to evacuate. If you are in that situation, contact your local fire department or the Department of Emergency Management, in advance, for special assistance. Take advantage of the help that is there for you. Don't stay in a dangerous situation just because you don't have your own ride. (Call the PSTA Info Line (727) 540-1900. For current route information during a storm go to [www.psta.net](http://www.psta.net).

If you have special needs, please sign up for the [special needs registry](#), you will then be asked about your transportation plans. If you need a ride to a shelter, your local fire department will be in contact with you to make arrangements when the time comes to evacuate.

#### **Personal Transportation:**

If you are taking your own personal transportation to leave town, be sure you are leaving enough time to get to your final destination. Roads get crowded and traffic jams can put you in danger because a hurricane can take many different paths through the state. When a HURRICANE WATCH is issued, you need to be packing your car and ready to leave as soon as the WARNING is issued.

#### Traffic Information:

There are convenient ways for motorists to receive this up-to-date traffic information:

- Visit [FL511.com](http://FL511.com), with interactive roadway maps showing traffic congestion, travel times and crashes.
  - Call 511 toll free for updates in English and Spanish.
  - Download the free Florida 511 mobile app available for iPhone and Android devices.
  - Follow one of the 12 statewide, regional or roadway-specific FL511 feeds on [Twitter](https://twitter.com).

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## Hurricane Preparedness

SOBREVIVIR LA TORMENTA ES LA RESPONSABILIDAD DE TODOS

# INFORMACION

en Español

El Centro Nacional de Huracanes enviara avisos en espanol de tormentas que amenazen con afectar las costas y areas pobladas a traves del servicio de INTERNET cortesia de sus oficinas en San Juan, Puerto Rico. Tambien proveeran entrevistas en vivo y pregrabadas en espanol a traves de sus afiliados de las cadenas de Telemundo y Univision.

- [Preparación del huracán](#)
- [Información para las personas sin hogares acerca los refugios durante la temporada de huracanes en español](#) Planeamiento del huracán y información de la evacuación para el español sin hogar de la temporada de huracanes en del durante de los refugios del los del acerca de los hogares del pecado de los personajes de los las de Información para de los ciudadanos
- [Guide to Debris Management - Sobre la limpieza de basura y matorrosjos despues de una tormenta en español](#)
- [Estas Preparado?](#)
- [En Español](#)
- The Special Needs Flyer en Espanol ([color](#), [bw](#))
- [Preparación para un Huracán:](#) Agua, Alcantarillado, Desperdicios Sólidos. En caso de un huracán, el agua, las alcantarillas y los servicios de desperdicios sólidos es muy probable que sean interrumpidos por un periodo de tiempo. Aprenda a cómo prepararse.
- <http://www.redcross.org/cruz-roja/preparate/aplicaciones-moviles>

HurricaneGuide

Official Hurricane Guide For Pinellas County

HurricaneVideos

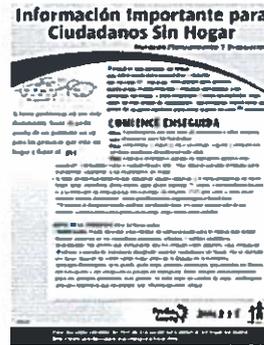
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## Business Solutions

**Businesses are encouraged to have a continuity plan** to help them survive the storm AND stay in business. Owners of both large and small businesses need to have secure storage for data and files, alternative sites for doing business, methods of communicating with employees and customers and appropriate insurance. These are just a few items to consider when putting together a business continuity plan.

- [Tampabay Prepares - Disaster planning](#)
- [FEMA Business Continuity Planning Suite](#)
- [Small Business Recovery Information](#)

- ▾ [Box for Critical Papers](#)
- ▾ [Business Preparation Tips](#)
- ▾ [Employees Need TLC](#)
- ▾ [Business Interruption Insurance](#)
- ▾ [Home-Based Businesses](#)
- ▾ [Bridge Loan Program](#)

- [Disaster Preparedness Seminar](#)
- [Marina Owners/Operators](#)

**▸ Set-up a to-go box for critical papers**

Use a plastic, waterproof container that can be used to hold and carry important business documents and helpful forms including:

- A list of all employees, key customers and clients along with their phone numbers
- Insurance policies and agent contact information
- Back-up electronic data
- Equipment, computer software/hardware and furniture inventories
- A list of emergency vendors, like plumbers and restoration contractors
- Copies of essential business policies, plans and agreements
- Photographs of the business, both inside and out

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**▸ Business preparation tips**

- Take the necessary precautions. As a storm threatens, secure your building. Cover and move equipment and furniture to a secured area.
- Always protect your data with back up files.
- Make plans to work with limited cash and probably no water, sewer or power for at least two weeks.
- Contact your customers and suppliers regarding your continuity plans.
- Protect windows and glass doors.

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- Clear the property or tie down any items that could become flying missiles.
- Fill fleet cars and equipment gas tanks.
- Turn off electricity, water and gas.
- If your business is in a non-evacuation area, think about having your business serve as a [host home shelter](#) for employees.

#### ► Employees need TLC

Communicate your business hurricane plan with your employees. Remember, too, that your associates may need some extra consideration. Probably all of your employees need time to prepare their own homes and talk with their families about their own personal emergency plans.



#### ► Business interruption insurance

Business owners need to think about what they would do if their buildings were unusable after a storm. Here are a few tips to keep in mind:

- Understand that Business Interruption Insurance will compensate you for lost income if your company has to leave the site because of disaster-related damage.
- Be sure that the policy will cover your company for more than a few days. After a disaster, it may take more time to get back up and running.
- Ask what the waiting period would be before the insurance coverage begins.
- Explore the cost of adding this coverage to your specific business type. Some businesses, like restaurants, might have to pay a higher premium based on risk.

#### ► Special note for home-based businesses

All businesses, large and small, are thinking about emergency preparedness. And, home-based business owners should be doing that too.

"Home-based business owners should be aware that after a disaster, they may qualify for [SBA Disaster Loans](#) and possibly unemployment benefits, if they are unable to work," said Dr. Cynthia Johnson, Senior Manager of Business Assistance at Pinellas County Economic Development.

A Go Box is another critical item every home-based business owner should pull together. One action to take right now is to back up computer information on CDs or another portable medium. Store those back-ups in the Go Box too. Take photos of your home office, both inside and out, to take along.

"Just like all business leaders, home-based business owners should ensure they safeguard essential business documents and information in a Go Box," said Johnson. Ideally, that box should be backed up in an alternative location in the event the home is destroyed.

#### ► Florida's Small Business Emergency Bridge Loan Program - A life raft for businesses after a storm

Should a devastating storm impact Pinellas County, [Florida's small business emergency bridge loan program](#) is designed to provide a source of expedient cash flow to businesses impacted by a major catastrophe, enabling them to quickly begin repairs and replace inventory. The short-term loans are intended to "bridge the gap" between the time a major catastrophe hits, and when a business has secured other resources like sufficient profits from revived business, receipt of payments on insurance claims, secured longer-term loans to include U.S. Small Business Administration (SBA) disaster loans, to operate successfully.

Short-term loans of up to \$25,000 will be available to owners of small businesses in counties most impacted by a storm. The interest-free loans come in terms of 90-day or 180-day maturities. To be eligible, a business owner must have been operational for one full year prior to the storm, have less than 100 employees and verifiable, physical damage to their business.

Should a hurricane strike our region, [Pinellas County Economic Development](#) will quickly distribute information regarding available bridge loans to local businesses and the media. SBDC Certified Business Analysts at the [Small Business Development Center](#) (SBDC) will assist business owners with the forms and applications needed to prepare for and recover from disasters.

See [Small Business Recovery Information](#) for more information.

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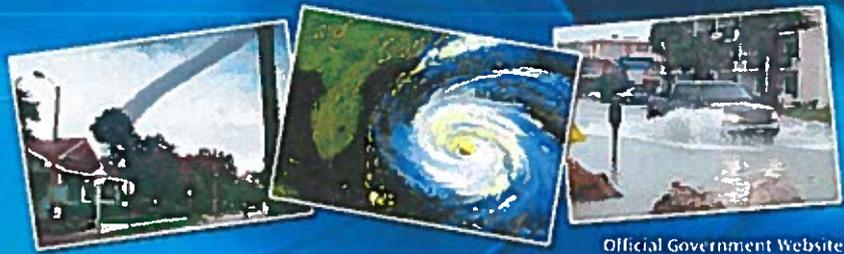
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### Home Healthcare Providers

#### Welcome to the Pinellas County website for home healthcare providers.

This web page will provide you with current information on the Pinellas County Special Needs and Transportation Assistance programs with the latest registration form and answers to some frequently asked questions. You will find an updated [Special Needs registration form here](#). There are two forms: one can be filled in online and e-mailed to us, the other can be downloaded, filled in and mailed or faxed to us. Please do not use any other forms.

#### Additional information can be found at:

- [Fact Sheet for Home Healthcare Providers](#)
- [Frequently Asked Questions About Special Needs Assistance](#)
- [Department of Health's Guidelines for Special Needs Shelter Admission](#)

#### Listed below are some areas we want to bring to your attention:

- This is a VOLUNTARY PROGRAM. Please ensure that clients understand that they are being registered and, if marked as needing transport, they will be picked up by the fire department and transported to a general or Special Needs shelter. Do not register people who do not want to be part of the program.
- Make a needs determination. Does the person need to evacuate to a shelter? Mobile and manufactured home residents should always evacuate; others may do best by staying home. Friends, hotels, motels or family may be better alternatives for evacuation than a shelter.
- When registering a client please ensure that you mark that transportation is required, if that is the case. This is very important as only registered residents will be transported. We encourage registration for Special Needs shelters but clients can go to these shelters without registering if they have their own transportation.
- If you have questions on the medical acceptability of a client for a Special Needs shelter, please call the Department of Health at (727) 820-4155.
- Caregivers and families are encouraged to accompany clients.
- Be sure to fill out agency name and contact in case we have questions.
- Clients residing in licensed healthcare facilities are not eligible for transport or public sheltering.
- If a client's needs exceed the capability of our Special Needs shelters, please work with the physician and client to arrange for admittance to an appropriate healthcare facility.
- If registration forms are difficult to read when you send them, they will be worse when we receive them via fax; please ensure they are readable.





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- There is a program for picking up pets if a registrant is going to a Special Needs shelter. They must preregister with Animal Services for this program. Call (727) 582-2600.
- Registrants requesting transport will be contacted by their local fire department when they are added to the registration database.
- Annual reviews are made by the fire departments; they will reconfirm the registrants in the system each year prior to hurricane season.
- Do not wait until we are in a hurricane watch to send in registration forms. We may not have time to process the registration forms and arrange transportation.
- Pinellas County Emergency Management no longer reviews disaster plans for Home Healthcare Providers. They are now sent to the Department of Health.

If you have any questions about the Special Needs or Transportation Assistance programs please contact the appropriate person listed below.

**General program questions:**

- [Pinellas County Emergency Management](#) - (727) 464-3800, [ema@pinellascounty.org](mailto:ema@pinellascounty.org)
- Department of Health questions: (727) 820-4155

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**Healthcare Facility Disaster Planning: Criteria, Statutes and Rules**

**Welcome to the Pinellas County Emergency Management Webpage for Healthcare Facilities.**

On this page you will find the information you need about healthcare facility disaster plan reviews along with other pertinent information on disaster response.

- ▾ [Disaster Plan Reviews](#)
- ▾ [What We Review](#)
- ▾ [Evacuation Level](#)
- ▾ [Disaster Notification](#)
- ▾ [Nursing Home Emergency Planning Tool](#)
- ▾ [Recovery](#)
- ▾ [2013 Hurricane & Health Care Conference](#)

**State of Florida Statutes**

- ▾ [Adult Day Care Centers](#)
- ▾ [Assisted Living Facility](#)
- ▾ [Ambulatory Surgical Center](#)
- ▾ [Hospitals](#)
- ▾ [Nursing Homes](#)
- ▾ [Developmentally Disabled Facility](#)
- ▾ [Residential Treatment Facilities](#)

**New for 2014**

- ▾ [Update Letter](#)
- ▾ [Pinellas County Healthcare Criteria](#)
- ▾ [Transportation Request Form](#)
- ▾ [See What We Review](#)

**Disaster Plan Reviews**

Pinellas County Emergency Management reviews all healthcare facility plans on an annual basis as required by state statute. Assisted Living Facilities may receive a letter indicating that they only need to fill out the letter, attach their evacuation agreement and return it to Emergency Management. All other facilities are required to send in their plans annually. The approval certificate you received last year shows the next review date. You may mail your plan in, bring it to our office, or send by [email](#). We will provide you with a letter stating we are in receipt of your plan.



View a nursing home evacuation drill.

**All "in-person" CEMP drop off and pick up will be restricted to:  
Monday – Friday between 11:00 a.m. and 2:00 p.m.**

If you are unable to arrange to travel to our office during these times, you **MUST** call the office (464-5550) in advance to set an appointment for these activities. You may mail or [email](#) your plans to our office in lieu of dropping them off in-person.

We have 60 days to review your plan and get it back to you. You will either get a letter stating your plan has been approved and the cost for the review (you must pay by cashier's check or money order) or you will get your plan back with a letter indicating the areas that are not in compliance.

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## What We Review - [Update Letter](#)

We use the state statute, AHCA outline for your particular healthcare facility, and the [Pinellas County Healthcare Criteria](#) to review your plan. (Statutes with outlines are posted at the top of this page.) These are the minimum requirements needed to approve your plan. Please download the outline link above for your type of facility, fill in the page numbers indicating where the information can be found and insert the outline at the front of your plan. This will ensure that you have included all required information and allow us to quickly review your plan.

### Some common errors we see in reviewing plans are:

- **EM Resource.** Insert registration page in your plan!
- **Missing Fire Plan Approval.** Approval must be obtained from your local fire marshal prior to sending the plan to us. It is not the same as your fire inspection.
- **Coordination between Plan and Agreements.** If your plan says you are evacuating to XYZ Facility, your agreement needs to be with XYZ Facility.
- **Evacuation Agreements.** If you are in an evacuation zone, you must have an agreement with a facility in a non-evacuation zone for evacuation. If you are in a non-evacuation zone, you can have an agreement with anyone.
- **Water.** You must have three gallons of water available per person per day for seven days; one of those gallons must be potable (drinkable) water. **This water must be on hand, not to be delivered.** You may use collapsible containers that you fill at the onset of a storm. You may also count the water in hot water heaters as long as you isolate the heaters prior to losing water pressure. For the Non-potable water (for washing) you may use sinks, tubs or plastic tubs with plastic liners.
- **Transportation.** You must address how you are going to get your residents to the shelter.
- **Assistance.** If you state in your plan that someone is going to help you, for example with evacuation location or transportation, then you must include a current signed agreement with them.
- **Agreements.** The statute defines the agreements as, current signed agreement. Even if your agreement is for five years, you should have the agreement reviewed (dated and initialed) annually.
- **Shelter in Place.** Your plan should include the actions you will take to shelter in place as well as your evacuation plan. In most cases you will not evacuate unless there is a severe storm. We have only evacuated at level C once in Pinellas County.
- **Extra information in your Plan.** If your information contains outdated information (over 1 year old), please remove it and use a history folder at your facility. The plan you turn into Emergency Management should contain the most current and up to date information you have on file. If this information is over one year old, it needs to be updated.

If you need assistance with your plan, please call us; we can help you. We cannot find an evacuation location for you, but we can make some suggestions and provide you with a list of non-evacuation facilities.

### Evacuation Level

Some evacuation levels have changed in the county due to better elevation information. If you are a hospital or nursing home, the evacuation level that shows up on the general evacuation-level maps or website's may not be your precise evacuation level. We check your location specifically to determine your evacuation level when we review your plan. If you are concerned that you may not know your correct evacuation level, please provide us with the

finished floor elevation of your facility and we will check it for you. If you are interested in a variance or vertical evacuation, please call us.

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### Disaster Notification

There are several ways we can notify you of impending evacuations or emergency situations other than the television or radio. If you provide us with your e-mail address or fax number, we can put you on the list to receive our situation reports (sitreps). These reports are sent out when there is an active weather system that may threaten us and as a once-a-month test. If you would like to be added to our sitrep list, please e-mail us at [ema@pinellascounty.org](mailto:ema@pinellascounty.org) or fax us at (727) 464-4024.

How will you receive disaster information if your power is out? What if you evacuate out of the area? Using the Community Notification Service, Pinellas County residents can receive emergency information via text messages on their cell phones.

To receive the alerts, call (888) 689-8905 from the cell phone you wish to register and enter your Pinellas County zip code. If you don't have free text messaging on your cell phone, you will be charged between 5 and 10 cents per message for these alerts. The Community Notification Service does not work with pre-paid or pay-as-you-go cell phones.

Signing up is quick and you can opt-out easily at any time. Subscribing to this service will allow Pinellas County to let you know when you have to evacuate due to a hurricane and when it's safe to go home. You will also be notified about other local emergencies.

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### Nursing Home Emergency Planning Tool

Nursing homes have several new resources to help prepare for emergencies such as hurricanes and other disasters. These include the recently published [Emergency Management Guide for Nursing Homes](#), along with a software application for developing nursing home emergency management plans. The new tools provide nursing home administrators, corporate representatives, owners and key emergency management staff with powerful information for developing all-hazards emergency plans.

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### Recovery

Please tell us when you have evacuated and to what location. Also, if you have problems after the storm with damage, loss of utilities, etc., please contact us by calling the Citizens Information Center at (727) 464-4333 and telling the operator that you want to speak to someone in EOC Healthcare. We will need to know what your situation is and what type of help you need. You may also use the emergency EOC number you were provided.

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Pinellas County Emergency Operations Center  
Department of Emergency Management  
Citizen Information Center  
(727) 464-3800  
**(during an emergency activation call (727) 464-4333)**

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- After the Storm-Recovery
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- Other Hazards
- Resources ▾

**Hotels/Motels/ R.V. Parks/Transient Accommodation Facilities:**

**▶ Hotel/Motel Owners Need To Plan Ahead Too**

**SURVIVING THE STORM**



**IT'S EVERYONE'S RESPONSIBILITY**

Four hurricanes that hit the state in 2004 cost Floridians an estimated \$20 billion in property damage. Hotel/Motel owners in Pinellas County must have an emergency plan in place to not be in violation of the ordinance 90-87. If you don't have an emergency response plan in place a \$500 fine can be levied from the Pinellas County Department of Emergency Management.

If a major storm approaches the Pinellas County coast...

- Do you know what to do?
- Do you know how to inform your guests?
- Prepare and protect your property?
- Do you know what to do for re-entry to your property after the storm passes?
- How can hotel/motel owners and managers keep damage and downtime to a minimum?

That depends on how well the property owners have planned, and if they have a emergency plan in place, before the storms hits their property.

- [Accommodation Planning Guide](#)
- [Sample Plan](#)

Having and practicing a [business emergency response plan](#) can provide the answers to the 'who's in charge' question and give direction to your entire staff concerning what their responsibilities are.

**▶ R.V. Parks/Transient Accommodation Facilities:**

- [Pinellas County Code](#)

**HurricaneGuide**  
Official Hurricane Guide  
For Pinellas County

**HurricaneVideos**  
Variety of Hurricane  
Educational Videos

**StayConnected**  
Subscribe to E-lett, cell  
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Largo, FL 33778  
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All documents in pdf format unless indicated.

- [FEMA Summary of Homeowner Flood Insurance Affordability Act of 2014](#)
  - [H.R. 3370](#) Signed into law 03-21-2014 (to delay)
    - [Summary - Overview](#)
- [FEMA: Flood Insurance Reform](#)
- **State Legislation (pending):**
  - [SB 542: Flood Insurance](#)
- [BCC Floodplain Presentation](#) - go to item #25
- [Pre-FIRM Single Family Homes in FEMA High Risk Flood Zones](#)
- [Tampa Bay Beaches Chamber](#)

### Flood Information

#### When flooding happens.... Fact:

Communities with flood insurance coverage in force recover much faster when a flood event happens.

Low-lying areas in Pinellas County that are adjacent to creeks, bayous, lakes, Clearwater Harbor, Boca Ciega Bay, Tampa Bay and the Anclote River are subject to flooding. Tropical storms and other threatening weather may present flood hazards to residents due to high tides, storm surges caused by winds and heavy rainfall.



All about your property, your neighborhood and the opportunities your location provides.

**Flood Insurance Rate Maps**  
[Are you in a flood zone?](#)

**Flood FAQ**  
[List of frequently asked questions.](#)

**Floodplain Management**  
[What to know](#)

**Flood Insurance**  
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This means everyone is in a flood zone with a risk designation of high, medium or low, so take steps to protect your property and financial security before disaster strikes. Most homeowners insurance does not cover flood damage. Talk to your insurance provider about your policy and consider if you need additional coverage.

The [National Flood Insurance Program \(NFIP\)](#) helps provide a means for property owners to financially protect themselves if additional coverage is required. The NFIP offers flood insurance to homeowners, renters, and business owners if their community participates in the NFIP. [Check the Community Status Book](#) to see if your community is already an NFIP partner. **To find out your flood risk, calculate your premium and learn more about the NFIP visit [www.FloodSmart.gov](http://www.FloodSmart.gov).**

**What to know:**

- [The Cost of Flooding](#)
- [FAQ](#)
- [Flood Elevation Certificates](#)
- [Flood Insurance](#)
- [Floodplain Management](#)
- [Flood Maps & Zones](#)
- [Flood Mitigation](#)
- [Flood Safety](#)
- [Flood Warning System](#)
- [Property Protection](#)
- [Resources, Publications and Contacts](#)

**Report:**

- [Ditch obstruction](#)
- [Flooding issue](#)
- [Illegal activities that affect our bays/lakes/streams](#)
- [Pond issue](#)
- [Sewer issue](#)

**Businesses/Contractors:**

- [Flood Protection Assistance](#)
- [Flood Zone Application](#)  
Application for building in a flood zone
- [Information and Guidance on Building Safer](#)
- [Letter of Map Amendment / Map Revision](#)
- [Elevation Certificate](#)
- [Development in Floodplain](#)

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## Flood Warning System

### Flood Hazard Areas:

Low-lying areas in Pinellas County that are adjacent to bodies of water are subject to flooding. Furthermore, tropical storms and other threatening weather may present flood hazards to residents due to high tides, storm surges caused by winds and heavy rainfall.



The Federal Emergency Management Agency (FEMA) has designated these low-lying areas as **Special Flood Hazard Areas (SFHA)**, which are defined as having a 1% chance of being flooded in any given year. The Special Flood Hazard Areas are depicted as A or V zones on a Flood Insurance Rate Map.

### Flood Warning System:

Find out if your home is at risk for flood and educate yourself on the impact a flood could have on you and your family.

- **Flood Watch:**  
Flooding is possible. Tune in to NOAA Weather Radio, commercial radio, or television for information.
- **Flash Flood Watch:**  
Flash flooding is possible. Be prepared to move to higher ground; listen to NOAA Weather Radio, commercial radio, or television for information.
- **Flood Warning:**  
Flooding is occurring or will occur soon; if advised to evacuate, do so immediately.
- **Flash Flood Warning:**  
A flash flood is occurring; seek higher ground on foot immediately.

Pinellas County flood warnings are broadcast by local television stations, including PCC-TV (Bright House 622, Knology 18, Verizon 44), as well as by the National Weather Service NOAA Weather Radio. Tune in to these media stations for instructions during times of possible flooding, including storms. Listen for weather updates, evacuation orders and expected storm arrival times.



To find your evacuation level visit [Know Your Zone](#), just type in your address or call the Interactive Hurricane Evacuation Level Inquiry Line at (727) 453-3150 for information, call (727) 464-3800 from 7:30 a.m. to 4:30 p.m., Monday through Friday.

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Evacuation levels are also provided on your [Pinellas County Utilities bill](#) and on your [Truth in Millage \(TRIM\) Notice](#) from the Property Appraiser's office. Please note that the Special Flood Hazard Area may differ from the evacuation levels.

Visit [Pinellas County Emergency Management](#) for more information.



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Property Protection

Floodproofing is one way to minimize property loss due to floods. Floodproofing may involve building walls or levees, elevating or moving structures, or sealing the structure.



Pinellas County Building & Development Review Services can provide citizens with information on techniques to reduce property loss and can review and critique floodproofing plans. Call (727) 464-3888 for more information.

- [Retrofitting Methods for Flood Protection](#)
- [Elevation Certificate](#)

Drainage System Maintenance:

Surface water runoff is affected by natural and manmade features and is channeled through inlets and pipes, swales, ditches, ponds and lakes, ultimately flowing into the surrounding bays and the Gulf of Mexico. Maintenance of these features is important since debris obstructs the flow of water causing street and yard flooding. To achieve the best flow capacity, the Pinellas County Public Works Operations Division performs scheduled inspections and maintenance that include removal of high weeds, clippings, branches or other debris. For further information, contact the Pinellas County Public Works Operations Division at (727) 464-8900. It is illegal to dump unauthorized chemical, sediment or waste materials into storm sewer systems, streams or bays in Pinellas County.

Report:

- [Ditch obstruction](#)
- [Flooding issue](#)
- [Illegal activities that affect our bays/lakes/streams](#)
- [Pond issue](#)
- [Sewer issue](#)

Substantial Improvement, Substantial Damage and the "50% Rule":

Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

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- Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
- Any alterations of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."
- [Required permits](#)

**Substantial Improvement Requirement:**

The National Flood Insurance Program and Pinellas County regulations require buildings within the Special Flood Hazard Area that are improved at a cost which is 50% or more of the existing building's market value before the improvement is started to meet current construction standards for buildings in a floodplain. For further information, please call Pinellas County Building & Development Review Services Department at (727) 464-3888.

Should you see illegal development in the floodplains, please contact Pinellas County Building & Development Review Services.

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## Flood Mitigation

Each year, thousands of properties flood repeatedly nationwide. Often built before floodplain management regulations took effect, these properties continue to place a severe strain on the National Flood Insurance fund. FEMA has several financial assistance programs available to communities and interested property owners to acquire, retrofit, or fund other flood mitigation projects.

All these programs are managed through the [State Division of Emergency Management's Mitigation Program](#).

- **The Flood Mitigation Assistance Program** funds are specifically designed to help reduce losses to National Flood Insurance Program insured buildings. Each year a certain amount is set aside for planning grants, project grants for acquisition or retrofitting, and technical assistance grants. These funds are allocated to states like Florida each year.
- **The Repetitive Flood Claims Program** provides pre-disaster funding for mitigation projects at 100% Federal Funding.
- **The Severe Repetitive Loss Program** funds residential buildings that have at least: (a) Two separate claims payments with the cumulative amount of the claims exceeding the market value of the building; or (b) Four claims payments over \$5,000 each and the cumulative amount of such claims payments exceeds \$20,000. The SRL Program is different from the other mitigation grant programs because property owners who decline offers of mitigation assistance may experience an increase in their flood insurance premium to more closely reflect the flood risk to the structure.
- **The Hazard Mitigation Program** funds become available after a Presidential Disaster declaration and can be used to fund projects to protect either public or private property such as flood proofing or installation of hurricane shutters or property acquisition, relocation, or elevation to protect structures from future disasters.
- **The Pre Disaster Mitigation Program** provides funds through a competitive grant program developed to assist communities implement hazard mitigation related activities to avert future disasters.

Another source of financial assistance available to a flood policy holder of a repetitive loss property is **Increased Cost of Compliance funding**. This rider on your flood policy provides additional coverage to help underwrite a flood mitigation project required by code as a condition to rebuild the damaged building. It can also help pay the non-federal portion of a cost-

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shared retrofitting project funded under the mitigation programs described above.

**The reimbursement funding programs noted above require the local government to "sponsor" the applicant from the application stage through to the completion of the project.**

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Flood Information- FAQ

■ **What flood zone am I in?**  
[Look up flood zone here.](#)

■ **Who needs flood insurance?**  
You must have flood insurance to get federally secured financing to buy, construct, or improve a building in a high-risk area known as a Special Flood Hazard Area (SFHA), where more than 75 percent of all flood claims are paid. Lending institutions that are federally regulated or insured must determine if the building is in an SFHA. If it is, the lender must require flood insurance on: FHA loans, VA loans, second mortgages, home equity loans, home improvement loans, construction loans, commercial loans, farm credit loans



■ **What can be done about flooding problems?**  
Drainage system maintenance is important since debris obstructs the flow of water causing street and yard flooding. It is illegal to dump unauthorized chemical, sediment or waste materials into storm sewer systems, streams or bays in Pinellas County. For maintenance issues for residents in unincorporated Pinellas County, call (727) 464-8900, and other residents need to call the [city](#) in which they live. **Or fill out a form online**  
[Ditch obstruction](#), [Flooding issue](#), [Pond issue](#), [Sewer issue](#), [Illegal activities that affect our bays, lakes and streams.](#)

■ **Who do I call to report a problem?**

- [Ditch obstruction](#)
- [Flooding issue](#)
- [Pond issue](#)
- [Sewer issue](#)
- [Illegal activities that affect our bays, lakes and streams.](#)

■ **What is the difference between a flood zone and an evacuation zone?**  
Flood zones and evacuation zones are different. They measure different conditions that may not occur at the same time. The flood zones and evacuation zones are determined by different methods and have different purposes. A home may be located in a non-evacuation zone, yet still be located in a flood zone because of a nearby stream or pond. Residents must check both zones.

**Flood zones** are areas mapped by FEMA for use in the [National Flood Insurance Program](#). Each flood zone designation, represented by a letter or letters, tells homeowners exactly what the risk is for flooding at their property over a period of years, regardless of the cause. By law, all homes in high-risk zones carrying a mortgage must be covered by flood insurance.

**Evacuation zones** are based on hurricane storm surge zones determined

by the National Hurricane Center using ground elevation and the area's vulnerability to storm surge from a hurricane. The evacuation zones are marked from A through E, plus non-evacuation zones.

■ **Where do I find out if I need to evacuate?**

For more information on if you need to evacuate, go to the Emergency Management - [Know Your Zone page for more information](#)

■ **Will I flood out in a hurricane?**

Hurricanes can bring tremendous amounts of rain and dangerous storm surge flooding from the Gulf of Mexico and Tampa Bay. While many factors about a particular hurricane (size, forward speed, point of landfall) will change the storm's effects, it's wise to plan as if you will be flooded out, and take all necessary precautions to save your life.

■ **Is it safe to drive during a flood event?**

The following are important points to remember when driving in flood conditions:

- Six inches of water will reach the bottom of most passenger cars causing loss of control and possible stalling.
- One foot of water will float many vehicles.
- Two feet of rushing water can carry away most vehicles including sport utility vehicles (SUVs) and pick-ups.

■ **Are sandbags helpful?**

Sand bags are not an effective way to block or minimize water intrusion into homes or buildings. But, some homeowners feel a sense of well-being by utilizing sand bags. [See more sandbag information.](#)

■ **Do I have an elevation certificate on my property?**

Yes, if it was built after September, 1992, when Building and Development Review Services (BDRS) joined that part of the Community Rating System (CRS). Contact BDRS at (727) 464-3471.

■ **How much Flood Insurance should you buy?**

For federally secured financing in an Special Flood Hazard Area (SFHA), the law requires flood insurance in an amount equal to the outstanding principal balance of the loan, the value of the building, or the maximum coverage available, whichever is less. It also requires flood insurance to be maintained for the life of the loan. While the law requires coverage only for the loan balance, you should consider protecting your equity. It's wise to insure primary residences and businesses in sufficient amounts to fully protect the building and its contents.

The NFIP provides up to \$250,000 coverage for single-family residential buildings and up to \$100,000 coverage for contents. Other residential and commercial property owners can also obtain flood insurance.

- For more information about the NFIP and flood insurance, call (800) 427-4661, or contact your Insurance company or agent.
- For an agent referral, call (888) 435-6637 TDD (800) 427-5593
- [Policy Rates](#) 

■ **Am I paying too much for my flood insurance?**

Please call your local insurance agent or the National Flood Insurance Program at 1-888-379-9531. Further information can be found on [typical policy rates](#) on [Preferred Risk Policies](#) and on [NFIP Grandfathering Rules](#). 

■ **Can I get a discount?**

The [Community Rating System](#) (CRS)  is a program that provides communities with discounts to flood insurance rates. If you do not live in unincorporated Pinellas County, check the [Community Status Book](#)  to see if your community is already an NFIP partner.

■ **What are the Special Flood Hazard Area (SFHA) Zones?**

Zones V, VE, A or AE are all considered to be SFHA Zones, meaning these properties have a greater than one percent chance of flooding in any given year. When viewing the Flood Insurance Rate Maps (FIRMs), SFHA Zones are shown as the darkest shaded areas.

■ **What Zones require Flood Insurance?**

If you have a federally backed mortgage, flood insurance is mandated for

those properties within the SFHA Zones (Zones V, VE, A, or AE). Although the purchase of flood insurance is not mandated in Zones X (unshaded areas on the FIRMs) or X (500) (lightly shaded areas FIRMs), a Lending Agency still may require it.

■ **Do I need flood insurance in Zones X or X (500)?**

Although FEMA doesn't mandate insurance and a mortgage company may not require it, purchasing flood insurance at a lower rate (known as "Preferred Risk" may be a wise idea. Nationwide, over 30% of reported flood claims are in an X or X (500) Zone.

■ **How do I get FEMA to remove my property from a Special Flood Hazard Area (SFHA) Zone?**

First check your Elevation Certificate and see if both the elevation of the lowest floor and the lowest adjacent grade (LAG) are at or above the Base Flood Elevation (BFE) for the respective flood zone. Next check your Elevation Certificate to see if the Surveyor (PLS) used the North American Vertical Datum 1988. If the PLS used the NAVD88 and both elevations are at or above the Base Flood Elevation (BFE) you may then contact FEMA at 877-336-2627 and apply for a Letter of Map Amendment (LOMA), if fill dirt was not used when your house was built, or for a Letter of Map Revision by Fill (LOMR-F), if fill was brought in by the builder/developer.

■ **How do I find out if there is an existing LOMA or LOMR-F on my property?**

For the Unincorporated areas of Pinellas County check the 2005 Revalidation List or the Pinellas County Building and Development Review Services at (727) 464-3471. For incorporated areas of the County please check with your city.

■ **Where can I find an Elevation Certificate on my structure?**

If your structure was built in the Unincorporated County after September 1992 and in is a Special Flood Hazard Area Zone then the Pinellas County Building and Development Review Services (BDRS) should have a copy. For all other jurisdictions, please contact the individual municipality. If there isn't an elevation certificate on record, then you will have to hire a Professional Land Surveyor (PLS) to conduct an elevation survey.

■ **What is Substantial Improvement, Substantial Damage, or the "50% Rule"?**

The National Flood Insurance Program and Pinellas County regulations require buildings within the Special Flood Hazard Area that are improved at a cost which is 50% or more of the existing building's market value before the improvement is started to meet current construction standards for buildings in a floodplain. For further information, please call Pinellas County Building & Development Review Services Department at (727) 464-3888.

The value of the structure is the estimate before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

- Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
- Any alterations of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."

■ **Where do I get the value of my structure?**

This is the value of the structure only, property value is not considered. The Pinellas County Property Appraiser's Office website is a good source. Use the replacement depreciation value figure and divide by two. A private appraisal company may also be used.

■ **How long do I need to wait between improvement permits when dealing with the 50% rule?**

Currently, Pinellas County has no waiting period. However, different

jurisdictions vary on this depending on their local ordinances. Please consult your respective municipality.

■ **Since I'm doing the work myself, do I have any labor fees to consider in the cost of construction?**

Yes. Square footage construction prices issued by the International Code Council will be used to determine compliance with the FEMA 50% cost requirements. Owner-contractors must include fair labor costs into their cost breakdown calculations, even if labor fees are not involved.

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# The Cost of Flooding

## Measure Your Damage

All it takes is a few inches of water to cause major damage to your home and its contents. This interactive tool shows you what a flood to your home could cost, inch by inch.

[Launch Cost Of Flooding](#)

## DON'T JUST SEE IT, SHARE IT.

Now that you've seen how much flooding can cost, share it with friends and family.

## LEARN MORE ABOUT FLOODING



### Floodsmart Video Library

Watch our collection of videos—from devastating testimonials about flooding to our Home Personified commercials. [Watch Now](#)



### Flood Risk Scenarios

There are many ways flooding can occur, from snow melt to flash floods and tropical storms. [Explore Now](#)



### Levee Simulator

The FloodSmart Levee Simulator is a helpful, animated tool that demonstrates how levees work. [Learn More](#)

## PRIMARY RESIDENCE DISCLAIMER

For flood insurance rating purposes, a primary residence is a building that will be lived in by the insured or the insured's spouse for at least 80 percent of the 365 days following the policy effective date. If the building will be lived in for less than 80 percent of the policy year, it is considered to be a non-primary residence.

- Rate your risk
- Estimate your premiums
- Find an agent

Address:

City:

State:  ▼

Zip code:

Residential?  Yes  No

**GO!**

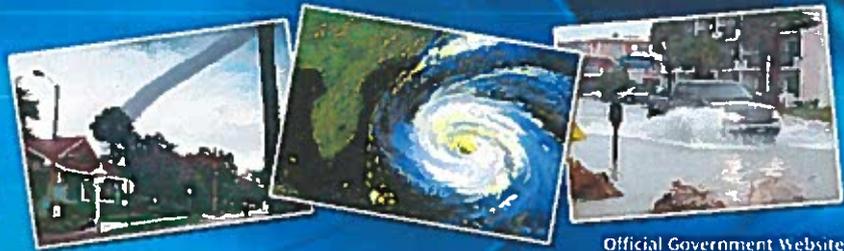
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## Emergency Management



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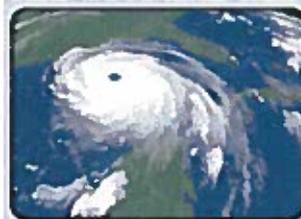
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### THE OFFICIAL ALL-HAZARD GUIDE FOR PINELLAS COUNTY



# SURVIVING THE STORM

## IT'S EVERYONE'S RESPONSIBILITY

### 10-Year Calm.. Don't Be Fooled!

**HurricaneGuide**  
Official Hurricane Guide  
For Pinellas County

**HurricaneVideos**  
Variety of Hurricane  
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### Hurricane Preparedness

Published specifically for Pinellas County residents by Pinellas County Emergency Management.

The Atlantic hurricane season runs from June 1 until November 30. That's why it's important to pick up your copy of the Surviving the Storm guide and prepare for what could come.

**You can find a copy of the guide at the following locations:**

- City Halls
- City Fire Departments
- All libraries
- Pinellas County Court Houses
- Tax Collector offices

While there may be several guides out there to choose from, the Surviving the Storm guide is the official guide of Pinellas County, addressing the special considerations of our very vulnerable county. Find the latest information on how to get ready for this year's storms. From preparing your pet and family to preparing your car and home, you'll find preparedness information in this guide you won't find anywhere else.

#### [View Entire Hurricane & All-Hazard Guide](#)

(When printing guide, please set printer to shrink to fit)

[Bahia de Tampa Guía de Huracanes 2014 - Español](#)

Pages all in pdf format

- ▶ 1 [Timing is Critical to Good Planning](#)
- ▶ 2 [Stay Connected Through the Season](#)
- ▶ 3 [Making Informed Decisions](#)
- ▶ 4-5 [Preparation is Key - Business Planning](#)

▶	6-7	<a href="#">Evacuation Map and Shelter List</a>
▶	8-9	<a href="#">Special Needs</a>
▶	10-11	<a href="#">Pets &amp; Host Homes</a>
▶	12-13	<a href="#">During &amp; After a Storm</a>
▶	14-15	<a href="#">All-Hazard Planning</a>
▶	16	<a href="#">Contact Numbers and Checklists</a>

**Some key preparation steps include:**

- [Find your evacuation level here.](#)
- Assemble a [emergency survival kit](#) that provides for your family’s needs for a minimum of one week.
- If you have to evacuate, find out now where you will be going should an order be issued.
- If you don’t have to evacuate, prepare shutters to protect your windows and brace your entry doors and garage door.

While the most active months of hurricane season are still to come, understand that a hurricane can spin up at any time. Check the weather forecast daily to stay on top of any tropical developments.

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### Hurricane Preparedness



- [Hurricane Related Videos](#)
- [Short Educational Videos](#)
- [eTownHall Hurricane Information](#) ■
- [Good to Know](#) ■

**HurricaneGuide**  
Official Hurricane Guide For Pinellas County

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### Animations and Simulations

**Storm Surge Mapping**  
know your zone

**Storm Surge**  
NOAA shows why it's so dangerous

**Hurricane Katrina**  
Historic Storm Surge Video

**Hurricane Storm Surge Vulnerability**

**What Tampa Bay residents might experience - Cat 5**

### Hurricane Related Videos ■

**Does it take a Category 5 Hurricane?**

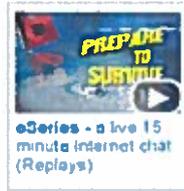
**[Does it take a Category 5 Hurricane?](#)** Time: 59:42.

Does it take a monster storm to create a lot of damage? Pinellas County's hurricane preparedness specialist Tom Iovino tackles this tropical weather misconception in a presentation delivered to residents of the city of Gulfport.

**[Prepare to Survive](#)** Time: 15:00

Is a 15-30 minute chat with a noted expert on hurricane preparedness. Topics:

- [Hurricane Season](#)



- ▣ [Building Codes to Prevent Disaster](#)
- ▣ [Businesses Survival Strategies](#)
- ▣ [C.E.R.T. \(Community Emergency Response Team\)](#)
- ▣ [Challenges of Living in Florida](#)
- ▣ [Fire Departments before, during and after hurricanes](#)
- ▣ [Food Safety](#)
- ▣ [Future First Responders](#)
- ▣ [Governor's Hurricane Conference- May 2012](#)
- ▣ [HazMat Response](#)
- ▣ [Hurricane Predictions & Winter Weather in Florida](#)
- ▣ [Insurance - 2013 Additional Insurance Info](#)
- ▣ [Know Your Zone](#)
- ▣ [Landscape Preparation - Trees and Hurricanes info](#)
- ▣ [Law Enforcement's Role: before, during and after a storm emergency](#)
- ▣ [Pet Preparedness](#)
- ▣ [Power Outages / Power](#)
- ▣ [Sandbags & Window Taping](#)
- ▣ [Special Needs Evacuation Program](#)
- ▣ [The Four Hurricane Hazards](#)
- ▣ [Transportation](#)



**[Hurricane Evacuation Changes](#)**

Time: 5:00.

Every year we stock up on supplies like batteries, canned foods and water. Now, there are a few new items to consider. Watch to learn more.

[\(watch with open caption\)](#)



**[Project Storm Story](#)**

Time: 27:00

Experience is the greatest teacher. Hear six first-hand accounts of hurricane survivors and learn just how devastating hurricanes can truly be.



**[Busting Hurricane Myths](#)**

Time: 46 min.

Learn about commonly-held hurricane myths and why they are so dangerous.

[\(watch with open caption\)](#)



**[Hurricanes for Kids](#)**

Time: 21 min.

Hurricanes for Kids Hey, Kids! Do you want to learn all about hurricanes? Join Typhoon Tom and Stormy as they learn what these storms are all about!

- ▣ [Part 2](#)



**[Hurricane 101 - En Espanol](#)**

Time: 50 min.

What is a hurricane? How do they form? What are their effects? Learn the Basics:



**Getting Ready for Disaster**

Time: 38 min.

Do you have a hurricane plan? This FEMA sponsored, program goes through a step-by-step process to develop one. It includes planning for children, pets and the elderly.



**Shuttering Your Home**

Time: 30 min.

Learn how to shutter your home from the storm's winds with this step-by-step program.

[\(watch with open caption\)](#)



**Tape Strikes Out**

Time: 4 min.

When a storm blows in, you put masking tape on your windows and you're fine right? We'll show you just how wrong that assumption can be.

[\(watch with open caption\)](#)



**Business Hurricane & Disaster Seminar**

Time: 1 hr. 30 min.

This seminar explains how a business should approach disaster preparedness.

[\(watch with open caption\)](#)



**¿Estás Preparado?**

Time: 12 min.

Recomendaciones para usted y su familia para preparar para un huracán. (Recommendations for you and your family to prepare for a hurricane.)



**Trees and Storms**

Time: 50 min.

The general health, maintenance and type of tree greatly determine its resistance to storm winds. This program is a videotaped public presentation on the topic.

[\(watch with open caption\)](#)



**Hurricane Charley**

Time: 11 min.

When a contingent of first responders from Pinellas County went to offer help to Charlotte County, PCC-TV went along. See what a strong hurricane can do.

[\(watch with open caption\)](#)



**Get Ready Florida - Espanol**

Time: 28 min.

This program was produced by the state of Florida in 2006 but it still has many valuable tips on how to prepare for a hurricane.

[\(watch with open caption\)](#)

**▶ Short Educational Videos:**



**[NOAA Storm Surge](#)**

Time: 3 min.

This video produced by NOAA explains how a hurricane's storm surge works and why it is so dangerous.



**[Host Homes](#)**

Time: 2 min.

Less crowded, more comfortable and more convenient, sheltering in a home outside of called evacuation zones is a smart option. [Emergency Management website](#)

[\(watch with open caption\)](#)



**[Experienced Ham Radio Operators Needed](#)**

Time: 5 min.

Pinellas County Emergency Management Department is in need of experienced Ham Radio operators to volunteer their skills and equipment to lend a hand if an emergency develops.

[\(watch with open caption\)](#)



**[Hurricane Boat Preparedness - short version](#)**

Time: 1 min.

View a quick explanation of how to secure a boat before a storm approaches.



**[Hurricane Boat Preparedness - long version](#)**

Time: 3 min. 30 sec

View a quick explanation of how to secure a boat before a storm approaches.



**[What to Expect at a Shelter](#)**

Time: 4 min.

Where's a safe place to go during a storm? A public shelter will be safer than staying in an evacuation zone, but it's going to be uncomfortable. Discover some better options.

[\(watch with open caption\)](#)



**[How Are Evacuations Ordered?](#)**

Time: 4 min. 22 sec.

Just what has to happen before an evacuation order is given? Follow along during 2008's Tropical Storm Fay to see what steps are required before an evacuation is ordered.

[\(watch with open caption\)](#)



**[The Helping Plan](#)**

Time: 4 min.

Being prepared takes planning for all of us here in Florida, but what about those who can't really help themselves even when there is no storm in sight? This is the story of how the county is reaching out to a group that can help the helpless.

[\(watch with open caption\)](#)



**[Generator Tips](#)**

Time: 5 min.

This video was prepared by Progress Energy to demonstrate the correct way to use a portable generator when a storm has caused a power outage in your neighborhood.

[\(watch with open caption\)](#)



**[Extreme Heat Safety](#)**

Time: 2 min. 30 sec.

Keeping your cool on a very hot day won't just keep you comfortable, it might save your life. Learn how to avoid heat stroke and other complications.

[\(watch with open caption\)](#)



**[Lightning Safety](#)**

Time: 2 min. 30 sec.

Nature's fireworks can be destructive. PCC-TV goes to the Progress Energy lightning lab to find out how to protect your home.

[\(watch with open caption\)](#)



**[Tornado Safety](#)**

Time: 4 min. 18 sec.

Florida's tornadoes may not be as strong as those found in Tornado Alley, but they can still bring destruction. Learn how to stay safe from these storms.

[\(watch with open caption\)](#)



**[Build Your Survival Kit](#)**

Time: 3 min. 30 sec.

Building a hurricane survival kit doesn't have to break the bank. Learn how to put together a well-stocked kit inexpensively.

[\(watch with open caption\)](#)



**[NOAA Hurricane Hunters](#)**

Time: 2 min.

Get an up close look at the NOAA P-3 Orion aircraft that fly into hurricanes.

[\(watch with open caption\)](#)

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- Publications & Links

### Hurricane Preparedness



Staying connected to important information can help you, your family and your business survive the storm.

- [E-Lert](#)
- [Speakers & Presentations](#)
- [Cell Phone](#)
- [Weather Alert Radio](#)
- [Watch PCC-TV](#)



- [Sign up for E-lert](#)  
 Receive a monthly electronic newsletter about hurricane safety  
 Receive emergency alerts via e-mail
- [Sign up with your cell phone](#)  
 Receive emergency alerts via text message on your cell phone
- [WATCH PCC-TV](#)  
 Videos and live coverage of the Emergency Operations Center
- [Speakers & Presentations](#)  
 Request a Pinellas County speaker to make a hurricane presentation to your group or employer
- [Weather Alert Radio Save Lives](#)  
 Just like a smoke alarm, this radio can save your life. Weather alert radios can be found at many retailers, in catalogs and online.

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#### ▶ Hurricane & Safety News E-Lert

An award-winning monthly newsletter that provides the latest emergency education information compiled from local and national sources. During emergencies, subscribers will receive emergency bulletins and instructions.

#### Subscribe to Hurricane & Safety News (E-lert)

E-mail addresses are public records under Florida law and are not exempt from public-records requirements. If you do not want your e-mail address to be subject to being released pursuant to a public-records request, do not send electronic mail to this entity. Instead contact this office by [telephone](#) or [in writing](#) via the United States Postal Service.



[View Current Newsletter](#)

► **Get Alerts By Cell Phone**

**Pinellas County's FirstCall service is FREE to our residents** and will give us multiple ways to get the word to you whenever an emergency situation arises. All you have to do is register your contact information with the FirstCall Emergency Notification Service and an automated message will be sent to alert you to local emergencies.

- Your contact information will remain protected and confidential.
- Subscribers will receive a notification on each contact method they provide to us.
- Each member of your household that would like to receive emergency notifications can register with this FREE service.
- An automated system will call land lines and cell phones at the same time an e-mail and text message will go out, so you could receive four notifications, but we would rather you know than not know!
- The FirstCall network will allow us to send out alerts to the County as a whole and to specific smaller geographic areas.
- It's easy to sign up for this FREE service:  
<https://alertregistration.com/PinellasCoFLEMS/>  
This is a secure web site so your information is protected! If the internet is not available, you can call 866-484-3264 to sign up.
- This emergency notification service is provided to the citizens of Pinellas by Pinellas County's Emergency Management Department to provide information in the event of an emergency situation.

*Due to the change to FirstCall from our previous automated calling system, residents will need to re-register with FirstCall. The Citizen Notification Service information previously provided will be kept and used until Dec. 31, 2014.*

► **Watch PCC-TV Hurricane Videos**

Pinellas County Connection TV (PCC-TV) produces hurricane educational and informational programs that are available through steaming video 24-hours a day at the PCC-TV web page. [Click here to go the hurricane video page.](#)



During an activation of the Emergency Operations Center, PCC-TV will air live coverage of all press briefings. [Click here to see PCC-TV live.](#)

► **Speakers & Presentations**

Pinellas County has expert speakers who make presentations by request to community groups, schools, employers and events. [Click here to go to the presentations page.](#)

---

▶ **Weather Alert Radio Save Lives**

Severe weather can often strike quickly, even during the very early morning hours. An alarm from a weather alert radio can mean the difference between life and death because every minute counts in that kind of situation. Pinellas County Emergency Management staff strongly urges residents to buy a weather alert radio. Just like a smoke alarm, this radio can save your life. Weather alert radios can be found at many retailers, in catalogs and online.



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**Hurricane Preparedness**



When it comes to spreading the word about hurricane preparedness, it truly is everyone's responsibility. Spreading the word about surviving the storm to friends, neighbors, coworkers and other people you know is the most effective way to let them know about the threat we face from these storms.

To assist your outreach efforts, Pinellas County has assembled the following resources. Please feel free to incorporate them into your next meeting.

- [Hurricane and disaster preparedness videos](#)
- [Pinellas County evacuation map](#)
- [Entire Hurricane Guide](#)

**Presentation & Classes Available:**

If your organization, school or place of employment would like a presenter, contact Pinellas County Communications to arrange for a speaker. Please review the list of topics at our [Speakers Bureau website](#) and fill in the online [request form](#).

If you have any questions or feedback, please call (727) 464-4600.

**Presentation Topics include:**

- ▼ [Hurricane 101](#)
- ▼ [Busting Hurricane Myths](#)
- ▼ [Hurricanes for Kids](#)
- ▼ [Becoming Storm Savvy](#)
- ▼ [Does it Take a Category 5?](#)

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**Hurricane 101**

What is a hurricane? How do they form?  
 What are their effects?



**Learn the Basics:**

- **The Four Hazards** - Always be aware of these
- **Being Prepared** - Why you need to be ready early
- **Your Evacuation Level** - Should you stay or go?
- **The Saffir-Simpson Scale** - What it is and how it's used
- **Hurricane Tracking** - How it's done
- **Harden Your Home** - How to help prevent damage
- [Watch Video - Hurricane 101 presentation!](#) 
- [Veá el Huracán 101 en Español!](#) 



Don't miss this opportunity! [printable poster 10"x6.5"](#)

## Busting Hurricane Myths

Learn the dangers of some commonly held beliefs when hurricanes approach. Not only will you find the real story, you may also save your life if the big one comes.

- **The Dirty Dozen** - 12 commonly held myths
- **Knowledge is Power** - Gain control of your safety
- **Don't Panic** - Stay prepared and well informed
- **Be Prepared** - It only takes one storm
- **Truth about Shelters** - Use them only as last resort
- [Watch Video - Myths put to the ultimate test](#) 



Don't miss this opportunity! [printable poster 10"x6.5"](#)

## Hurricanes for Kids

Hurricane season can be a very frightening time for younger family members. By using experiments and easy-to-understand language, your youngsters can find some control over these scary situations.

- **What Is A Hurricane?**
- **How Do They Form?**
- **Why Do Hurricanes Have Names?**
- **What Can I Do To Get Ready?**
- **How Do They Track Hurricanes?**
- **Watch the Hurricanes for Kids video!**
- [Check out our Hurricanes for Kids Activity Book!](#)



printable poster 10"x6.5"

## Pre-season Presentation Only Becoming Storm Savvy

Don't wait until a hurricane is approaching. Learn why you should prepare early for the hurricane season.

- **Know Your Zone** - Know which evacuation zone you live in



- **Building Your Survival Kit** – Don't busting your budget
- **Preparation or Panic** - It's your choice
- **Safeguarding Your Home** - And your wallet
- **Hurricane History** - It only takes one storm
- **Now is the Time** - Don't wait - prepare today



## Does it Take a Category 5?

Does a storm need to be a monster to do damage?  
Learn about:

- **The Saffir-Simpson Scale and How It Works**
- **What the Categories Mean**
- **How Bad Small Storms Can Be**
- **Which Storms Have Done the Most Damage**

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### Other Hazard Resources

While hurricanes tend to be foremost on the minds of Pinellas County residents, lightning, flooding and emergencies from hazardous materials are other likely disaster situations we could face at any time. Make sure your survival kit is ready year-round and learn about how to deal with these life-threatening situations.

▶ **The following links will take you the FEMA website:**

- [Natural Disasters](#)
  - Drought, earthquakes, extreme heat, floods, hurricanes, severe weather, space weather, thunderstorms and lightening, tornadoes, tsunamis, wild fires, etc.
- [Technological & Accidental Hazards](#)
  - Black outs, hazardous materials incidents, household chemical emergency and nuclear power plant
- [Terrorism](#)
  - Biological threats, chemical threats, cyber attack, explosions, nuclear blast and radiological dispersion device

▶ **Pinellas County has prepared or supplied the following information on other hazards:**

- [Bioterrorism FAQ](#)
- [Earthquake](#)
- [Flooding Information](#)
- [Homeland Security Information](#)
- [Homeland Security FAQ](#)
- [Oil Spill](#)
- [Tornado](#)
- [SARS Information](#)

▶ **Other Links of Interest:**

- [Are You Ready? - FEMA Citizen Guide to Preparedness](#)
- [Terrorism Preparedness Brochure](#)

**HurricaneGuido**  
Official Hurricane Guide For Pinellas County

**HurricaneVideos**  
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[Limpiar y desinfectar las escuelas para ayudar a disminuir la propagación de la gripe](#)

**Florida Amber Alerts - Live RSS Feed**

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Tue, 14 Oct 2014 12:00:00 EDT

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**Attachment 7-3**

**Sample Municipal Flood Information Outreach  
(City of Clearwater)**





## 2014 Flood Protection Questionnaire

Property address: \_\_\_\_\_

Years living at this address: \_\_\_\_\_

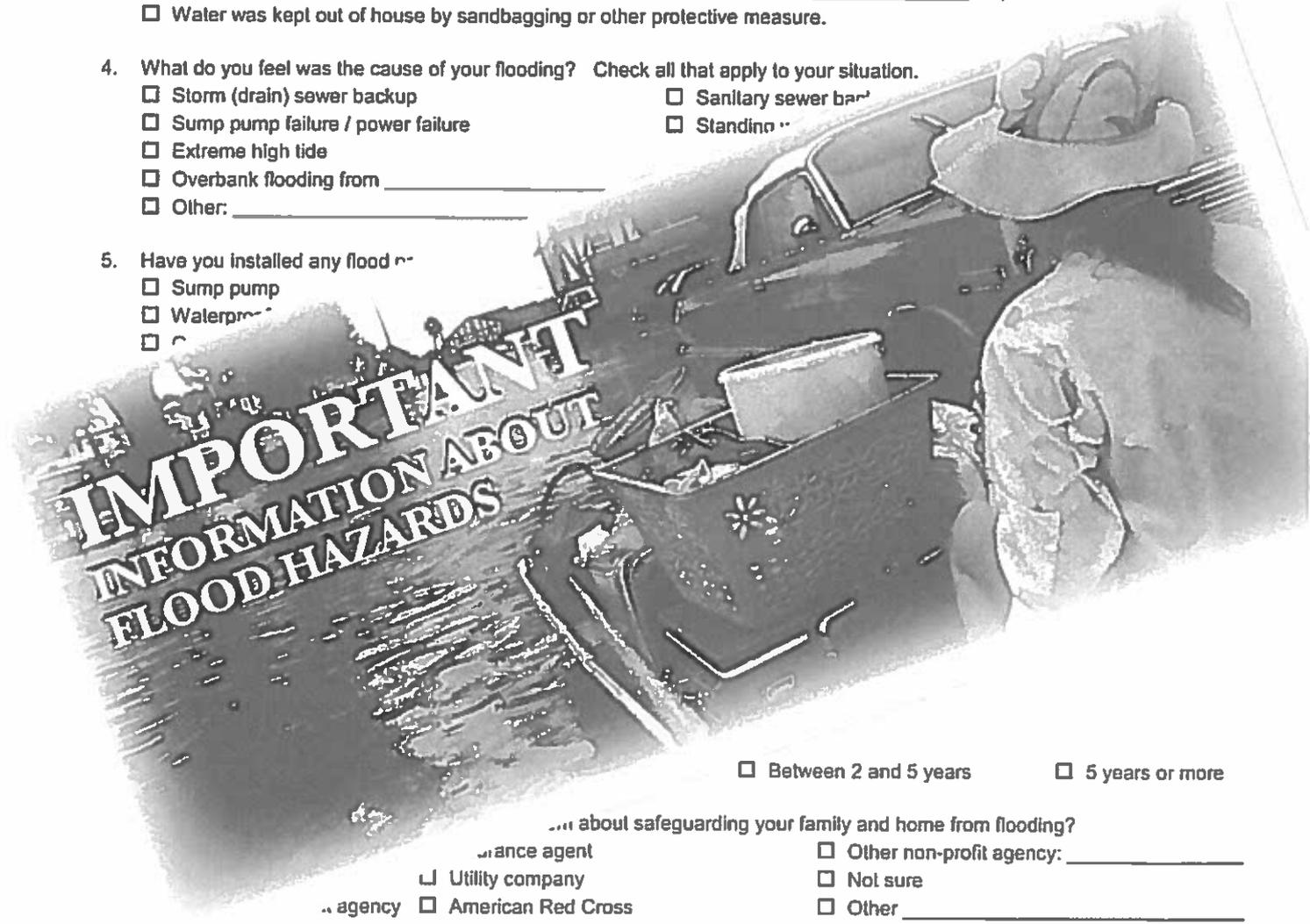
1. Has your home or property ever been flooded or had a (flooding concern) water problem?  yes  no  
If "yes," please complete the entire questionnaire. If "no," please complete questions 6-11.
2. In what years did the flooding occur, and was it due to a named hurricane or tropical storm? If so, please provide the name of the storm(s). \_\_\_\_\_
3. Where did you get water and how deep did it get? (in feet)
 

<input type="checkbox"/> In crawl space: _____ deep	<input type="checkbox"/> In yard only: _____ deep
<input type="checkbox"/> Over first floor: _____ deep	<input type="checkbox"/> In the street: _____ deep

 Water was kept out of house by sandbagging or other protective measure.
4. What do you feel was the cause of your flooding? Check all that apply to your situation.
 

<input type="checkbox"/> Storm (drain) sewer backup	<input type="checkbox"/> Sanitary sewer backup
<input type="checkbox"/> Sump pump failure / power failure	<input type="checkbox"/> Standing water
<input type="checkbox"/> Extreme high tide	
<input type="checkbox"/> Overbank flooding from _____	
<input type="checkbox"/> Other: _____	
5. Have you installed any flood protection?
 

<input type="checkbox"/> Sump pump	
<input type="checkbox"/> Waterproofing	
<input type="checkbox"/> Other: _____	



- Between 2 and 5 years       5 years or more

- Have you been contacted about safeguarding your family and home from flooding?
- |   |   |
|---|---|
| <input type="checkbox"/> Insurance agent  | <input type="checkbox"/> Other non-profit agency: _____ |
| <input type="checkbox"/> Utility company  | <input type="checkbox"/> Not sure                       |
| <input type="checkbox"/> Other agency <input type="checkbox"/> American Red Cross | <input type="checkbox"/> Other _____                    |

Please provide any additional comments you may have. (Use the back or attach a separate sheet if necessary)

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---



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The purpose of this questionnaire is to obtain general information about your property's specific flooding circumstances. Your answers will be used to better understand the effects that flooding has on our community. If you've previously sent in this questionnaire and nothing has changed since then, there is no need to send it in this year.

Contact Sarah Josuns, Environmental Specialist & CRS Coordinator (727) 562-4750 (office); (727) 562-4755 (fax)  
City of Clearwater - Engineering Department, 100 S Myrtle Avenue, Rm 220 Clearwater, Florida 33756-5520

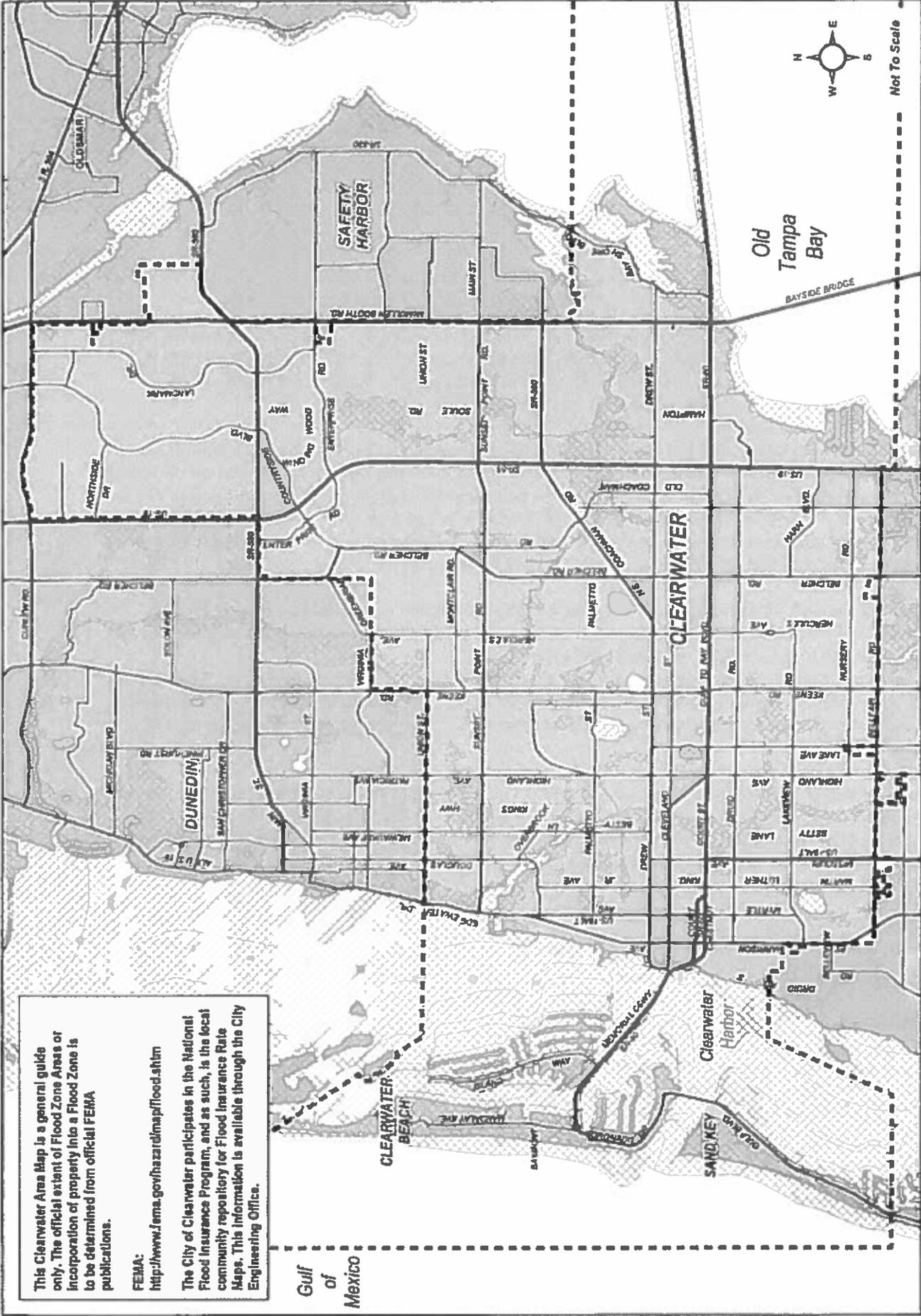


This Clearwater Area Map is a general guide only. The official extent of Flood Zone Areas or incorporation of property into a Flood Zone is to be determined from official FEMA publications.

FEMA:  
<http://www.fema.gov/hazardmap/flood.shtml>

The City of Clearwater participates in the National Flood Insurance Program, and as such, is the local community repository for Flood Insurance Rate Maps. This information is available through the City Engineering Office.

Gulf of Mexico



Prepared by:  
 Engineering Department  
 Geographic Technology Division  
 100 S. Myrtle Ave., Clearwater, FL 33755  
 Ph: (727)662-4750, Fax: (727)626-4755  
[www.myclearwater.com](http://www.myclearwater.com)

# City of Clearwater Flood Zone Guide

## July 2012

 Flood Zone Area  
 Clearwater Service Area



# City of Clearwater

Engineering Department, Post Office Box 4748, Clearwater, Florida 33758-4748  
100 South Myrtle Avenue, Clearwater, Florida 33756  
Telephone (727) 562-4750 Fax (727) 562-4755

Sept. 30, 2014

Dear property owner:

The City of Clearwater is concerned about flooding and has an active program to help you protect yourself and your property from future flooding. Enclosed is a flyer, "*Important Information about Flood Hazards*," which is intended to inform city residents about the risks associated with flooding and where to find additional information. For more information, go to [myclearwater.com/flooding](http://myclearwater.com/flooding).

Also enclosed with this letter is the City of Clearwater *Flood Zone Guide*. This map shows the flood zones within Clearwater and surrounding areas. This map is intended to be only a general guide. The official extents of the flood zones are depicted in more detail on the FEMA website at <http://msc.fema.gov/portals>. You can look up your property on that website to see which flood zone it is in. If you prefer city staff to look up your flood zone for you, you can send us an e-mail at [floodzone@myclearwater.com](mailto:floodzone@myclearwater.com), fill out a request form on our website at [myclearwater.com/flooding](http://myclearwater.com/flooding), or call (727) 562-4750 and ask for a flood zone lookup.

As part of the city's flood management activities, elevation certificates are maintained for properties in certain flood zones which document that new buildings and substantial improvements are properly elevated. You can search for an elevation certificate on the city's website: [myclearwater.com/gov/depts/planning\\_dev/construction/index.asp](http://myclearwater.com/gov/depts/planning_dev/construction/index.asp). Scroll down and click on "Search for an Elevation Certificate/Letter of Map Amendment (LOMA)." Then, search by street name and then by address. If you cannot find one for your property, you can send an email to [elevation@myclearwater.com](mailto:elevation@myclearwater.com) or call us at (727) 562-4750.

Please be aware that homeowner insurance policies do not cover flood losses. In addition, there is a 30-day waiting period before flood insurance coverage goes into effect. The city participates in the National Flood Insurance Program and the Community Rating System so that flood insurance is available to our residents. For more information, go to [fema.gov/business/nfip](http://fema.gov/business/nfip).

Sincerely,

A handwritten signature in black ink that reads "Sarah Josuns". The signature is written in a cursive, flowing style.

Sarah Josuns  
Environmental Specialist  
Engineering Dept.

**Attachment 7-4**

**Pinellas County Facebook Page with Citizen Survey**



Browser tabs: (10) Pinellas County Govern...  
Address bar: https://www.facebook.com/PinellasCountyNews  
Page title: Pinellas County Government

Navigation: Home 20+  
User: Brady

Left Column:

- Video: 12 likes
- Video: 6 likes
- Video: 5 likes
- REVIEWS: 3.9 stars, 24 reviews
- Charles Walker: If you have a pet or rescued animal to surrender do not send them to Pinellas County Animal Services. They will kill the... See More. July 13, 2014 - 24 Reviews - 3 likes, 1 comment
- Karen Bann: April 12, 2015 - 4 Reviews - Like - Comment
- Tell people what you think: 5 stars
- LIKED BY THIS PAGE: Tampa Bay Estuary Program (Like)

Main Content:

216 Views  
Like - Comment - Share  
3 people like this.  
Write a comment...

**Pinellas County Government**  
February 17 · 🌐

#Pinellas residents: We want to hear from you! Take our short #survey now through Friday to help shape the future of our county!



# Help Shape The Future

Please take the 2-minute survey

**Pinellas County 2015 Citizen Survey**  
Web survey powered by Research.net, your feedback is greatly appreciated!  
RESEARCH.NET

Like - Comment - Share  
3 people like this.

TBReporter.com http://tbreporter.com/.../pinellas/pinellas-county-thoughts/

Right Column:

- Create Page
- Kevin Rendon
- Recent: 2015, 2014, 2013, 2012, 2011, 2010, 2009



**Attachment 7-5**  
**Findings of Focus Groups**



**LMS Mitigation Survey 2008**  
Results Overview



Date: 11/4/2008 6:54 AM PST  
Responses: Completed  
Filter: No filter applied

We're asking residents ten questions on disaster preparedness to help us with our mitigation strategy update. Please take a few minutes to fill out this survey on what you know about preparing for disasters. Thank you.

**1. What is the most effective way to give you information on how to make your home and/or business better prepared for disasters? Please click all that apply.**

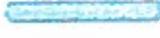
Web sites and newsletters		126	53%
Television ads and sponsored shows		124	52%
Newspaper ads and articles		83	35%
Radio ads and news reports		95	40%
Direct mail (brochures, newsletters)		97	41%
Public workshops and expos		57	34%

**2. Are you familiar with the term "mitigation?"**

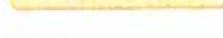
I understand it fully		133	56%
I've heard of it		90	38%
I have no idea		16	7%
<b>Total</b>		<b>239</b>	<b>100%</b>

**3. What steps have you (or someone in your household) taken to prepare for a natural disaster? Please click all that apply.**

Stocked food and water		214	90%
Stocked flashlights and batteries		215	91%
Have battery powered radio		189	80%
Have generator		157	66%

Have CPR/First Aid training		133	56%
Have disaster plan		121	51%
Have smoke detectors		206	87%
Have hurricane shutters		79	33%
Have reinforced garage doors		67	26%
Other please specify		29	12%

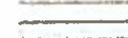
4. Do you have flood insurance? If your answer is no, why not?

Yes, I have flood insurance		63	35%
No, too expensive		18	8%
No, the deductible is too high		3	1%
No, it was not available		20	8%
No, I don't think it's necessary		113	47%
Not yet, but I'm getting it		21	9%
Total		238	100%

5. Would you spend more money on a new home that was disaster resilient?

Yes		182	77%
No		54	23%
Total		236	100%

6. How much would you be willing to spend to mitigate (protect) your home against future disasters? Remember, for every \$1 spent mitigating your home, you save \$4 in damage in the event of a disaster.

Over \$5000		38	16%
\$2500 - \$4999		56	24%
\$1000 - \$2499		59	25%
\$500 - \$999		37	16%
\$100 - \$499		17	7%
Less than \$100		5	2%

Nothing		8	3%
Other, please specify		17	7%
<b>Total</b>		<b>237</b>	<b>100%</b>

**7. How long have you lived in an area affected by hurricanes?**

20 years or more		106	32%
15 to 20 years		16	7%
10 to 15 years		13	6%
5 to 10 years		8	3%
Less than 5 years		6	3%
Just moved here in 2008		0	0%
<b>Total</b>		<b>239</b>	<b>100%</b>

**8. Describe your home please. Please click an answer in each colored section**

Rent		29	12%
Own		200	84%
Apartment/condo/townhouse		15	6%
Single family home		185	77%
Mobile home		7	3%
On the beach		7	3%
By a river or bayou		15	7%
In low-lying area		13	5%
High and dry		165	69%
I'm not sure		9	4%
Other, please specify		6	3%

**9. Are you aware that by mitigating your home against disaster, you may be eligible discounts on your insurance?**

Yes		190	79%
No		49	21%
<b>Total</b>		<b>239</b>	<b>100%</b>



**APPENDIX 8**  
**PRIORITIZATION METHODOLOGY**

# Pinellas County Local Mitigation Strategy

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# Pinellas County Local Mitigation Strategy

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## APPENDIX 8: PRIORITIZATION METHODOLOGY

### Introduction

Based upon the Hazards Analysis and Vulnerability Assessment, the review of both the Goals and Objectives and Local Programs and Policies, the LMS Prioritization Procedures outlined below were developed to better prioritize future projects to be submitted for mitigation funding.

The procedures are utilized to identify and prioritize projects and programs that appear to:

1. Have technical merit
2. Be cost beneficial, and
3. Be environmentally sound and acceptable to the public upon implementation.

Annually, new projects are brought forward and evaluated by the Working Group for inclusion in the Local Mitigation Strategy. The total score is then used as the basis for the preliminary ranking of projects and programs on the list.

### Scoring System and Definitions

The rating system for submitted projects/initiatives deals with projects on an objective basis and is designed to treat projects from barrier islands, coastal communities, inland communities, small towns and larger cities equally.

There are three components of the total score a project receives, with 16 variables having an available total of 1500 points per project. The submitter assigns the score to each of the variables. The score sheets are submitted to the LMS Vice Chair who reviews each one, providing a level of consistency in the review process. The Vice Chair responds with his agreement or alternate scores and explanations for those scores. The submitter and Vice Chair negotiate until they agree on an accepted score for each of the variables. So far, this system is working to everyone's satisfaction. There are three components of the scoring system, weighed as follows:

- A. 30% Suitability of the project – 450 points
  - 1) 40% Appropriateness of the Project  
Definition - The extent to which a measure reduces identified vulnerabilities and conforms to stated Local Mitigation Strategy goals, objectives and plans.
  - 2) 15% Community Acceptance  
Definition - The likelihood of the measure being accepted or perceived as positive by all, most, or only some of a community. The “not in my back yard” theory is a negative.
  - 3) 10% Environmental Impact



# Pinellas County Local Mitigation Strategy

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Definition - An indicator of whether the measure will have a positive, negative, or neutral effect on the environment.

4) 10% Consistent with Existing Legislation and/or Policies

Definition - An indication of whether the measure can be implemented within existing laws and regulations, or if it will require legislative action or senior management level policy changes to be adopted.

5) 25% Consistent with Existing Plans and Priorities

Definition - A measure of conformance with existing planning documents and stated goals and objectives of a municipality or other jurisdiction.

B. 45% Risk Reduction produced by the project – 675 points

1) 15% Scope of Benefits

Definition - The extent to which a measure benefits multiple communities, more than half of a community, or less than half of the community.

2) 35% Potential to Save Human Lives

Definition - How many lives, if any, will the measure save or protect.

3) 15% Importance of Benefits

Definition - The effect of a measure on essential services, such as life safety, human health, and the basic necessities of life.

4) 10% Level of Inconvenience or “Nuisance Factor”

Definition - The extent to which completion of a measure can avoid problems in the community, or cause problems such as traffic congestion, delays, loss of power, etc.

5) 10% Economic Effect or Loss

Definition - A measure of economic effects avoided, including both property damage and economic losses suffered by businesses and residents such as business closings and jobs affected or lost during the life of the project.

6) 15% Number of People to Benefit

Definition - A measure of the number of people expected to benefit from a measure: More than 100,000; more than 10,000; less than 10,000?

C. 25% Cost of the project – 375 points

1) 20% Estimated Costs

a) 75% Initial Cost

Definition - Actual anticipated total (federal plus local share) dollar costs of a proposed mitigation measure.

b) 5% Maintenance/Operating Costs

Definition - Measures the ability of a municipality to maintain and operate the equipment or facility after it is completed or acquired.

2) 40% Benefit to Cost Ratio

# Pinellas County Local Mitigation Strategy

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Definition - A measure of total anticipated benefits divided by total costs, discounted appropriately and evaluated using accepted benefit/cost methodology.

3) 10% Financing availability

Definition - The extent to which resources are available to finance the cost of the measure, including sources of potential grants and matching funds.

4) 10% Affordability

Definition - An assessment of the measure's cost in relation to available resources.

5) 20% Repetitive Damages Corrected

Definition - The potential for a measure to reduce the frequency of repetitive damages at a facility. Past damages must have occurred and have been documented.

## Evaluation Spreadsheet

There is an LMS Prioritization Matrix spreadsheet that actually does the calculations based upon the scoring of the 16 variables. The submitter fills out a prioritization matrix, which is an Excel® spreadsheet and submits it to the Vice Chair. The spreadsheet is Figure 8-1.

## Posting of Evaluation Spreadsheets

By vote of the Working Group, each evaluation spreadsheet, with accompanying comments and remarks from the Vice Chair and the submitter, is posted at the Pinellas County LMS sharepoint website. This enables everyone to see how everyone else's project evaluation was handled.

## Project List

Projects with accepted scores are listed in Appendix 9 in descending order, highest score first. In the event of a tie score, the project with the lower cost is listed first. This helps to assure that, with limited funds available, more projects get accomplished.

## Challenge to a Score

In the event that a Working Group member feels an accepted project has been assigned a score that is inaccurate or inconsistent, he may challenge that score. The method of challenging the score will be as follows:

Challenges will be handled at Working Group meetings.

Each challenge will appear on the agenda and will need to be submitted far enough in advance of a Working Group meeting to appear on the agenda that is sent out. Four items are listed in any challenge:

- Sufficient details to identify the project whose score you are challenging.
- The score you are challenging.
- What you propose as an alternate score (1 – 5).
- Your justification for the score you propose.

## Pinellas County Local Mitigation Strategy

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The agenda will be sent out in advance of the meeting. This will allow the jurisdiction whose scores are being challenged an opportunity to research the reason and provide its own justification for its scoring.

At the LMS Working Group meeting, each jurisdiction whose scores are being challenged will have the opportunity to justify its scores or accept the alternate proposed by the challenger. The challenger will have the opportunity to expand its submitted justification for the alternate score. The Working Group Chair will determine how long discussion should proceed. If the challenged project's sponsor does not accept the alternate proposed score, the Working Group Chair will call for a vote and a simple majority of Working Group members present will resolve the issue.

In the event that a jurisdiction whose score is being challenged is not represented at the Working Group meeting, the project under question will have its score deleted and the project will be considered as unrated.

**Figure 8- 1: Project Evaluation Template**

<b>Initiative Being Scored:</b>					
<b>Name of Applicant:</b>					
<b>Project Cost:</b>					
<b>Project Description:</b>					
Parameter		Weighting Factor	Scoring Criteria	Score	Points
<b>Suitability</b>		<b>30%</b>			
1	Appropriateness of the Project	40%	<b>5 - High:</b> Reduces vulnerability and is consistent with Local Mitigation Strategy (LMS) goals and plans for future growth. <b>3 - Medium:</b> Needed, but does not tie to identified vulnerability. <b>1 - Low:</b> Inconsistent with LMS goals or plans.		0
2	Community Acceptance	15%	<b>5 - High:</b> Accepted by most communities. <b>3 - Medium:</b> Accepted by most; may create some burdens. <b>1 - Low:</b> Not likely to be accepted by any community ("The not in my backyard" theory).		0
3	Environmental Impact	10%	<b>5 - Positive effect</b> on the environment. <b>3 - No effect</b> - environmentally neutral. <b>1 - Adverse effect</b> on the environment.		0
4	Consistent with Existing Legislation and/or Policies	10%	<b>5 - High:</b> Consistent with existing laws and policies. <b>3 - Medium:</b> New legislation or policy changes needed, but no conflicts identified. <b>1 - Low:</b> Conflicts with existing laws, regulations and/or policies.		0
5	Consistent with Existing Plans and Priorities	25%	<b>5 - High</b> - Consistent with existing plans and priorities. <b>3 - Medium</b> - Somewhat consistent with current plans and priorities. <b>1 - Low</b> - Conflicts with existing plans and priorities. Does not fit in with identified initiatives.		0
Parameter Subtotal		100%	<b>sum of parameter scores; max =</b>	500	0
<b>Suitability subtotal</b>		(sum of parameter scores) / (maximum possible score)			<b>0%</b>

Project Evaluation Template (continued)

<b>Initiative Being Scored:</b>					
<b>Name of Applicant:</b>					
<b>Project Cost:</b>					
<b>Project Description:</b>					
Parameter		Weighting Factor	Scoring Criteria	Score	Points
<b>Risk Reduction</b>		<b>45%</b>			
1	Scope of Benefits	15%	<b>5 - High:</b> Benefits all municipalities and the unincorporated area, directly or indirectly. <b>3 - Medium:</b> Benefits more than half but not all of the municipalities and/or the unincorporated area. <b>1 - Low:</b> Benefits less than half of the municipalities and/		0
2	Potential to Save Human Lives	35%	<b>5 - High:</b> More than 1,000 lives. <b>3 - Medium:</b> Up to 1,000 lives. <b>1 - Low:</b> No lifesaving potential.		0
3	Importance of Benefits	15%	<b>5 - High:</b> Needed for essential services. <b>3 - Medium:</b> Needed for other services. <b>1 - Low:</b> No significant implications.		0
4	Level of Inconvenience or "Nuisance Factor"	10%	<b>5 - None:</b> Causes few problems. <b>3 - Moderate:</b> Most major problems avoided. <b>1 - Significant:</b> Causes much inconvenience (e.g., traffic jams, loss of power, delays).		0
5	Economic Effect or Loss	10%	<b>5 - Minimal</b> economic loss (little effect during project). <b>3 - Moderate</b> economic loss (minimum disruption). <b>1 - Significant</b> economic loss (businesses closed, jobs affected, etc.).		0
6	Number of People to Benefit	15%	<b>5 - High:</b> More than 100,000 people. <b>3 - Medium:</b> 10,000 to 100,000 people. <b>1 - Low:</b> Fewer than 10,000 people.		0
Parameter Subtotal		100%	<b>sum of parameter scores; max =</b>	500	0
<b>Risk Reduction Subtotal</b>		(sum of parameter scores) / (maximum possible score)			<b>0%</b>

Project Evaluation Template (continued)

<b>Initiative Being Scored:</b>					
<b>Name of Applicant:</b>					
<b>Project Cost:</b>					
<b>Project Description:</b>					
Parameter		Weighting Factor	Scoring Criteria	Score	Points
<b>Cost</b>		<b>25%</b>			
1	Estimated Costs*	20%			0
	<i>i. Initial Cost</i>	75%	<b>5 - Low:</b> \$0 to \$100,000. <b>3 - Moderate:</b> \$100,001 to \$1 million. <b>1 - High:</b> More than \$1 million.		0
	<i>ii. Maintenance/Operating Costs</i>	25%	<b>5 - Low costs</b> <b>3 - Moderate costs</b> <b>1 - High costs</b>		0
2	Benefit to Cost Ratio	40%	<b>5 - High:</b> Ratio is greater than 4 to 1. <b>3 - Medium:</b> Ratio is between 1 to 1 and 4 to 1. <b>1 - Low:</b> Ratio is less than 1 to 1.		0
3	Financing availability	10%	<b>5 - Good:</b> Readily available through grants or other funding sources. <b>3 - Moderate:</b> Limited grant or matching funds available. <b>1 - Poor:</b> No funding sources or matching funds are identified.		0
4	Affordability	10%	<b>5 - Good:</b> Project is easily affordable. <b>3 - Moderate:</b> Project is somewhat affordable. <b>1 - Poor:</b> Project is very costly for the jurisdiction.		0
5	Repetitive Damages Corrected	20%	<b>5 - High:</b> Alleviates repetitive loss. Property must have been damaged in the past by a disaster event. <b>3 - Medium:</b> Repetitive loss may have occurred but was not documented. <b>1 - Low:</b> No effect on repetitive loss.		0
Parameter Subtotal		100%	<b>sum of parameter scores: max =</b>	500	0
<b>Cost Subtotal</b>			<b>(sum of parameter scores) / (maximum possible score)</b>		<b>0%</b>

\* Estimated costs are comprised of two secondary parameters: initial and maintenance/operating costs

SUITABILITY	<b>30%</b>		0%	0
RISK REDUCTION	<b>45%</b>		0%	0
COST	<b>25%</b>		0%	0
<b>TOTAL</b>	<b>100%</b>			<b>0</b>

**APPENDIX 9**  
**MITIGATION INITIATIVES**

# Pinellas County Local Mitigation Strategy

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## APPENDIX 9: MITIGATION INITIATIVES

### Introduction

The mitigation measures or initiatives listed in Attachment 1 are the result of the identification, evaluation and prioritizing of the proposed actions from the representatives on the LMS Working Group. The mitigation measures are consistent with the Goals and Objectives identified in Appendix 4 and the priority methodology defined in Appendix 8.



### Identification of Mitigation Measures

Mitigation measures implemented in Florida can be grouped into five general categories or approaches: preventive measure, property protection, emergency services, structural projects, natural resource protection and public information.

#### Preventive Measures

Preventive measures keep problems from getting started or getting worse. The use of known hazard areas, like floodplains, can be limited through growth management strategies, land acquisition or regulation. Building, zoning, planning and code enforcement activities work hand-in-hand to implement public safety and mitigation goals in the most cost-effective manner. Implementation of preventive measures is a local responsibility which involves planning, permitting and development review.

#### Property Protection

Property protection refers to the actions which retrofit or relocate vulnerable properties including property acquisition, elevation of structures, hardening of structures (shutters), safe rooms or flood proofing. Many of the measures listed are property protection strategies.

#### Structural Projects

Structural projects are typically engineering projects designed to reduce or redirect the impact of natural disaster (especially floods) away from at-risk population areas. Examples include reservoirs, levees, seawalls, channel modification, storm water management facilities and drainage system maintenance. Stormwater management is a major task in urbanized areas such as Pinellas County and represents a significant part of local government budgets.

#### Natural Resource Protection

Natural resource protection preserves or restores natural areas or their natural functions. Park and recreation departments, conservation agencies or wildlife groups usually implement such measures including wetland protection, riverine protection, erosion and sediment control, and beach re-nourishment projects.

#### Public Information Programs

Public information programs involve conveying risk to property owners and potential property owners and an awareness of mitigation actions they should take. Examples of these activities include flood maps and data, library resources, outreach projects, technical assistance, real estate

# Pinellas County Local Mitigation Strategy

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disclosure information and environmental education projects. Existing ongoing public outreach projects are addressed in Appendix 7.

**Pinellas County  
Local Mitigation Strategy  
2018 Appendix 9, Table 9-1: Mitigation Initiatives**

Total Score	Jurisdiction/ Organization	Project Name	Description/ Natural Hazard Addressed	Est. Cost	Timeframe / Status	Possible Funding Sources	Date Last Reviewed	Date Last Updated	Comments	Updated By
	1025 Baycare, Inc. / St. Petersburg	Hospital EOC	Construct new EOC. Estimated completion time: more than 12 months. / 4	\$1,100,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	Bayfront Medical Center / St. Petersburg	Harden Window Openings - Building A	Harden the exterior of Building A and install new hurricane-rated windows. Estimated completion time: more than 12 months. / 2	\$1,217,370	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	Bayfront Medical Center / St. Petersburg	Harden Window and Roof - Building C Center	Harden the exterior including hurricane-rated windows and roofing system to protect against high wind velocity events. Estimated completion time: more than 12 months. / 2	\$2,789,889	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	Bayfront Medical Center / St. Petersburg	Harden Window and Roof - Building C South	Harden the exterior including hurricane-rated windows and roofing system to protect against high wind velocity events. Estimated completion time: more than 12 months. / 2	\$4,575,295	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	Bayfront Medical Center / St. Petersburg	Harden Window and Roof - Building C North	Harden the exterior including hurricane-rated windows and roofing system to protect against high wind velocity events. Estimated completion time: more than 12 months. / 2	\$4,646,281	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	Bayfront Medical Center / St. Petersburg	Harden Cancer Care Center	Harden the exterior including the roof, windows and walls to ensure continuity of operations. Estimated completion time: more than 12 months. / 2	\$430,003	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	Bayfront Medical Center / St. Petersburg	Harden West Lobby	Harden the roof and curtainwall window assembly to protect against high wind velocity events. Estimated completion time: more than 12 months. / 2	\$1,250,200	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	Bayfront Medical Center / St. Petersburg	Harden Mechanical Room & Medical Gas Enclosure - Building B/C	The Mechanical Room and a fenced lean to will be hardened. Estimated completion time: more than 12 months. / 2	\$1,000,000	Currently Unfunded	Emergency Management, Preparedness and Assistance Trust Fund, HMGP; PDM Program	1/10/2018			
	Bayfront Medical Center / St. Petersburg	Building C Boiler / Chiller Plant Hardening & Rooftop Equipment Mitigation	The hospital's boiler & chiller plant needs hardening for severe weather mitigation. Estimated completion time; More than 12 months. / 2	\$1,000,000	Currently Unfunded	Emergency Management, Preparedness and Assistance Trust Fund, HMGP; PDM Program	1/10/2018			
	Bayfront Medical Center / St. Petersburg	Tank Farm Enclosure	On the South side of Building C, the Oxygen Tank Farm will be hardened. Estimated completion time; more than 12 months. / 2	\$1,000,000	Currently Unfunded	Emergency Management, Preparedness and Assistance Trust Fund, HMGP; PDM Program	1/10/2018			
	Bayfront Medical Center / St. Petersburg	Life Services Building Window, Door & Wall Hardening	The Life Services Building needs windows, doors and walls hardened for protection against high wind velocity and severe weather events. Estimated completion time; more than 12 months. / 2	\$1,000,000	Currently Unfunded	Emergency Management, Preparedness and Assistance Trust Fund, HMGP; PDM Program	1/10/2018			
	Bayfront Medical Center / St. Petersburg	Child Development Center Wind, Door & Roof Hardening	Harden windows, doors and roof for hurricane and severe weather mitigation. Estimated completion time: more than 12 months. / 2	\$1,000,000	Currently Unfunded	Emergency Management, Preparedness and Assistance Trust Fund, HMGP; PDM Program	1/10/2018			
	Bayfront Medical Center / St. Petersburg	Family Health Center Structural Hardening	Harden walls and roof to mitigate high wind velocity. Estimated time of completion: 12 months. / 2	\$1,000,000	Currently Unfunded	Emergency Management, Preparedness and Assistance Trust Fund, HMGP; PDM Program	1/10/2018			
	Bayfront Medical Center / St. Petersburg	Haden Exterior - Building C East - Area 4	Harden the exterior of Building C East - including hurricane-rated windows, walls, doors and roofing system to protect against high wind velocity events. / 2	\$3,070,827	Currently Unfunded	Emergency Management, Preparedness and Assistance Trust Fund, HMGP; PDM Program	1/10/2018			
	1270 Town of Belleair	Generator Installation Town Hall/Police Department	1, 2	138,476.00	6 months	HMGP Hurricane Hermine	1/10/2018	4/24/2017		Greg Lauda
	Belleair Beach / Support Services	Town Hall Storm Mitigation	Mitigate town hall (901 Ponce de Leon Blvd.). Estimated completion time: more than 12 months. / 2	\$40,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	925 Belleair Beach / Public Works	Traffic Light Mitigation	Replace traffic control light at the corner of Causeway Blvd and Gulf Blvd with a mast arm. Estimated completion time: / 4	\$447,000	Funded through Gulf Blvd. Beautification Project	EMPATF, HMGP; PDM Program Penny for Pinellas	1/10/2018	8/16/2016		Nancy Gonzalez

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	910 Belleair Beach / Public Works	Stormwater Management	Stormwater repairs, improvements, and replacing curb work. Replace valley curbs Estimated completion time: more than 12 months. / 1	\$55,000	Currently Underway	Local Funds and SWFWMD Cooperative Funding Grant	1/10/2018	8/16/2016		Nancy Gonzalez
	910 Belleair Beach / Public Works	Master Drainage Plan	Addresses issues with street flooding, drainage hydraulics problems, water quality and community drainage / 1	\$50,000	Currently Underway	Local Funds	1/10/2018	8/16/2016		Nancy Gonzalez
	929 Belleair Beach	Harbor Drive & 1st Street	Drainage Improvement Plan – to prevent high tides from flooding the street 1	\$381,000	2018 Local		1/10/2018	8/17/2017		Nancy Gonzalez
	970 Belleair Bluffs	City Hall Storm Shutters	Install commercial roll-down storm shutters to protect city hall and the fire department. Estimated completion time: more than 12 months. / 1	\$45,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	960 Clearwater / General Services	Install Communications at Fire Training 48	Install radio tower at the new fire training building, install wireless comms, and install backup radio communications. Estimated completion time: more than 12 months. / 4	\$200,000	Currently unfunded	EMPATF, HMGP; PDM Program	1/10/2018	10/4/2016		Sarah Kessler
	850 Clearwater / General Services	Hardened Countryside Recreation Center	Harden windows and doors, increase roof attachments and install emergency generator. Estimated completion time: more than 12 months. / 2	\$300,000	Currently unfunded	EMPATF, HMGP; PDM Program	1/10/2018	10/4/2016		Sarah Kessler
	900 Clearwater / Public Utilities	Purchase trailer mounted antenna	Purchase antenna for citywide telemetry system for monitoring lift stations, water and wastewater plants. Estimated completion time: less than 12 months. / 1	\$75,000	Currently unfunded	EMPATF, HMGP; PDM Program	1/10/2018	10/4/2016		Sarah Kessler
	900 Clearwater / Public Utilities	Northeast Water Pollution Control Plant generators	Procure seven backup generators to maintain the generator reliability. Estimated completion time: less than 12 months. / 4	\$950,000	Currently unfunded	EMPATF, HMGP; PDM Program	1/10/2018	10/4/2016		Sarah Kessler
	850 Clearwater/ Marine & Aviation	Airpark Hanger	Replace airplane hangar. Added 2016 /2	\$700,000	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
	1150 Clearwater/ Fire & Rescue	Fire Station 46 – Mandalay	Construction of a new fire station to meet current building standards. Added 2016 /4	\$4,305,560	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
	1150 Clearwater/ Fire & Rescue	Fire Station 47	Construction of a new fire station in an alternate location. Added 2016 /4	\$200,000	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
	1210 Clearwater/ Gas	Gas Complex	Construction of a new Clearwater Gas building built to Category 5 building standard. Added 2016 /4	\$13,000,000	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
	710 Clearwater/ Public Utilities	Groundwater Replenishment	Construction of a new hardened facility. Added 2016 /2	\$500,000	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
	900 Clearwater/ Engineering	Intermodal Facility	Construction of a new terminal in downtown. Added 2016 /2	\$2,425,000	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
	830 Clearwater/ Marine & Aviation	Stormwater Management	Construct a stormwater management system at the Marina Added 2016 /1	\$7,000,000	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
	800 Clearwater/ Marine & Aviation	Marina Walkway	Repair walkway at Marina and protect utilities located under the surface. Added 2016 /1	\$1,450,000	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
	1190 Clearwater/ Police	District 3 Headquarters	Rebuild Police Station to be resilient and address site flooding Added 2016 /4	\$3,505,000	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
	1070 Clearwater/ Engineering	Public Works Complex – Phase 2 Public Utilities and Stormwater Warehouse Facility	New warehouse facility will be built to Category 5 standards. Added 2016 /4	\$4,248,134	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
	1080 Clearwater/ Engineering	Public Works Complex – Phase 3 Administration Building with IT Server	New administration building and secure storage of IT servers will be built to Category 5 standards. Added 2016 /4	\$10,191,909	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
	960 Clearwater/ Engineering	Public Works Complex – Phase 4 Meter Shop/ Utilities Mechanical Shop/ Survey Office	New facility for meter shop, utilities mechanical shop, and survey office will be built to Category 5 standards. Added 2016 /4	\$1,449,586	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
	1150 Clearwater/ Engineering	Public Works Complex – Phase 5 Traffic Operations Facility	New facility for traffic operations will be built to Category 5 standards. Added 2016 /4	\$2,626,580	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler

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900	Clearwater/ Engineering	Public Works Complex – Phase 6 Urban Forestry/ Parks & Beautification and Infrastructure	New facility for urban forestry and P&B will be built to Category 5 standards. Added 2016 /4	\$3,902,806	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
970	Clearwater/ Public Utilities	Water Treatment Plant #3	The expansion of the water treatment plant will make is possible for the City to produce 100% of the necessary water supply for residents. Added 2016 /4	\$13,400,000	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
1010	Clearwater/ Engineering	Acquisition of Repetitive Loss Properties	Several repetitive loss properties have been identified for acquisition Added 2016 /1	\$16,000,000	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
1030	Clearwater/ Engineering	Sunshine Towers Stormwater Pipe Realignment	The realignment of the stormwater pipe under the Sunshine Towers will alleviate flooding from the collapsed pipes under the building. Added 2016 /1	\$588,000	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	12/16/2016		Sarah Kessler
970	Dunedin / Public Works	City Hall Shutters	Install hurricane shutters on City Hall (542 Main Street). Estimated completion time: less than 12 months. / 2	\$7,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
970	Dunedin / Public Works	Lift Station Elevation & Retrofit	Harden & upgrade 12 lift stations for waste water. Estimated completion time: more than 12 months. / 1	\$300,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
920	Dunedin / Public Works	Library Retrofit	Install hurricane shutters on Library Facility (223 Douglas). Estimated completion time: more than 12 months. / 2	\$95,000	Currently funded with HMGP	EMPATF, HMGP; PDM Program	1/10/2018			
970	Eckerd College / St. Petersburg	Building Flood/Wind Retrofit	Retrofit priority support building to address vulnerabilities to high winds and/or flooding based on engineering evaluation. Estimated completion time: more than 12 months. / 1, 2	\$50,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	10/24/2016		Lisa Mets
940	Eckerd College / St. Petersburg	Building Flood/Wind Retrofit	Retrofit academic building to address vulnerabilities to high winds and/or flooding based on engineering evaluation. Estimated completion time: more than 12 months. / 1, 2	\$250,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	10/24/2016		Lisa Mets
1090	Gulfport	Stormwater Project	Enlarge drainage pipes and construct retention ponds citywide to reduce street and yard flooding to improve drainage in low lying areas of the City. Estimated completion time: more than 12 months. / 1	\$500,000	Currently Unfunded	Capitalization Grants for Clean Water State Revolving Funds; CDBG; FMAP; HMGP; Nonpoint Source Implementation Grants	1/10/2018			
1035	Gulfport	Flood Mitigation in Waterfront Redevelopment District	Construct storm doors for commercial businesses within the 100-year floodplain of the Waterfront Redevelopment District. Estimated completion time: more than 12 months. / 1	\$60,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
1030	Gulfport	Land Acquisition	Public purchase of properties that are flood prone or at high risk/exposure to being flooded or experience wave action/erosion. Estimated completion time: more than 12 months. / 1	\$500,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
1015	Gulfport	Municipal EOC	Build a new City EOC, 1617 - 49th Street South. Estimated completion time: more than 12 months. / 4	\$3,500,000	Currently Unfunded	HMGP; PDM Program	1/10/2018			
1,247	Gulfport	City Hall Complex – EOC Generators Installation	Hurricane Irma left 85% of Gulfport without power for more than one week, destroying 17 transformers and downing many power lines. City Hall complex was without electricity for one week. City Hall complex is the city's EOC and consists of three buildings: City Hall/Police Department, Fire Department, and Public Services. No power at the EOC complex compromised the City's emergency services and ability to respond and recover from Irma due to the lack of communications within and outside of the City, the use of computers, telephones, radios, and the equipment for damage assessment and monitoring of critical facilities such as water and lift stations. Install 3 generators. / 4	\$334,000	Currently Unfunded	HMGP, CDBG, EMPA, Local	1/10/2018	10/31/2017		

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1,260	Gulfport	Critical Facility Generator Retrofit	Install one generator. Lift Station 1 is the City's facility that collects 80% of the wastewater generated in the City and pumps it to St Petersburg for treatment. Of the 19 collection basins within the City, Lift Station 1 directly collects 63% of the basins wastewater. The remaining 37% is collected at Lift Station 2 and is pumped directly to Lift Station 1. The City has hardened the lift stations. The current generator has passed its estimated useful life. / 4	\$64,000	Currently Unfunded	EMPA, HMGP, Local	1/10/2018	10/31/2017		
1,284	Gulfport	Generator Installation at Alternate EOC	Hurricane Irma left 85% of Gulfport without power for more than one week, destroying 17 transformers and downing many power lines. City Hall complex and the Public Works building was without electricity for one week. City Hall complex is the city's EOC but lies within Evacuation D Zone. Therefore, the Public Works building is the alternate EOC since it is not in a flood zone or evacuation zone. No power for the EOC complex and Public Works building compromised the City's emergency services and ability to respond and recover from Irma due to the lack of communications within and outside of the City, the use of computers, telephones, radios, and equipment for damage assessment and monitoring of critical facilities such as water and lift stations. /4	\$72,900	Currently Unfunded	HMGP, CDBG, EMPA, Local	1/10/2018	10/31/2017		
	Indian Rocks Beach / Building 1050 Dept.	Flood Mitigation Buyout	Provide a grant of up to \$15,000 per structure for the removal of noncompliant repetitive loss properties and pre-FIRM structures that are floodprone or at high risk/exposure to being flooded or experience wave action/erosion. / 1	\$150,000	Currently Unfunded	FMAP; HMGP; PDM Program, Penny for Pinellas, CDBG, Nonpoint Source Implementation Grants, Residential Construction Mitigation Program	1/10/2018	10/9/2017		Dean Scharmer
	Indian Rocks Beach / Public 1250 Services	Stormwater Drainage	Reconstruction of small basin stormwater collection and discharge facilities as required by NPDES. . /4	\$450,000.00		City of Indian Rocks Beach Capital Improvement Plan; Capitalization Grants for Clean Water State Revolving Funds; CDBG; FMAP; HMGP; Nonpoint Source Implementation Grants; Penny for Pinellas; SWFWMD	1/10/2018	10/9/2017	Currently underway	Dean Scharmer
	Indian Rocks Beach / Public 870 Services	Gulf Blvd Utility Undergrounding	To make aesthetic and safety improvements along Gulf Blvd, including the undergrounding of the Gulf Blvd overhead utilities and to elevate transformers and other equipment above the base flood elevation. Phase 1 of the project, about \$4 million in cost would start at the southern boundary of the City (Whitehurst) and continue north through the Gulf Blvd/Walsingham Rd intersection to at least 6th Ave. /4	4,120,180	Design work has begun. Construction should commence in the fall of 2017	Pinellas County, City of Indian Rocks Beach Capital Improvement Plan	1/10/2018	11/9/2017		Dean Scharmer
	Indian Rocks Beach / Public 860 Services	Road Milling, Resurfacing and curbing	Road deterioration causes safety hazards and negatively impacts the attractiveness of the neighborhood. This project includes continuation of street milling, resurfacing, and curb replacement and includes updating the drainage system in the areas resurfaced. This project also includes concrete curb and gutter replacement and asphalt milling and resurfacing at selected locations in Fiscal Years 2018-2022 / 3	\$2,100,000	In CIP for the next five years	; City of Indian Rocks Beach Capital Improvement Plan; SWFMD	1/10/2018	10/9/2017		Dean Scharmer
	Indian Shores / Town 1030 Administrator	Critical Facility Rebuild	Build new town hall, police department and annex buildings. Estimated completion time: more than 12 months. / 2	\$3,500,000	Currently Unfunded	FMAP; HMGP; PDM Program	1/10/2018			
	Indian Shores / Town 915 Administrator	Seawall Erosion Control	Reconstruct seawall with tiebacks at Intra Coastal Waterway and Town Street. Estimated completion time: more than 12 months. / 3	\$160,000	Currently Unfunded	Capitalization Grants for Clean Water State Revolving Funds; CDBG; FMAP; HMGP; Nonpoint Source Implementation Grants	1/10/2018			

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	Indian Shores / Town 865 Administrator	Detention Pond	Create a detention pond and storm water drainage system in the community redevelopment area. Estimated completion time: more than 12 months. / 1	\$100,000	Currently Unfunded	Capitalization Grants for Clean Water State Revolving Funds; CDBG; FMAP; HMGP; Nonpoint Source Implementation Grants	1/10/2018			
	910 Kenneth City	Stormwater Management	Repair, rework, and replace components in the Kenneth City storm drain system. Estimated completion time: more than 12 months. / 1	\$300,000	Currently Unfunded	Capitalization Grants for Clean Water State Revolving Funds; CDBG; FMAP; HMGP; Nonpoint Source Implementation Grants	1/10/2018			
	910 Kenneth City	Stormwater Management	Repair, rework, and replace components in the Kenneth City storm drain system. Estimated completion time: more than 12 months. / 1	\$500,000	Currently Unfunded	Capitalization Grants for Clean Water State Revolving Funds; CDBG; FMAP; HMGP; Nonpoint Source Implementation Grants	1/10/2018			
	1240 Largo	Fire Station Renovation Program	The City of Largo operates six fire stations, 38, 39, 40, 41, 42 and 43. The stations are in need of significant repair, maintenance, and upgrade in order to remain operational. An outside consultant completed a needs analysis in 2015 to determine the following: space needs analysis, analysis of all current and immediate repair and maintenance needs and costs, and estimates on the remaining useful life of the buildings. The 2015 Needs Assessment indicated extensive repairs and upgrades for Largo Fire Rescue stations. The Largo Fire Rescue Department is looking ahead to replacing stations that have reached the end of their useful life, including fire stations 38, 39, 42, and 43. The replacement of Station 43 was initiated in FY 16 and will be completed in FY 17. Station 38 would be next, station 42 would be after station 38 and station 39 would be the last, in coordination with the county project to rebuild Rainbow Village. Fire Station 38: Apparatus bay floor resurfacing, interior painting, and drop ceiling replacement. Station 38 is slated to be the first station to be replaced if the penny is re-approved. (Station was built in 1987.) Fire Station 39: Roof replacement, apparatus bay floor resurfacing, and interior painting. Station 39 is scheduled to be replaced in coordination with the county project to rebuild Rainbow Village. (Station was build in 1980.) Fire Station 40: Major roof repair,	\$692,000	FY 17-FY 21	General (Local Fund)	1/10/2018	10/19/2017		Matthew DiFiore
	1150 Largo	Fire Station 38 Reconstruction	This is the youngest of the three proposed stations however still has many of the same issues. The roof and HVAC systems will need replacing, the building will need to be brought up to ADA and NFPA standards and living quarters will need redesign and reconfiguration. This building has gone through many changes due to personnel additions and changes over the last ten years. The current building is 6,500 square feet and was constructed in 1986. /4	\$3,750,000	N/A	Unfunded	1/10/2018	10/19/2017		Matthew DiFiore
	1150 Largo	Fire Station 39 Reconstruction	This building has exceeded its useful life and currently is in need of a roof replacement and internal renovations. The building has no separated living quarters and has inadequate storage space for the needs of the department. This project is intended to work in coordination with the county project to rebuild Rainbow Village. The current building is 5,300 square feet and was constructed in 1979. /4	\$3,500,000	N/A	Unfunded	1/10/2018	10/19/2017		Matthew DiFiore
	1150 Largo	Fire Station 42 Reconstruction	On top of issues regarding access and the age of the facility, the building has had multiple roof replacements, renovations, and updates throughout its life. It is recommended that a new building be built with better access for apparatus and better separation of living quarters for firefighters. The current building is 5,300 square feet and was constructed in 1978. /4	\$3,500,000	N/A	Unfunded	1/10/2018	10/19/2017		Matthew DiFiore

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990	Largo	WWRF - Biosolids Building Hardening	The Biosolids building is a large industrial, pre-engineered metal building. It houses most of the operating components used to convert wastewater solid into a Class AA Biosolid product, used for fertilization. Due to the essential nature of the facility and the potential for the facility to sustain significant damage during a hurricane, a study was conducted to evaluate the structural performance of the building under the effects of a Category 3 hurricane. Based on the results of the contracted study, scope for this project includes either 1) structural modifications to the existing building, including roofing work, wall work, all structural bracing and stiffening, replacement of doors, windows, louvers (framed openings), and fans, and painting or 2) replacement of the entire building. /1, 2	\$1,600,000	FY 18 -FY19	Wastewater (Local Fund)	1/10/2018	12/22/2016		Matthew DiFiore
1190	Largo	WWRF – Operations Center Reconstruction	The existing WWRF control building and laboratory, both of which are approximately 40 years of age, are not hurricane hardened. As these structures are essential to treatment plant operations, the Department would like to construct a new facility so that staff could continue to operate the plant after a storm event. This would entail design and construction of a new two-story building overlooking the process trains, which would be hurricane hardened for safe quartering during a storm. It would contain the main control room for SCADA workstations, a server room, a full laboratory for permit required lab analysis, storage for chemicals & supplies, a bunker/lounge area, a records room, and a variety of other needs to be determined during the design process. /1, 2	\$4,570,000	FY 18-FY19	Wastewater (Local Fund)	1/10/2018	12/22/2016		Matthew DiFiore
970	Largo	City Hall Reconstruction	The City Hall facility has a number of issues. First, it is not rated for hurricane winds and is in a flood plain. It has electrical and plumbing systems that are original to the building and are repeatedly needing repair. The HVAC system needs to be redesigned as it is not efficient and does not service employees there appropriately. The building is not hardened and has significant space utilization issues. This estimate would construct a new building with the same square footage of the current City Hall and does not include land acquisition or design costs at this time. Policy direction is needed to determine the needs for inside a new City Hall building. The current building is 57,740 square feet and was constructed in 1973. /1, 2	\$18,000,000	N/A	Unfunded	1/10/2018	12/22/2016		Matthew DiFiore
1000	Largo	Public Works Complex Reconstruction	Due to the complex being built on a former closed landfill, the soil underneath the complex is giving way to considerable damage to both the pavement used around the building and the buildings themselves. The Administration building is showing settling in both the facilities workshop and the fleet central stores area and while currently not a structure issue, may be in the near future. The building does not currently meet some ADA requirements for facilities of this nature and size and the building has had multiple issues with water intrusion over the past ten years. It is in the intention that through this project Public Works administrative and management functions can be reviewed, centralized, and coordinated more efficiently. This project scope and cost is based upon engineering estimates and a space needs analysis done in 2013. Costs include the environmental remediation, the moving of the fuel island, the consolidation of the divisions into one building, and associated vehicle storage areas. Total square footage of existing buildings is 44,528, Public Works Administration and Fleet building was constructed in 1976 and the Solid Waste facility was constructed in 1990. /3	\$20,000,000	N/A	Unfunded	1/10/2018	12/22/2016		Matthew DiFiore

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1210	Largo	Regional Watershed Management Planning	The Regional Watershed Management Planning project was initiated in the FY2012-2016 CIP and identified the need for the development of a City-wide Watershed Management Plan for the various drainage basins (Starkey, Longbranch, Allen's Creek, McKay Creek) and sub-basins located in the City of Largo. This project included joint funding and participation with the South West Florida Water Management District, Pinellas County, City of Clearwater and other entities that share jurisdiction within the watersheds. The watershed management plans for McKay Creek, Allen's Creek, Long Branch Creek, Starkey Road Basin, and the Clearwater-Largo Road Drainage District Study were completed by FY14. The purpose of this project is to begin planning and designing stormwater system improvements based on the Best Management Practices (BMPs) identified in the Watershed Plans to address flooding, water quality, infrastructure rehabilitation, and meet regulatory requirements. This project will contribute to compliance with the City's National Pollutant Discharge Elimination System (NPDES) stormwater permit and pending Total Maximum Daily Loads (TMDL's) regulations which are administered by the Florida Department of Environmental Protection. /1	\$14,800,000	N/A	Unfunded	1/10/2018	12/22/2016		Matthew DiFiore
1090	Largo	WWRF Master Plan Improvements – Biological Treatment Systems	A portion of the overall project is intended raise critical components of the Largo Wastewater Reclamation Facility (WWRF) above the floodplain. This includes elevating the structure that contains the filter feed pump station and the new disk filters. It also includes four (4) new Motor Control Center (MCC) Buildings that are hardened and elevated. /1	\$2,375,000	FY 18	Wastewater (Local Fund)	1/10/2018	12/22/2016		Matthew DiFiore
944	Largo/ Engineering Services	126 Ave Church Creek Storm Drainage Improvements	Project will construct large conveyance piping to eliminate repeat property flooding and damage/1	\$1,500,000	Unfunded	Local Funding	1/10/2018	10/25/2017		Jerald Woloszynski
1060	Lealman SFC / Emergency Management	Fire Station #18 EOC Hardening	Harden by installing roll down shutters, 5 double doors, 3 single doors and 16 windows. Estimated completion time: more than 12 months. / 2	\$36,500	Unfunded		1/10/2018			
980	Lealman SFC / Emergency Management	Fire Station #19 Secondary EOC Hardening	Harden by adding roll down shutters, 4 single doors and 5 windows. Estimated completion time: more than 12 months. / 2	\$12,700	Unfunded		1/10/2018			
860	Lealman SFC / Emergency Management	Fleet Building Hardening	Harden with roll down shutters, 2 single doors and 1 window. Estimated completion time: less than 12 months. / 2	\$3,900	unfunded		1/10/2018			
840	Lealman SFC / Emergency Management	Fleet Building Emergency Power	Evaluate and install quick connect and power transfer switch. Estimated completion time: less than 12 months. / 4	\$35,000	Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
1304	Madeira Beach	Emergency Operations Generator	Emergency Operations Generator to allow operations during state of emergency, power outages or other events of power loss.	\$268,000	Unfunded	HMGP	1/10/2018	11/28/2017		Karen Paulson
	Madeira Beach	13001 Boca Avenue	Mitigation of SRL Property 13001 Boca Avenue	\$200,000	Unfunded	HMGP & Private	1/10/2018	10/5/2016		Michelle Orton
	Madeira Beach	847 Bay Point	Mitigation of SRL Property 847 Bay Point	\$200,000	Unfunded	HMGP & Private	1/10/2018	10/5/2016		Michelle Orton
	Madeira Beach	14196 W Parsley	Mitigation of SRL Property 14196 W Parsley	\$200,000	Unfunded	HMGP & Private	1/10/2018	10/5/2016		Michelle Orton
	Madeira Beach	911 Bay Point	Mitigation of SRL Property 911 Bay Point	\$200,000	Unfunded	HMGP & Private	1/10/2018	10/5/2016		Michelle Orton
	Madeira Beach	577 Crystal Drive	Mitigation of SRL Property 577 Crystal Drive	\$200,000	Unfunded	HMGP & Private	1/10/2018	10/5/2016		Michelle Orton
	Madeira Beach	Drainage Basin A – As depicted in the Stormwater Master Plan	Stormwater system upgrades to address flooding and tide control devices	\$2,142,000	Unfunded	EMPATF; HMGP; PDM Program	1/10/2018	10/5/2016		Michelle Orton
	Madeira Beach	Drainage Basin B – As depicted in the Stormwater Master Plan	Stormwater system upgrades to address flooding and tide control devices	\$3,166,000	Unfunded	EMPATF; HMGP; PDM Program	1/10/2018	10/5/2016		Michelle Orton

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2018 Appendix 9, Table 9-1: Mitigation Initiatives**

Total Score	Jurisdiction/ Organization	Project Name	Description/ Natural Hazard Addressed	Est. Cost	Timeframe / Status	Possible Funding Sources	Date Last Reviewed	Date Last Updated	Comments	Updated By
	Madeira Beach	Drainage Basin C – As depicted in the Stormwater Master Plan	Stormwater system upgrades to address flooding and tide control devices	\$8,100,000	Unfunded	EMPATF; HMGP; PDM Program	1/10/2018	10/5/2016		Michelle Orton
	Madeira Beach	Drainage Basin D – As depicted in the Stormwater Master Plan	Stormwater system upgrades to address flooding and tide control devices	\$4,360,000	Unfunded	EMPATF; HMGP; PDM Program	1/10/2018	10/5/2016		Michelle Orton
	Madeira Beach	Drainage Basin E- As depicted in the Stormwater Master Plan	Stormwater system upgrades to address flooding and tide control devices	\$3,500,000	Unfunded	EMPATF; HMGP; PDM Program	1/10/2018	10/5/2016		Michelle Orton
	Madeira Beach	Drainage Basin F – as depicted in the Stormwater Master Plan	Stormwater system upgrades to address flooding and tide control devices	\$2,200,000	Unfunded	EMPATF; HMGP; PDM Program	1/10/2018	10/5/2016		Michelle Orton
	Madeira Beach	Underground Utilities	Underground utilities – East and West side streets	\$3,000,000	Unfunded	Local	1/10/2018	10/5/2016		Michelle Orton
	Morton Plant Hospital / 890 Clearwater	Hospital Retrofit	Replace windows at Morton Plan Hospital’s Adler/ Women’s Center Estimated completion time: more than 12 months. / 2	\$680,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	Morton Plant Hospital / 890 Clearwater	Hospital Retrofit	Replace the lower roof of Witt South building at Morton Plant Hospital. Estimated completion time: more than 12 months. / 2	\$400,000	Currently Unfunded	FMAP; HMGP; PDM Program	1/10/2018			
	North Redington Beach / Public Works 840	Stormwater Management #1	Install storm water sewer valve to prevent storm water/tidal backup into the streets. Estimated completion time: less than 12 months. / 1	\$25,000	Currently Unfunded	FMAP; HMGP; PDM Program	1/10/2018			
	North Redington Beach / Public Works 830	Stormwater Management #2	Implement retrofit of the remaining 14 storm water valves. Estimated completion time: more than 12 months. / 1	\$210,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	North Redington Beach / Public Works 810	Underground Utilities	Place underground utilities along Gulf Boulevard (NRB). Estimated completion time: more than 12 months. / 2	\$7,000,000	Currently Unfunded	EMPATF; HMGP; PDM Program	1/10/2018			
	950 Oldsmar / City Clerk; IT	COOP Document Imaging	Document management program utilizing scanning and digitization of vital records for off-site storage and retrieval. / 4	\$75,000	Currently Unfunded	EMPATF; HMGP; PDM Program	1/10/2018	12/15/2017		Steven Everitt
	Oldsmar / Planning and Redevelopment; 880 Communications	Public Education and Information	Provide education and information to property and business owners about storm damage and ways to properly protect structures. Estimated completion time: more than 12 months. / 4	\$25,000	Currently Unfunded	EMPATF; HMGP; PDM Program	1/10/2018	12/15/2017		Steven Everitt
	Oldsmar / Public Works; 940 Engineering	Storm Water Management Plan	Prepare a citywide drainage plan to minimize flooding throughout the City. Estimated completion time: more than 12 months. / 1	\$100,000	Currently Unfunded	FMAP; HMGP; PDM Program	1/10/2018	12/15/2017	In-progress	Steven Everitt
	Oldsmar / Public Works; 970 Facilities	Critical Facility Generator Retrofit	Replace electrical generating equipment at Water Reclamation Facility. Estimated completion time: less than 12 months. / 4	\$1,200,000	Currently Unfunded	State Revolving Funds, CDBGs; FMAP; HMGP; HMGP Planning	1/10/2018	12/15/2017		Steven Everitt
	Oldsmar / Public Works; Storm Water 995	Mitigation/ Response/ Recovery Equipment	Purchase vacuum excavation system for the maintenance and recovery of all storm water inlets and structures. Estimated completion time: less than 12 months. / 1	\$50,000	Currently Unfunded	EMPATF; HMGP; PDM Program	1/10/2018	12/15/2017		Steven Everitt
	950 Oldsmar / Public Works; TECO	Bury Utilities Underground	Bury the overhead electric, telephone and cable TV utility lines in the Community Redevelopment District. Estimated completion time: more than 12 months. / 2	\$2,000,000	Currently Unfunded		1/10/2018	12/15/2017		Steven Everitt
	Oldsmar / Public Works; Water Reclamation 1160	Flood Proofing and Hardening of Sanitary Sewer Lift Stations	Storm proof and retrofit eight existing sanitary sewer lift stations within the flood plain. Estimated completion time: more than 12 months. / 1, 2	\$400,000	Currently Unfunded	EMPATF; HMGP; PDM Program	1/10/2018	12/15/2017		Steven Everitt
	930 PARC	Disabilities Registration	Provide computerized pre-registration for individuals with severe developmental disabilities. Estimated completion time: less than 12 months. / 4	\$25,000	Currently Unfunded		1/10/2018			
	920 PARC / St. Petersburg	Special Needs Shelter Retrofit	Harden PARC building to serve as a safe multi-hazard shelter including an emergency operation center. Estimated completion time: more than 12 months. / 2	\$4,000,000	Currently Unfunded		1/10/2018			
	PC Parks & Conservation Resources 920	Alligator Lake Habitat Restoration (845)	Comprehensive ecosystem restoration project for wetland and upland creation and enhancement and stormwater polishing. /2	\$1,300,000	FY2012 - FY2018	Grant; Local funds; SWFWMD	1/10/2018	10/30/2017	Project on schedule in monitoring/maintenance phase	Steve Harper

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	PC Parks & Conservation 680 Resources	Mobbly Bay Habitat Restoration (656)	Comprehensive ecosystem restoration project for wetland and upland creation and enhancement and stormwater polishing. /2	\$1,100,000	FY2012 - FY2018	Grant; Local funds; SWFWMD	1/10/2018	10/30/2017	Project to be completed by SWFWMD	Steve Harper
	PC Planning and Development 1255 Review Services	Sea Level Rise Vulnerability Assessment	Pinellas County Sea Level Rise and Storm Surge Vulnerability Assessment / 3	\$450,000	FY18-FY20	U.S. Treasury	1/10/2018	10/27/2017	Grant application approved	Chris Moore
	1200 PC Public Safety	County-wide	Replace seven (7) existing radio shelters housing the infrastructure of Pinellas County's 800 MHz Intergovernmental Public Safety Radio System serving over 10,000 responders to meet national standards and practices as defined by the Association of Public Safety Communication Officials (APCO) and local building codes. Shelter structures must be constructed to eliminate the threat of flooding with elevated platforms and drainage, while protecting against hurricane force winds. The hardening of sites is one of the most critical elements in the construction of a reliable communications system to prevent radio communication failure and better serve public safety responders and the public during routine incidents and major disasters. Public safety grade shelters are imperative to ensure the ability of public safety users to communicate at all times.	\$15,130,000	FY16-18	Penny for Pinellas	1/10/2018	10/27/2016		
	1340 PC Public Works	Joes Creek Watershed Management Plan	Evaluate drainage patterns within Joes Creek watershed; identify flooding locations; develop BMPs to address the issues	\$500,000	FY2014 - FY2016	Surface Water Assessment and SWFWMD Grant	1/10/2018	10/27/2017	Plan development in progress	Rahim Harji
	1150 PC Public Works	Span Wire Intersection Replacement Program	Replacement of 24 existing span wire intersections with mast arms. Intersections are along major evacuation routes throughout Pinellas County. Approx. \$240k per intersection. Estimated completion time: more than 12 months. / 4	5,800,000	Unfunded	Seeking Pre-Disaster Mitigation Program grant funds	1/10/2018	11/17/2016		Gina Harvey
	1130 PC Public Works	Stormwater Conveyance System Improvement Program (921321)	Replace/reline inadequate or deteriorating stormwater conveyance systems county wide. Estimated completion time: more than 12 months. / 1	\$44,025,000	FY2016 - FY2026 In Progress	Penny for Pinellas	1/10/2018	10/27/2017	Added additional funding. Projects in progress	David Talhouk/Rahim Harji
	1120 PC Public Works	Cross Bayou Improvements	Improve conveyance through Cross Bayou Canal and reduce duration of flooding. Removed material should be tested to account for pollutant removal. Estimated completion time: more than 12 months	\$6,770,000	FY2014 - FY2019	Penny for Pinellas	1/10/2018	10/27/2017	Project in progress	David Talhouk/Rahim Harji
	1020 PC Public Works	Roosevelt Channel 5 improvements	Various BMPs from the 1981 Watershed Master Plans, Removal of salinity barrier. 1, 3. Increase box culvert size; water treatment ponds.	\$4,679,200	FY2015 - FY2019 In Progress	Penny for Pinellas	1/10/2018	10/27/2017	Increase box culvert size; water treatment ponds. Project in progress	David Talhouk/Rahim Harji
	1020 PC Public Works	Pinellas County Stormwater Facilities (Countywide)	1, 3	\$1,170,000	FY2016-2019	Penny for Pinellas	1/10/2018	10/27/2017	No Change; Project in progress	David Talhouk/Rahim Harji
	1020 PC Public Works	McKay Creek Drainage/Hickory	1, 3	\$1,000,000	FY2015-2017	Penny for Pinellas/FDOT	1/10/2018	10/27/2017	Project in progress	David Talhouk/Rahim Harji

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870	PC Public Works	Drainage Pond Compliance Program (1629)	Improve existing ponds for permit compliance. Estimated completion time: more than 12 months. / 1	\$4,509,500	FY2016-FY2026 In Progress	Penny for Pinellas	1/10/2018	10/27/2017	Revised est. cost and timeframe	David Talhouk/Rahim Harji
870	PC Public Works	Bee Branch Drainage Improvements (922333)	Bank stabilization, erosion control, and drainage structure replacement. Estimated completion time: more than 12 months. / 3	\$2,990,000	FY2012 - FY2018; Phase 2 complete, phase1 in progress	Penny for Pinellas; SWFWMD	1/10/2018	10/27/2017	Revised est. cost and timeframe. Phase 1 in progress. Other phases complete.	David Talhouk/Rahim Harji
860	PC Public Works	Pinellas Trail - 54th Ave. Drainage Improvements (1823)	Alleviate flooding on 54th Ave. N, Pinellas Trail, and 97th Way. Estimated completion time: more than 12 months. / 1	\$1,975,000	FY2015 - FY2018 In Progress	Penny for Pinellas	1/10/2018	10/27/2017	Revised est. cost. Project in progress	Rahim Harji
1000	PC Public Works	Acquisition of Repetitive Loss Properties	Purchase repetitive loss properties in unincorporated Pinellas County to mitigate losses. Estimated completion time: more than 12 months. / 1	\$36,100,000	Currently Unfunded	HMGP, PDM, FMA	1/10/2018	10/25/2017		Lisa Foster
830	PC Public Works	Cross Bayou Channel 2 - Rena Dr. (1821)	Improve Cross Bayou Channel 2 from 66th St. to Pinecrest Subdivision. Estimated completion time: more than 12 months. / 1	\$1,150,000	FY2015-FY2018 In Progress	Penny for Pinellas	1/10/2018	10/27/2017	Revised est. cost and timeframe. Project in progress	David Talhouk/Rahim Harji
960	PC Public Works	Repetitive Loss Area Analysis and Mitigation Projects Evaluation	Develop a detailed mitigation plan for repetitive loss areas and identify potential mitigation projects, develop scopes of work, budgets, and cost-benefit analyses for each. Estimated completion time: less than one year	\$25,000	Currently Unfunded	Surface Water Assessment and HMGP	1/10/2018	10/25/2017	New	Lisa Foster
1205	PC Public Works	Floodplain models for extreme events	Develop a simplified rain-on-grid family of storms flood models to see predicted inundation from severe rain events (exceeding standard 100 year event) for improved flood warning and response.	\$225,000	Currently Unfunded	Surface Water Assessment and HMGP	1/10/2018	10/25/2017	New	Lisa Foster
1197	PC Public Works	Real-time flood forecasting	Develop a real-time flood forecasting model to predict flooding from NWS rainfall and NOAA tide predictions for improved flood warning and response.	\$500,000	Currently Unfunded	Surface Water Assessment and HMGP	1/10/2018	10/25/2017	New	Lisa Foster
1205	PC Public Works	Rain and stream gage data correlation with flooding	Develop rain and stream gage data correlation to predict flooding in vicinity of existing stream gages and develop response procedures for gage levels at each location for improved flood warning and response.	\$150,000	Currently Unfunded	Surface Water Assessment and HMGP	1/10/2018	10/25/2017	New	Lisa Foster
1161	PC Utilities	Back Up Power and Pumping Equipment for Sewer Pumping Stations	Improve infrastructure resiliency to natural hazards by installing back up power and/or permanent bypass pumping at sewer pumping stations to maintain sewer transmission during emergency events. /4	\$2,500,000	FY18 – FY20 / Unfunded	HMGP, PDM	1/10/2018	12/15/2017		Ivy Drexler
978	PC Utilities	Force Main Sampling Equipment to Improve Sanitary Sewage Collection Process	The South Cross Bayou Water Reclamation Facility (SCBWRF) treats sanitary sewage collected from (4) different and independent collection system basins located in southern Pinellas County. There have been occurrences of monitored parameters exceeding the allowable limits in the influent ('hits'). Most recently these have included lead and copper, and other unknown compounds that have caused upsets in the treatment process. Although the County's IPP group is notified, there is no effective mechanism in-place that can quickly help identify the source(s) of these 'hits'. This equipment will help track those sources and potentially prevent them from causing a negative effect on the quality of the treatment process, reclaimed water and surface water discharge. /1	\$450,000	FY19 – FY20 / Unfunded	HMGP	1/10/2018	12/15/2017		Ivy Drexler
1118	PC Utilities	Drinking Water Facility Security Equipment	Installing additional pan and zoom cameras at drinking water facilities to cover blank areas. Provide remote gate control and install perimeter fencing. /1, 2	\$250,000	FY19 – FY20 / Unfunded	HMGP	1/10/2018	12/15/2017		Ivy Drexler

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	1300 Pinellas Park/ Public Works	Generator for Public Works Facility	The Public Works facility is hardened for a Category 3 storm and is the central location for all storm and stormwater equipment and personnel that are activated before, during and after the storm. The generator is necessary to ensure protection from flooding by providing continuity of operations./1	\$225,000	FY 2018-2019 / Grant Pending.	The funding will be a combination of HGMP grant and local funds.	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	890 Pinellas Park / Fire Dept.	Community Emergency Response Team (CERT).	Supply CERT Training to 60 trainees. Estimated completion time: less than 12 months. / 4	\$30,000	Currently Unfunded	EMPATF, HMGP; PDM Program, and local funds (i.e., Penny for Pinellas)	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	970 Pinellas Park / Public Works	Structure Hardening - Forbes Recreation Center	Harden the recreation center to be used for sheltering and operations during and after a storm event. Estimated completion time: more than 12 months. / 2	\$775,000	Currently Unfunded	EMPATF, HMGP; PDM Program; & local funds	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	940 Pinellas Park / Public Works	Hardening - Public Works / Technical Services Building	Harden the Public Works/Technical Services Building for sheltering and operations. Estimated completion time: more than 12 months. / 2	\$950,000	Currently Unfunded	HMGP, EMPATF, and local funds (i.e. Penny for Pinellas)	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	780 Pinellas Park / Public Works	Municipal EOC	Design, engineer, construct and equip an Emergency Operations and Command Center. Estimated completion time: more than 12 months. / 4	\$15,000,000	Currently Unfunded	Funding for the current phase is from local coffers. Funding for implementation could include: Local Funds, SWFWMD Grant, EMPATF, HMGP; PDM Program.	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	1060 Pinellas Park/ Public Works	72nd Ave. Channel Culverting	Install a stormwater culvert at the headwaters of Pinellas Park Water Mgt. District Channel 3A to eliminate localized flooding. Additionally, this improvement would remove a hazard which when over t's banks can totally submerge a car and eliminate the opportunity for people and children to be caught up in moving waters. /1	\$5,500,000	Currently Unfunded	Funding for the current phase is from local coffers. Funding for implementation could include: Local Funds, SWFWMD Grant, EMPATF, HMGP; PDM Program	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	1020 Pinellas Park/ Public Works	Fairlawn Subdivision Drainage	Install a stormwater collection and conveyance system in a subdivision originally developed in the County in the 1960s and 70s. This would eliminate issues of localized flooding and dangerous stormwater inlets. /1	\$1,500,000	Currently Unfunded	Funding for the current phase is from local coffers. Funding for implementation could include: Local Funds, SWFWMD Grant, EMPATF, HMGP; PDM Program	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	980 Pinellas Park/ Public Works	Relocation or Construction of FS 34	Fire Station #34 at its present location cannot effectively service the geographic area which it originally serviced due to unanticipated growth and expansion. It is necessary to either relocate FS 34 or construct another station to serve the western third of the community. /4	\$7,000,000	Currently Unfunded	EMPATF, HMGP; PDM Program; & local funds	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	905 Pinellas Park/ Public Works	Primary EOC and Storm Safe Parking Facility	Develop a storm safe multi-level parking garage with the City's Primary EOC atop of the structure. The EOC would be situated above both storm surge and 100 year floodplain hazards and be constructed to be wind resistant. The elevated status would provide for self-sufficiency by utilizing solar and wind energy to supplement the local power company source when power failure occurs. Additionally the structure would be constructed to protect response vehicles of personnel that are housed at the City Shelter next door. The structure would also be able to serve as a support feature for downtown development and support a future rail or BRT stop since the proposed site is near Park Station. /4	\$4,500,000	Currently Unfunded	HMGP, EMPATF, and local funds (i.e. Penny for Pinellas)	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	835 Pinellas Park/ Public Works	78th Ave. and 78th St. Stormwater Improvements	Install a stormwater system to eliminate localized flooding. /1	\$750,000	Currently Unfunded	Funding for the current phase is from local coffers. Funding for implementation could include: Local Funds, SWFWMD Grant, EMPATF, HMGP; PDM Program	1/10/2018	10/24/2017		S. Boisvert / K. Gademer

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	1000 Pinellas Park	Replace Generator at Technical Services Building	Emergency Generator Installation to Maintain Service / 4	\$225,000	6 months / FY 2017-2018	Unfunded	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	1180 Pinellas Park	Boardwalk and Restoration of Wetlands - Performing Arts Center/England Brothers Park	Design work to improve drainage and natural functions of floodplain / 1	\$100,000	12 months / FY 2017-2018	Local funding	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	1270 Pinellas Park	Fire Station 35 Fuel Tank Replacement	Convault Tank Installation for Emergency Generator to Maintain Service / 4	\$35,000	6 months / FY 2019-2020	Infrastructure Sales Tax	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	1090 Pinellas Park	98th Avenue Pond Improvements	Improvement of wet pond to increase drainage capability for several single family subdivisions and a 60 acre park / 1	\$200,000	12 months / FY 2016-2017	FDEP Grant and Pinellas Park Utility fees	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	1090 Pinellas Park	Technical Services Pond Improvements	Restoration of a 9,095 s.f. dry pond, to improve environmental conditions (pond now wet) and increase drainage capability of an area serving mobile home parks and industrial uses / 1	\$200,000	12 months / FY 2016-2017	FDEP Grant and Pinellas Park Utility fees	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	1050 Pinellas Park	England Brothers Park Drainage and Water Quality Improvements	Improvements to increase drainage capability and water quality for a 42.5 acre drainage area that flows through Channel One into Cross Bayou / 1	\$768,125	18 months	SWFWMD Grant and Pinellas Park Utility fees	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	933 Pinellas Park	60th St Roadway, utilities & drainage improvements	Improvements of drainage and related infrastructure along 60th St. from 102nd Ave to 110th Ave., including culverting existing ditches, installing sidewalks, replacement of existing asbestos concrete waterman with new 6" PVC, and reconstruction of existing roadway. /4	\$1,936,497	FY 17-19	IST	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	1199 Pinellas Park	Fire Station 16	Relocation or construction of fire station ./4	\$4,000,000	Unfunded	IST, Pinellas County, HMGP, FEMA Grant, Local coffers	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	1199 Pinellas Park	Fire Station 35	Relocation or construction of fire station ./4	\$4,000,000	Unfunded	IST, Pinellas County, HMGP, FEMA Grant, Local coffers	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	1199 Pinellas Park	Fire Station 36	Construction of new Mainlands/Gateway Fire Station at 4050 80th Ave. /4	\$4,000,000	Unfunded	IST, Pinellas County, HMGP, FEMA Grant, Local coffers	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	1218 Pinellas Park	Citywide Analysis of Special Flood Hazard Area	Hire a stormwater / drainage consultant to determine effect of storm drains, cemented culverts, and ditches with special flood hazard areas within the City. /1	\$50,000	FY 18-19	Utility Fee	1/10/2018	10/24/2017		S. Boisvert / K. Gademer
	Redington Shores / Emergency Management 1110	Impact Windows for Town Hall EOC (Critical Facility)	Town Hall /EOC updates to existing for expedited response to emergency by reducing labor commitment and with revised Wind & Impact loads per current codes, located at 17425 Gulf Blvd. Estimated completion time: less than 12 months.	\$15,000	Town Funded	EMPATF, HMGP; PDM Program	1/10/2018	8/30/2016		Steve Andrews

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	Redington Shores / Emergency Management	Flood proofing, Tie -Down or Re-elevation of Town Hall EOC (Critical Facility)	Town Hall /EOC updates to existing for Coastal High Hazard AE zone located at 17425 Gulf Blvd. Estimated completion time: more than 24 months.	\$2,150,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	8/30/2016		Steve Andrews
	Redington Shores / Emergency Management	TV-Media Upgrades	CATV broadcasting equipment emergency replacement for public education & awareness to provide up to date info re: Evacuation & shelters, flood mitigation programs & projects prior to emergencies. Estimated completion time: less than 12 months. / 1	\$35,000	Town Funded	Town annual budget for EM.	1/10/2018	8/30/2016		Steve Andrews
	Redington Shores / Preservation / Parks area	Create a Beach (Erosion) Management plan.	Provide for plans and specifications to expand existing Dune System and Walkover use. Estimated completion time: more than 12 months. / 2	\$150,000	Currently Unfunded	CDBG; FMAP; HMGP; Nonpoint Source Implementation Grants; HMGP Planning	1/10/2018	8/30/2016		Steve Andrews
	Redington Shores / Flood Stormwater Planning	Create a Revised CRS program for the Town	Consultant to review/recommend program upgrades to flood management planning / 1 / 2	\$8,000	Town Funded	Local	1/10/2018	8/30/2016		Steve Andrews
	Redington Shores / Public Works	Stormwater Management	Rebuild stormwater drainage system in the last three (3) phases. Two phases were completed early 2006. Estimated completion time: more than 12 months. / 1	\$3,100,000	Funding by SWFWMD Grant and Town C.I.P. 2008-2009.	CDBG; FMAP; HMGP; Nonpoint Source Implementation Grants	1/10/2018	8/30/2016		Steve Andrews
	Redington Shores / Public Works	Flood proofing, Structural Hardening of Town Maintenance Garage (Essential Facility)	Wet Flood Proofing and bracing the Town's existing Maintenance facility located at 155 174th Ave. E. Located in FEMA Zone AE-11. Estimated completion time: more than 12 months. / 1	\$150,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	8/30/2016		Steve Andrews
	Redington Shores / Public Works	Underground Utilities	Place underground electrical, telephone and cable utilities to all properties along Gulf Boulevard from 175th Avenue to 83rd Terrace West. Estimated completion time: more than 12 months. / 2	\$7,500,000	Currently Unfunded	CDBG; FMAP; HMGP; Nonpoint Source Implementation Grants; HMGP Planning	1/10/2018	8/30/2016		Steve Andrews
	Redington Shores / Sewer Department	Flood and wind retrofit of lift stations	Storm proof sanitary sewer lift stations (3). Estimated completion time: less than 12 months. / 1	\$550,000	Funding by SWFWMD Grant and Town C.I.P. 2008-2009.	Capitalization Grants for Clean Water State Revolving Funds; CDBG; FMAP; HMGP; Nonpoint Source Implementation Grants; HMGP Planning	1/10/2018	8/30/2016		Steve Andrews
	1320 Safety Harbor	Baytowne West Lift Station	Complete Renovation of Sanitary Sewer Lift Station. / 1,2	\$60,000	FY21/22	Local	1/10/2018	10/21/2016		Michael Schoderb ock
	1320 Safety Harbor	Highlands Lift Station	Complete Renovation of Sanitary Sewer Lift Station. / 1,2	\$60,000	FY18/19	Local	1/10/2018	10/21/2016		Michael Schoderb ock
	1320 Safety Harbor	North Bayshore Lift Station	Complete Renovation of Sanitary Sewer Lift Station. / 1,2	\$60,000	FY17/18	Local	1/10/2018	10/21/2016		Michael Schoderb ock
	1270 Safety Harbor	Cypress Hollow Lift Station Repair	Complete Renovation of Sanitary Sewer Lift Station. / 1,2	\$60,000	FY19/20	Local	1/10/2018	10/21/2016		Michael Schoderb ock
	1270 Safety Harbor	Harbor Woods Lift Station Repair	Complete Renovation of Sanitary Sewer Lift Station. / 1,2	\$75,000	FY20/21	Local	1/10/2018	10/21/2016		Michael Schoderb ock
	1240 Safety Harbor	South Bayshore Lift Station and Generator	Complete Renovation of Sanitary Sewer Lift Station. / 1,2	\$125,000	FY16/17	Local	1/10/2018	10/21/2016		Michael Schoderb ock
	1180 Safety Harbor	City Hall Window Replacement	Replace City Hall windows with wind resistant / impact resistant product. /2	\$150,000	FY16/17	Local	1/10/2018	10/21/2016		Michael Schoderb ock

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	1030 Safety Harbor	Lower Mullet Creek Project	Design of the Lower Mullet Creek project. Water Quality and Flooding. /1,3,4	\$300,000	12-18 months	Unfunded— pending joint project with Pinellas County	1/10/2018	10/21/2016		Michael Schoderbock
	1030 South Pasadena / Public Works	City Hall Window Protection	Install protective window film on all windows in City Hall. Estimated completion time: less than 12 months. / 2	\$50,000	Currently Unfunded	Residential Construction Mitigation Program; EMPATF, HMGP; PDM Program	1/10/2018			
	1010 South Pasadena / Public Works	Finish Mast Arms on Evac Route	Install mast arms at 3 remaining locations on Pasadena Avenue. Estimated completion time: less than 12 months. / 2	\$1,500,000	Currently Unfunded	FDOT; EMPATF, Hazard Mitigation Grant Program; PDM Program.	1/10/2018			
	950 South Pasadena / Public Works	Generators	Install emergency generator at city hall. Estimated completion time: less than 12 months. / 4	\$60,000	Currently Unfunded	Residential Construction Mitigation Program; EMPATF, HMGP; PDM Program; Penny for Pinellas	1/10/2018			
	915 South Pasadena / Public Works	Bury Utilities	Bury utilities on all streets. Phase I - main roads \$1,500,000. Phase II - \$2,000,000. Estimated completion time: more than 12 months. / 2	\$3,500,000	Currently Unfunded	CDBG; FMAP; HMGP; Nonpoint Source Implementation Grants; HMGP Planning	1/10/2018			
	South Pasadena/Fire 1352 Department	Portable Generator and Transfer Switch Upgrade at Fire Station 20	Purchase and installation of new portable 175kW diesel generator and applicable electronic transfer switch at Fire Station #20 in South Pasadena, FL. Post Hurricane Irma, Fire Station 20 lost electrical power for four (4) days. During this time frame, Station 20 relied on an older generator configuration that was unable to supply sufficient electricity to run the air conditioning system or sufficient electrical outlets throughout the fire station. The City of South Pasadena is seeking funds that will provide an alternate electrical power source capable of running the fire station's AC system as well as sufficient outlets to run station computers, dispatch printer(s), and communications equipment. Natural Hazards addressed include 1-Flooding, 2 - Strom Wind, and 4 - All Hazard.	\$94,500	Currently Unfunded; Project for FY 2020	Pre-Disaster Mitigation (PDM), Hurricane Program, Penny Sales Tax	1/10/2018	10/10/2017	New Project	David Mixson
	South Pasadena/Fire 1284 Department	Fire Station #20	The City of South Pasadena will construct a new fire station designed to withstand hazards posed by hurricanes, to include wind, storm surge and flooding, as well as threats posed by future sea-level rise. The City of South Pasadena is located in a FEMA AE-12 Flood Zone. The City of South Pasadena per city ordinance has increase the B.F.E. by 2 feet and as such the new fire station shall be constructed at 14 feet above sea level. The new fire station will house apparatus and personnel assigned to both fire suppression and emergency medical response activities. Part of the station design and scope will include an Emergency Operations Center (EOC) for the City of South Pasadena. Natural Hazards Addressed include: 1 - Flooding, 2 - Storm Wind, 4 - All Hazards.	\$4,500,000	Currently Unfunded; Project for FY 2021	Pre-Disaster Mitigation (PDM), Hurricane Program, Penny Sales Tax	1/10/2018	10/10/2017	New Project	David Mixson
	St. Anthony's Hospital / St. 780 Petersburg	Public Education	Develop a community education program to provide a better interface between the City and its stakeholders. Estimated completion time: less than 12 months. / 4	\$10,000	Currently Unfunded	Residential Construction Mitigation Program; EMPATF, HMGP; PDM Program	1/10/2018			
	St. Anthony's Hospital / St. 780 Petersburg	ER Retrofit to provide surge capacity for emergencies	Build surge capacity for St. Anthony's Hospital including a new Emergency Dept. Estimated completion time: more than 12 months. / 4	\$2,000,000	Currently Unfunded	Residential Construction Mitigation Program; EMPATF, HMGP; PDM Program	1/10/2018			
	1330 St. Pete Beach	City EOC Retrofit	Provide shutters for the city EOC. Estimated completion time: less than 12 months. / 2	\$40,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	10/3/2017		C.W. Porter
	890 St. Pete Beach	Flood Proof Recreation Building	Flood-proof recreation building. Estimated completion time: more than 12 months. / 1	\$350,000	Currently Unfunded	FMAP; HMGP; PDM Program; EMPATF	1/10/2018	10/3/2017		C.W. Porter
	1000 St. Pete Beach	Acquisition of Repetitive Loss Properties	Purchase repetitive loss properties to mitigate losses. Estimated completion time: more than 12 months. / 1	\$1,000,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	10/3/2017		C.W. Porter

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	1220 St. Pete Beach	Dune Creation	Create dunes where there are gaps in the system and restore those which do not meet current FDEP dune standards. This will protect the entire city against the impacts of storms and damage to lives and property. /1,3	\$500,000	Currently Unfunded		1/10/2018	10/3/2017		C.W. Porter
	1060 St. Pete Beach	Sea Level Rise Study	Identify areas which are particularly vulnerable to sea level rise and which experience frequent flooding and develop an action plan to mitigate future damages. Many areas of the city become inundated with water during storms and greatly affect the welfare of the community. By developing strategies to prevent this, the city will reduce the threat level of flooding and erosion./ 1	\$40,000	Currently Unfunded		1/10/2018	10/3/2017		C.W. Porter
	1313 St. Pete Beach	Stormwater Improvements	Ongoing improvements to the City's stormwater infrastructure. Repair locations are prioritized based on stormwater flooding throughout the City./1	\$3,000,000	\$ 600,000 annually 2018-2022	Stormwater Fund, HGMP, SWFWMD.	1/10/2018	10/3/2017		C.W. Porter
	1262 St. Pete Beach	Seawall Rehabilitation	Seawall repair and replacement in accordance with established level of service. City staff review inventory and prioritize project locations annually./3	\$500,000	\$ 100,000 annually 2018-2022	Capital Projects Fund	1/10/2018	10/3/2017		C.W. Porter
	1029 St. Pete Beach	Sub-Aqueous Condition Assessment	Condition assessment of all force mains to plan future maintenance and replacement in order to prevent sanitary sewer overflows (SSOs) into bodies of water that surround the island. Project includes a highly detailed assessment of the force main leading from pump station no. 1./1	\$175,000	Less than 12 months	Wastewater Fund	1/10/2018	10/3/2017		C.W. Porter
	1073 St. Pete Beach	Gulf Boulevard Electric Undergrounding	Undergrounding of electric utility lines adjacent to Gulf Boulevard./2	\$4,500,000	More than 12 months	Penny for Pinellas, Interlocal Agreement with Pinellas County	1/10/2018	10/3/2017		C.W. Porter
	1091 St. Pete Beach	Dune Walkover Replacement	Dune walkover replacement at 12th Avenue and 16th Avenue to meet FDEP requirements and increase resiliency by increasing the height of the walkover to permit the dunes to grow./1,3	\$120,000	Less than 12 months	Grant from Pinellas County	1/10/2018	10/3/2017		C.W. Porter
	1142 St. Pete Beach	Alley Improvements	Replacement of the existing eastern north-south shell alley between 21st and 22nd Avenue in Pass-a-Grille with a new concrete alley, designed to convey stormwater to the newly installed stormwater collection system on Pass-a-Grille Way./1	\$100,000	18 months	Capital Projects Fund	1/10/2018	10/3/2017		C.W. Porter
	1169 St. Pete Beach	Blind Pass Stormwater Basin Connections	The Blind Pass Road stormwater system is designed to connect 7 flood control basins. This project will connect the first basin to the new twin 60' stormwater pipes. Anticipated project schedule includes one basin per year for the next 7 years until the project is complete. /1	\$1,400,000	7 years	Stormwater Fund, SWFWMD	1/10/2018	10/3/2017		C.W. Porter
	1080 St. Pete Beach	Boca Ciega Isle Stormwater Improvements	Improvements in stormwater basin 6F identified in the Stormwater Master Plan. This basin contains 5.8 acres in a residential zone and comprises the east end of Boca Ciega Isle./1	\$350,000	18 months	Stormwater Fund	1/10/2018	10/3/2017		C.W. Porter
	1227 St. Pete Beach	Fire Department Dock	Infrastructure improvements to the City-owned area across from Station 22 to facilitate the operation of Fire Boat 22 (100% County-funded vessel). Improvements include a dock, boat lift, and all required electrical equipment./4	\$35,000	Less than 12 months	Capital Projects Fund	1/10/2018	10/3/2017		C.W. Porter
	1152 St. Pete Beach	GIS Integration System	Camera system integrated with GIS mapping for exact pipe and infrastructure location. Software system integrates with the Work Order Management System for mapping maintenance./1	\$80,000	18 months	Stormwater Fund	1/10/2018	10/3/2017		C.W. Porter
	1047 St. Pete Beach	Pump Replacement Stock	"Change out" pumps reduce service interruption, the likelihood of SSOs, and the associated emergency maintenance cost. One surplus pump for each of the five different types currently in service will be acquired. /4	\$120,000	Less than 12 months	Wastewater Fund	1/10/2018	10/3/2017		C.W. Porter
	1101 St. Pete Beach	Valve Vault Repair	The combined valve vault where the outflow from the Cities of Treasure Island and St. Pete Beach enter the City of St. Petersburg's wastewater system are frozen in the open position. This project will install a new 20-inch valve to help reduce the possibility of SSOs./4	\$310,000	24 months	Wastewater Fund	1/10/2018	10/3/2017		C.W. Porter

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	1065 St. Pete Beach	Wastewater Inflow and Infiltration Repairs	Priority-based improvements to wastewater system infrastructure to help reduce the possibility of SSOs. The City received a system-wide inflow and infiltration study in fiscal year 2017, which prioritizes manhole, lining, and pipe point repairs./4	\$4,900,000	5 years	Wastewater Fund	1/10/2018	10/3/2017		C.W. Porter
	1299 St. Pete Beach	Generator at Station 22	Provide and install 40-kilowatt natural gas-fired generator to be located on the roof in order to meet FEMA regulations at Fire Station 22, including roof engineering and construction as well as running TECO natural gas line to the building in order to ensure Continuity of Operations./4	\$150,000	2 years	Currently Unfunded	1/10/2018	10/23/2017		C.W. Porter
	1025 St. Petersburg / Baycare, Inc.	Hospital EOC	Construct new EOC. Estimated completion time: more than 12 months. / 4	\$1,100,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	St. Petersburg / Bayfront 1150 Medical Center	Harden Window Openings - Building A	Harden the exterior of Building A and install new hurricane-rated windows. Estimated completion time: more than 12 months. / 2	\$1,217,370	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	St. Petersburg / Bayfront 1150 Medical Center	Harden Window and Roof - Building C Center	Harden the exterior including hurricane-rated windows and roofing system to protect against high wind velocity events. Estimated completion time: more than 12 months. / 2	\$2,789,889	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	St. Petersburg / Bayfront 1150 Medical Center	Harden Window and Roof - Building C South	Harden the exterior including hurricane-rated windows and roofing system to protect against high wind velocity events. Estimated completion time: more than 12 months. / 2	\$4,575,295	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	St. Petersburg / Bayfront 1150 Medical Center	Harden Window and Roof - Building C North	Harden the exterior including hurricane-rated windows and roofing system to protect against high wind velocity events. Estimated completion time: more than 12 months. / 2	\$4,646,281	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	St. Petersburg / Bayfront 1090 Medical Center	Harden Cancer Care Center	Harden the exterior including the roof, windows and walls to ensure continuity of operations. Estimated completion time: more than 12 months. / 2	\$430,003	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	St. Petersburg / Bayfront 1070 Medical Center	Harden West Lobby	Harden the roof and curtainwall window assembly to protect against high wind velocity events. Estimated completion time: more than 12 months. / 2	\$1,250,200	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	St. Petersburg / Bayfront 1000 Medical Center	Harden Mechanical Room & Medical Gas Enclosure - Building B/C	The Mechanical Room and a fenced lean to will be hardened. Estimated completion time: more than 12 months. / 2	\$1,000,000	Currently Unfunded	Emergency Management, Preparedness and Assistance Trust Fund, HMGP; PDM Program	1/10/2018			
	St. Petersburg / Bayfront 995 Medical Center	Building C Boiler / Chiller Plant Hardening & Rooftop Equipment Mitigation	The hospital's boiler & chiller plant needs hardening for severe weather mitigation. Estimated completion time; More than 12 months. / 2	\$1,000,000	Currently Unfunded	Emergency Management, Preparedness and Assistance Trust Fund, HMGP; PDM Program	1/10/2018			
	St. Petersburg / Bayfront 995 Medical Center	Tank Farm Enclosure	On the South side of Building C, the Oxygen Tank Farm will be hardened. Estimated completion time; more than 12 months. / 2	\$1,000,000	Currently Unfunded	Emergency Management, Preparedness and Assistance Trust Fund, HMGP; PDM Program	1/10/2018			
	St. Petersburg / Bayfront 995 Medical Center	Life Services Building Window, Door & Wall Hardening	The Life Services Building needs windows, doors and walls hardened for protection against high wind velocity and severe weather events. Estimated completion time; more than 12 months. / 2	\$1,000,000	Currently Unfunded	Emergency Management, Preparedness and Assistance Trust Fund, HMGP; PDM Program	1/10/2018			
	St. Petersburg / Bayfront 990 Medical Center	Child Development Center Wind, Door & Roof Hardening	Harden windows, doors and roof for hurricane and severe weather mitigation. Estimated completion time: more than 12 months. / 2	\$1,000,000	Currently Unfunded	Emergency Management, Preparedness and Assistance Trust Fund, HMGP; PDM Program	1/10/2018			
	St. Petersburg / Bayfront 980 Medical Center	Family Health Center Structural Hardening	Harden walls and roof to mitigate high wind velocity. Estimated time of completion: 12 months. / 2	\$1,000,000	Currently Unfunded	Emergency Management, Preparedness and Assistance Trust Fund, HMGP; PDM Program	1/10/2018			
	St. Petersburg / Bayfront 980 Medical Center	Haden Exterior - Building C East - Area 4	Harden the exterior of Building C East - including hurricane-rated windows, walls, doors and roofing system to protect against high wind velocity events. / 2	\$3,070,827	Currently Unfunded	Emergency Management, Preparedness and Assistance Trust Fund, HMGP; PDM Program	1/10/2018			

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	St. Petersburg / City of St Petersburg Development Svcs	Acquisition of Repetitive Loss Properties	Acquire repetitive loss properties to mitigate real property vulnerabilities. Estimated completion time: more than 12 months. / 1	\$1,000,000	Currently Unfunded	Residential Construction Mitigation Program; EMPATF, HMGP; PDM Program	1/10/2018	9/26/2016		Noah Taylor
	970 St. Petersburg / Eckerd College	Building Flood/Wind Retrofit	Retrofit priority support building to address vulnerabilities to high winds and/or flooding based on engineering evaluation. Estimated completion time: more than 12 months. / 1, 2	\$50,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	10/24/2016		Lisa Mets
	940 St. Petersburg / Eckerd College	Building Flood/Wind Retrofit	Retrofit academic building to address vulnerabilities to high winds and/or flooding based on engineering evaluation. Estimated completion time: more than 12 months. / 1, 2	\$250,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018	10/24/2016		Lisa Mets
	St. Petersburg / St. Anthony's 780 Hospital	Public Education	Develop a community education program to provide a better interface between the City and its stakeholders. Estimated completion time: less than 12 months. / 4	\$10,000	Currently Unfunded	Residential Construction Mitigation Program; EMPATF, HMGP; PDM Program	1/10/2018			
	St. Petersburg / St. Anthony's 780 Hospital	ER Retrofit to provide surge capacity for emergencies	Build surge capacity for St. Anthony's Hospital including a new Emergency Dept. Estimated completion time: more than 12 months. / 4	\$2,000,000	Currently Unfunded	Residential Construction Mitigation Program; EMPATF, HMGP; PDM Program	1/10/2018			
	St. Petersburg/ City of St Petersburg Public Works	Oak Street NE and Gandy Blvd Storm Drainage Improvements	Project will construct large conveyance piping to reduce street and property flooding. /1	\$1,000,000	FY16- FY18	Local	1/10/2018	9/26/2016		Noah Taylor
	St. Petersburg/ City of St Petersburg Public Works	Stormwater Management Master Plan Update	Update 1994 Stormwater Management Master Plan utilizing SWFWMD criteria. /1	\$1,800,000	FY17-FY20	SWFWMD/Local	1/10/2018	10/24/2017		Noah Taylor
	St. Petersburg/ City of St Petersburg Public Works	Cosme Water Treatment Facilities Structural Improvements	This project will provide wind mitigation improvements to water treatment plant buildings constructed in the 1960's and earlier. They include the Chemical, Chlorine, Fluoride, Pump/Filter, and Gulf to Bay Pumping Station buildings. The existing buildings are not structurally sufficient to provide shelter of emergency critical staff and remain operational during and after a hurricane.	\$1,000,000	Currently Unfunded	Bond CIP Funded	1/10/2018	10/24/2017		Noah Taylor
	St. Petersburg/ City of St Petersburg Public Works	Main Laboratory Replacement	Replace the Water Resources Department main Laboratory Building with a modern laboratory sufficient to conduct accurate analysis of samples taken at water reclamation and potable water treatment plant and other locations throughout the city. The existing building is not structurally sufficient to provide shelter of emergency critical staff and remain operational during and after a hurricane.	\$4,400,000	Currently Unfunded	Bond CIP Funded	1/10/2018	10/24/2017		Noah Taylor
	St. Petersburg/ City of St Petersburg Public Works	SW Water Reclamation Facility Building Replacements	This project provides for the replacement of operation/lab/maintenance buildings located in an Evacuation Zone A with buildings constructed to meet latest hurricane and flood codes. The existing buildings are not structurally sufficient to provide shelter of emergency critical staff during, and remain operational after, a hurricane.	\$4,250,000	Currently Unfunded	Bond CIP Funded	1/10/2018	10/24/2017		Noah Taylor
	St. Petersburg/ City of St Petersburg Public Works	NE Water Reclamation Facility Building Replacements	This project provides for the replacement of operation/lab/maintenance buildings to meet latest hurricane and flood codes. The existing buildings are not structurally sufficient to provide shelter of emergency critical staff during, and remain operational after, a hurricane.	\$4,250,000	Currently Unfunded	Bond CIP Funded	1/10/2018	10/24/2017		Noah Taylor
	St. Petersburg/ City of St Petersburg Public Works	NW Water Reclamation Facility Building Replacements	This project provides for the replacement of operation/lab/maintenance buildings to meet latest hurricane and flood codes. The existing buildings are not structurally sufficient to provide shelter of emergency critical staff during, and remain operational after, a hurricane.	\$4,250,000	Currently Unfunded	Bond CIP Funded	1/10/2018	10/24/2017		Noah Taylor
	St. Petersburg/ City of St Petersburg Public Works	Water Resources Maintenance Building Replacement	This project provides for the replacement of Water Resources Building C and M to meet latest hurricane and flood codes. The existing buildings are not structurally sufficient to provide shelter of emergency critical staff during, and remain operational after, a hurricane.	\$2,750,000	Currently Unfunded	Bond CIP Funded	1/10/2018	10/24/2017		Noah Taylor

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	St. Petersburg/ City of St 1368 Petersburg Public Works	Sanitary Sewer Inflow and Infiltration Reduction Improvements	This project includes construction projects that will reduce inflow and infiltration (rain and ground water) into the City's sanitary sewer system by repairing and replacing old sewer collection system infrastructure. Inflow and Infiltration during wet weather periods has increased flow rates above the capacities of the collection system and treatment plants resulting in sewage discharges into the bay.	\$12,000,000	Currently Unfunded	Penny for Pinellas Local Option Sales Tax	1/10/2018	10/24/2017		Noah Taylor
	St. Petersburg/ City of St 1193 Petersburg Public Works	NE Water Reclamation Facility MCC Building	This project provides for the replacement of a building located in an Evacuation Zone A that contains electrical switch gear and controls for essential wastewater treatment process equipment with a new building meeting current wind and flood building code requirements.	\$1,500,000	Currently Unfunded	Bond CIP Fund	1/10/2018	10/24/2017		Noah Taylor
	St. Petersburg/ City of St 1193 Petersburg Public Works	SW Water Reclamation Facility MCC Building	This project provides for the replacement of a building located in an Evacuation Zone A that contains electrical switch gear and controls for critical wastewater treatment process equipment with a new building meeting current wind and flood building code requirements.	\$1,500,000	Currently Unfunded	Bond CIP Fund	1/10/2018	10/24/2017		Noah Taylor
	St. Petersburg/ City of St 1121 Petersburg Public Works	Bartlett Park Area Storm Drainage Improvements	This project includes construction of stormwater improvements to alleviate heavy flooding along Bartlett Park area and into recreation center in the neighborhood. Existing flooding is severe enough to reduce functionality of public park and services as well as endanger public safety.	\$1,400,000	Currently Unfunded	Bond CIP Fund	1/10/2018	10/24/2017		Noah Taylor
	St. Petersburg/ City of St 1026 Petersburg Public Works	Broadwater at 42nd Ave S and 37th St/S Storm Drainage Improvements	This project includes construction of stormwater improvements to alleviate heavy flooding along in the Broadwater Neighborhood. Current flooding has caused repetitive loss to vehicle and encroached on house structures as well as impeding road travel evacuating the neighborhood	\$1,200,000	Currently Unfunded	Bond CIP Fund	1/10/2018	10/24/2017		Noah Taylor
	St. Petersburg/ City of St 906 Petersburg Public Works	5th Ave Improvements East of 72nd Street	This project includes construction of stormwater improvements to alleviate a stormwater system that incorporates a large community that has experienced some repetitive loss and flooding concerns. It has been identified in a stormwater masterplan update as a possible improvement area.	\$1,580,000	Currently Unfunded	Bond CIP Fund	1/10/2018	10/24/2017		Noah Taylor
	Tampa Bay Regional Planning 1130 Council / Pinellas County	Regional Public Education Initiative	With Pinellas County Emergency Management develop a county-wide public education program to address preparation and mitigation actions for all hazards related to hurricanes. All jurisdictions will benefit from this effort. Estimated completion time: less than 12 months. / 4	\$75,000	Currently Unfunded	EMPATF, HMGP, PDM Program	1/10/2018			
	Tampa Bay Regional Planning 940 Council / Pinellas County	Post-Storm Evaluation of the Regional Evacuation Study	Evaluate the evacuation study to identify any discrepancies in the predicted and observed elements of the Regional Plan. Estimated completion time: less than 12 months. / 4	\$90,000	Currently Unfunded	EMPATF, HMGP; PDM Program	1/10/2018			
	Tarpon Springs Project 1073 Administration Department	Portable Generators	Purchase 15 portable generators	\$450,000	FY 2017 Currently Unfunded	City of Tarpon Springs General Fund and Utility Reserve Fund	1/10/2018	10/27/2017	As a result of Hurricane Irma the City has determined a need for additional portable generators	Heather Urwiller
	Tarpon Springs Stormwater 1200 Division	SAP	Stormwater Capital Improvement plan. (SAP-Stormwater Action Plan) Estimated completion time: Ongoing. / 4	\$100,000 Annually	Currently funded	Stormwater Tax Assessment	1/10/2018	12/1/2017		Heather Urwiller
	Tarpon Springs Stormwater 998 Division	Vehicles	Purchase Tennant Mini Street Sweeper for removal of sidewalk and roadside sediment, fertilizer & debris that would otherwise get into our bayou system.	\$16,000	Purchased	Stormwater Tax Assessment	1/10/2018	8/23/2017		Heather Urwiller

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	Tarpon Springs Streets & 993 Stormwater Division	Vehicles	Purchase CAT Mini Excavator & Tractor for in-house construction and maintenance of Stormwater infrastructure. Estimated completion time: Ongoing. / 1,3	\$89,000	Purchasing	Stormwater Tax Assessment	1/10/2018	8/23/2017		Heather Urwiller
	Tarpon Springs Streets & 1170 Stormwater Division	Spruce Street flood abatement SAP 29	Project to reduce/eliminate localized flooding and emergency vehicle access.	\$151,230	Currently Unfunded	Stormwater Tax Assessment, EMPATF, HMGP; PDM Program	1/10/2018	10/24/2016		Heather Urwiller
	Tarpon Springs Streets & 1080 Stormwater Division	Riverside/Hillside flood abatement SAP 71	Project to reduce/eliminate localized flooding and emergency vehicle access.	\$50,680	Construction to Begin 10/2017	Stormwater Tax Assessment, EMPATF, HMGP; PDM Program	1/10/2018	8/23/2017		Heather Urwiller
	Tarpon Springs Streets & 1260 Stormwater Division	Pent/Grosse flood abatement SAP 5	Project to reduce/eliminate localized flooding and emergency vehicle access.	\$2,183,614	Construction 2018	Stormwater Tax Assessment, SWFWMD Cooperative Funding Initiative (50% Match)	1/10/2018	8/23/2017		Heather Urwiller
	Tarpon Springs Streets & 1190 Stormwater Division	Jasmine/Highland flood abatement SAP 5 & 33	Project to reduce/eliminate localized flooding and emergency vehicle access.	\$993,382	Design Completion	Stormwater Tax Assessment, SWFWMD Cooperative Funding Initiative (50% Match)	1/10/2018	8/23/2017		Heather Urwiller
	Tarpon Springs Streets & 1120 Stormwater Division	Athens/Dodecanese flood abatement SAP 42	Project to reduce/eliminate localized flooding and emergency vehicle access.	\$110,915	Design Phase	Stormwater Tax Assessment	1/10/2018	8/23/2017		Heather Urwiller
	Tarpon Springs Streets & 1180 Stormwater Division	Palm Avenue flood abatement SAP 22	Project to reduce/eliminate localized flooding and emergency vehicle access.	\$499,958	Design 2018- Construction 2019	Stormwater Tax Assessment, SWFWMD Cooperative Funding Initiative (50% Match)	1/10/2018	8/23/2017		Heather Urwiller
	Tarpon Springs Streets & 1160 Stormwater Division	GIS Mapping of Stormwater Infrastructure	Project to reduce/eliminate localized flooding and emergency vehicle access.	\$200,000	Begin 10-1-17 & Complete 2019/20	Stormwater Tax Assessment, SWFWMD Cooperative Funding Initiative (50% Match)	1/10/2018	8/23/2017		Heather Urwiller
	Tarpon Springs Streets & 1170 Stormwater Division	Avoka Drive flood abatement SAP 74	Project to reduce/eliminate localized flooding and emergency vehicle access.	\$255,600	Currently Unfunded	Stormwater Tax Assessment, EMPATF, HMGP; PDM Program	1/10/2018	10/24/2016		Heather Urwiller
	Tarpon Springs Streets & 1140 Stormwater Division	Mango Street & Mango Circle flood abatement SAP 102	Project to reduce/eliminate localized flooding and emergency vehicle access.	\$43,900	Currently Unfunded	Stormwater Tax Assessment, EMPATF, HMGP; PDM Program	1/10/2018	10/24/2016		Heather Urwiller
	Tarpon Springs Streets & 1160 Stormwater Division	Coburn Drive flood abatement SAP 39	Project to reduce/eliminate localized flooding and emergency vehicle access.	\$210,040	Currently Unfunded	Stormwater Tax Assessment, EMPATF, HMGP; PDM Program	1/10/2018	10/24/2016		Heather Urwiller
	Tarpon Springs Streets & 1160 Stormwater Division	Levis between Lime & Oakwood flood abatement SAP 25	Project to reduce/eliminate localized flooding and emergency vehicle access.	\$248,638	Currently Unfunded	Stormwater Tax Assessment, EMPATF, HMGP; PDM Program	1/10/2018	10/24/2016		Heather Urwiller
	Tarpon Springs Streets & 1190 Stormwater Division	Kenneth Way & Seaside flood abatement SAP 57	Project to reduce/eliminate localized flooding and emergency vehicle access.	\$91,000	Currently Unfunded	Stormwater Tax Assessment, EMPATF, HMGP; PDM Program	1/10/2018	10/24/2016		Heather Urwiller
	Tarpon Springs Housing 1166 Authority	Emergency Operations Generator	Emergency generator to allow operations during state of emergency, power outages or other events of power loss. 1 & 2	\$64,200	Currently Unfunded	CDBG, HUD	1/10/2018	10/11/2017		Michael Denehy
	Tarpon Springs Housing 800 Authority	Landscape Restoration	Trimming of Palm, Planting of Sod & Shrubs, Repair of Erosion and Control of Runoff	\$56,640	Currently Unfunded	CDBG, HUD	1/10/2018	9/21/2016		Michael Denehy
	Tarpon Springs Housing 1160 Authority	Door & Window Upgrades	Replacement of all original doors and windows to meet Florida building codes, Miami-Dade wind codes, and impact resistant ratings.	\$96.30	Currently Unfunded	CDBG, HUD	1/10/2018	10/11/2017		Michael Denehy
	1710 Treasure Island	Citywide Seawall Assessment and Repair for Locations NOT listed as a separate project (street ends, etc.)	Citywide Seawall repair/replacement. Estimated completion time: more than 12 months. / 4	\$2,260,000	Currently Unfunded	EMPATF, HMGP; PDM Program; CDBG	1/10/2018	10/30/2017		Paulette Cohen
	970 Treasure Island	Wind Retrofit of critical facilities	Harden critical municipal facilities including: PWorks Admin, PWorks Garage. Estimated completion time: more than 12 months. / 2	\$100,000	Funded by City	EMPATF, HMGP; PDM Program;	1/10/2018	10/30/2017		Paulette Cohen

**Pinellas County  
Local Mitigation Strategy  
2018 Appendix 9, Table 9-1: Mitigation Initiatives**

Total Score	Jurisdiction/ Organization	Project Name	Description/ Natural Hazard Addressed	Est. Cost	Timeframe / Status	Possible Funding Sources	Date Last Reviewed	Date Last Updated	Comments	Updated By
1290	Treasure Island	Stormwater Interceptor project in Sunset Beach and rehabilitation of underdrain system at lots 2 and 3 improvement of stormwater discharge throughout the city / 4	At lots 2 and 3 and nearby areas. 2016: Phase 4 & 5. 2017: Phase 6. 2018: Master Plan. 2019: Causeway Area. 2020: Sunshine Beach Area. 2021: Downtown Area.	\$3,105,000	FY16 – FY17 Partially Funded (50% funded by SWFWMD); FY 18- FY 21: Unfunded	Capitalization Grants for Clean Water State Revolving Funds; CDBG; FMAP; HMGP; SWFWMD Cooperative Funding, Nonpoint Source Implementation Grants	1/10/2018	10/30/2017		Paulette Cohen
1270	Treasure Island	Replacement of City Hall and seawall rehabilitation	Harden critical municipal facilities - Admin, Fire, and Police completion time: more than 12 months. / 2	Estimated \$8,000,000	Currently Unfunded	EMPATF, HMGP; PDM Program; CDBG; FMAP	1/10/2018	10/30/2017		Paulette Cohen
1220	Treasure Island	Provide ten -- 10.5 and 5 hp pumps and controls to city lift stations	(Lift Station 7 -\$250,000)( Lift Station 9 - \$250,000)(Lift Station 8 - \$250,000)(Lift Station 6 - \$250,000) Harden critical municipal facilities - Estimated completion time: more than 12 months. / 4	\$1,000,000	Partially Funded by City	Capitalization Grants for Clean Water State Revolving Funds; CDBG; FMAP; HMGP; Nonpoint Source Implementation Grants; HMGP Planning	1/10/2018	10/30/2017		Paulette Cohen
970	Treasure Island	Kingfish Park Seawall Rehabilitation	Repair/replace seawall: Estimated completion time: less than 12 months. / 3	\$50,000	Currently Unfunded; Projected for FY 2018	EMPATF, HMGP; PDM Program; CDBG	1/10/2018	10/30/2017		Paulette Cohen
940	Treasure Island	Lift Station #4 - Refurbishment	Elevation of Controls & Electrical Equipment in Lift Station #4 Estimated completion time: more than 12 months. / 4	\$823,300	Partially Funded by City	Capitalization Grants for Clean Water State Revolving Funds; CDBG; FMAP; HMGP; Nonpoint Source Implementation Grants; HMGP Planning	1/10/2018	10/30/2017		Paulette Cohen
890	Treasure Island	GPS Inventory of Street Signs	Inventory all street and identification signs using GPS technology to facilitate replacement following a storm event. Estimated completion time: more than 12 months. / 4	\$50,000	Currently Unfunded; Projected for FY 2018	CDBG; HMGP; HMGP Planning	1/10/2018	10/30/2017		Paulette Cohen
1060	Treasure Island	City Hall Seawall Rehabilitation	Repair/replace seawall adjacent to critical facilities: Estimated completion time: more than 12 months. / 3	\$660,000	Currently Unfunded	EMPATF, HMGP; PDM Program; CDBG	1/10/2018	10/30/2017		Paulette Cohen
970	Treasure Island	Electronic Information Signs at Bridges	Purchase and installation of four (4) electronic signs, to be placed at strategic locations on either side of the two bridges. Signs would afford motorists, cyclists, and pedestrian's sufficient opportunity to choose alternate travel routes in the event bridge(s) are closed for repairs, malfunction, traffic accidents, or other reasons. /4	\$600,000	Currently Unfunded; Projected for FY 2019	DOT Grant (County Incentive Program); CDBG; HMGP; HMGP Planning; Local Funding	1/10/2018	10/30/2017		Paulette Cohen
1060	Treasure Island	Mitigation of Rising Sea Levels Study	Hire a consultant to conduct a study regarding rising sea level impacts and possible mitigation measures and associated mitigation measure costs for Treasure Island.	\$400,000	Currently Unfunded; Projected for FY 2021	DOT Grant (County Incentive Program); Capitalization Grants for Clean Water State Revolving Funds; CDBG; HMGP; HMGP Planning; Local Funding	1/10/2018	10/30/2017		Paulette Cohen

**APPENDIX 10**  
**MITIGATION ACCOMPLISHMENTS AND SUCCESS STORIES**

# Pinellas County Local Mitigation Strategy

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## APPENDIX 10: MITIGATION ACCOMPLISHMENTS AND SUCCESS STORIES

### Introduction

As projects are funded and accomplished - either through federal, state or local resources – they move from the mitigation initiatives (Appendix 9) to the List of Accomplishments (Appendix 10) and new projects are then identified to keep the county moving forward. The list of Accomplishments (Attachment 1) does not include all of the projects completed over the last 5-10 years. In fact many of the successes funded locally, especially stormwater projects accomplished through local Capital Improvement Projects (CIPs) and transportation projects identified in the Transportation Improvement Program (TIPs), probably have not been captured. However, communities have recognized the benefit of celebrating these successes in the LMS. A significant effort was made by each of the members to identify their accomplishments.



### Successful Mitigation Activities

Examples of some of the accomplishments within the County include the following:

1. One of the most striking examples has been the retrofit of existing schools in Pinellas County to serve as hurricane shelters. Using HMGP and state EMPA funds, more than 20 schools were retrofitted to American Red Cross standards (ARC 4496) reducing the county's shelter deficit. In 2001, Pinellas County surveyed the shelter inventory and found there was very little public shelter capacity that met the guidelines for the more than 200,000 population-at-risk from a major hurricane. In partnership with the state and the local school board, Pinellas County has increased their capacity to more than 50,000 spaces. In addition, the retrofitted schools and the new schools built to the Enhanced Hurricane Protection Area (EHPA) standards have a much better chance of withstanding a hurricane winds and therefore, being able to open more quickly moving the community to recovery more quickly.
2. Using funding from the state of Florida Community Trust Program, the state has acquired hundreds of millions of acres of land, now designated for public parks, open space and greenways. During fiscal year 2002-03, the FCT program funded 37 projects that acquired lands, which will prevent future development in Coastal High Hazard Areas and 100-Year floodplains. One such example is the Wall Springs Coastal addition in Pinellas County, which consisted of 87 areas of undeveloped privately owned land in the 100-Year floodplain. This area is surrounded by several properties that are presently on the FEMA repetitive loss list for Pinellas County. By acquiring these properties, the state is substantially reducing risk in these areas.
3. As a result of lessons learned from Project Impact Initiative, the state recognized that protecting the continuity of community businesses and industries after a disaster event is one of the most important aspects of hazard mitigation. Without a resilient economic base, affected communities cannot quickly recover and may experience permanent economic injury. Under the umbrella of Florida Prepares Initiative, the state using HMGP program 5% funds, partnered with the Tampa Bay Regional Planning Council to develop a motivational and

## Pinellas County Local Mitigation Strategy

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informative interactive CD/DVD outreach tool that presents a unified approach to all aspects of business continuity. The project has resulted in the development of an educational business CD, a manual for completing a business continuity plan with an emphasis on pre-disaster mitigation, and a new webpage designed to complement the concepts presented in the manual. In 2008 the website ([www.fl Disaster Kit.org](http://www.fl Disaster Kit.org)) was redesigned to include an updated guidebook and emergency checklists for employers and employees, an interactive template for Business Continuity Planning (the BCP Wizard) and a game which demonstrates the impact of choices regarding preparedness and mitigation to a small business' bottom line.

4. Using Flood Mitigation Assistance (FMA) program funds, the City of Indian Shores acquired a structure that was under HUD foreclosure action. The structure was abandoned, blighted and had become an eyesore to the community. The structure was acquired at a substantial savings well below market appraisal for properties in this coastal/oceanfront community. The structure was demolished and the site is presently used for parking.
5. In the spring of 2005, the City of Oldsmar applied for funds through the State of Florida – Joint Hazard Mitigation Grant Program & Flood Mitigation Assistance. The grant funding was made available by FEMA through the state as a result of a disaster declaration for Hurricane Frances in September 2004. The grant request was for a project costing \$103,723 to harden the city's Municipal Services complex which houses its Public Works and Leisure Services departments and divisions. This facility is also utilized as a staging center for equipment and personnel during times of disaster. Through the Pinellas County LMS the city was able to identify the project, add it to the LMS project list and receive the LMS letter of support for the grant funds. FEMA and the state awarded the city the 75% match grant funding in the spring of 2006 and the project was completed within six months of award. The work included hardening doors and frames, replacing overhead doors and shuttering windows. The facility is now much safer in a high wind event and permits the city to continue essential operations during disaster declarations.
6. In 2008, the City of Clearwater purchased the Friendly Village of Kapok Mobile Home Park to eliminate repetitive flood losses. A nature park was created on the site. The City of Dunedin elevated five repetitive loss structures, retrofitted 2 structures and completed one rebuild.
7. Indian Rocks Beach demolished 10 pre-FIRM structures and replaced with conforming structures.
8. Since 2010, Eckerd College constructed a new Center for Molecular and Life Sciences to withstand storm wind and flooding and hardened the envelope of the Sheen Science Center (3 buildings). In 2016, Eckerd College constructed a new facility called the Iota Lounge in the center of the Iota Residence Complex; it can withstand storm wind and flooding.
9. Madeira Beach has completed the reconstruction of their Municipal Complex including their City Hall, Fire Station, and Recreation Center to better withstand flooding and high winds.
10. Tarpon Springs completed a shoreline stabilization project (\$503,700) using Penny for Pinellas funding.

Since 2010, a host of stormwater projects have been completed throughout the County; critical facilities such as schools, the Medical Examiner/ Forensics Building and Community Centers have been hardened

## Pinellas County Local Mitigation Strategy

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and lift stations elevated. In the county, 81 single family homes received a low interest loans from Pinellas County for hurricane mitigation.

**Pinellas County**  
**Local Mitigation Strategy**  
**2018 Appendix 10, Table 10-1: Mitigation Accomplishments**

Municipality / Entity	Project	Est. Cost	Status	Funding	Date Last Reviewed	Date Last Updated	Updated By
Belleair Beach	Master Stormwater Plan for city-wide stormwater improvements and flood pr	\$55,000	Completed 2016	Currently Budgeted Local	1/10/2018	8/17/2017	Nancy Gonzalez
Belleair Beach	Harbor Dr. & 1st Street	\$280,000	2018	Local	1/10/2018	8/17/2017	Nancy Gonzalez
Belleair Beach	Harrison Avenue Bridge Repair	\$160,000	Bid awarded	Local	1/10/2018	8/17/2017	Nancy Gonzalez
Belleair Beach	Various Stormwater Improvements	\$185,000	2018	Local	1/10/2018	8/17/2017	Nancy Gonzalez
Belleair Beach	Belle Isle Avenue Seawall Repair	\$290,000	Project has begun	Local	1/10/2018	8/17/2017	Nancy Gonzalez
Belleair Beach	Harbor Drive & 2nd Street	\$143,000	Out for bid	Local	1/10/2018	8/17/2017	Nancy Gonzalez
Belleair Beach	Harrison Avenue Seawall	\$105,000	Out for bid	Local	1/10/2018	8/17/2017	Nancy Gonzalez
Clearwater	Former Clearwater Christian College Property Acquisition	\$1,300,000	Project complete (2016)	Local	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Fire Station 45 and EOC	\$10,500,000	Construction complete (2016)	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Fire Station 50	\$3,814,740	Currently in Design (2016)	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Police Shooting Range	\$2,382,819	Currently in Design (2016)	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Public Works Complex – Phase I Street Sweeping Facility	\$1,975,349	Currently in Construction (2016)	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Berkley Place Drainage Improvements	\$360,000	Project complete in 2016	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Lower Spring Branch Stormwater Improvements	\$1,800,000	Currently in Design (2016)	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Byram Ditch Bank Stablization	\$330,000	Project complete in 2015.	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Druid Road Stormwater Improvements	\$2,825,000	Currently in Construction (2016)	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Mango Avenue Stormwater Improvements	\$1,600,000	Currently in Construction (2016)	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Glen Oaks Stormwater Improvement Project	\$2,500,000	Project completed in 2006.	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Lake Bellevue Stormwater Improvements	\$1,300,000	Project complete in 2007	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Woodlawn Terrace Stormwater Improvements	\$800,000	Project complete in 2015	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Hillcrest Avenue Bypass Culvert	\$3,900,00	Currently in Design (2016)	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	East Gateway Stormwater Improvements	\$12,000,000	100% Design (2016)	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Solid Waste Transfer Facility	\$18,000,000	Currently in Design (2016)	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Cooper’s Point Master Plan	\$200,000	Currently in Design (2016)	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Renovations to Beach Marina Buiding	\$2,500,000	Project complete (2016)	Private and Local	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Purchase Friendly Village of Kapok Mobile Home Park to eliminate repetitive flood losses. A nature park was created on the site along with storm water improvements for the area to prevent flooding.	\$17,000,000	Complete	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Replace seawalls throughout Clearwater Beach. Estimated completion time: more than 12 months.	\$5,000,000	Funded and Underway	EMPATF, HMGP; PDM Program	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Develop a CERT that is trained on How to Educate Homeowners on Mitigation Techniques.	\$37,000	Complete	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Purchase 2000Kw mobile generator	\$375,000	Currently being bid.	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Jeffords Street Outfall	\$1,000,000	Currently in Design.	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Magnolia Street Outfall	\$4,000,000	Currently in Design.	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Woodlawn Terace Floodplain Storage	\$1,000,000	Currently under Construction	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Clearwater	Smallwood Circle Drainage Improvements	\$1,500,000	Currently under Construction	Local and State	1/10/2018	10/4/2016	Sarah Kessler
Dunedin	Lake Earl to Skyeloch Piping.	\$35,000	Complete	State	1/10/2018		
Dunedin	Lake Sperry pipe lining.	\$150,000	Complete	State	1/10/2018		
Dunedin	Elevated five (5) repetitive loss structures	\$307,268	Complete	State	1/10/2018		
Dunedin	Retrofit 2 structures to reduce flood damage potential	\$174,872	Underway	State	1/10/2018		
Dunedin	Rebuild 1 Structure	\$119,746	Complete	State	1/10/2018		

**Pinellas County  
Local Mitigation Strategy  
2018 Appendix 10, Table 10-1: Mitigation Accomplishments**

Municipality / Entity	Project	Est. Cost	Status	Funding	Date Last Reviewed	Date Last Updated	Updated By
Dunedin	Storm Shutters for Municipal Services Building, 750 Milwaukee Ave.; City Hall, 542 Main St., and the Sheriff's North County Sub-station, 737 Loudon Ave.	\$25,000	Municipal Services Building and Sheriff's North County Sub-station Projects completed with HMGP funds in 2007. City Hall Project found to be infeasible and was deleted.	HMGP and Local	1/10/2018		
Eckerd College	Project: Construction of a new Center for Molecular and Life Sciences	\$25,000,000	Completed 2013	Local	1/10/2018	10/4/2016	Lisa Mets
Eckerd College	Project: Hardening envelope (roof, windows) Sheen Science Center (3 buildings)	\$7,500,000	2013/14	Local	1/10/2018	10/4/2016	Lisa Mets
Eckerd College	Project: Center for Visual Arts. (Project entailed demolition of vulnerable arts buildings and studios, and construction of new hardened, storm-resistant Center for Visual Arts.	\$15,500,000	Completed 2017	Local	1/10/2018	1/4/2018	Lisa Mets
Gulfport	Retrofit City Hall: Harden skylights in City Hall to withstand hurricane force winds	\$1,000	Completed 2000/2001	Local	1/10/2018	10/27/2017	Michael Taylor
Gulfport	Thermal Imaging Camera: Purchase Thermal Imaging camera for post-storm surveys	\$10,000	Completed 2004	Local	1/10/2018	10/27/2017	Michael Taylor
Gulfport	Retrofit City Hall: Install window protection devices (shutters) at City Hall, Fire Station 17	\$25,000	Completed 2008	HMGP and Local	1/10/2018	10/27/2017	Michael Taylor
Gulfport	Fire Station Wind Retrofit: Harden Fire Station 17 overhead apparatus bay door	\$100,000	Completed 2008	Local	1/10/2018	10/27/2017	Michael Taylor
Gulfport	Thermal Imaging Camera: Purchase Thermal Imaging camera for post-storm surveys	\$7,000	Completed 2014	Local	1/10/2018	10/27/2017	Michael Taylor
Gulfport	Hardening of Critical Facilities: 2 lift stations - Install hurricane resistant wind doors	\$15,000	Completed 2015	Local	1/10/2018	10/27/2017	Michael Taylor
Indian Rocks Beach	Demolished ten (10) pre-FIRM non-conforming structures and replaced them with conforming structures	\$2,432,000	Complete	Private	1/10/2018	10/9/2017	Dean Scharmen
Indian Rocks Beach	27th Ave. and 1st St. drainage project to mitigate local flooding and provide treatment of local storm water runoff.	\$260,000	Complete	Local and State	1/10/2018	10/9/2017	Dean Scharmen
Indian Rocks Beach	Design 11th Ave. through 13th Ave. drainage project to mitigate local flooding.	\$290,000	Complete	Local	1/10/2018	10/9/2017	Dean Scharmen
Indian Rocks Beach	Reclamation of 1.2 acres of wetlands to act as a flood buffer.	\$100,000	Complete	Local	1/10/2018	10/9/2017	Dean Scharmen
Indian Rocks Beach	Dune Walkovers	\$114,000	Complete	Local	1/10/2018	10/9/2017	Dean Scharmen
Indian Rocks Beach	Small Basin Reconstruction	\$375,000	Complete	Local	1/10/2018	10/9/2017	Dean Scharmen
Indian Rocks Beach	Stormwater Reconstruction	\$160,000	Complete	Local	1/10/2018	10/9/2017	Dean Scharmen
Indian Rocks Beach	20th Avenue Stormwater Improvements	\$231,024	Complete	SWFWMD grant, IRB CIP	1/10/2018	10/9/2017	Dean Scharmen
Indian Rocks Beach	Street Resurfacing	\$420,305	Complete	CIP, SWFWMD	1/10/2018	10/9/2017	Dean Scharmen
Indian Shores	Storm water management in redevelopment area to control and mitigate flooding. FY97/98	\$60,000	Complete	Local and State	1/10/2018		
Indian Shores	FMAP elevation of existing repetitive loss structure. FY97/98	\$22,500	Complete	Private and State	1/10/2018		
Indian Shores	FMAP acquisition and demolition of repetitive loss structure. FY97/98	\$26,797	Complete	Local and State	1/10/2018		
Indian Shores	Installed new seawall to mitigate flooding. FY97/98	\$16,770	Complete	Local and State	1/10/2018		
Indian Shores	Installed new seawall and replaced seawall cap. FY97/98	\$5,080	Complete	Local	1/10/2018		
Indian Shores	Storm water management at 19305 Gulf Blvd. (Town Hall complex) FY97/98	\$80,000	Complete	Local and State	1/10/2018		
Indian Shores	FMAP elevation of repetitive loss existing structure. FY00/01	\$41,683	Complete	Local and State	1/10/2018		
Indian Shores	Development of Town master drainage plan. FY01/02	\$80,000	Complete	Local and State	1/10/2018		
Indian Shores	Purchase property in redevelopment area for potential site of future retention pond. FY01/02	\$40,000	Complete	Local	1/10/2018		
Indian Shores	Implement Town-wide storm water master plan. FY02/03	\$300,000	Underway	Local and State	1/10/2018		

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Municipality / Entity	Project	Est. Cost	Status	Funding	Date Last Reviewed	Date Last Updated	Updated By
Indian Shores	Purchase and installation of an auxiliary generator for the Critical Facility, Town Hall, 19305 Gulf Blvd.	\$33,455	Complete	HMGP and Local	1/10/2018		
Kenneth City	In 2015, the Town completed a \$1.2M repair to a tributary of Joe's Creek, whereby a semi-collapsed open ditch was replaced with an underground culvert/CMU box culvert system.	\$600,000	Completed	(\$600K secured through SWFWMD cooperative funding)	1/10/2018		
Kenneth City	Necessary repairs were completed to the Town's underground fuel storage tank, along with the acquisition of an emergency generator to supply back-up power in the event of an emergency in 2015				1/10/2018		
Kenneth City	Retrofit of Critical Facility/Storm shutters on PD and City Hall	\$46,000	Completed	EMPATF;HMGP; PDM Program	1/10/2018		
Kenneth City	Repairs to existing stormwater lines damaged by July Rain event		Underway	Local	1/10/2018		
Kenneth City	Re-sheathing of Public Works Building with wind-loaded exterior	\$400,000	Underway	Local	1/10/2018		
Largo	Initiative: Hardening the new Public Works administration building by adding storm shutters and installing emergency generators. This facility contains the Public Works Emergency Operations Center. Benefit: Averting wind damage would minimize or eliminate post-disaster disruption of municipal services. The Public Works administration structure is valued at \$1.1 million.	\$89,151	Completed		1/10/2018	9/16/2016	Matthew DiFiore
Largo	Initiative: Hardening the new Environmental Services (sewer) administration building by adding storm shutters and installing emergency generators. This facility contains the Environmental Services Emergency Operations Center. Benefit: Averting wind damage would minimize or eliminate post-disaster disruption of municipal services. The Environmental Services administration structure is valued at \$1.8 million.	\$89,151	Completed		1/10/2018	9/16/2016	Matthew DiFiore
Largo	Initiative: Installing an emergency generator at the new administration building for the Wastewater Treatment Plant. The generator will insure the Plant's ability to provide continuous service during power failures. Benefit: Keeping the WWTP fully operational would help avoid sanitary sewer conveyance system backup that could cause significant damage to private properties in the event of a power failure caused by a natural or man-made disaster event.	\$859,072	Completed	Local	1/10/2018	9/16/2016	Matthew DiFiore
Largo	Initiative: Hardening the Largo City Hall, Police, and Emergency Operations Center buildings by adding storm shutters, removing abandoned air conditioning equipment from the roof, and installing emergency generators. In addition to housing the administrations of more than half of the City's departments, this facility contains the City's centralized telephone, computer, and broadcasting systems. Benefit: Averting wind damage would minimize or eliminate post-disaster disruption of municipal services, including the EOC, police, fire, permitting, and planning operations. The Largo Municipal Complex structures are valued at \$10.9 million.	\$321,285	Completed		1/10/2018	9/16/2016	Matthew DiFiore

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Municipality / Entity	Project	Est. Cost	Status	Funding	Date Last Reviewed	Date Last Updated	Updated By
Largo	Hardening the new Environmental services (sewer) administration building by adding storm shutters and installing emergency generators. This facility contains the Environmental Services EOC	\$89,151	Project Completed.	HMGP/Local	1/10/2018	9/16/2016	Matthew DiFiore
Largo	Channel 1 Drainage/Infrastructure Plan	\$1,919,213	Completed 2007	Local	1/10/2018	9/16/2016	Matthew DiFiore
Largo	Suncoast Manor Drainage//Old Valencia Blvd. Plan	\$274,132	Completed 2007	Local	1/10/2018	9/16/2016	Matthew DiFiore
Largo	McKay Creek Drainage Improvement Plan	\$1,549,460	Completed 2006	Local	1/10/2018	9/16/2016	Matthew DiFiore
Largo	Purchasing and Demolition of Repetitive Loss Properties: 132 Gatewood Drive	\$149,000	Completed 2003	Local	1/10/2018	9/16/2016	Matthew DiFiore
Largo	Purchasing and Demolition of Repetitive Loss Properties: 198 Gatewood Drive	\$190,000	Completed 2003	Local	1/10/2018	9/16/2016	Matthew DiFiore
Largo	Purchasing and Demolition of Repetitive Loss Properties: 71 East Overbrook Drive	\$177,000	Completed 2005	Local	1/10/2018	9/16/2016	Matthew DiFiore
Largo	Purchasing and Demolition of Repetitive Loss Properties: 2463 19th Place SW	\$127,500	Completed 2005	Local	1/10/2018	9/16/2016	Matthew DiFiore
Largo	Rain Gauge Monitoring System Base Unit (32 units at \$1800 per unit)	\$57,600	Completed 1995-2007 (more added as budget permits)	Local	1/10/2018	9/16/2016	Matthew DiFiore
Largo	Base Level Monitoring System for Rain Gauge System, 24 hours a day service (2 units), \$6,000 per unit	\$12,000	Completed 1995-2007 (more added as budget permits)	Local	1/10/2018	9/16/2016	Matthew DiFiore
Largo	SCADA System for remote monitoring	\$1,350,000	Completed 2004	Local	1/10/2018	9/16/2016	Matthew DiFiore
Largo	Fire Station Bay Doors	\$144,710	Completed	General, (Local Fund)	1/10/2018	9/16/2016	Matthew DiFiore
Largo	Waste Water Reclamation Facility Warehouse	\$3,426,795	Completed	Wastewater (Local Fund)	1/10/2018	9/16/2016	Matthew DiFiore
Largo	IT Data Center	\$3,189,569	Completed	LOST	1/10/2018	9/16/2016	Matthew DiFiore
Largo	Community Center	\$10,918,386	Completed	LOST	1/10/2018	9/16/2016	Matthew DiFiore
Largo	Stormwater Program Update	\$250,000	Completed	Stormwater (Local Fund)	1/10/2018	10/25/2017	Jerald Woloszynski
Madeira Beach	Stormwater Master Plan Improvements	\$218,429	Completed	Local	1/10/2018	10/5/2016	Michelle Orton
Madeira Beach	Beach Groin Rehabilitation Project – Repair and maintain the City’s existing beach groin system. (This system was installed in the 1950’s. Because of the effectiveness of this system, Madeira Beach has not required other beach renourishment efforts.)	\$275,000		Local	1/10/2018	10/5/2016	Michelle Orton
Madeira Beach	Storm Drainage and Roadway Improvements Relating to Drainage – Normandy Road	\$1,180,000	Completed	Local /Applied for Matching SWFWMD Cooperative Funding	1/10/2018	10/5/2016	Michelle Orton
Madeira Beach	Storm Drainage and Roadway Improvements Relating to Drainage – Engineering Study – Boca Ciega Drive	\$80,000	Completed	Local (including a portion by Local Option Sales Tax)	1/10/2018	10/5/2016	Michelle Orton
Madeira Beach	Municipal Complex Reconstruction (City Hall, Fire Station, Recreation Center and related outside activity areas)	\$8,630,000	Completed	Localoldsmar	1/10/2018	10/5/2016	Michelle Orton
Madeira Beach	Stormwater Outfall Cleaning	\$180,000	On-going	Local	1/10/2018	10/5/2016	Michelle Orton
Madeira Beach	Boca Ciega roadway and Drainage Improvement Project (Address deteriorating roads, aging drainage infrastructure, store related flooding and pollutant discharge into Boca Ciega Bay)	\$3,927,000	Underway	City and SWFWMD	1/10/2018	10/5/2016	Michelle Orton

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Municipality / Entity	Project	Est. Cost	Status	Funding	Date Last Reviewed	Date Last Updated	Updated By
Madeira Beach	140th Ave E & Bayshore Drive North Drainage Improvement (Install a new storm grate, baffle box and a pipe outfall to Boca Ciega Bay)	\$86,800	Underway	City and SFWMD	1/10/2018	10/5/2016	Michelle Orton
Madeira Beach	American Legion Drive Drainage Improvement (Construct stormwater inlets and pipes to meet the 10 year MB design standards and install a BMP treatment train.)	\$600,000	In design	City and SFWMD	1/10/2018	10/5/2016	Michelle Orton
Madeira Beach	Rex Place Drainage Improvement (Alleviate flooding problems, treat water prior to discharge)	\$600,000	In design	City and SWFMD	1/10/2018	10/5/2016	Michelle Orton
Madeira Beach	137th Avenue Circle Drainage Improvements (Upsize existing stormwater inlets and pipes to meet 10 year design standards. Installing pervious pavement, nutrient separating baffle box.)	\$935,000	In design	City and SWFMD	1/10/2018	10/5/2016	Michelle Orton
Madeira Beach	860 Bay Point (Mitigation of RL Property-Construction Plan s submitted for review and permitting)	\$210,000	In design	HMGP & Private	1/10/2018	10/5/2016	Michelle Orton
Madeira Beach	914 Bay Point (Mitigation of RL Property- Property sold, new owners reside out of state, yet to complete paperwork for the FEMA grant)	\$211,000	In design	HMGP & Private	1/10/2018	10/5/2016	Michelle Orton
Madeira Beach	13101 4th Street (Mitigation of SRL property - Demolition in progress construction plans being prepared)	\$210,000	In design	HMGP & Private	1/10/2018	10/5/2016	Michelle Orton
Madeira Beach	882 Bay Point Mitigation of SRL property – Design and construction plans in progress)	\$226,000	In design	HMGP & Private	1/10/2018	10/5/2016	Michelle Orton
Madeira Beach	905 Bay Point Drive (Mitigation of SRL property – Ground floor under construction)	\$200,000	In design	HMGP & Private	1/10/2018	10/5/2016	Michelle Orton
North Redington Beach	SEWER - North Redington Beach provides sewer service for Redington Shores and NRB. Raise main lift station electrical and controls above flood plain (\$75,000). Raise emergency generator and fuel tank above flood plain (\$50,000).	Unknown	Completed, November 2008	Local/County	1/10/2018		
North Redington Beach	Underground utilities throughout the side streets of NRB. This includes all streets except Gulf Boulevard.	\$2,000,000	Completed	Local	1/10/2018		
Oldsmar	Hurricane Wind Hardening Retrofit of Municipal Services Facility.	\$103,723	Complete	HMGP/Local	1/10/2018	10/31/2016	Steve Everitt
Oldsmar	Hurricane Wind Hardening Retrofit of City Hall windows.	\$145,214	Complete	Local	1/10/2018	12/14/2017	Steve Everitt
Pinellas County	Sediment/erosion control, sediment removal, and/or stream bank/ channel stabilization for flood control purposes		Ongoing and completed	State and Local	1/10/2018	10/26/2017	Reviewed by: David Talhouk
Pinellas County	1) Bee Branch	\$6,570,900	Phase 2 complete, phase 1 in progress	Penny for Pinellas; SWFWMD; Grant	1/10/2018	10/26/2017	Reviewed by: David Talhouk
Pinellas County	2) Bear Creek Channel Improvements	\$8,301,120	FY2014 Complete	Penny for Pinellas; SWFWMD	1/10/2018	10/26/2017	Reviewed by: David Talhouk (corrected funding)
Pinellas County	3) Curlew Creek Channel A Improvements	\$7,115,800	Completed	Penny for Pinellas; SWFWMD	1/10/2018	10/26/2017	Reviewed by: David Talhouk
Pinellas County	Animal Services Building Storm Hardening	\$256,670	Completed	HM Allocation/Local	1/10/2018	10/26/2016	
Pinellas County	Belleair Elementary School Storm Retrofit; new classroom will gain 783 shelter spaces	\$44,100	Completed	Local	1/10/2018	10/26/2016	
Pinellas County	Emergency Communications upgrade of radio system to SmartZone technology.	\$17,500,000	Complete	CIP/grants	1/10/2018	10/26/2016	
Pinellas County	EMS hardening of Sunstar Communications Center north wall and south alleyway enclosed.	\$310,000	Complete	General Fund	1/10/2018	10/26/2016	

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Pinellas County	EMS A/C replacement for the radio and server room.	\$300,000	Complete	General Fund	1/10/2018	10/26/2016	
Pinellas County	EMS Sunstar Communications Center and radio room roof replacement.	\$150,000	Complete	General Fund	1/10/2018	10/26/2016	
Pinellas County	EMS Building Storm Hardening	\$272,294	Completed	HM Allocation/Local	1/10/2018	10/26/2016	
Pinellas County	High Point Elementary School Retrofit	\$6,002	Project Completed	Local	1/10/2018	10/26/2016	
Pinellas County	Medical Examiner/Forensics Building Storm Hardening	\$347,607	Completed	HM Allocation/Local	1/10/2018	10/26/2016	
Pinellas County	New Heights Elementary School Door Replacements in Building 2	\$33,927	Project Completed	Local	1/10/2018	10/26/2016	
Pinellas County	Public Works Storm Hardening - Generator Bldg., Traffic Bldg, Survey Bldg.	\$49,422	Completed	HM Allocation/Local	1/10/2018	10/26/2016	
Pinellas County	Ross Norton Community Center - Generator	\$70,322	Project Completed	Local	1/10/2018	10/26/2016	
Pinellas County	Skycrest Elementary School Storm Retrofit; new classroom will gain 783 shelter spaces	\$44,100	Completed	Local	1/10/2018	10/26/2016	
Pinellas County	Supervisor of Elections Building Storm Hardening (Starkey Rd)	\$98,271	Completed	HM Allocation/Local	1/10/2018	10/26/2016	
Pinellas County	Post-Disaster Redevelopment Plan, including Health/Human Services Component	\$120,000	Project completed; to be reviewed by BCC	CPI/Local	1/10/2018	10/26/2016	
Pinellas County	Post-Disaster Redevelopment Plan - Health/Human Services Component	\$40,000	Project completed; to be reviewed by BCC	HMGP/Local	1/10/2018	10/26/2016	
Pinellas County	Comprehensive Land Development Regulations Update - includes updating floodplain management regulations		Project in progress		1/10/2018	10/26/2016	
Pinellas County	Homeless Emergency Project was awarded for 4 single-family home roof replacements	\$38,000.00	Roof replaced with current building code standards.	CDBG	1/10/2018	10/26/2016	
Pinellas County	Religious Community Services, Inc. (RCS) was awarded for roof replacement at the Food Bank.	\$40,000.00	Roof replaced with current building code standards.	CDBG	1/10/2018	10/26/2016	
Pinellas County	Pinellas County Community Development Low Interest Loan	\$1.4M	81 Single family homes received a Low Interest Loan from Pinellas County for hurricane mitigation.	CDBG; State Housing Initiatives Partners (SHIP); Housing Trust Fund (HFT)	1/10/2018	10/26/2016	
Pinellas County	Neighborhood Stabilization Program NSP	\$20,400 (est.)	10 homes remodeled, 2 with impact windows, 4 with metal storm panels	NSP 1	1/10/2018	10/26/2016	
Pinellas County	Neighborhood Stabilization Program NSP2	\$43,300 (est.)	13 homes remodeled, 4 with impact windows, 9 with metal storm panels	NSP2	1/10/2018	10/26/2016	
Pinellas County	Neighborhood-based education and outreach on County issues of concern (i.e. hurricane preparedness, mosquito prevention, surface water quality, etc.).		Ongoing project in progress	CDBG	1/10/2018	10/26/2016	
Pinellas County	The Glades Drainage Assessment	\$1,089,200	Completed	Penny for Pinellas/ Local	1/10/2018	10/26/2016	
Pinellas County	Cross Bayou Watershed Plan (132A)	\$514,600	Completed FY2013	Penny for Pinellas	1/10/2018	10/26/2017	Reviewed by: David Talhouk
Pinellas County	Keystone Road Reconstruction	\$16,805,900	Completed FY2013	Penny for Pinellas	1/10/2018	10/26/2016	
Pinellas County	Bryan Dairy Road - Starkey to 72nd St.	\$9,275,400	Completed FY2013	Penny for Pinellas; Grants	1/10/2018	10/26/2016	
Pinellas County	Cross Bayou Watershed Plan	\$252,310	Completed FY2013	Penny for Pinellas; SWFWMD; Grant	1/10/2018	10/26/2016	

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Pinellas County	Starkey Basin Watershed Mgt. Plan	\$607,200	Completed FY2013	Penny for Pinellas; SWFMD; Gov't Reimbursement	1/10/2018	10/26/2016	
Pinellas County	Public Safety Facilities & Centralized Communications Center	\$72,981,800	Completed	Penny for Pinellas	1/10/2018	10/26/2016	
Pinellas County	Sea Level Rise: Implemented mulit-departmental County Climate Team; joined efforts with TBRPC; contracted with UF/Sea Grant Program to initiate sea level rise conversations with municipalities	\$15,000	Ongoing	General Fund	1/10/2018	10/26/2016	
Pinellas County	Lealman Area Drainage Improvements (1628)	\$881,930	FY2012 to FY2014 Completed	Penny for Pinellas	1/10/2018	10/26/2016	
Pinellas County	Lealman Central Area Drainage Improvements (2027) Preliminary engineering for master drainage plan.	\$150,000	Completed	CDBG	1/10/2018	10/26/2016	
Pinellas County	Government Facilities Remodel & Renovation (1633)	12,275,500	Completed	Penny for Pinellas	1/10/2018	10/26/2016	
Pinellas County	Community Buildings Emergency Shelter Project (1843)	6,950,000	Completed	Penny for Pinellas	1/10/2018	10/26/2016	
Pinellas County	Allens Creek Watershed Management Plan	\$575,000	Complete	Surface Water Assesment Fee	1/10/2018	10/27/2016	Added by Rahim Harji
Pinellas County	McKay Creek Watershed Management Plan	\$730,000	Complete	Surface Water Assessment Fee	1/10/2018	10/27/2016	Added by Rahim Harji
Pinellas County	118th Avenue Expressway (1618). Built east-west evacuation route parallel to Ulmerton Rd.	\$55,750,000	Complete	Penny for Pinellas	1/10/2018	11/8/2017	Added by Gina Harvey
Pinellas County	Antilles/Oakhurst Drainage Improvements (1820). Improvements to alleviate street flooding.	\$3,160,000	Complete	Penny for Pinellas	1/10/2018	10/27/2017	Added by David Talhouk
Pinellas Park	Basin 4A Drainage Improvement - Culvert replacements and ditch regrading w	\$487,250	Completed in 2004	Local	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Park Blvd Drainage Improvement Phase I, Basin B - Improve drainage along Pa	\$5,364,000	Completed in 2006	Local, State, and Federal	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Park Blvd Drainage Improvement Phase II, Basin A - Improve drainage along P	\$10,000,000	Completed in 2008	Local, State, and Federal	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Park Blvd Drainage Improvement Phase III, Basin C - Improve drainage along P	\$14,530,000	The drainage project was completed in FY10/	Local, County, State, and Federal	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Helen Howarth Park Drainage Basin Evaluation - Provide survey, conceptual-le	\$32,500	Study completed in 2005	Local	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Homeland Drainage Improvement District Drainage Study - Determine improv	\$55,000	Study completed in 2005	Local	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Stormwater Rehabilitation Program - Install and line galvanized culvert pipe tl	\$500,000	This is an annual ongoing project.	Local	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	NFIP Map Update - This project involved an outreach to property owners of potential changes ar	Completed.	The maps became effective Aug	Local	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Home Disaster Mitigation Handbook - This document is currently being produ	\$50,000	Completed	State	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Purchase of Land for Drainage Retention. The City has entered into a contract	\$796,000	Completed	Local	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	94th Avenue N. widening: This is a roadway project with a drainage compone	\$2,200,000	Completed	Local	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	60th St. N. ditch mitigation project is to install a major box culvert system alor	\$1,067,000	Completed	Local	1/10/2018	10/24/2017	Emergency Management / Community Planning

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Pinellas Park	Park Blvd/66th St. N. intersection improvement. Florida Department of Trans	\$1,600,000	Completed	State and Federal	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Homeland Drainage Improvement District Drainage Study - Determine improv	\$3,750,000	Completed 2012	Local	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Annual Sanitary Sewer Rehabilitation & Relining - This program is an ongoing	\$550,000 annually	Annual Project Ongoing	Local	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Longhill Drive Drainage Improvements - Project included the culverting of 1,20	\$1,176,680	Completed FY13-14	Local and SWFWMD Grant	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Emergency Generator Installation LS 27 to maintain service	\$70,000	Completed FY13-14	Local	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Emergency Generator Installation LS1 to maintain service	\$115,000	Completed FY13-14	Local	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Garnett & North Disston Subdivisions - 40 acre +/- tract situated between 82n	\$5,920,614	Complete	SWFWMD Grant, FDOT Grant, FDEP Grant, TIF, Pinellas Park Water and Sewer Fund, and Infrastructure Sales Tax	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Design and construct drainage features and sidewalks on 90th Ave to provide	\$170,069	2017	IST, Utility Fee	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	98th Avenue Pond Improvements Improvement of wet pond to increase drain	\$200,000	Completed in 2017	FDEP Grant and Pinellas Park Utility fees	1/10/2018	10/24/2017	Emergency Management / Community Planning
Pinellas Park	Technical Services Pond Improvements Restoration of a 9,095 s.f. dry pond, t	\$200,000	Completed in 2017	FDEP Grant and Pinellas Park Utility fees	1/10/2018	10/24/2017	Emergency Management / Community Planning
Redington Beach	Improvement of storm drainage to have the remainder of the Town's storm sewer system upgraded and add on to serve growth in the community.	\$5,000,000	Completed 2009	SWFWMD/Local	1/10/2018	8/19/2016	Adriana Nieves
Redington Beach	Flood mitigation of town streets and roads, milling & resurfacing	\$2,000,000	Completed in 2012	Local	1/10/2018	8/19/2016	Adriana Nieves
Redington Beach	Replace intracoastal causeway north side seawall	\$175,000	Completed in 2015	Local	1/10/2018	8/19/2016	Adriana Nieves
Redington Shores	Elevated Town Hall / EOC Building. Constructed on fill to elevation 12.0 NGVD. Zone AE.	\$600,000	Complete 2001	Local	1/10/2018	8/30/2016	Steve Andrews
Redington Shores	Storm water retrofit project for areas east of Gulf Blvd. Water quality improvement by filtering street rainfall run-off.	\$3,100,000	Complete 2010	Local and State	1/10/2018	8/30/2016	Steve Andrews
Redington Shores	TV / Media Upgrades :CATV broadcasting equipment emergency replacement for public education & awareness to provide up to date info re:Evacuation & shelters, flood mitigation programs & projects prior to emergencies.	\$35,000	Complete 2013	Local	1/10/2018	8/30/2016	Steve Andrews
Redington Shores	Kayak Ramp : ShorelineProtection to provide erosion control of park open shore due to 4 foot change in grade within 30 feet of top of bank ACOE and FDEP approved 5 foot wide concrete ramp and planting of Red Mangroves in unstabilized areas.	\$8,500	Complete 2013	Local	1/10/2018	8/30/2016	Steve Andrews

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Redington Shores	T.S. Debby : Emergency response to Town Infrastructure due to wind, erosion, and flooding Re; Debris Removal, Sewer, Street, Parks and Roof Repairs.	\$12,625 Complete 2013		Local and State	1/10/2018	8/30/2016	Steve Andrews
Redington Shores	Town Hall / EOC Impact Shutters revised to impact windows	\$15,000 Bid & Scheduled to start September 2016		Local	1/10/2018	8/30/2016	Steve Andrews
Safety Harbor	Public Works dewatering pump replacement	\$18,000 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Harden Safety Harbor EOC – Impact resistant windows and doors.	\$15,000 Complete		Federal, State, Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Harden Fire Station #52 – Impact resistant windows, doors, garage doors.	\$110,000 Complete		Federal, State, Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Harden Fire Station #53 and upgrade EOC	\$250,000 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	East Gate Drainage Improvements	\$1,442,811 Complete		Local and State	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	South Green Springs - Improvements to minimize street flooding.	\$1,500,000 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	11th Ave. S. Brick Street & Drainage Improvements	\$701,339 Complete		Local and State	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Street and Yard Flooding - 2nd Ave. N.	\$1,300,000 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Rigsby Center/Hurricane Shutters Installed	\$1,438 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Parks & Bldg. Maintenance/Hurricane Shutters and Wind rated Bay/Garage doors installed.	\$4,021 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Street Flooding Improvements - Bailey Street	\$430,000 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Bishop Creek Erosion and Storm Water Control, Harbor Woods	\$906,857 Complete		Local and State	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Fire Station #53, Replace Ladder Truck and special Equipment	\$510,000 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Bishop Creek Erosion and Storm Water Control, Rainbow Farms Ph 1.	\$1,300,000 Complete		Local and State	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Library/Hurricane Shutters for existing building	\$7,058 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Daisy Douglas Park/Wind rated garage doors installed.	\$1,464 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Fire Station #53/hurricane shutters installed	\$1,398 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Public Works Office Facility/Hurricane shutters installed	\$1,538 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	North City Park/Wind rated garage doors installed	\$1,392 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Master Lift Station: new generator and pumps	\$70,000 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Fire Station #52: New generator	\$75,000 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Fire Station #53: New generator	\$60,000 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Fire Station #53: Building to house new generator	\$50,000 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Public Works replacement of a generator	\$40,000 Complete		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	South Bayshore Drainage/Water Quality Improvements	\$2,289,313 Completed		Federal, State, Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Cypress Trace Lift Station	\$60,000 Completed		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Briar Creek Lift Station	\$70,000 Completed		Local	1/10/2018	10/21/2016	Michael Schoderbock
Safety Harbor	Amber Glades Lift Station Repair	\$90,000 Completed		Local	1/10/2018	10/21/2016	Michael Schoderbock
Seminole	Construct emergency operations center and public works garage. Estimated completion time: more than 12 months.	\$6,500,000 Complete 2013		Local	1/10/2018		
South Pasadena	Storm shutters on public works building	\$16,500 Complete		HMGP	1/10/2018		
South Pasadena	Generator switch at joint EOC	\$15,000 Complete		Local	1/10/2018		
South Pasadena	Hardened fire station and construct addition	\$43,000 Complete		HMGP \$5,000/ Local \$38,000	1/10/2018		
South Pasadena	Purchased 80KW generator for public works building	\$39,000 Complete		Local	1/10/2018		
South Pasadena	City Hall Window Protection	\$50,000 Complete		Local	1/10/2018		
St. Petersburg	Mitigated 3 waterfront properties on Bayou Grande Blvd. NE to prevent dama	\$289,237 Complete		Federal and Local	1/10/2018	9/26/2017	Noah Taylor

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St. Petersburg	1st St. N. storm water project	\$5,788,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Highland St. storm water project.	\$844,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Nebraska Ave. NE storm water project.	\$200,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	3rd St. Bayboro storm water project.	\$3,668,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	4th St. S. Bayboro storm water project.	\$2,369,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Floral Lake storm water project	\$308,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Mirror Lake alum injection system.	\$553,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Booker Creek Maintenance at Tropicana Dome.	\$203,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	8th St. drain storm water project.	\$2,558,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	67th St. drain storm water project.	\$681,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Lake Winston storm water project.	\$2,261,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	31st St. S storm water project.	\$576,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Tinney Creek rehab. project.	\$194,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Ponds Ditch rehab. project.	\$30,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Clam Bayou retrofit project	\$286,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Ditch piping project - 4 locations throughout the city.	\$3,578,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Bayou Grande Blvd. NE project.	\$398,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Roser Park Creek project.	\$1,000,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	King St. N. drainage improvements	\$2,966,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Oak St. NE drainage improvements	\$344,000	Complete	Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Riviera Bay & Snell Isle Stormwater Vaults	\$1,400,000	Complete	Penney for Pinellas/Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	MLK Street N. Part 2 Storm Drainage Improvements	\$5,958,000	Complete	SWFWMD/Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Golf Creek, 13th A/N & Vicinity Stormwater Improvements	\$1,600,000	Complete	SWFWMD/Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Jungle Lake Outfall Storm Drainage Improvements	\$2,980,000	Complete	SWFWMD/Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Jungle Lake Northeast Basin Storm drainage Improvements	\$3,557,000	Complete	SWFWMD/Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	94th Ave. at Tinney Creek Storm Drainage Improvements	\$1,500,000	Complete	Penney for Pinellas/SWFWMD/Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Fire Station Window and Door Storm Protection. This project will retrofit nine	\$250,000	All projects completed using local funds except	HMGP/Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Backflow Prevention Stormwater Vaults. Project design, permitting and consti	\$2,855,000	Complete	PDM Program	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	Flood and Wind Retrofit of Municipal Buildings	\$310,000	Complete	Federal and Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	EOC. Design construct and equip a municipal Emergency Operations Center Fa	\$3,500,000	Complete	Penny for Pinellas/Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	94th Ave. at Tinney Creek Storm Drainage Improvements. Project will constru	\$1,500,000	Complete	Penny for Pinellas/Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	4th St & 14th Ave N to Crescent Lake Storm Drainage Improvements. Design a	\$1,900,000	In Progress	Penny for Pinellas/Local	1/10/2018	9/26/2017	Noah Taylor
St. Petersburg	8th Ave. S. & 44th St. S. Storm Drainage Improvements. Project will construct	\$4,500,000	In Progress	Penny for Pinellas/Local	1/10/2018	9/26/2017	Noah Taylor
St. Pete Beach	SCADA System / Lift Stations (Purchase a SCADA system for 17 wastewater pump/lift stations.)	\$90,000	Completed	City funds	1/10/2018	11/1/2016	Chelsey Welden
St. Pete Beach	Generators for Lift Stations (Procure emergency generators and electrical equipment for lift stations #2 and #3.)	\$100,000	Completed	City funds	1/10/2018	11/1/2016	Chelsey Welden
St. Pete Beach	Egan Park Improvements: Water Quality Detention Basin/1	\$50,000	Complete	SWFWMD Grant	1/10/2018	10/3/2017	C.W. Porter
St. Pete Beach	GIS/ Computer Hardware and Software Enhancement: Develop work order sy	\$35,000	Complete	Local	1/10/2018	10/3/2017	C.W. Porter
St. Pete Beach	Repairs: Wastewater Inflow and Infiltration FY2016: Priority-based improvem	\$500,000	Complete	Wastewater Fund	1/10/2018	10/3/2017	C.W. Porter
St. Pete Beach	Stormwater Improvements to Pass-a-Grille Way (Reconstruction Phase I)./1	\$843,525	Complete	Stormwater Fund	1/10/2018	10/3/2017	C.W. Porter

**Pinellas County**  
**Local Mitigation Strategy**  
**2018 Appendix 10, Table 10-1: Mitigation Accomplishments**

Municipality / Entity	Project	Est. Cost	Status	Funding	Date Last Reviewed	Date Last Updated	Updated By
St. Pete Beach	Repairs: Wastewater Inflow and Infiltration FY2017: Priority-based improvemen	\$2,300,000	Complete	Wastewater Fund	1/10/2018	10/3/2017	C.W. Porter
St. Pete Beach	Wastewater Improvements to Pass-a-Grille Way (Reconstruction Phase I)/4	\$2,210,325	Complete	Wastewater Fund	1/10/2018	10/3/2017	C.W. Porter
Tarpon Springs	Riverside and Hillside Drive Stormwater Improvements	\$67,000	Engineering Design & Permitted, Constructio	SW Utility	1/10/2018	10/24/2016	Heather Urwiller
Tarpon Springs	Pent Street/Grosse Avenue Flooding Abatement Project Flooding/Drainage Irr	\$1,122,000	Engineering Design, Survey Underway	SWFWMD CFI	1/10/2018	10/24/2016	Heather Urwiller
Tarpon Springs	Disston and Tarpon Ave Evac Route SW Improvements	\$428,000	Design Complete	SW Utility	1/10/2018	10/24/2016	Heather Urwiller
Tarpon Springs	Kenneth Way Flooding/Drainage Improvements	\$91,000	Conceptual Design	SW Utility	1/10/2018	10/24/2016	Heather Urwiller
Tarpon Springs	Center Street at Disston Ave Flooding/Drainage Improvements	\$573,000	Alternatives Analysis Underway	SW Utility	1/10/2018	10/24/2016	Heather Urwiller
Tarpon Springs	Athens St. and Dodecenase Sponge Docks Flooding/Drainage Imp.	\$27,000	Engineering Design	SW Utility	1/10/2018	10/24/2016	Heather Urwiller
Tarpon Springs	Palm Avenue Flooding/Drainage Improvements	\$728,000	Conceptual Design, Application to SWFWMD	SW Utility & CFI Application Submitted	1/10/2018	10/24/2016	Heather Urwiller
Tarpon Springs	Highland Ave. & Vista Pl./Jasmine Ave. & Lime St.Flooding/Drainage Improven	\$161,500	Engineering Design, Survey Underway	SWFWMD CFI	1/10/2018	10/24/2016	Heather Urwiller
Tarpon Springs	Disston Ave between Spruce and Live Oak Flooding/Drainage Imp	\$581,000	Conceptual Design	SW Utility	1/10/2018	10/24/2016	Heather Urwiller
Tarpon Springs	Fire Station #71 – Construct a new Fire Station to reach the community during	\$2,700,000	Under construction	City of Tarpon Springs and Penny for Pinellas	1/10/2018	10/24/2016	Heather Urwiller
Tarpon Springs	Window replacement, roof replacement, pointing of the brick and waterproof	\$2,100,000	Under construction	City of Tarpon Springs and Penny for Pinellas	1/10/2018	10/24/2016	Heather Urwiller
Tarpon Springs	Riverside Drive Flooding Abatement	\$2,800	Completed	S Utility	1/10/2018	10/24/2016	Heather Urwiller
Tarpon Springs	Bath St./Shaddock Ave. Alley	\$9,870	Completed	S Utility	1/10/2018	10/24/2016	Heather Urwiller
Tarpon Springs	Stormwater Infrastructure (GIS) Assessment Project	\$200,000	Data Collection, Application to SWFWMD for	SW Utility & CFI Application Submitted	1/10/2018	10/24/2016	Heather Urwiller
Tarpon Springs	Fire Station #71 – Construct a new Fire Station to reach the community during	\$2,700,000	Completed	City of Tarpon Springs and Penny for Pinellas	1/10/2018	12/1/2017	Heather Urwiller
Tarpon Springs	Window replacement, roof replacement, pointing of the brick and waterproof	\$2,100,000	Completed	City of Tarpon Springs and Penny for Pinellas	1/10/2018	12/1/2017	Heather Urwiller
Tarpon Springs	Purchase Johnson Street Sweeper for in-house removal of roadside sediment & debris that would otherwise get into our stormwater system. Estimated completion time: Ongoing. / 1,3	\$240,000	Purchased	Stormwater Tax Assessment	1/10/2018	12/1/2017	Heather Urwiller
Tarpon Springs	Purchase CAT Mini Loader for in-house construction and maintenance of Stormwater infrastructure. Estimated completion time: Ongoing. / 1,3	\$89,000	Purchased	Stormwater Tax Assessment	1/10/2018	12/1/2017	Heather Urwiller
Tarpon Springs	Purchase Aquatech VacCon for in-house removal of sediment & debris that cause blockages of our stormwater system. Estimated completion time: Ongoing. / 1,3	\$350,000	Purchased	Stormwater Tax Assessment	1/10/2018	12/1/2017	Heather Urwiller
Treasure Island	Elevated three structures above the base floor elevation	\$100,000	Complete	Private	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Demolished three structures and replaced with conforming structures.	\$1,500,000	Complete	Private	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Demolished one structure in flood area.	\$800,000	Complete	Local and State	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Applications pending to elevate two structures above the base floor elevation	\$210,000	Underway	Private and State	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Drainage improvements in the Sunset Beach neighborhood to reduce flooding.	\$300,000	Complete	Local and State	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Hardening of critical facilities - City Hall and Public works complex.	\$150,000	Received HMGP grant for this project in the amount of \$71,487.	HMGP/Local	1/10/2018	10/31/2017	R.G. Bray, Jr.

**Pinellas County  
Local Mitigation Strategy  
2018 Appendix 10, Table 10-1: Mitigation Accomplishments**

Municipality / Entity	Project	Est. Cost	Status	Funding	Date Last Reviewed	Date Last Updated	Updated By
Treasure Island	Reconstruction of Treasure Island Causeway bascule bridges to replace bridges built in 1939. Causeway is designated evacuation route for 7,560 permanent and 8,000 seasonal residents with the original bridges and equipment subject to storm tide flooding due to low elevation.	\$50,000,000	Completed in 2007.	Received federal grant for this project in the amount of \$50,000,000. Federal	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Enhancement of beach area to reduce storm losses. Quarterly planting of sea oats by community volunteers to enhance dune system for a number of years. County provides sea oats free of charge. Nominal cost to City. Also, sand sharing program set up so that in the event of a storm, the City can relocate accreted sand to storm damaged areas of Treasure Island's beach (\$500,000 reserve fund set aside by City Commission for emergency beach repairs.)	Nominal to date. Reserve of \$500,000 established.	Complete and on-going	Local and County (sea oats donation)	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	2013 Elevated 2 structures above BFE	\$459,000	Complete	Private	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	2013 Demolished one structure in flood area (no replacement)	\$10,000	Complete	Private	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Permits issues to elevate one structure above the base floor elevation (to be completed in 2014)	\$1,430,000	Underway	Private	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Demolition of 7 non-FEMA compliant structures (2015)	\$64,700	Complete	Private	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Drainage improvements in the Sunset Beach neighborhood to reduce flooding. (One phase)	\$914,000	One Phase Complete	Local and State	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Palms Bridge replacement	\$1,657,638	Complete	Local	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Capri Bridge replacement	\$2,244,517	Complete	Local	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Main Lift Station Refurbishment	\$429,176	Complete	Local	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Lift Station #3 Refurbishment	\$244,339	Complete	Local	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Emergency Generator	\$56,400	Complete	Penny for Pinellas, Local (Wastewater General Fund)	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Harden / Refurbish Municipal Facilities (LS #6, LS #7, LS #8, LS #9)	\$1,093,240	Complete	Local (Wastewater General Fund)	1/10/2018	10/31/2017	R.G. Bray, Jr.
Treasure Island	Harden / Refurbish Municipal Facilities (LS #4)	\$756,289	Complete	Local (Wastewater General Fund)	1/10/2018	10/31/2017	R.G. Bray, Jr.

**APPENDIX 11**  
**POTENTIAL FUNDING SOURCES**

# Pinellas County Local Mitigation Strategy

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## APPENDIX 11: POTENTIAL FUNDING SOURCES

### Introduction

One of the requirements for the LMS is the identification of potential funding for mitigation projects. Federal, state and local governments have programs which provide funding for various types of mitigation. Some funding is available prior to a disaster while other programs are initiated in a post- disaster scenario. Typically, many more resources specifically earmarked for mitigation activities are available following a federal disaster declaration.



Local and state agencies have dedicated financial resources toward the funding of mitigation projects. The majority of the state funds that indirectly support mitigation related activities are provided for land acquisition, water quality and quantity-related issues as well as meeting non-federal match requirements for various federally-funded mitigation assistance programs. Similarly, local governments fund various projects including implementation of growth management initiatives; planning, permitting and code enforcement; acquisition and maintenance of parks and conservation areas; stormwater projects; housing mitigation assistance programs for low and moderate income citizens; and construction and structural hardening of critical facilities, such as public safety and emergency operations centers, fire and police stations, city halls, etc.

Both the State of Florida and local governments leverage funds available from federal and state sources to provide financial assistance to implement the hazard mitigation projects that have been identified, prioritized and documented by the Local Mitigation Strategy (LMS) Working Group as well as the projects submitted under the Flood Mitigation Assistance Program (FMAP), Repetitive Flood Claims and Severe Repetitive Loss Programs.

### Pre-Disaster Mitigation Funding

#### KNOWN CHANGES TO FEDERAL FUNDING

The Biggert-Waters Flood Insurance Reform Act of 2012, found in H.R. 4348, consolidates three of the NFIP funded mitigation programs described below into a single program. The combined “National Flood Mitigation Fund” is to be funded at \$90 million per year. While the old FMA and pilot SRL program were funded annually at up to \$40 million per year each, and the RFC program at up to \$10 million annually, the SRL program was never fully utilized in part due to its complexity. The new program simplifies and combines the three previous programs and includes the following elements:

- Encourages flood mitigation planning to be integrated into a community’s multi-hazard mitigation plan
- Adds demolition/ rebuild (mitigation reconstruction) as an allowed mitigation activity under all programs
- Caps the use of mitigation grant funds for mitigation planning activities at \$50,000 (states) and \$25,000 (communities)

# Pinellas County Local Mitigation Strategy

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- Provides for denial of grant funds if not fully obligated in five years
- Restructures federal share requirement:
  - Up to 100 percent for severe repetitive loss structures (four or more claims of over \$5000 or two or more claims exceeding value of structure)
  - Up to 90 percent for repetitive loss structures (two claims over a 10 year period averaging at least 25 percent of value of structure)
  - Up to 75 percent for other approved mitigation activities.

For more information, see the *State of Florida Enhanced Hazard Mitigation Strategy* (2013).  
[www.floridadisaster.org/mitigation](http://www.floridadisaster.org/mitigation)

## NATIONAL FLOOD INSURANCE PROGRAM

To enable persons to purchase insurance against physical damage to or loss of buildings and/or contents therein caused by floods, mudslide (i.e., mudflow), or flood-related erosion, thereby reducing Federal disaster assistance payments, and to promote wise floodplain management practices in the Nation's flood-prone and mudflow-prone areas.

### Contact Information

FEMA  
3003 Chamblee Tucker Road  
Atlanta, GA 30341  
(770) 220-5200

## FLOOD MITIGATION ASSISTANCE PROGRAM (FMAP)

To fund cost effective measures to States and communities that reduce or eliminate the long term risk of flood damage to buildings, manufactured homes, and other insurable structures.

Note: We did not include FMAP Projects on the mitigation list due to the fact that the owner of the property must agree and apply.

### Contact Information:

Program Implementation Division  
Federal Emergency Management Agency 500 C Street SW  
Washington, DC 20472  
(202) 646-3619

## HURRICANE LOSS MITIGATION PROGRAM (HLMP) a.k.a. Residential Construction Mitigation Program (RCMP)

The Residential Construction Mitigation Program (RCMP) receives \$10 million annually from the Florida Hurricane Catastrophe Trust Fund (Ch. 215.559, Florida Statutes). Of annual appropriation of \$10 million, \$3 million is directed to retrofitting existing public facilities to enable them to be used as public shelters, and \$7million is allocated as follows:

- 1) 40 percent, or \$2.8 million is used to mitigate future losses for mobile homes;
- 2) 10 percent, or \$700,000, is directed to the Type I Center of the State University System dedicated to hurricane research - Florida International University;
- 3) 50 percent, or \$3.4 million is directed to programs developed by the department with advice from the Advisory Council to help prevent or reduce losses or to reduce the cost of rebuilding after a disaster.

# Pinellas County Local Mitigation Strategy

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## **Contact Information:**

Residential Mitigation Construction Program

Florida Division of Emergency Management

2555 Shumard Oak Boulevard

Tallahassee, Florida 32399-2500

Telephone: (850) 413-9816

Web page: <http://www.floridacommunitydevelopment.org/programs/rcmp/>

## **PRE-DISASTER MITIGATION (PDM) COMPETITIVE GRANTS**

The PDM program was authorized by Section §203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), as amended by Section §102 of the Disaster Mitigation Act of 2000, to assist communities to implement hazard mitigation programs designed to reduce overall risk to the population and structures before the next disaster occurs.

Although the PDM program is federally funded, the program is administered through a partnership arrangement with the Florida Division of Emergency Management. It is their responsibility to:

- 1) Solicit and review proposals from applicants;
- 2) Prepare and submit the proposals to FEMA  
Use procedures set forth in the National PDM funding guidance; and
- 3) Manage the PDM program and the funds available under the program.

Eligible projects include:

- Acquisition of damaged structures;
- Elevation and retrofit of existing structures;
- Relocation or demolition of existing structures; and
- Minor flood control projects.

## **Contact Information:**

Florida Division of Emergency Management

2555 Shumard Oak Blvd., Tallahassee, FL 32399-2100

(850) 413-9966

## **BEACH MANAGEMENT FUNDING ASSISTANCE (BMFA) PROGRAM**

### **(Formerly the Beach Erosion Control Program - BECP)**

**"To develop and implement a long term regional proactive beach management program for the state of Florida"**

Recognizing the importance of the state's beaches, the Florida Legislature in 1986 adopted a posture of protecting and restoring the state's beaches through a comprehensive beach management planning program. Under the program, the Department of Environmental Protection's Division of Water Resource Management evaluates beach erosion problems throughout the state seeking viable solutions. The primary vehicle for implementing the beach management planning recommendations is the Florida Beach Management Funding Assistance Program, which is a program established for the purpose of working in concert with local, state and federal governmental entities to achieve the protection, preservation and restoration of the coastal sandy beach resources of the state. Under the program, financial assistance in an amount up to 50 percent of project costs is available to Florida's county and municipal governments, community development districts, or special taxing districts for shore protection and preservation activities located on the Gulf of Mexico, Atlantic Ocean, or Straits of Florida.

# Pinellas County Local Mitigation Strategy

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Eligible activities include beach restoration and nourishment activities, project design and engineering studies, environmental studies and monitoring, inlet management planning, inlet sand transfer, dune restoration and protection activities, and other beach erosion prevention related activities consistent with the adopted Strategic Beach Management Plan. The program is authorized by Section 161.101, Florida Statutes. Since 1998, when the Legislature dedicated a portion of the Ecosystem Management and Restoration Trust Fund for beach management, \$541.6 million has been appropriated to cost-share with local governments on local and federally authorized projects, with each level of government contributing about one-third of the cost of the entire program. This has resulted in the restoration and subsequent maintenance of over 226.7 miles, or nearly 57%, of the state's critically eroded beaches.

**Contact Information:**

Florida Department of Environmental Protection  
<http://www.dep.state.fl.us/beaches/programs/becp/>

## BEACH EROSION CONTROL PROJECTS

To control beach and shore erosion to public shores through programs not specifically authorized by Congress.

**Contact Information:**

U.S. Army Corps of Engineers  
Attn: CECW-PM  
Washington, DC 20314-1000  
(202) 761-1975

## COMMUNITY ASSISTANCE PROGRAM STATE SUPPORT SERVICES ELEMENT (CAP-SSSE)

To ensure that communities participating in the National Flood Insurance Program (NFIP) are achieving flood loss reduction measures consistent with program direction. The CAP-SSSE is intended to identify, prevent and resolve floodplain management issues in participating communities before they develop into problems requiring enforcement action.

**Contact Information:**

Federal Emergency Management Agency  
Mitigation Directorate Program Implementation Division  
500 C Street SW  
Washington, DC 20472  
(202) 646-2719

## COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG)

The Community Development Block Grants (also see post-disaster funding) provide for long-term needs, such as acquisition, rehabilitation or reconstruction of damaged properties and facilities and redevelopment of disaster-affected areas. Funds may also be used for emergency response activities, such as debris clearance and demolition, extraordinary increases in the level of necessary public services. Eligible projects include the following:

- Voluntary acquisition or if appropriate, elevation of storm damaged structures (can be used as match for FMA projects in low income areas);
- Relocation payments for displaced people and businesses;
- Rehabilitation or reconstruction of residential and commercial buildings;
- Assistance to help people buy homes, including down payment assistance and interest rate subsidies; and
- Improvement to public sewer and water facilities

# Pinellas County Local Mitigation Strategy

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**Contact Information:**

Department of Housing and Urban Development Community Planning and Development  
451 7<sup>th</sup> Street, SW Washington, D.C. 20410  
(202) 708-3587  
[www.hud.gov](http://www.hud.gov)

**CONSERVATION AND RECREATION LANDS (CARL)**

This grant program is intended to conserve environmentally endangered lands and provide resource conservation measures for other types of lands.

**Contact Information:**

Florida Department of Environmental Protection Division of State Lands  
Marjory Stoneman Douglas Bldg. 3900 commonwealth Blvd., MS 100  
Tallahassee, FL 32399-3000  
(850) 245-2118  
[www.dep.state.fl.us/lands/](http://www.dep.state.fl.us/lands/)

**EMERGENCY ADVANCE MEASURES FOR FLOOD PREVENTION**

To perform activities prior of flooding or flood fight that would assist in protecting against loss of life and damages to property due to flooding.

**Contact Information:**

US Army Corps of Engineers Attn: CECW - OE  
Washington, DC 20314  
(202) 272-0251

**EXPANDED LOCAL MANAGEMENT HAZARDOUS WASTE PROGRAM**

The primary purpose of this fund is to cover costs incurred to establish the expanded local hazardous waste management program as stated in FS403.7238 including training for county personnel, materials & equipment for educational activities.

**Contact Information:**

Florida Dept. Of Environmental Protection  
2600 Blair Stone Rd.  
Tallahassee, FL 32399-2400  
(850) 488-0300

**FLOOD CONTROL PROJECTS**

To reduce flood damages through projects not specifically authorized by Congress.

**Contact Information:**

Commander  
US Army Corps of Engineers Attn: CECW - OE  
Washington, DC 20314  
(202) 272-1975

**FLOOD PLAIN MANAGEMENT SERVICES**

To promote appropriate recognition of flood hazards in land and water use planning and development through the provision of flood and flood plain related data, technical services, and guidance.

**Contact Information:**

US Army Corps of Engineers Attn: CECW - PF  
Washington, DC 20314-1000  
(202) 272-0169

# Pinellas County Local Mitigation Strategy

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## **FLORIDA COMMUNITIES TRUST (FCT)**

This grant program facilitates the purchase of lands for conservation and/or recreation purposes by local governments. This land acquisition program helps to implement conservation, recreation, open space, and coastal elements of local comprehensive plans. The Board of Florida Communities Trust has latitude to consider innovative financing arrangement, loans, and land swaps. However, most of the Trust's funding is for land acquisition. Land acquisition projects in which matching funds are available will receive more favorable consideration, although a portion of available funds may be awarded on outright grants.

### **Contact Information:**

Florida Department of Environmental Protection  
Florida Communities Trust  
3900 Commonwealth Blvd, M.S. 100  
Tallahassee, FL 32399  
(850) 245-2555

## **GRANTS & LOANS FOR PUBLIC WORKS & DEVELOPMENT FACILITIES**

To provide financial assistance for the construction of public facilities needed to initiate and encourage the creation or retention of permanent jobs in the private sector in designated areas where economic growth is lagging.

### **Contact Information:**

Economic Development Administration  
The Federal Building  
Room 423  
80 N. Hughey Ave.  
Orlando, FL 32801  
(407) 648-6572

## **HAZARDOUS MATERIALS TRAINING PROGRAM**

For Implementation of the Superfund Amendment and Reauthorization Act (SARA) of 1986, the goal of the SARA Title III Training Program is to make funding available to support programs of State, local, and Tribal governments, and university sponsored programs designed to improve emergency planning, preparedness, mitigation, response, and recovery capabilities. These programs must provide special emphasis on emergencies associated with hazardous chemicals.

### **Contact Information:**

Federal Emergency Management Agency Support Systems Branch, Training Division  
16825 S. Seton Ave.  
Emmitsburg, MD 21727  
(301) 447-1142

## **HURRICANE PROGRAM**

To reduce the loss of life, property, economic disruption, and disaster assistance costs resulting from hurricanes.

### **Contact Information:**

Director  
Program Implementation Division Mitigation Directorate  
FEMA  
500 C Street SW  
Washington, DC 20472  
(202) 646-4621

# Pinellas County Local Mitigation Strategy

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## **PROTECTION, CLEARING AND STRAIGHTENING CHANNELS**

To restore channels for purposes of navigation or flood control.

**Contact Information:** Commander  
US Army Corps of Engineers Attn: CECW - OD  
Washington, DC 20314-1000  
(202) 272-8835

## **PROTECTION OF ESSENTIAL HIGHWAYS, HIGHWAY BRIDGE APPROACHES, AND PUBLIC WORKS**

To provide bank protection of highways, highway bridges, essential public works, churches, hospitals, schools, and other nonprofit public services endangered by flood caused erosion.

**Contact Information:**  
US Army Corps of Engineers Attn: CECW - PM  
Washington, DC 20314-1000  
(202) 272-1975

## **SNAGGING AND CLEARING FOR FLOOD CONTROL**

To reduce flood damage.

**Contact Information:**  
US Army Corps of Engineers Attn: CECW - PM  
Washington, DC 20314-1000  
(202) 272-1975

## **FLORIDA COASTAL MANAGEMENT PROGRAM (FCMP) GRANTS ANNUAL FUNDING**

While four types of assistance can be provided to implement local coastal management projects (technical assistance, site designation, training, and financial assistance) under the Florida Coastal Management Program, the financial assistance award is limited to no more than \$50,000 for land acquisition, small construction, or capital improvement projects; and no more than \$25,000 for all other projects. A recipient will be required to provide 100 percent (one to one) matching funds, which may be cash or in-kind.

**Contact Information:**  
Florida Coastal Management Program Grants  
Florida Department of Environmental Protection  
3900 Commonwealth Blvd. MS 47  
Tallahassee, Florida 32399-3000  
Phone: (850) 245-2094  
Web-page <http://www.dep.state.fl.us/cmp/grants>

## **RESOURCE CONSERVATION AND DEVELOPMENT**

To encourage and improve the capability of State and local units of government and local nonprofit organizations in rural areas to plan, develop and carry out programs for resource conservation and development.

**Contact Information:**  
Deputy Chief for Programs  
Resource Conservation and Community Development Division  
Natural Resources Conservation Service  
Department of Agriculture  
P.O. Box 2890  
Washington, DC 20013  
(202) 720-2847

# Pinellas County Local Mitigation Strategy

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## **SOIL AND WATER CONSERVATION**

To help people conserve, improve, and sustain our natural resources and environment.  
Natural Resources Conservation Service, Department of Agriculture  
P.O. Box 2890  
Washington, DC  
(202) 720-4527

## **WATERSHED PROTECTION AND FLOOD PREVENTION**

To provide technical and financial assistance in carrying out works of improvement to protect, develop, and utilize the land and water resources in small watersheds.  
Watersheds and Wetlands Division  
Natural Resources Conservation Service  
Department of Agriculture  
P.O. Box 28890  
Washington, DC 20013  
(202) 720-3534

## **Post – Disaster Mitigation Funding**

### **COMMUNITY DEVELOPMENT BLOCK GRANTS (CDBG)/ENTITLEMENT GRANTS**

To develop viable urban communities by providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low to moderate income individuals.

#### **Contact Information:**

Entitlement Communities Division  
Office of Block Grant Assistance CPD, HUD  
451 7th Street SW Washington, DC 20410-7000  
(202) 708-3587

### **CORA C. BROWN FUND**

To assist disaster victims for unmet disaster related needs. When Cora C. Brown of Kansas City, Missouri, died in 1977, she left a portion of her estate to the Federal Government as a special fund to be used solely for the relief of human suffering caused by disasters.

#### **Contact Information:**

Human Services Division  
Response and Recovery Directorate FEMA  
500 C Street SW  
Washington, DC 20472  
(202) 646-3642

### **ECONOMIC INJURY DISASTER LOANS (EIDL)**

To assist business concerns suffering economic injury as a result of certain presidential, Secretary of Agriculture, and/or SBA declared disasters.

#### **Contact Information:**

Office of Disaster Assistance SBA  
409 3rd Street SW Washington, DC 20416  
1 (800) 659-2955  
[www.sba.gov/content/economic-injury-disaster-loans](http://www.sba.gov/content/economic-injury-disaster-loans)

# Pinellas County Local Mitigation Strategy

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## **DIRECT HOUSING NATURAL DISASTER LOANS AND GRANTS**

To assist qualified recipients to meet emergency assistance needs resulting from natural disaster. Funds are only available to the extent that funds are not provided by the Federal Emergency Management Agency (FEMA). For the purpose of administering these funds, natural disaster will only include those counties identified by a Presidential declaration.

### **Contact Information**

Rural Housing Services (RHS)  
Department of Agriculture  
Single Family Processing Division  
Washington, D.C. 20250  
(202) 720-1474

## **EMERGENCY CONSERVATION PROGRAM**

To enable farmers to perform emergency conservation measures to control wind erosion on farmlands, or to rehabilitate farmlands damaged by wind erosion, floods, hurricanes, or other natural disasters and to carry out emergency water conservation or water enhancing measures during periods of severe drought.

### **Contact Information:**

Consolidated Farm Service Agency  
Dept. of Agriculture  
PO Box 2415  
Washington, DC 20013  
(202) 720-6221

## **EMERGENCY OPERATIONS FLOOD RESPONSE AND POST FLOOD RESPONSE**

To provide emergency flood response and post flood response assistance as required to supplement State and local efforts and capabilities in time of flood coastal storm.

### **Contact Information:**

Commander  
US Army Corps of Engineers Attn: CECW - OE  
Washington, DC 20314-1000  
(202) 272-0251

## **FEDERAL EMERGENCY SHELTER GRANTS PROGRAM FOR THE HOMELESS**

Grants are for the provision of emergency shelter and essential support services to the homeless. Funds may be used for structural improvements to shelters, shelter operating expenses, furnishings and equipment, and other services.

### **Contact Information:**

Benefit Recovery & Special Program Economic Services Program  
1317 Winewood Blvd.  
Tallahassee, FL 32399-0700  
(850) 487-2966

## **HAZARD MITIGATION GRANT PROGRAM (HMGP)**

To prevent future losses of lives and property due to disasters; to implement State or local hazard mitigation plans; to enable mitigation measures to be implemented during immediate recovery from a disaster; and to provide funding for previously identified mitigation measures to benefit the disaster area.

# Pinellas County Local Mitigation Strategy

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**Contact Information:**

Director, Program Implementation Division Mitigation Directorate  
FEMA  
500 C Street SW Washington, DC 20472  
(202) 646-4621

**FLORIDA HURRICANE CATASTROPHE FUND (FHCF)**

The FHCF is a reinsurance program. Insurers that write residential property insurance on structures and their contents- 259 with more than \$900 billion in exposure as of 12/31/2001 - are required to participate and pay a premium based on their maximum hurricane exposure. Companies can select three coverage option levels - 45, 75, or 90 percent of covered losses above their retention. The unrestricted fund balance as of December 31, 2001, was approximately \$3.8 million.

**Funding Source:**

The State Board of Administration invests reimbursement premiums, collected from the participating insurers selling residential property insurance in Florida, in short-term securities.

The FHCF covers residential structures located in the State of Florida, including appurtenant structures and their contents. This includes commercial-residential, mobile home, tenants, condominium owners, and stand-alone inland marine policies. All other commercial property was exempted from the fund during the 1995 legislative session. Premiums paid by participating insurers into the fund may be included in policyholder rates the same as the expense of reinsurance. Companies must demonstrate to the Department of Insurance that there is no overlap between the FHCF premium included in their rate filing and their Acat load, covering either private reinsurance or catastrophe reserves being set aside on a taxable basis.

**Mitigation Implication:**

The FHCF would reduce the long-term economic impacts of hurricanes by maintaining the state's property insurance capacity through providing reimbursement to participating insurers for a portion of catastrophic hurricane losses. Furthermore, the FHCF supports implementation of hurricane mitigation projects through providing annual funding to the Florida Division of Emergency Management's Residential Construction Mitigation Program, as well as other local governments and state agencies' programs to reduce potential losses from hurricanes.

**Contact Information:**

The State Board of Administration administers the FHCF.  
Florida Hurricane Catastrophe Fund Florida State Board of Administration  
Hermitage Center, Suite 100  
1801 Hermitage Boulevard  
Tallahassee, FL 32308  
Telephone: (850) 413-1349; Web page: <http://www.fsba.state.fl.us/fhcf/>

**PHYSICAL DISASTER LOANS (BUSINESS AND INDIVIDUALS)**

To provide loans to businesses affected by declared physical type disasters for uninsured losses.

**Contact Information:**

Office of Disaster Assistance SBA  
409 3rd Street SW Washington, DC 20416  
(202) 205-6734

# Pinellas County Local Mitigation Strategy

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## **PUBLIC ASSISTANCE PROGRAM**

To provide supplemental assistance to States, local governments, and certain private nonprofit organizations to alleviate suffering and hardship resulting from major disasters or emergencies declared by the President.

**Contact Information:** Infrastructure Support Division Response and Recovery Directorate FEMA  
500 C Street SW Washington, DC 20472  
(202) 646-3026

## **Current Local Funding Sources**

The following table provides a synopsis of data obtained from reviewing each of the local governments in Pinellas County to identify local funding sources that have been used in the past to fund local mitigation related projects. This list contains funding sources that have been used as a match for federal grant programs as well as to fund non-federally funded local projects.

# Pinellas County Local Mitigation Strategy

**Table 11- 1: Local Funding Sources**

Funding Source	Description
Penny Sales Tax ("Penny for Pinellas")	This is a local option tax designed to raise revenues to plan, finance, construct, renovate and improve infrastructure such as roads, drainage, and parks.
Ad Valorem Tax	The ad valorem tax is levied based on the value of real and tangible personal property as of January 1 of each year and is intended to increase total revenue of local governments.
Surface Water Assessment Fee (County)	The fee is based on the total amount of a property's impervious surface and has been used to prepare a stormwater program and fund a wide range of drainage maintenance.
Housing and Rehabilitation Fund	Assistance in this category stems from Community Development Block Program funds and is used for rehabilitation for owner occupied homes.
Stormwater Fees/Assessments (cities)	Most cities within the unincorporated area has a dedicated funding source to fund stormwater services within their jurisdiction.
In-Kind Services	Services or equipment for projects provided by local individuals or groups in the community.
Impact Fees/ Development Exaction	Impact fees on new development such as: <ul style="list-style-type: none"> <li>• Water and Sewer Connection Fee;</li> <li>• Fire Impact Fee;</li> <li>• Law Enforcement Impact Fee;</li> <li>• Transportation Impact Fee; and</li> <li>• School Impact Fees are used for the purchase and construction of capital assets. (School impact fees may be remitted periodically to the County School Board).</li> </ul>
Tourist Tax Local Option	A local tax is levied on most rents, leases or lets, and living accommodations in hotels, motels, apartments, houses, and mobile homes (contracted for periods of less than six months or less) in promotion of tourism and tourist-type activities.
Revenue Bonds	This is revenue derived from the issuance of long-term debt, such as bonds or commercial paper. Proceeds are deposited into capital projects funds and/or debt service funds.
Permit Fees	This is revenue derived from the issuance of local licenses and permits. Exceptions include occupational licenses and building permits.

## Pinellas County Local Mitigation Strategy

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State Revenue Sharing	Two tax sources are earmarked for sharing with counties: 2.9 % of net cigarette tax collections; 41.3% of net intangible tax collections. Intangible tax collections provide 95% of total revenue shared with counties in this category.
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**APPENDIX 12**  
**CRITICAL FACILITIES**

# Pinellas County Local Mitigation Strategy

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## APPENDIX 12: CRITICAL FACILITIES

### Introduction

Pinellas County in coordination with the State Division of Emergency Management maintains a detailed inventory of critical facilities. These facilities, organized under the four major functions (Emergency Services, Human Services, Infrastructure, and Operations) with numerous categories as described below. These facilities are considered essential for Continuity of Government and Continuity of Operations. They represent public and private resources necessary to ensure public safety, emergency response and continuation of mission essential functions.



The list of critical facilities is exempt from public record under Florida Statute 119.07(1) for security purposes. The list and corresponding GIS map files will be provided to federal, state, regional and local agencies with emergency management responsibilities, but will not be provided in documents intended for public review. The maps of critical facilities are included in Attachment 12-1.

### Categories and Types of Facilities

#### EMERGENCY SERVICES

The medical, police, fire and rescue systems and personnel that are called upon when an individual or community is responding to a public health or safety incident where speed and efficiency are necessary. These facilities would also include hospitals and other critical care facilities, hazardous materials sites and correctional facilities, etc.

##### 1. Emergency Response

- EMS
- EOCs
- Fire Stations
- Law Enforcement
- Dispatch/ Call Centers

##### 2. Hazardous Materials

- List of Extremely Hazardous Materials (302 Facilities)<sup>1</sup>

##### 3. Healthcare Facilities

- Adult Family Care Home
- Assisted Living Facility
- Ambulatory Surgical Center
- Clinical Laboratory
- Crisis Stabilization Unit
- End-Stage Renal Disease

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<sup>1</sup> The Tampa Bay Local Emergency Planning Committee (LEPC), District 8, is charged with facilitating regional hazardous materials emergency response and compliance with hazardous materials reporting laws. Title III of the Superfund Amendments and Reauthorization Act (SARA), also known as the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), requires public and private facilities that use, produce or store extremely hazardous substances or hazardous chemicals, to report their inventories on an annual basis.

# Pinellas County Local Mitigation Strategy

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- Hospice
  - Hospital
  - Intermediate Care Facility
  - Residential Treatment Facility
  - Skilled Nursing Facility
  - Transitional Living Facility
- 4. Correctional Facilities**

## HUMAN SERVICES

- 1. Education**
- Public Schools and Private Schools
  - University/ College
- 2. Public Shelters**

## INFRASTRUCTURE

- 1. Communications/ Telecommunications**
- Radio / Mobile Communications Towers
  - Media: Television and Radio
  - Telecommunications resources (Networks and systems that support the transmission and exchange of electronic communications among and between end-users (such as networked computers)).
- 2. Community Resources**
- Attractions
  - Faith-based Facilities
  - Human Services
  - Libraries
  - Local Govt. Facilities
  - Relief Agencies
  - Stadiums
  - State Govt. Facilities
- 3. Energy**
- Fuel Facility – DOT
  - Fuel Facility – Along Evacuation Routes
  - Electric Power Plants
- 4. Utilities**
- Solid Waste Facility
  - Public Water Supply
  - Wastewater Facility
  - Sources of water
  - Reservoirs and holding facilities
  - Filtration and cleaning systems
  - Pipelines
  - Cooling systems
  - Other delivery mechanisms that provide for domestic and industrial applications
- 5. Transportation resources**
- Aviation ( Airports, Heliports/Helipads)
  - Rail (Freight and passenger)
  - Highway (major intersections)

# Pinellas County Local Mitigation Strategy

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- Aquatic (Major Ports, Seaplane Base)
- Support systems by which people and goods are moved from a point- of-origin to a destination point in order to support and complete matters of commerce

## **OPERATIONS**

### **1. Logistics**

- Logistical Staging Areas
- Points of Distribution

### **2. Military**

- National Guard
- MacDill AFB
- Coast Guard

Table 12-1 presents an overview of vulnerability of key critical facilities to different hazards addressed in the Hazards Analysis. For a detailed listing of critical facilities and vulnerability assessments, please refer to the critical facility data base and vulnerability analyses (FOUO) under separate cover.

## Pinellas County Local Mitigation Strategy

### Table 12- 1: Critical Facilities Vulnerabilities

Type of Facility	Coastal Erosion	Coastal Flooding	Flooding	Hurricanes	Sinkholes	Winter Storms	Wildfire	HazMat Variable	HazMat Fixed	Special Events	Total Facilities
Communications	2	16	12	16	0	10	12	29	29	4	29
Community Resources	1	49	28	49	6	10	7	91	91	33	91
Correctional Facilities	0	8	2	8	0	1	2	10	10	6	10
Education	2	68	24	68	32	8	5	187	187	29	187
Emergency Services	1	75	38	75	7	24	12	121	122	25	122
Energy	0	13	4	13	2	0	3	24	24	5	24
Hazardous Materials	8	366	167	366	29	55	54	589	593	165	593
Healthcare Facilities	0	255	97	255	88	22	29	620	621	156	621
Infrastructure	2	66	40	66	23	4	14	174	174	28	174
Logistics	2	36	19	36	2	10	6	52	53	1	53
Military	0	3	4	3	0	1	1	6	6	4	6
Shelters	0	7	0	7	7	0	0	30	30	8	30
Transportation	1	9	6	9	1	1	3	21	21	6	21
<b>Total Facilities</b>	19	971	441	971	197	146	148	1954	1961	470	1961

**Notes:**

- Coastal Erosion - all facilities within FEMA V-zones
  - Coastal Flooding - all facilities within storm surge zones
  - Flooding - all facilities within FEMA flood zones (A/B/V)
  - Hurricanes - all facilities within storm surge zones
  - Sinkholes - all facilities within historic sinkhole density distribution
  - Winter Storms - all facilities within storm surge category 1
  - Wildfires - all facilities within the wildfire/urban interface
  - HazMat Variable - all facilities within 2 miles of railway or within 2 miles of evacuation routes
  - HazMat Fixed - all facilities within 5 miles of a Section 302 facility
  - Special Events - all facilities within 2 miles of a special event facility
- (Tropicana Field, Downtown Clearwater Courthouse, Pinellas County Jail Complex - 49th St)

# Pinellas County Local Mitigation Strategy

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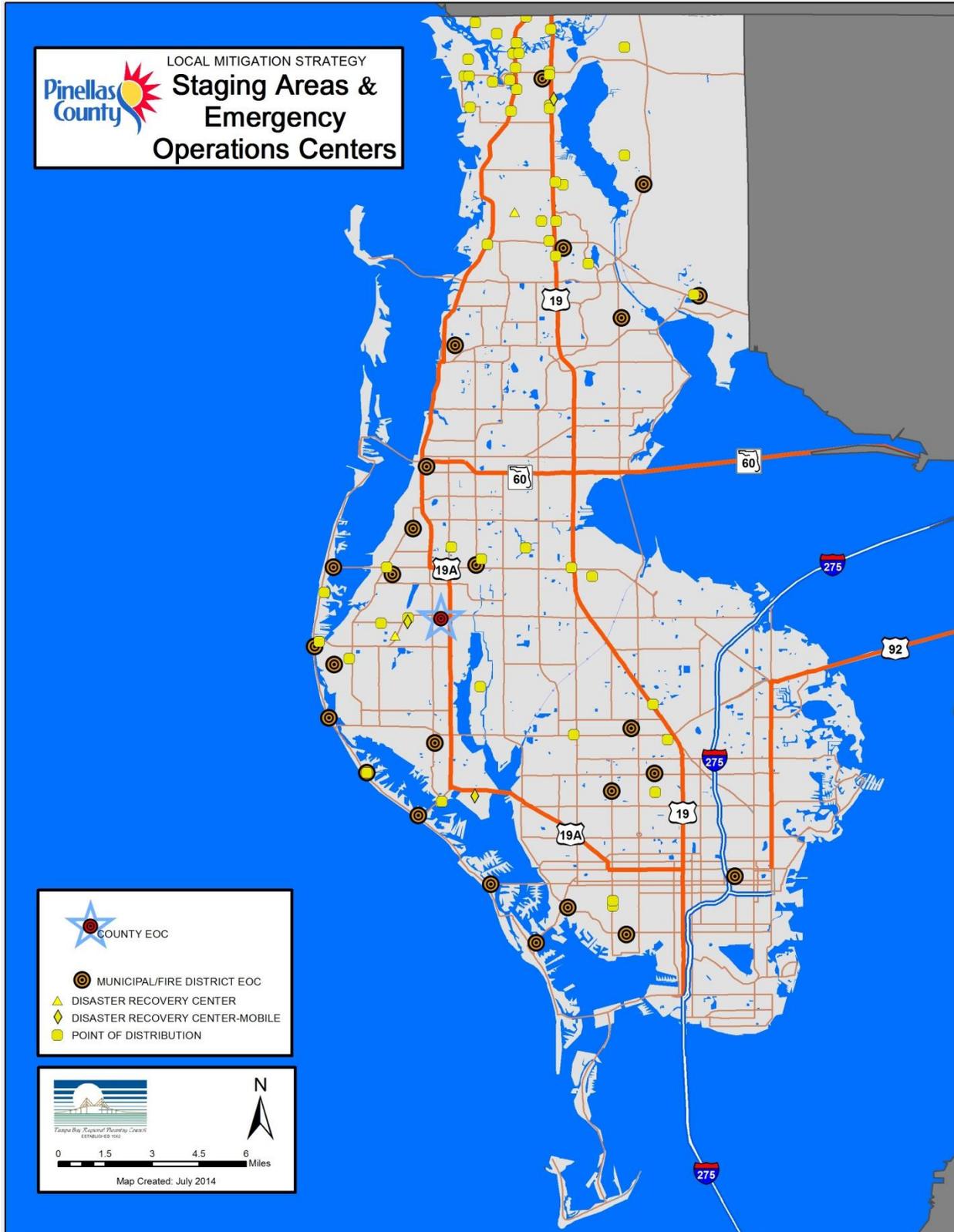
## Maps and GIS Files

Once the data base was updated and geo-coded, some of the key facilities were mapped. The data base and GIS map files were provided to County and municipal emergency management and LMS representatives for planning purposes. Map files include the following:

Map 12-1	Staging Areas/ Emergency Operations Centers
Map 12-2	Federal, State and Local Buildings
Map 12-3a	Fire Stations
Map 12-3b	Emergency Medical Services
Map 12-4	Hospitals
Map 12-5	Water Treatment Facilities
Map 12-6	Wastewater Treatment Facilities
Map 12-7	Public & Private Schools
Map 12-8	Group Care Facilities
Map 12-9	Evacuation Shelters
Map 12-10	Air Transportation
Map 12-11	Radio/TV Towers

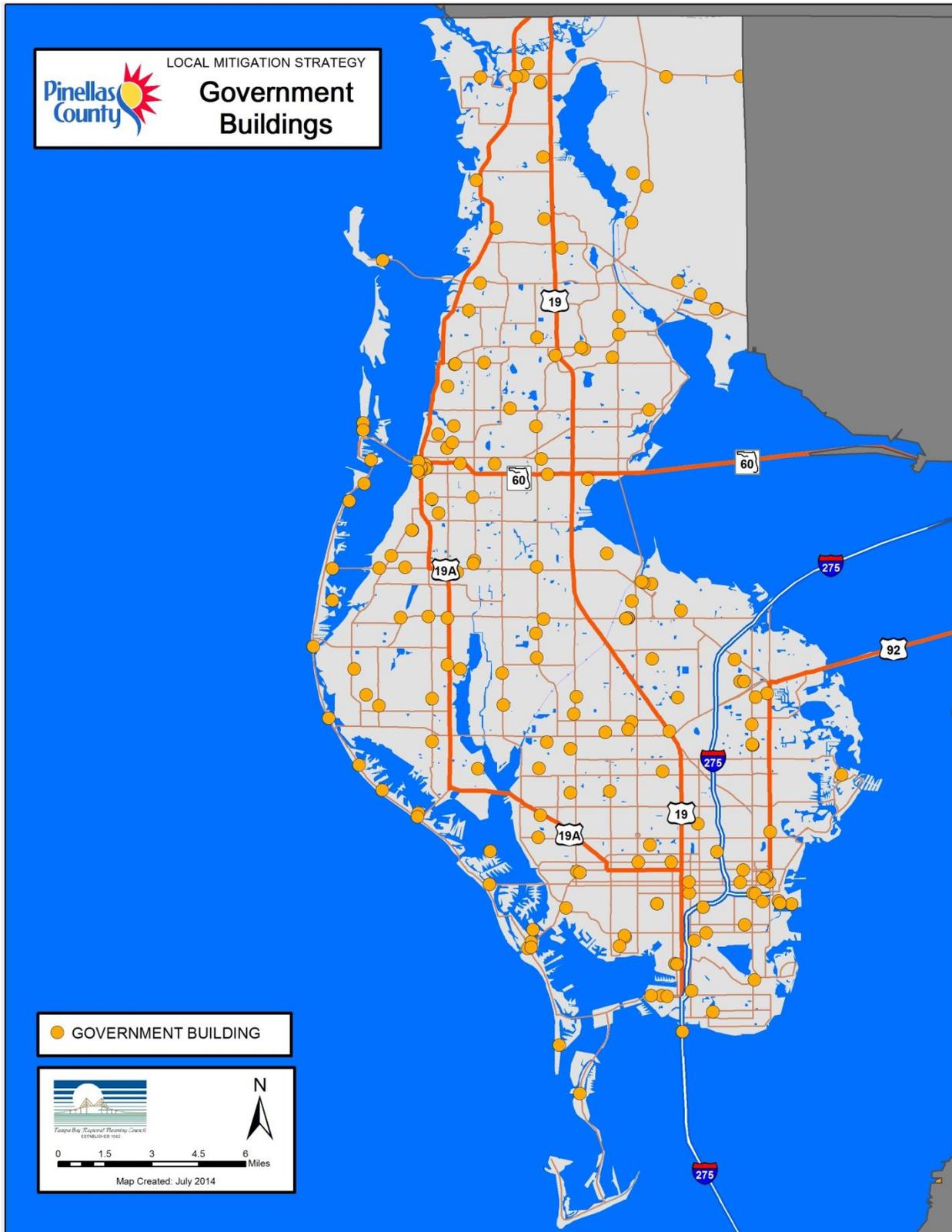
# Pinellas County Local Mitigation Strategy

## Map 12- 1: Staging Areas/ EOCs



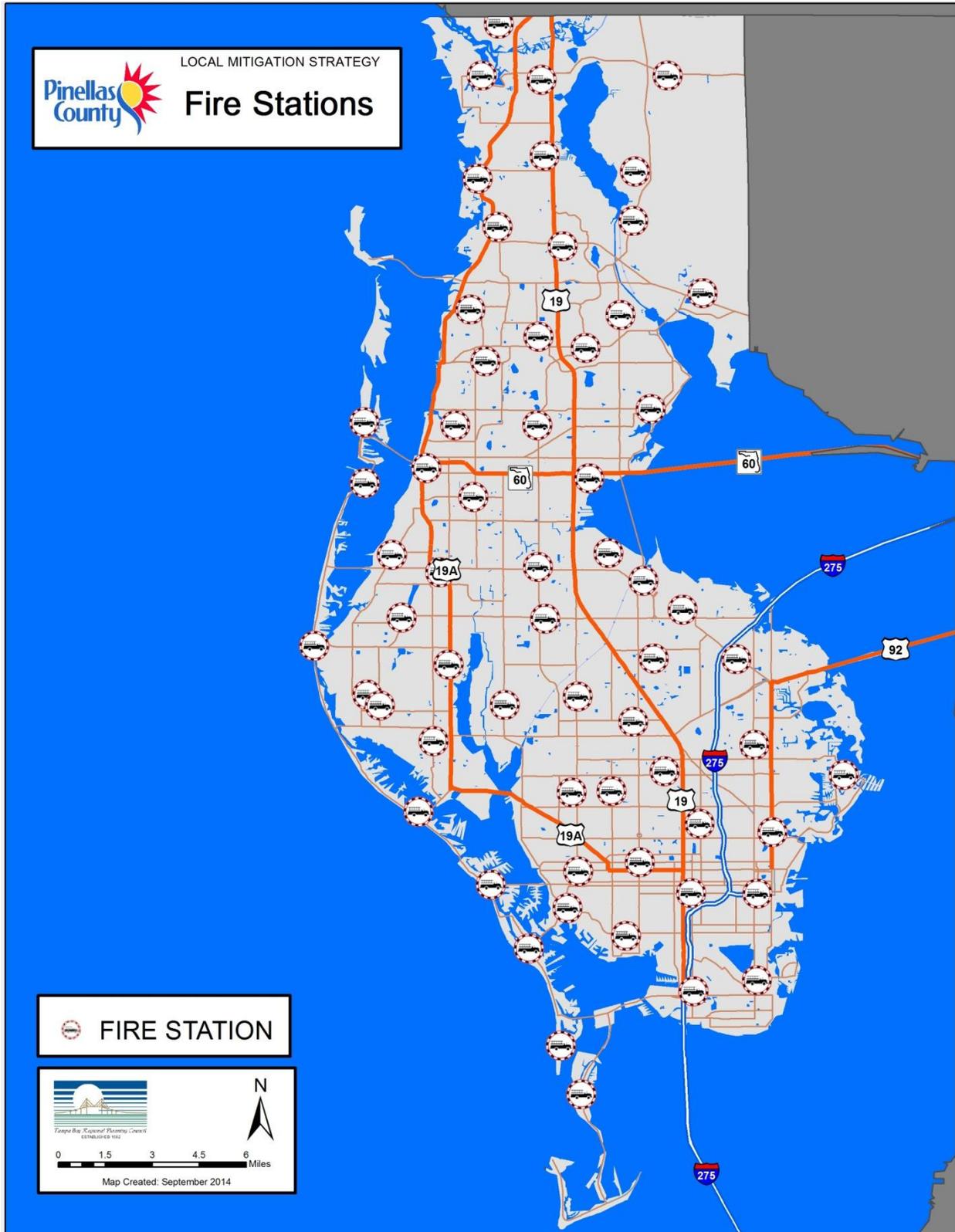
# Pinellas County Local Mitigation Strategy

## Map 12- 2: Federal, State and Local Government Buildings



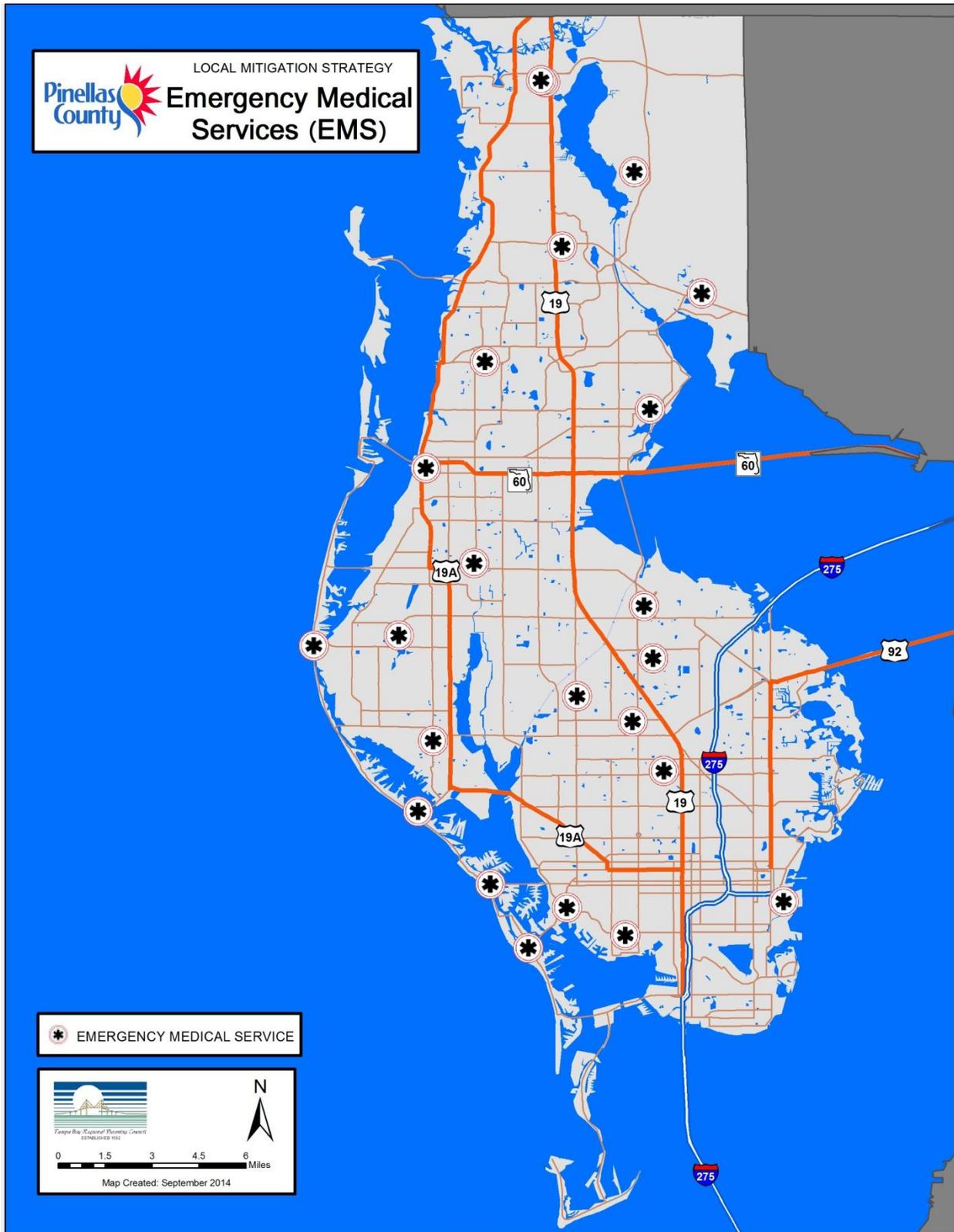
# Pinellas County Local Mitigation Strategy

## Map 12- 3: Fire Stations



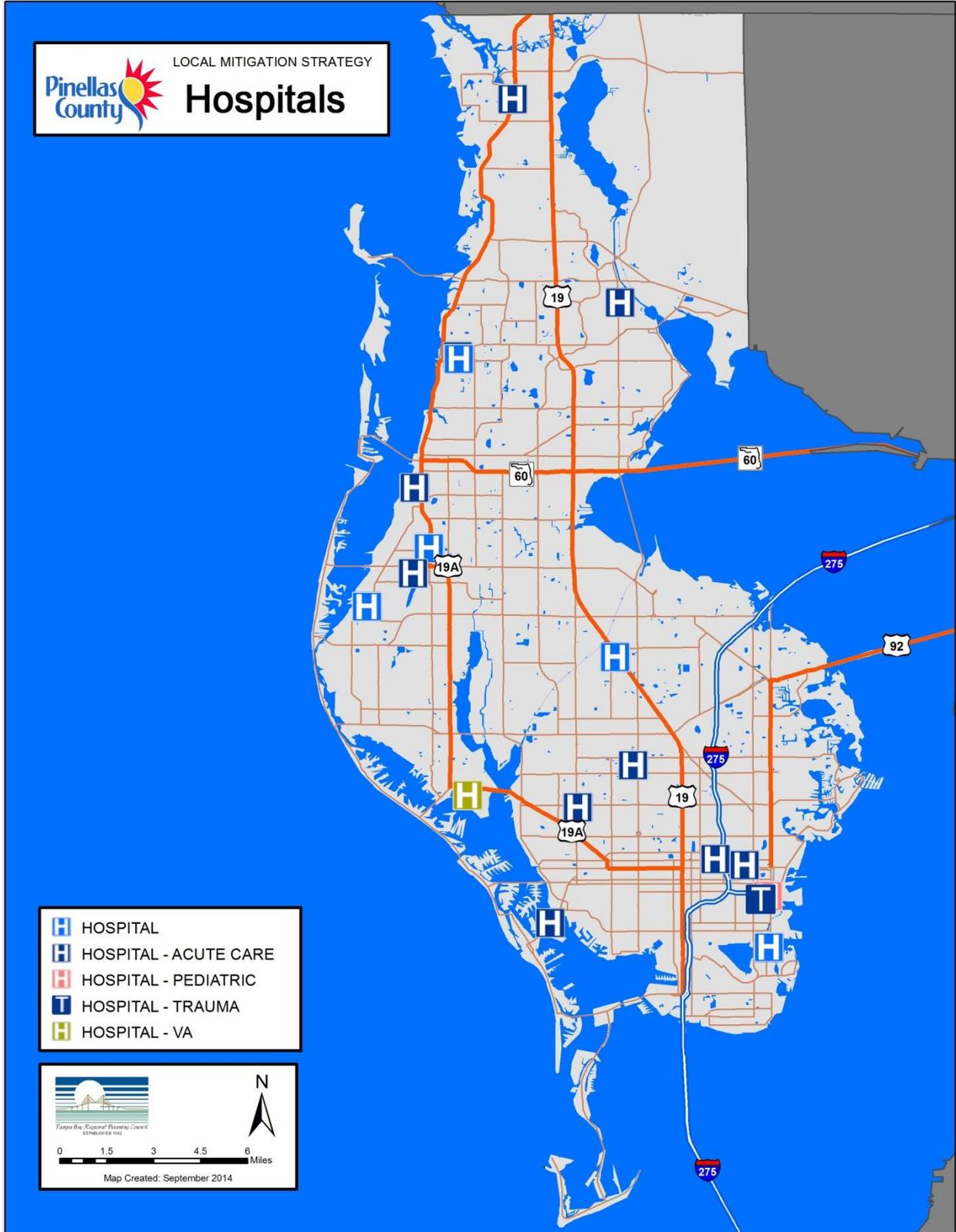
# Pinellas County Local Mitigation Strategy

## Map 12- 4: Emergency Medical Services (EMS)



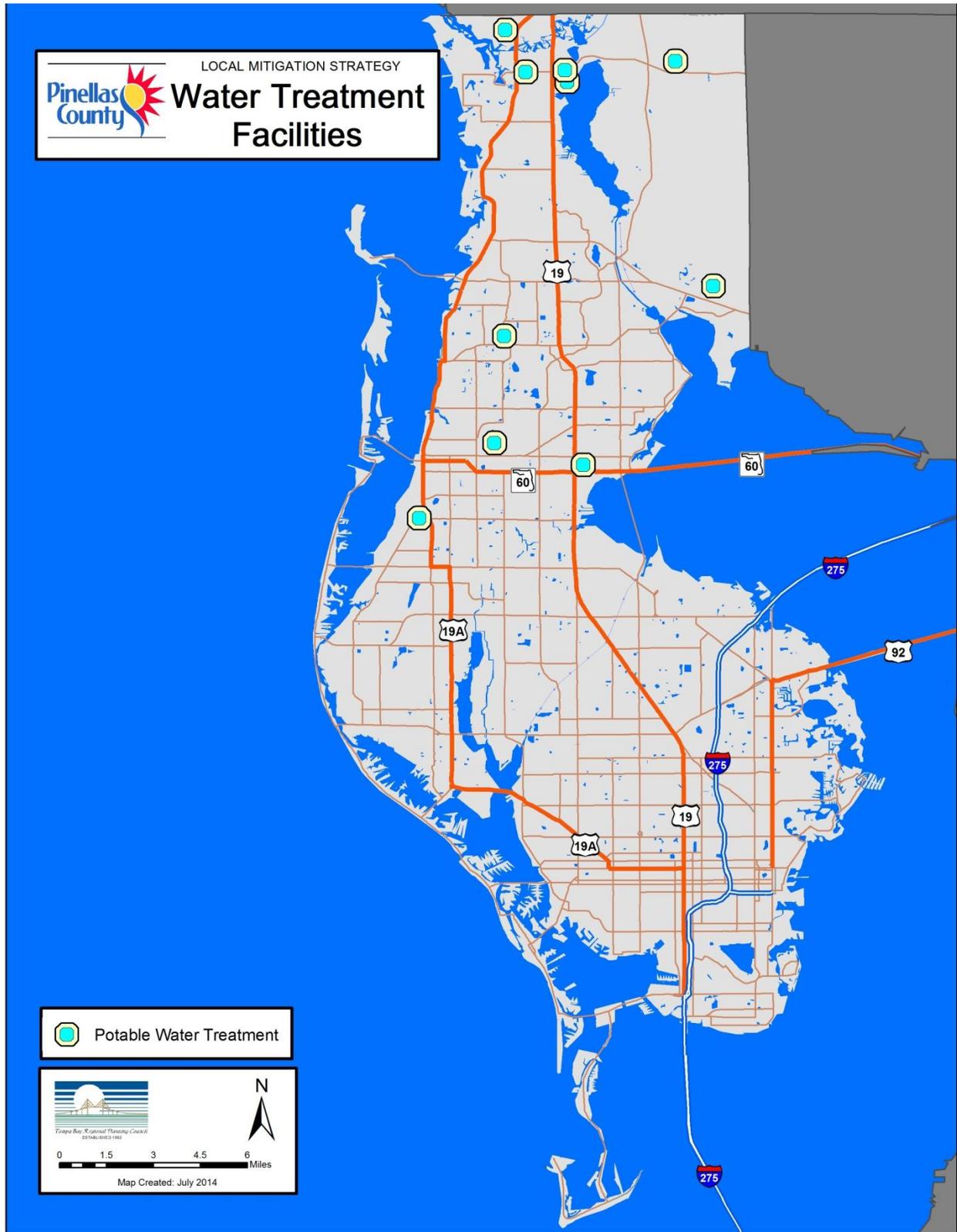
# Pinellas County Local Mitigation Strategy

## Map 12- 5: Hospitals



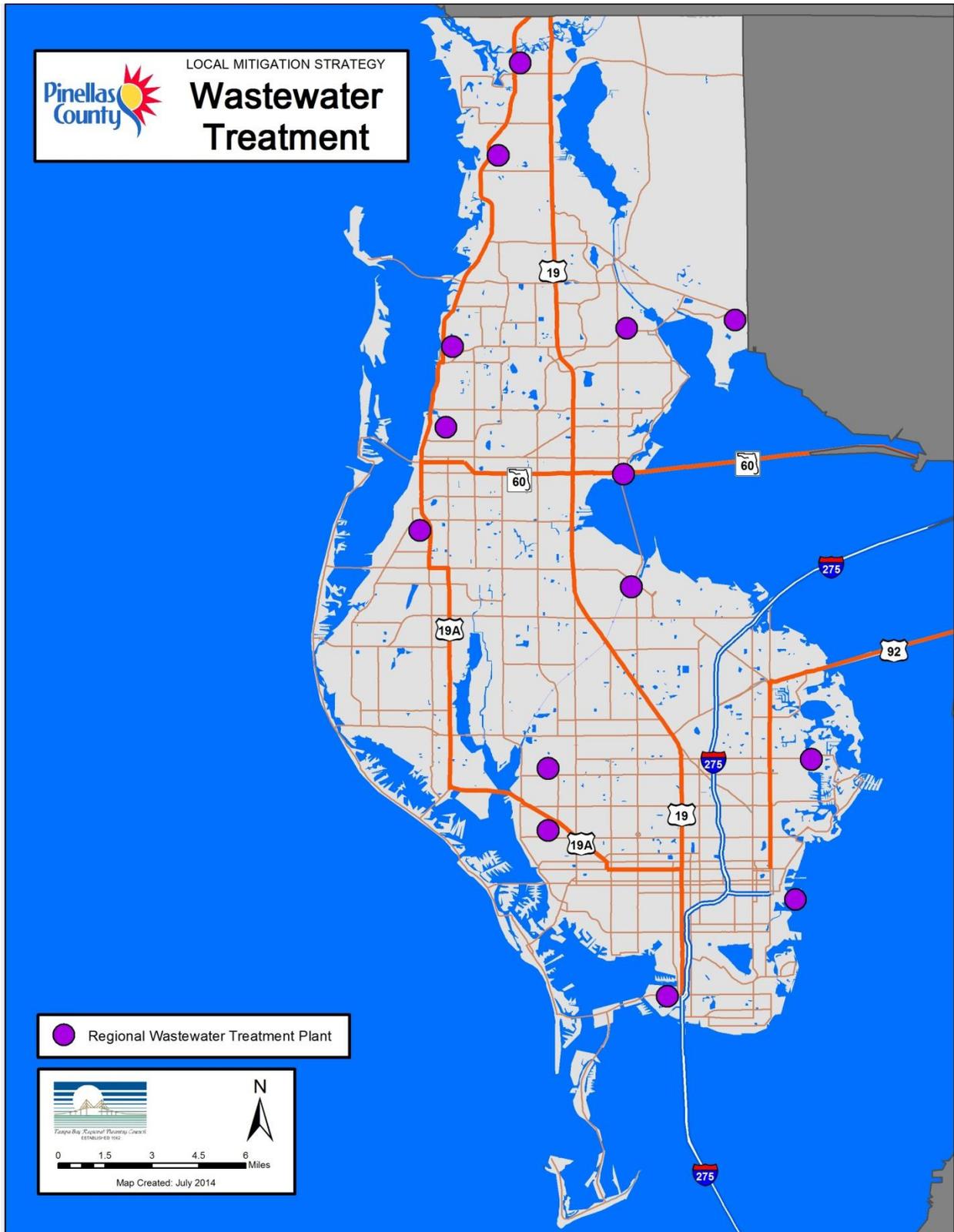
# Pinellas County Local Mitigation Strategy

## Map 12- 6: Water Treatment Facilities



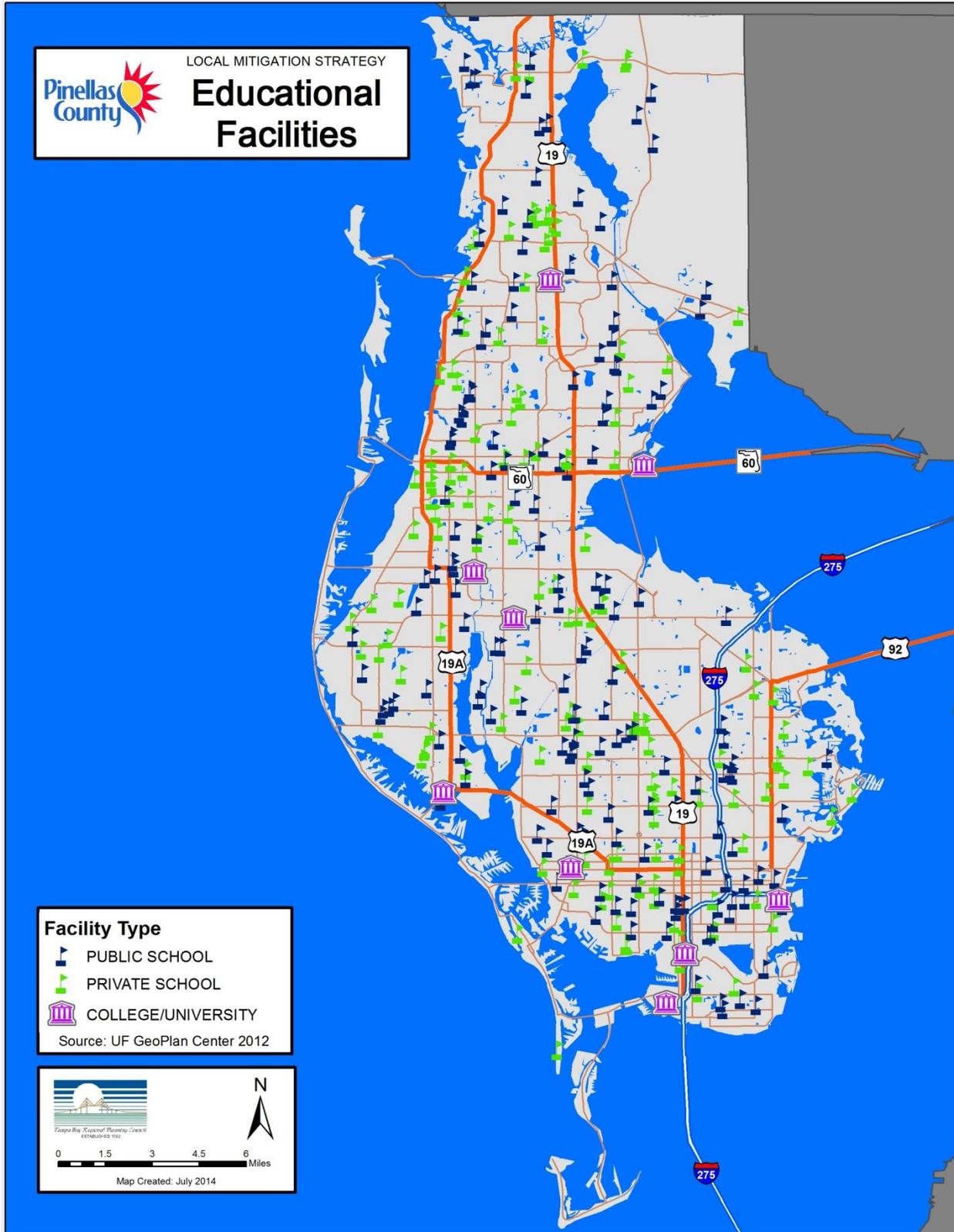
# Pinellas County Local Mitigation Strategy

## Map 12- 7: Wastewater Treatment Facilities



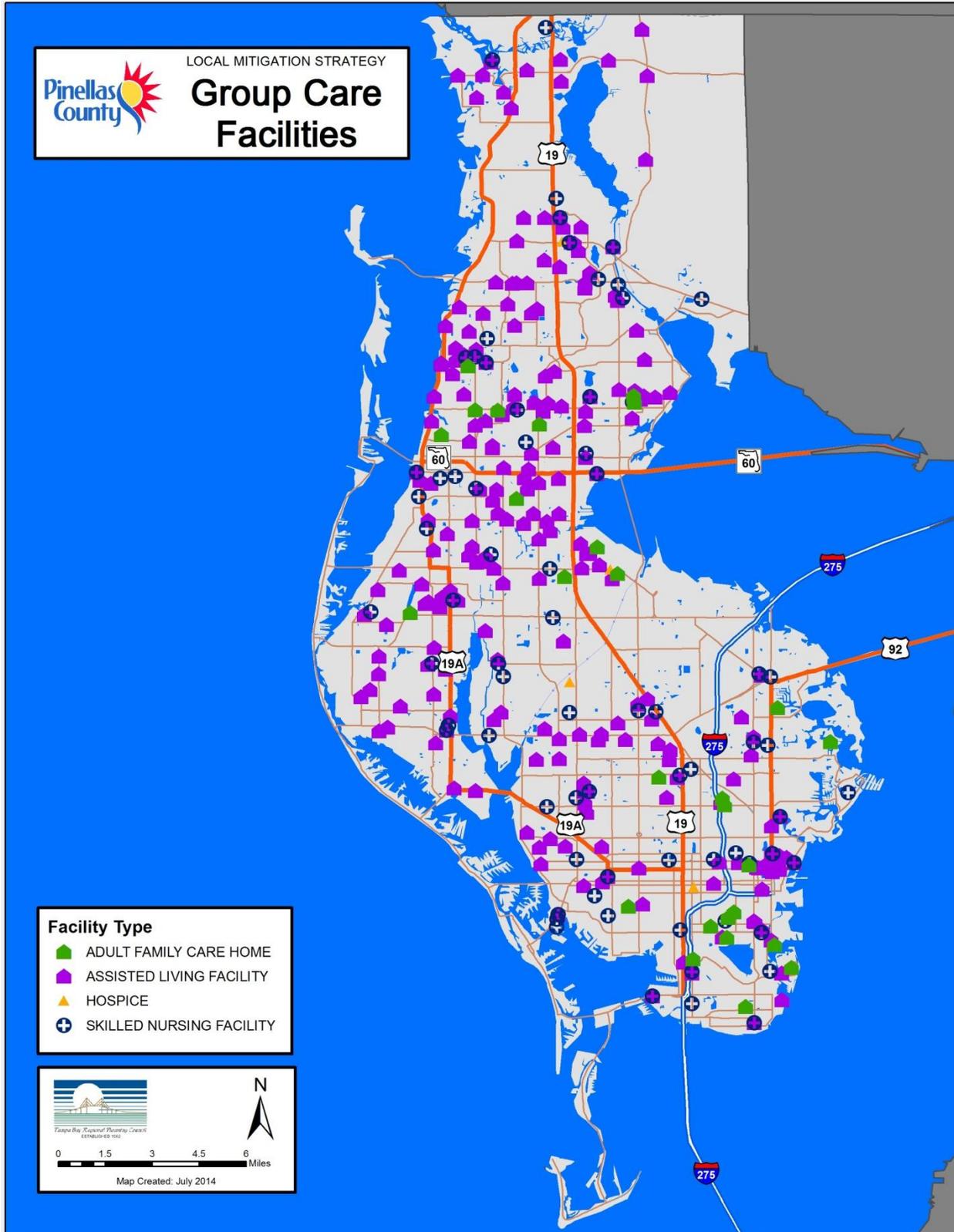
# Pinellas County Local Mitigation Strategy

## Map 12- 8: Public and Private Schools, Colleges and Universities



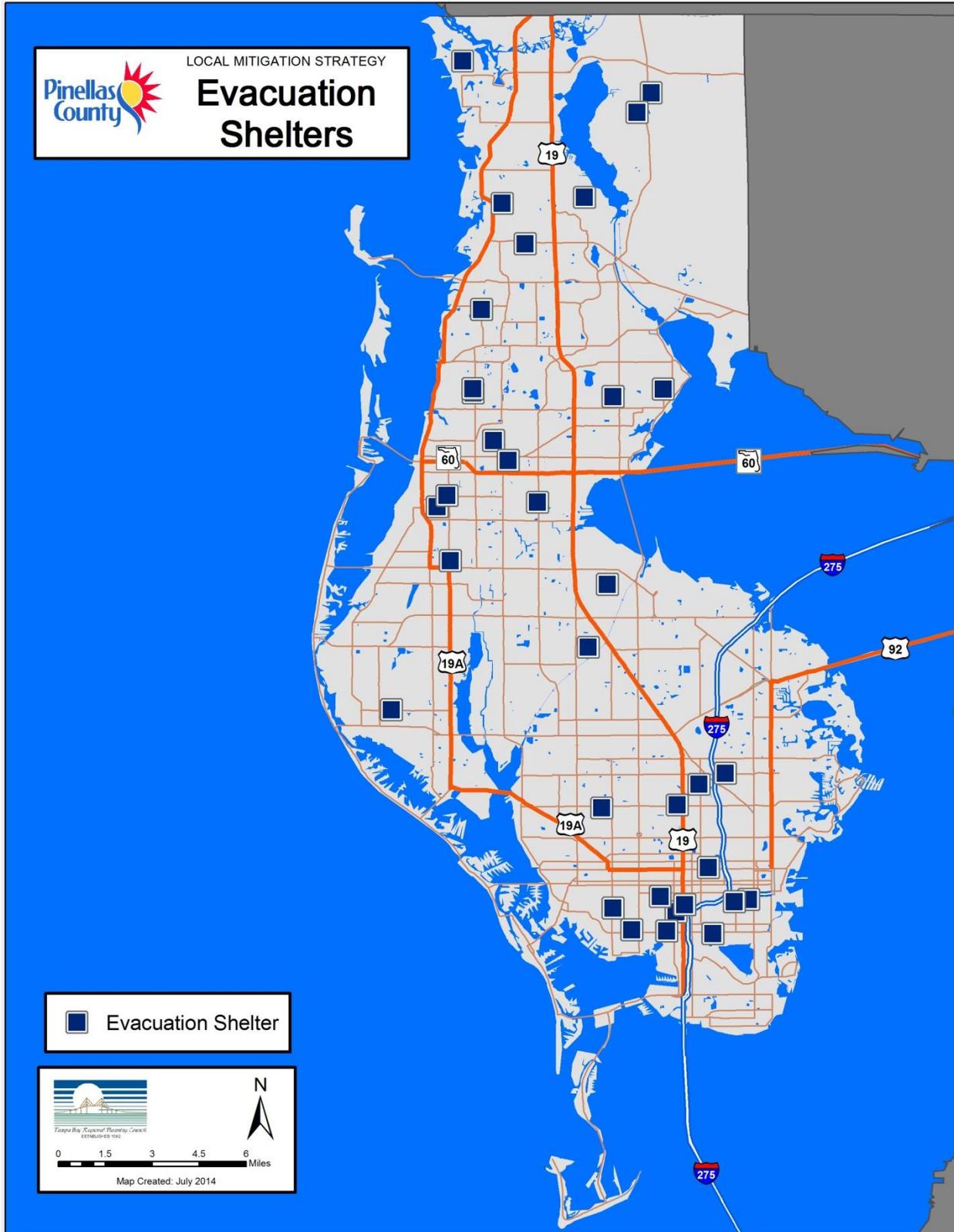
# Pinellas County Local Mitigation Strategy

## Map 12- 9: Skilled Nursing Facilities, Assisted Living Facilities and Group Homes



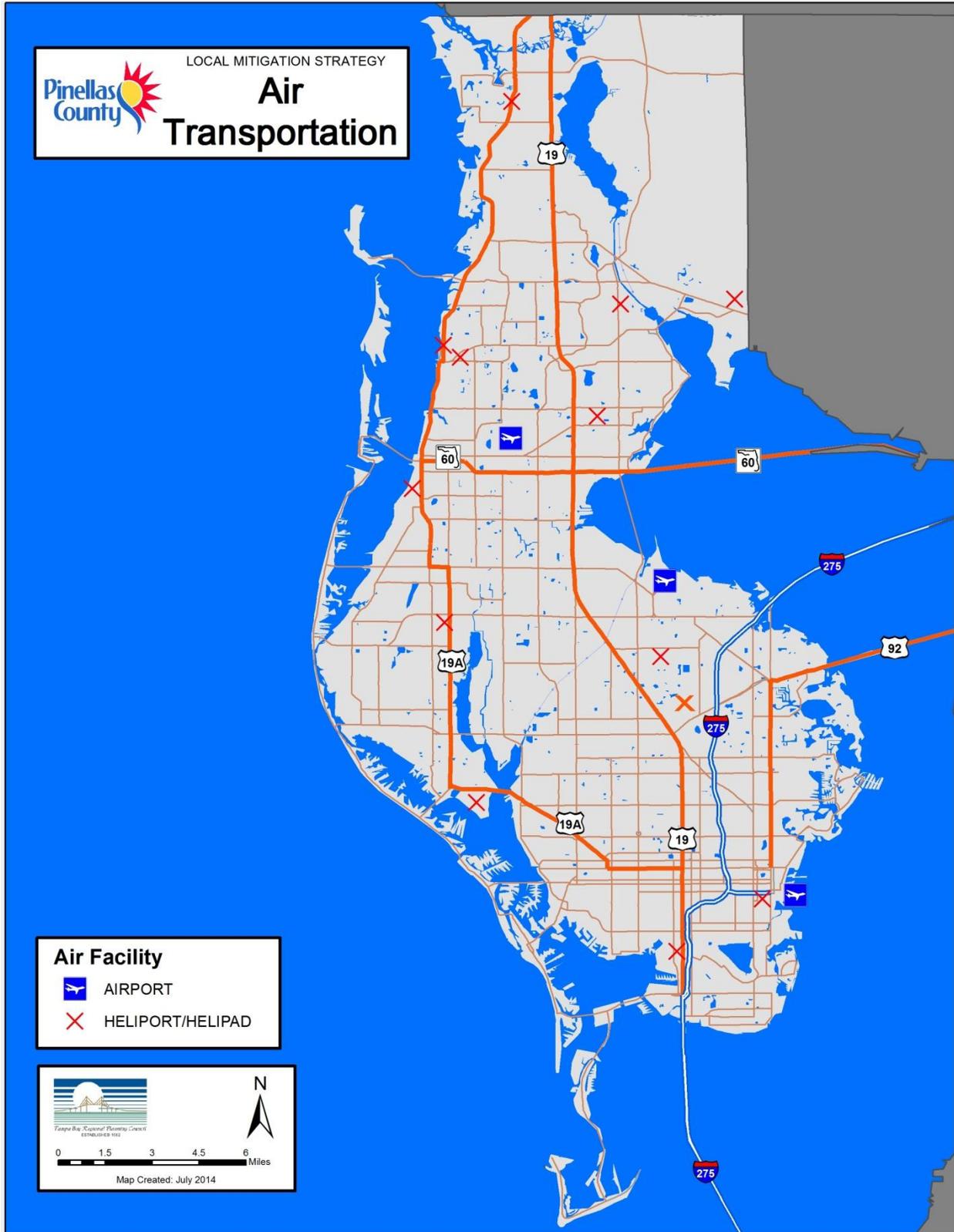
# Pinellas County Local Mitigation Strategy

## Map 12- 10: Risk / Evacuation Shelters



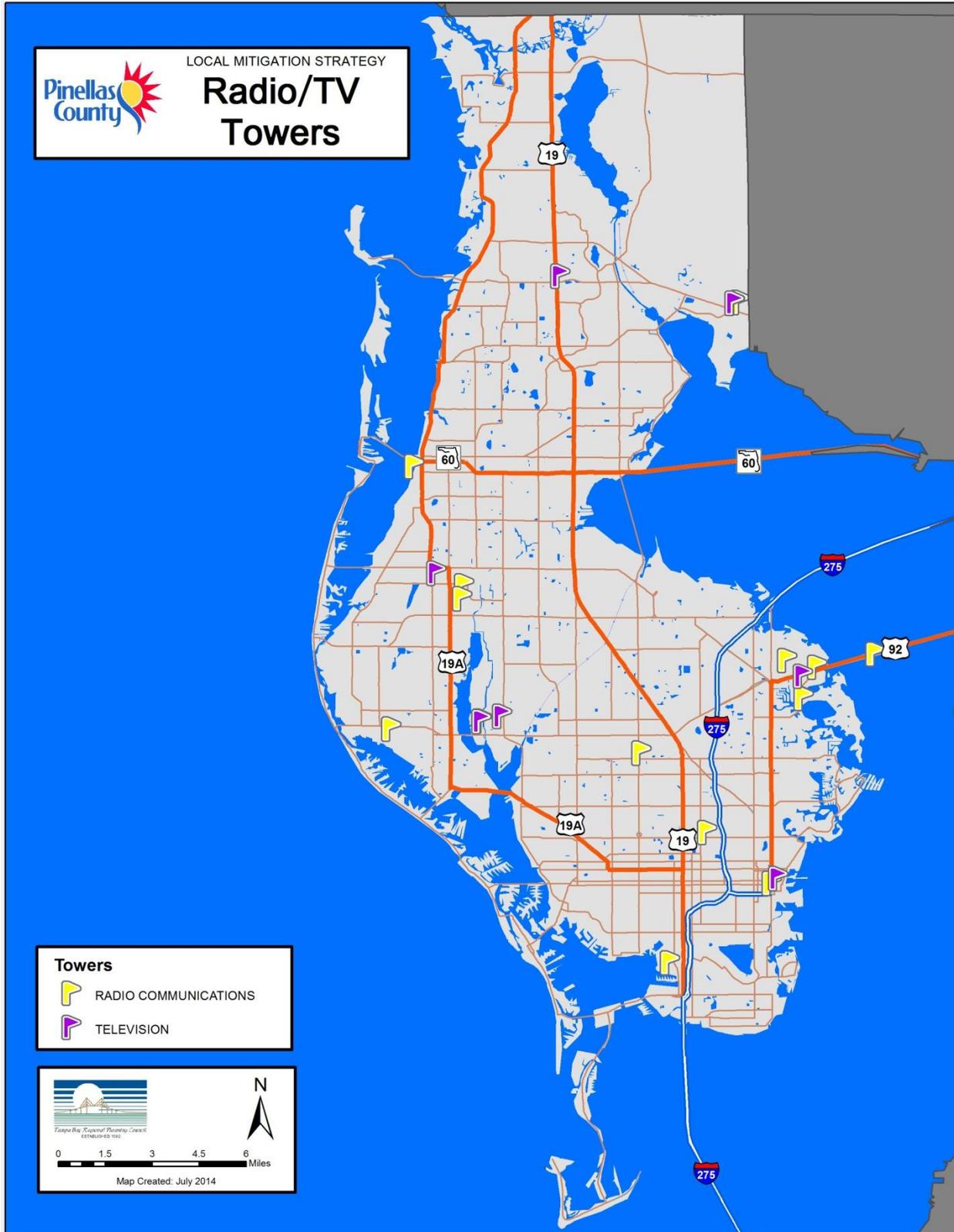
# Pinellas County Local Mitigation Strategy

## Map 12- 11: Air Transportation



# Pinellas County Local Mitigation Strategy

## Map 12- 12: Radio/ TV/ Communications Towers



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## ATTACHMENT 12-1 Critical Facility Vulnerability Analysis

Specific attention was paid to health care facilities such as hospitals and nursing homes; emergency response agencies, hazardous materials, mobile home parks, schools and colleges and community centers. Where possible, communications resources and community infrastructure /utilities such as water and waste-water facilities were located by latitude and longitude and overlaid on the storm tide limits map. Each facility has the name, location, lat/long coordinates, description, critical code and results of the 2010 surge analysis based on the most accurate topographic data and the SLOSH model.

The Critical Facility Inventory (Database) includes a comprehensive list of critical facilities identified by the State and County Emergency Management Agencies. This inventory is not published as part of the report. However, selected facilities which may require evacuation or mitigation are identified in the tables and maps which follow. The tables indicate vulnerability from storm surge (based on the SLOSH model), freshwater flooding (based on the FEMA Flood Maps) and wildfire (Wildfire Interface/Levels of Concern).

The illustrations below identify the potential storm surge heights on county landmarks. These illustrations are provided for public information purposes only.

**Figure 12-1-1  
St. Petersburg Pier**



**Figure 12-1-2**  
**Helias Restaurant, Tarpon Springs, FL**



**Figure 12-1-3**  
**Gulfport Casino, Gulfport, FL**



# Pinellas County Local Mitigation Strategy

**Table 12-1-1  
Pinellas County Health Care Vulnerability Assessment**

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
ALF	80th Place	5551 80 Place	Pinellas Park	33781	12.23	3	C	100	N
ALF	A Rose Garden	1655 Curlew Road	Palm Harbor	34683	40.26		X	OUT	N
ALF	Abigail Manor	1655 Bayshore Blvd.	Dunedin	34698	7.88	2	B	100	N
ALF	Adrian Manor	2168 9 Avenue North	Saint Petersburg	33713	41.42		X	OUT	N
ALF	Adult Home Care Villa, Inc.	4760 Eighth Avenue, South	Saint Petersburg	33711	39.24		X	OUT	N
ALF	Albina Manor	820 15 Th Street N.	Saint Petersburg	33705	48.34		X	OUT	N
ALF	Alcove " De" Neptune Board & Care Facility	4360 Neptune Drive	Saint Petersburg	33705	4.41	1	A	100	N
ALF	Alcove Assisted Living Facility	2801 4th Street N.	Saint Petersburg	33704	29.95		X	OUT	N
ALF	Alexandra House	1014 Osage Street	Clearwater	33755	17.50	4	D	OUT	N
ALF	Alf Phillippe Ridge	1055 Phillippe Pkwy	Safety Harbor	34695	14.78	3	C	OUT	N
ALF	Allegro At College Harbor (The)	4600 54th Avenue, South	Saint Petersburg	33711	0.93	1	A	100	N
ALF	Allegro At East Lake,L.L.C. (The)	1755 East Lake Road	Tarpon Springs	34688	22.44	4	C	OUT	N
ALF	Ambleside Manor	585 Casler Avenue	Clearwater	33755	67.87		X	OUT	N
ALF	Amelia's House	7175 53 Street North	Pinellas Park	33781	16.22	4	D	OUT	N
ALF	Amer Home	1918 Barrington Drive, W.	Clearwater	33763	62.23		X	OUT	N
ALF	Angel Heart Adult Care	2417 21 St South	Saint Petersburg	33712	27.09		X	OUT	N
ALF	Angel Heart Manor	334 6th Avenue North	Saint Petersburg	33701	42.23		X	OUT	N
ALF	Angel's Touch	2446 Nursery Road	Clearwater	33764	14.02	3	C	OUT	Y
ALF	Arbor Oaks At Tyrone	1701 68 Street, North	Saint Petersburg	33710	22.84		X	OUT	N
ALF	Arden Courts Manorcare Health Services	300 Highland Avenue, Ne	Largo	33770	11.12	3	D	OUT	N
ALF	Arden Courts Manorcare Health Services-P	2895 Tampa Road	Palm Harbor	36484	50.13		X	OUT	N
ALF	Arden Courts Manorcare Health Services-S	9300 Antilles Street, North	Seminole	33776	51.12		X	OUT	N
ALF	Ashlee's Place	12680 95th Street N.	Largo	33773	10.60	2	B	500	N
ALF	Assisted Living Of Pinellas Inc.	6409 10th Street	Saint Petersburg	33702	6.13	2	B	100	N
ALF	Autumn Haven	12392 88 Th Ave North	Seminole	33772	52.79		X	OUT	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
ALF	Autumn House	880 17th Ave., South	Saint Petersburg	33701	25.92		X	OUT	N
ALF	Azalea Manor Of St. Petersburg	112 12th Avenue North	Saint Petersburg	33701	31.96		X	OUT	N
ALF	B & H Care Homes, Inc.	235 12th Avenue, N.	Saint Petersburg	33701	35.77		X	OUT	N
ALF	Balmoral	2960 Tampa Road	Palm Harbor	34684	47.65		X	OUT	N
ALF	Barrington (The)	901 Seminole Boulevard	Largo	33770	37.21		X	OUT	N
ALF	Barrington Terrace	333 16th Avenue Southeast	Largo	33771	19.31	5	E	OUT	N
ALF	Bay Home	5200 17th Street North	Saint Petersburg	33714	24.18		X	OUT	N
ALF	Bay Pines Manor	10591 Bay Pines Blvd.	Saint Petersburg	33708	6.58	2	B	100	N
ALF	Baytree Lakeside	6411 46th Avenue North	Saint Petersburg	33709	22.16		X	OUT	N
ALF	Bayview Gardens	2855 Gulf To Bay Blvd.	Clearwater	33759	28.01		X	OUT	N
ALF	Bee Haven Home	675 10th Place North	Safety Harbor	34695	19.36	4	D	OUT	N
ALF	Belle Vista Bluffs	1138 Rosemary Drive	Largo	33770	14.01	5	E	OUT	N
ALF	Belle Vista Retirement Home	1453 Belleair Road	Clearwater	33756	44.60		X	OUT	N
ALF	Belleair Country House	2298 Belleair Road	Clearwater	33764	12.41	3	C	OUT	Y
ALF	Belleair Manor	1711 Balmoral Drive	Clearwater	33756	34.16		X	100	N
ALF	Best Care	1430 Palmetto Street	Clearwater	33755	20.53		X	500	N
ALF	Bethany Terrace Assisted Living Center	2549 Keystone Road	Tarpon Springs	34689	19.13	5	D	OUT	Y
ALF	Bimini Manor	3791 67 Avenue, North	Pinellas Park	33781	16.74	4	D	500	N
ALF	Blake Glenn	3933 Erne Street	Palm Harbor	34683	13.35	3	C	OUT	N
ALF	Bloomfield Manor	2774 Wesleyan Dr	Palm Harbor	34684	61.29		X	OUT	N
ALF	Bon Secours Place At St Petersburg	10401 Roosevelt Blvd.	Saint Petersburg	33716	4.91	1	A	100	N
ALF	Butterfly Manor (The)	660 3rd Avenue South	Saint Petersburg	33701	37.43		X	OUT	N
ALF	Cabot Cove Of Largo	455 Belcher Rd	Largo	33770	16.11	4	D	OUT	N
ALF	Canterbury Dreams	675 Canterbury Rd	Clearwater	33764	74.11		X	OUT	N
ALF	Carden House	2349 Central Avenue	Saint Petersburg	33713	48.67		X	OUT	N
ALF	Care First	1325 4th Street, North	Saint Petersburg	33701	29.98		X	OUT	N
ALF	Caring Angels Inc	6405 40th Avenue, North	Saint Petersburg	33709	17.09	5	E	100	N
ALF	Casa Buena	6021 1st Avenue North	Saint Petersburg	33710	18.97	5	E	OUT	N
ALF	Casa Grande Manor	1557 Robinson Drive	Saint Petersburg	33710	20.29	5	E	OUT	N
ALF	Chateau Blanc	711 Casler Avenue	Clearwater	33755	66.44		X	500	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
ALF	Chateau Palms Manor, Inc.	1679 Tampa Road	Palm Harbor	34683	58.27		X	OUT	N
ALF	Christian Manor Of Clearwater, Inc.	1845 N. Keene Road	Clearwater	33755	57.46		X	OUT	N
ALF	Clearwater Manor	1815 Star Drive	Clearwater	33765	64.03		X	OUT	N
ALF	Clinton Crest Retirement Hotel	343 4th Avenue North	Saint Petersburg	33701	37.24		X	OUT	N
ALF	Comfort Manor Inc.	8087 25 Avenue North	Saint Petersburg	33710	17.36	4	E	OUT	N
ALF	Comfort Village	15354 George Blvd.	Clearwater	33760	14.64	3	C	OUT	N
ALF	Communicare At Countryside	2769 Whitney Rd	Clearwater	33760	16.73	4	C	OUT	N
ALF	Communicare At Poinciana Terrace	2141 Poinciana Terrace	Clearwater	33760	11.17	3	C	OUT	N
ALF	Communicare At Whitney Acres	2769 Whitney Road	Clearwater	33760	16.73	4	C	OUT	N
ALF	Communicare At Whitney Pines	2785 Whitney Road	Clearwater	33760	15.93	4	C	OUT	N
ALF	Communicare Inc. Whitney Oaks	2769 Whitney Road	Clearwater	33760	16.73	4	C	OUT	N
ALF	Coral Oaks	900 West Lake Road	Palm Harbor	34684	68.00		X	OUT	N
ALF	Country Inn	7600 78th Avenue North	Pinellas Park	33781	13.23	3	C	500	N
ALF	Country Oaks	3240 Cr #1	Dunedin	34698	56.56		X	OUT	N
ALF	Countryside Haven	6960 Cr 95	Palm Harbor	34684	40.18		X	500	N
ALF	Cozy Coachman	2700 State Road 590	Clearwater	33759	50.46		X	OUT	N
ALF	Curlew Care	2730 Curlew Road	Clearwater	33761	75.41		X	OUT	N
ALF	Curlew Care Home	1722 Curlew Road	Dunedin	34698	28.63		X	OUT	N
ALF	Cypress Gardens At Dunedin	880 Patricia Avenue	Dunedin	34698	29.02		X	OUT	N
ALF	Cypress Manor Assisted Living Facility	631 N Jasmine Avenue	Tarpon Springs	34689	21.02	4	B	OUT	Y
ALF	Cypress Palms Assisted Living Facility	400 Lake Avenue N.E.	Largo	33771	15.48	4	D	OUT	N
ALF	Diamond Spring Retirement Home	7873 Sundown Drive	Saint Petersburg	33709	9.19	2	B	100	N
ALF	Doc's Resort	4400 Winding Willow Drive	Palm Harbor	34683	63.22		X	OUT	N
ALF	Dolphin House, Inc. (The)	9670 - 134 Street, North	Seminole	33776	54.17		X	OUT	N
ALF	Dreams Within	857 Harbor Hill Dr	Safety Harbor	34695	42.62		X	OUT	N
ALF	Duey's Place	6285 71st Street, N.	Pinellas Park	33781	13.03	3	C	OUT	N
ALF	Dunedin Assisted Living Facility	534 Howell Street	Dunedin	34698	16.48	4	D	OUT	N
ALF	Eagles	6928 122nd Drive	Largo	33773	13.04	4	D	500	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
ALF	East Lake Manor, Inc.	722 East Lake Road	Tarpon Springs	34689	25.06	5	E	OUT	Y
ALF	Easton Home	8233 44th Street North	Pinellas Park	33781	13.45	3	C	OUT	N
ALF	Edgewater Retirement Manor	2057 Edgewater Drive	Clearwater	33755	7.26	2	B	100	N
ALF	Edinburgh Square	1059 Virginia Street	Dunedin	34698	24.72		X	OUT	N
ALF	Elzaida's Caring Hands, Inc.	1617 Madrid Drive, Sw	Largo	33778	67.95		X	OUT	N
ALF	Elzaida's Tender Care	804 South Belcher Road	Clearwater	33764	71.59		X	OUT	N
ALF	Emerald Gardens Inc.	2159 McMullen Booth Road	Clearwater	33759	27.70		X	OUT	N
ALF	Encore Senior Village At Clearwater	620 Belleair Road	Clearwater	33756	43.47		X	OUT	N
ALF	Evergreen Manor Retirement Home	3297 S.R. 580	Safety Harbor	34695	50.38		X	OUT	Y
ALF	Fair Oaks A.L.F.-96	738 Country Club Road North	Saint Petersburg	33710	12.47	3	C	100	N
ALF	Fairway Chalet	905 Virginia Avenue	Tarpon Springs	34689	11.96	2	A	500	N
ALF	Family Care Free House	1875 Allendale Drive	Clearwater	33760	13.92	3	C	OUT	N
ALF	Farmer's Retirement Home, Inc.	2135 40th Avenue N.	Saint Petersburg	33714	44.68		X	OUT	N
ALF	Fifth Avenue Retirement Home	126 5th Avenue, North	Saint Petersburg	33701	25.27		X	OUT	N
ALF	First Choice ALF	709 College Hill	Clearwater	33765	30.01		X	OUT	N
ALF	Forest Hills Home At Palm Harbor	3672 Fairway Forest Circle	Palm Harbor	34685	13.85	3	C	OUT	Y
ALF	Four Palms Manor	302 11 Avenue, N.E.	Saint Petersburg	33701	17.95	5	E	OUT	N
ALF	Francis Home ALF	124 East Overbrook Drive	Largo	33770	18.00		X	100	N
ALF	Freedom Inn At Bay Pines	9797 Bay Pines Blvd	Saint Petersburg	33708	10.88	3	C	100	N
ALF	Freedom Inn At Countryside	3260 McMullen Booth Road	Clearwater	33761	37.63		X	OUT	Y
ALF	Freedom Inn At Tarpon Springs	1651 South Pinellas Avenue	Tarpon Springs	34689	9.30	2	B	100	N
ALF	Front Porch Manor	157 9th Avenue, N.	Saint Petersburg	33701	30.11		X	OUT	N
ALF	G & L Arbors Retirement Center	7550 60th Way North	Pinellas Park	33781	16.63	4	C	100	N
ALF	Gateway Manor	8320 14th Way North	Saint Petersburg	33702	4.60	1	B	100	N
ALF	Georgia's Place	2101 7th Street, South	Saint Petersburg	33705	4.29	2	B	100	N
ALF	Glendale House	1706 North Highland Avenue	Clearwater	33755	28.02		X	OUT	N
ALF	Gloria Manor	9000 86 Avenue	Seminole	33777	12.17	3	C	500	N
ALF	Golden Homes Corp.	787 San Salvador Drive	Dunedin	34698	15.46	4	D	OUT	N
ALF	Grand Villa Of Largo	750 Starkey Road	Largo	33771	11.14	3	C	OUT	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
ALF	Green Bench	601 49th Street North	Saint Petersburg	33710	49.89		X	OUT	N
ALF	Greenbriar Manor	7555 131 St., North	Seminole	33776	16.56		X	OUT	N
ALF	Hagey House, Inc.	3935 43rd Ave, North	Saint Petersburg	33714	48.52		X	OUT	N
ALF	Happy Home ALF	500 Highland Ave., North	Dunedin	34698	20.57	5	E	OUT	N
ALF	Harbor Point ALF, Inc.	1045 Harbor Lake Drive	Safety Harbor	34695	16.85	4	D	OUT	N
ALF	Heather Haven	725 Edgewater Drive	Dunedin	34698	10.33	2	B	100	Y
ALF	Heather Haven	220 Scotland Street	Dunedin	34698	10.27	3	C	100	N
ALF	Heritage House Retirement Home	1810 S. Belcher Road	Clearwater	34624	6.75	2	B	100	N
ALF	Heron House Indian Rocks	2050 East Bay Drive	Largo	33771	13.47	3	C	OUT	N
ALF	Highland Terrace	1520 Jeffords Street	Clearwater	33756	30.98		X	100	N
ALF	Hilcrest Retirement Residence	220 Fifth Ave., North	Saint Petersburg	33701	34.50		X	OUT	N
ALF	Hillside Gardens	3434 Zara Way	Clearwater	33761	80.87		X	OUT	N
ALF	Hope Enterprises Of America, Inc.	1629 Gulf Road	Tarpon Springs	34689	11.87	2	B	100	N
ALF	House That Faith Built (The)	1105 Melba Court	Largo	33770	26.40		X	OUT	N
ALF	Inn At Fountains(The)	1255 Pasadena Avenue, S.	Saint Petersburg	33707	5.19	1	A	100	N
ALF	Inn At Freedom Square (The)	10801 Johnson Blvd.	Seminole	33772	26.19		X	OUT	N
ALF	Inn At Lake Seminole Square (The)	8355 Seminole Blvd.	Seminole	33772	17.39		C	OUT	N
ALF	Island Splendor	1155 18th Avenue S.W.	Largo	33778	67.68		X	OUT	N
ALF	John-Nell Manor	1012 Gulf Road	Tarpon Springs	34689	11.71	3	B	500	N
ALF	Lake View House	465 7th Avenue, N.	Saint Petersburg	33701	37.44		X	OUT	N
ALF	Lakeside Manor	676 Union Street	Dunedin	34698	19.35	5	E	OUT	N
ALF	Leon Manor	531 8th Street North	Saint Petersburg	33701	36.62		X	OUT	N
ALF	Lepe's Home	524 Highland Street, North	Saint Petersburg	33701	36.89		X	OUT	N
ALF	Lexington Terrace	6340 46th Avenue North	Saint Petersburg	33709	22.73		E	OUT	N
ALF	Lifetides Home, Inc	3133 Las Olas Drive	Dunedin	34698	59.47		X	OUT	N
ALF	Lighthouse ALF Corp	920 Lynnlea Lane	Tarpon Springs	34689	6.89	2	B	100	N
ALF	Lighthouse Retirement Home	2248 Albright Drive	Clearwater	33765	55.54		X	OUT	N
ALF	Lodge At Mainlands (The)	9381 U.S. Hwy 19 North	Pinellas Park	33782	15.85	4	C	OUT	N
ALF	Long Shadow Inn	2275 Nebraska Avenue	Palm Harbor	34683	61.60		X	500	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
ALF	Loving Care ALF , Inc.	870 7th Avenue Northeast	Largo	33770	23.07		X	OUT	N
ALF	Magnolia Gardens	3800 62 Avenue North	Pinellas Park	33781	24.01		X	OUT	N
ALF	Magnolia House	655 5th Avenue North	Safety Harbor	34695	16.02	4	D	OUT	N
ALF	Magnolia Manor Inc.	926 S. Myrtle Avenue	Clearwater	34616	25.62		X	OUT	N
ALF	Mapleway Community	485 Mapleway	Safety Harbor	34695	16.75	4	D	OUT	N
ALF	Martha's Home	3586 53rd Avenue, North	Saint Petersburg	33714	47.80		X	OUT	N
ALF	Mary's Garden	6067 17th Ave N	Saint Petersburg	33710	17.94	5	E	OUT	N
ALF	Masonic Home Of Florida	3201 1st Street, N.E.	Saint Petersburg	33704	7.19	3	B	500	N
ALF	Mease Assisted Living	700 Mease Plaza	Dunedin	34698	35.54		X	OUT	N
ALF	Melody Place	35 Harbor Woods Circle	Safety Harbor	34695	26.85		X	OUT	N
ALF	Merrill Gardens At Clearwater	3141 North McMullen Booth Road	Clearwater	33761	34.16		X	OUT	Y
ALF	Midway Manor Retirement Res.	1754 Ensley Avenue	Clearwater	33756	69.17		X	OUT	N
ALF	Mimi's Retirement Home	1442 Chesterfield Drive	Dunedin	34698	52.74		X	OUT	N
ALF	Mrm Boarding Home	6035 72nd Ave., North	Pinellas Park	33781	15.92	4	D	500	N
ALF	Nancy B. Bruno	10746 109th Street, North	Largo	33778	26.76		X	OUT	N
ALF	Nancy Lee's Manor	3461 64th Street North	Saint Petersburg	33710	14.85	4	D	100	N
ALF	Normandy Manor	1103 Normandy Road	Clearwater	33764	55.98		X	OUT	N
ALF	Nurse's Helping Hands ALF Inc.	7191 71st Street North	Pinellas Park	33781	10.95	3	C	500	N
ALF	Nurses Helping Hands Of Dunedin	1585 Curlew Rd.	Dunedin	34698	19.81		X	OUT	N
ALF	Nurse's Helping Hearts	1735 Nursery Road	Clearwater	33756	25.82		X	OUT	N
ALF	Nurse's Loving Hearts, Inc.	945 7th Street Northwest	Largo	33770	65.43		X	OUT	N
ALF	Oak Manor	3600 Oak Manor Lane	Largo	33774	16.68	5	C	OUT	N
ALF	Oak Tree Manor	7770 128th Street	Seminole	33774	24.84		X	OUT	N
ALF	Oaks Of Clearwater, The	420 Bay Avenue	Clearwater	33756	34.67		C	OUT	N
ALF	Oakwood East Retirement Center	1210 East Oakwood	Tarpon Springs	34689	9.63	2	B	OUT	Y
ALF	Our Home	12912-128th Lane North	Largo	33774	42.87		X	OUT	N
ALF	Our Home Alf	2377 Covington Dr	Clearwater	33763	80.98		X	OUT	N
ALF	Palazzo Di Oro	3600 34 Street South	Saint Petersburg	33711	17.16	5	E	OUT	N
ALF	Park Place Of Dunedin Inc.	541 Park Street	Dunedin	34698	20.40	5	E	OUT	N
ALF	Patricia House	1040 Angle Road	Dunedin	34698	34.08		X	OUT	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
ALF	Patrick Manor	896 73 Rd Ave	Saint Petersburg	33702	5.89	2	B	100	N
ALF	Pearl Manor	2179 Dodge Street	Clearwater	33760	13.99	3	C	OUT	N
ALF	Pembrook Place	2331 Pembrook Drive	Clearwater	33764	8.94	2	B	500	N
ALF	Pembrook Place li	1623 Robinhood Lane	Clearwater	33764	9.06	2	B	100	N
ALF	Picket Fence Manor	1662 9th Street South	Saint Petersburg	33701	32.50		X	OUT	N
ALF	Pinecrest Place	1150 8th Avenue, S.W.	Largo	33770	47.33		X	OUT	N
ALF	Rainbow Manor, Inc.	2075 Rainbow Drive	Clearwater	33765	72.99		X	OUT	N
ALF	Raintree (The)	620 Edenville Avenue	Clearwater	33764	49.53		X	OUT	N
ALF	Regal Palms	300 Lake Ave N.E	Largo	33771	15.14	4	D	OUT	N
ALF	Residence Club At Seminole	11177 70th Avenue North	Seminole	33772	36.86		X	OUT	N
ALF	Roda Haven ALF, Inc.	1846 Southwood Lane	Clearwater	33764	22.36		X	OUT	N
ALF	Rosewood House II, Inc.	3175 Belcher Road	Dunedin	34698	65.37		X	OUT	N
ALF	Royal Oaks Manor	1833 Seminole Blvd	Largo	33778	45.40		X	OUT	N
ALF	Serenity On Bayou	522 Doric Court	Tarpon Springs	34689	7.69	2	A	100	N
ALF	Serenity Village	11277 Freedom Court	Seminole	33772	30.21		X	OUT	N
ALF	Serenity Village II	1403 4th Street Sw	Largo	33770	59.42		X	OUT	N
ALF	Seven Springs Manor II	1834 Pinehurst Road	Dunedin	34698	14.74	4	D	500	N
ALF	Shady Glen I	451 East Orange Street	Tarpon Springs	34689	13.96	3	C	OUT	N
ALF	Shady Oaks Of Curlew	1889 Curlew Road	Palm Harbor	34683	38.43		X	OUT	N
ALF	Sharondale (The)	1743 Sharondale Drive	Clearwater	33755	52.27		X	OUT	N
ALF	St Mark Assisted Living Center	880 Highland Blvd.	Palm Harbor	34684	55.83		X	OUT	N
ALF	St Mark Village	2655 Nebraska Avenue	Palm Harbor	34684	70.89		X	OUT	N
ALF	Stratford Court Of Palm Harbor	45 Katherine Blvd.	Palm Harbor	34684	10.24	3	B	OUT	Y
ALF	Summerville At Beckett Lake Lodge	2155 Montclair Road	Clearwater	33763	64.48		X	OUT	N
ALF	Summerville At Clearwater	2750 Drew Street	Clearwater	33759	37.71		X	OUT	Y
ALF	Summerville At Pinellas Park	8980 49th Street	Pinellas Park	34666	10.68	3	C	500	N
ALF	Summit House ALF	1943 Summit Drive	Clearwater	33763	74.37		X	OUT	N
ALF	Suncoast Manor	6909 Milk Street South	Saint Petersburg	33705	7.93	2	C	500	N
ALF	Sunrise Retirement Home	4201 70th Avenue N	Pinellas Park	33781	15.78	4	D	100	N
ALF	Sunset Villa Retirement Home	2308 Americus Dr.	Clearwater	33763	68.32		X	OUT	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
ALF	Sunshine Manor	6439 First Avenue, South	Saint Petersburg	33707	22.56		X	OUT	N
ALF	Sunshine Villa	1507 Meadow Dale Drive	Clearwater	33764	17.75	5	E	OUT	N
ALF	Sweet Water At Largo	11290 Walsingham Road	Largo	33778	34.68		X	OUT	N
ALF	Sylvan Terrace	2770 Regency Oaks Blvd	Clearwater	33759	88.29		X	OUT	N
ALF	Toby Weinman Assisted Living Residence	255 59 Street North	Saint Petersburg	33710	17.66	5	E	500	N
ALF	Tray's Place	9103 Fairweather Dr	Largo	33773	7.69	2	B	100	N
ALF	Twin Oaks ALF	2143 N.E. Coachman Road	Clearwater	33765	74.08		X	OUT	N
ALF	Tyrone Manor	2192 74th Street, North	Saint Petersburg	33710	21.69		X	OUT	N
ALF	Union House	1930 Union Street	Clearwater	33763	63.54		X	OUT	N
ALF	Valencia House	4870 Orange Grove Way	Palm Harbor	34684	62.34		X	OUT	N
ALF	Verandah (The)	4301 31st Street, South	Saint Petersburg	33712	19.56	5	E	OUT	N
ALF	Villa Cabana (The)	2600 4th Street, South	Saint Petersburg	33705	9.71	3	C	500	N
ALF	Villas Of Casa Celeste (The)	9225 82nd Avenue North	Seminole	33777	8.28	2	B	100	N
ALF	Vineyard Inn (The)	10929 Ridge Road	Largo	33778	49.63		X	OUT	N
ALF	Visiondel ALF	5012 North Ridge St N	Saint Petersburg	33709	22.19		X	OUT	N
ALF	Westminister Palms	830 N. Shore Drive, N.E.	Saint Petersburg	33701	5.69	2	C	100	N
ALF	Westminster Shores, Inc.	125 56th Avenue, South	Saint Petersburg	33705	2.54	1	A	100	N
ALF	White House #2	1822 Nebraska Avenue	Palm Harbor	34683	71.59		X	OUT	N
ALF	Wild Flower Inn	639 Michigan Blvd. #1500	Dunedin	34698	6.45	1	A	100	N
ALF	Windsor House	411 Hamilton Crescent	Clearwater	33756	36.86		X	OUT	N
ALF	Wirick (The)	434 4th Street, North	Saint Petersburg	33701	37.30		X	OUT	N
ALF	Woodcrest Manor	1735 Jeffords Street	Clearwater	33756	30.46		X	100	N
ALF	Woodgate Place	2314 Hawthorne Drive	Clearwater	33763	76.16		X	OUT	N
ALF	Zanovia House	2729 South Drive	Clearwater	33759	60.34		X	500	N
Ambulatory Surgical Center	Bardmoor Outpatient Center	8787 Bryan Dairy Road Suite 300	Largo	33777	13.06	3	C	OUT	N
Ambulatory Surgical Center	Bay Area Endoscopy & Surgery Center	5771 49th Street North	Saint Petersburg	33709	27.83		X	OUT	N
Ambulatory Surgical Center	Bayfront Same Day Surgery Center, Llc	603 Seventh Street South	Saint Petersburg	33701	35.41		X	OUT	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
Ambulatory Surgical Center	Belleair Surgery Center	1130 Ponce De Leon Blvd	Clearwater	34616	39.73		X	OUT	N
Ambulatory Surgical Center	Center For Special Surgery	4650 4th Street North	Saint Petersburg	33703	8.61	3	C	100	N
Ambulatory Surgical Center	Clearwater Endoscopy Center	401 Corbett Street	Clearwater	33756	35.37		X	OUT	N
Ambulatory Surgical Center	C-Med Ambulatory Surgery Center	2238 Drew Street	Clearwater	33765	71.34		X	OUT	N
Ambulatory Surgical Center	Countryside Surgery Center	3291 North McMullen Booth Road	Clearwater	33761	35.75		X	OUT	Y
Ambulatory Surgical Center	Healthsouth St. Petersburg Surgery Center	539 Pasadena Avenue, South	Saint Petersburg	33707	11.18	3	C	500	N
Ambulatory Surgical Center	Largo Ambulatory Surgery Center, Llc	148 13th St Sw	Largo	33770	48.91		X	OUT	N
Ambulatory Surgical Center	Laserscopic Surgery Center Of Florida, L	5000 Park St North	Saint Petersburg	33709	8.26	2	B	100	N
Ambulatory Surgical Center	North Pinellas Surgery Center, Llc	2323 Curlew Rd	Dunedin	34698	58.26		X	OUT	N
Ambulatory Surgical Center	Orthopaedic Surgery Center Of Clearwater	402 Jeffords St	Clearwater	33756	34.42		X	OUT	N
Ambulatory Surgical Center	St Anthony's Physicians Surgery Center L	705 16th St North	Saint Petersburg	33705	48.11		X	OUT	N
Ambulatory Surgical Center	St Luke's Surgical Center	43309 U.S Hwy 19 North	Tarpon Springs	34688	18.73	4	B	OUT	Y
Ambulatory Surgical Center	St Michael's Surgery Center	1018 West Bay Drive	Largo	33770	63.21		X	OUT	N
Ambulatory Surgical Center	St Petersburg Endoscopy Center Llc	1099 5th Avenue North Suite 100	Saint Petersburg	33705	44.83		X	OUT	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
Ambulatory Surgical Center	Suncoast Medical Clinic, Llc	601 Seventh Street South	Saint Petersburg	33701	35.41		X	OUT	N
Ambulatory Surgical Center	Tampa Bay Regional Surgery Center	7300 Bryan Dairy Rd	Largo	33777	15.40	3	C	OUT	N
Ambulatory Surgical Center	Tampa Bay Specialty Surgery Center, Llc	6500 66th St North	Pinellas Park	33781	15.48	3	D	OUT	N
Ambulatory Surgical Center	Updegraff Vision Laser & Surgery Center	1601 38th Ave N	Saint Petersburg	33703	48.04		X	OUT	N
Ambulatory Surgical Center	West Bay Surgery Center	1401 West Bay Drive	Largo	33770	43.48		X	OUT	N
Ambulatory Surgical Center	West Coast Endoscopy Center	616 E Street	Clearwater	33756	48.33		X	OUT	N
Ambulatory Surgical Center	West Park Surgery Center	6640 78 Ave North	Pinellas Park	33781	10.52	3	C	500	N
Crisis Stabilization Unit	Pemhs, Inc./Adult Csu-C	401 16 Street North	Saint Petersburg	33705	42.27		X	OUT	N
Crisis Stabilization Unit	Pemhs, Inc./Adult, Regional Srt, Children's, Crisis Stabilization F	11254 58 St N	Pinellas Park	33778	14.50	3	C	OUT	N
Renal Dialysis	All Children's Hospital Esrd	801 6th Street South	Saint Petersburg	33701	29.68		X	OUT	N
Renal Dialysis	American Dialysis Center	5787 49th Street North	Saint Petersburg	33709	27.20		X	OUT	N
Renal Dialysis	Bay Breeze Dialysis Clinic	11465 Ulmerton Road	Largo	33778	72.62		X	OUT	N
Renal Dialysis	Bays Dialysis Center,The	446 4th Street South	Saint Petersburg	33701	20.30	5	E	OUT	N
Renal Dialysis	Bma Of South St Petersburg	3251 3rd Avenue North	Saint Petersburg	33713	43.52		X	OUT	N
Renal Dialysis	Bma Of St Petersburg	8601 4th Street North	Saint Petersburg	33702	5.24	2	B	100	N
Renal Dialysis	Clearwater Artificial Kidney Center	2565 Enterprise Road	Clearwater	34623	72.79		X	OUT	N
Renal Dialysis	Gulf Breeze Dialysis Center	1121 Overcash Drive	Dunedin	34698	56.77		X	OUT	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
Renal Dialysis	Kidney Institute Of Clearwater	617 Lakeview Rd	Clearwater	33756	45.80		X	OUT	N
Renal Dialysis	Rai Care Centers - Clearwater	1124 Lakeview Avenue	Clearwater	34616	47.27		X	OUT	N
Renal Dialysis	Rai Care Centers - Largo	12505 Starkey Road	Largo	33773	17.33	4	D	OUT	N
Renal Dialysis	Rai Care Centers - Palm Harbor	30522 Us Highway 19 N Ste 100	Palm Harbor	34684	62.77		X	OUT	N
Renal Dialysis	Rai Care Centers - St Petersburg	1101 9th Street North	Saint Petersburg	33701	38.85		X	OUT	N
Renal Dialysis	Seminole Dialysis Center	10755 Park Blvd Suite 101	Seminole	33772	29.76		X	OUT	N
Renal Dialysis	St Petersburg Dialysis	1117 Arlington Avenue North	Saint Petersburg	33705	44.39		X	OUT	N
Renal Dialysis	St Petersburg South Dialysis	2850 34th Street South	Saint Petersburg	33711	9.87	3	C	500	Y
Hospice	Hospice Of Florida Suncoast, Inc., The	5771 Roosevelt Boulevard	Clearwater	33760	15.00	3	C	OUT	N
Hospital	All Children's Hospital	801 Sixth Street South	Saint Petersburg	33701	29.68		X	OUT	N
Hospital	Bardmoor Er Center	8839 Bryan Dairy Rd	Largo	33777	11.43	3	C	OUT	N
Hospital	Bay Pines Veterans Affairs Medical Center	10000 Bay Pines Boulevard	Bay Pines	33744	-0.75	1	A	100	N
Hospital	Bayfront Medical Center	701 Sixth Street South	Saint Petersburg	33701	30.30		X	OUT	N
Hospital	Edward White Hospital	2323 9th Ave North	Saint Petersburg	33733	40.53		X	OUT	N
Hospital	Healthsouth Rehabilitation Hospital	901 N Clearwater/Largo Road	Largo	34640	64.04		X	OUT	N
Hospital	Helen Ellis Memorial Hospital	1395 South Pinellas Avenue	Tarpon Springs	34689	28.59		X	OUT	N
Hospital	Kindred Hosp-Bay Area-St Petersburg	3030 6th Street South	Saint Petersburg	33705	10.53	3	B	OUT	N
Hospital	Largo Medical Center	201 14th Street, S.W.	Largo	34649	37.80		X	OUT	N
Hospital	Mease Countryside Hospital	3231 McMullen Booth Rd.	Safety Harbor	34695	31.36		X	OUT	Y
Hospital	Mease Countryside Hospital	3231 McMullen Booth Road	Safety Harbor	34695	18.37		X	OUT	N
Hospital	Mease Dunedin Hospital	601 Main Street	Dunedin	34698	28.00		X	OUT	N
Hospital	Morton Plant Hospital	300 Pinellas Street	Clearwater	33756	22.18		X	OUT	N
Hospital	Northside Hospital	6000 49th St North	Saint Petersburg	33709	25.18		X	OUT	N
Hospital	Palms Of Pasadena Hospital	1501 Pasadena Avenue South	Saint Petersburg	33707	4.52	1	A	100	N
Hospital	Saint Anthony's Hospital	1200 Seventh Avenue North	Saint Petersburg	33705	47.97		X	OUT	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
Hospital	St Petersburg General Hospital	6500 38th Avenue North	Saint Petersburg	33710	16.21	4	D	500	N
Hospital	Sun Coast Hospital	2025 Indian Rocks Road	Largo	33774	6.08	2	D	100	N
Hospital	Windmoor Healthcare Of Clearwater	11300 Us Highway 19 North	Clearwater	33764	13.75	3	C	OUT	N
Intermediate Care	Bayview Community Home	3438 State Route 580	Safety Harbor	34695	25.30		X	OUT	Y
Intermediate Care	Parc Center Apartments	3190 75th St. N.	Saint Petersburg	33710	21.92	5	E	OUT	N
Intermediate Care	Parc Cottage	3101 76th Way North	Saint Petersburg	33710	17.99	5	E	OUT	N
Intermediate Care	Squire Court Community Home	95 Squire Court	Dunedin	34698	36.58		X	500	N
Intermediate Care	St Petersburg Cluster	1101 102nd Avenue North	Saint Petersburg	33716	4.86	2	B	100	N
Intermediate Care	Twin Lane Community Home	2281 Twin Lane Drive	Dunedin	34698	64.62		X	OUT	N
Residential Treatment Facility	Benedict Haven Inc.	210 72 Avenue, North	Saint Petersburg	33702	6.43	2	B	100	N
Residential Treatment Facility	Boley Centers For Behavioral Health Care	4123 37th Street, N.	Saint Petersburg	33714	49.10		X	OUT	N
Residential Treatment Facility	Boley Centers Inc/ Celia Hall	815 7th Avenue, South	Saint Petersburg	33701	31.54		X	OUT	N
Residential Treatment Facility	Boley Centers Inc/ Edna Stephens Home	620 32nd Avenue, South	Saint Petersburg	33543	10.91	3	C	OUT	N
Residential Treatment Facility	Boley Centers Inc/ Martin Lott Residence	3537 5 Avenue, North	Saint Petersburg	33713	46.05		X	OUT	N
Residential Treatment Facility	Boley Centers Inc/ Owl's Nest Apartments	1147-1205 16th Street, North	Saint Petersburg	33705	49.31		X	OUT	N
Residential Treatment Facility	Boley Centers Inc/ Wild Acres	12809 Wild Acres Road	Largo	33773	18.40	5	E	OUT	N
Residential Treatment Facility	Boley Centers, Inc./Safe Haven	555 31st Street South	Saint Petersburg	33713	47.72		X	OUT	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
Residential Treatment Facility	Fairwinds Properties Inc/ Fairwinds Trea	1569 South Ft. Harrison Avenue	Clearwater	33762	38.02		X	OUT	N
Residential Treatment Facility	Gulf Coast Jewish Family Services/ 66th	3180-3200 66th Street North	Saint Petersburg	33710	17.84	5	E	OUT	N
Residential Treatment Facility	Tampa Crossroads Inc.	460 Third Street, North	Saint Petersburg	33701	38.50		X	OUT	N
Skilled Nursing Facility	Abbey Rehabilitation And Nursing Center,	7101 9th Street N	Saint Petersburg	33702	3.53	2	B	100	N
Skilled Nursing Facility	Advanced Rehabilitation And Health Cente	401 Fairwood Avenue	Clearwater	33759	20.81		X	OUT	N
Skilled Nursing Facility	Alhambra Health And Rehabilitation Cente	7501 38th Avenue N	Saint Petersburg	33710	21.99		X	OUT	N
Skilled Nursing Facility	Allegro At College Harbor, The	4600 54th Avenue South	Saint Petersburg	33711	0.93	1	A	100	N
Skilled Nursing Facility	Alpine Health & Rehabilitation Center	3456 21st Avenue S	Saint Petersburg	33711	20.56		X	OUT	N
Skilled Nursing Facility	Apollo Health & Rehabilitation Center	1000 24th Street N	Saint Petersburg	33713	39.00		X	OUT	N
Skilled Nursing Facility	Bay Pointe Nursing Pavilion	4201 31st Street S	Saint Petersburg	33712	19.43	5	E	OUT	N
Skilled Nursing Facility	Bay Tree Rehabilitation And Nursing Cent	2600 Highlands Blvd., N.	Palm Harbor	34684	70.50		X	OUT	N
Skilled Nursing Facility	Bayside Rehabilitation & Health Center	811 Jackson Street N	Saint Petersburg	33705	43.08		X	OUT	N
Skilled Nursing Facility	Baywood Nursing Center	2000 17th Avenue South	Saint Petersburg	33712	42.32		X	OUT	N
Skilled Nursing Facility	Belleair East Health Care Center	1150 Ponce De Leon Blvd.	Clearwater	33756	37.74		X	OUT	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
Skilled Nursing Facility	Boca Ciega Center	1414 59th Street S.	Gulfport	33707	17.63	5	E	OUT	N
Skilled Nursing Facility	Bon Secours Maria Manor Nursing Care Cen	10300 4th Street N	Saint Petersburg	33716	5.35	2	A	100	Y
Skilled Nursing Facility	Carrington Place Nursing & Rehabilitatio	10501 Roosevelt Blvd North	Saint Petersburg	33716	4.19	1	A	100	N
Skilled Nursing Facility	Clearwater Center	1270 Turner Street	Clearwater	33756	19.50		X	100	N
Skilled Nursing Facility	Comprehensive Healthcare Of Clearwater	2055 Palmetto Street	Clearwater	33756	69.09		X	OUT	N
Skilled Nursing Facility	Concordia Manor	321 13th Avenue North	Saint Petersburg	33701	32.14		X	OUT	N
Skilled Nursing Facility	Coquina Key Health & Rehabilitation Cent	435 42nd Avenue S.	Saint Petersburg	33705	3.56	1	A	100	N
Skilled Nursing Facility	Countryside Healthcare Center	3825 Countryside Blvd.	Palm Harbor	34684	40.79		X	OUT	Y
Skilled Nursing Facility	Cross Terrace Rehabilitation Center	1351 San Christopher Drive	Dunedin	34698	30.34		X	OUT	N
Skilled Nursing Facility	Crystal Oaks Of Pinellas	6767 86th Avenue North	Pinellas Park	33782	6.19	3	C	100	N
Skilled Nursing Facility	Eagle Lake Rehab & Care Center	1100 66th Street North	Saint Petersburg	33710	20.40	5	E	OUT	N
Skilled Nursing Facility	East Bay Nursing Center	4470 E. Bay Drive	Clearwater	33764	18.19	4	D	OUT	N
Skilled Nursing Facility	Edinborough Healthcare Center	1061 Virginia Street	Dunedin	34698	24.75		X	OUT	N
Skilled Nursing Facility	Egret Cove Center	550 62nd Street S	Saint Petersburg	33707	18.79	5	E	OUT	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
Skilled Nursing Facility	Freedom Square Nursing Center	10801 Johnson Blvd	Seminole	33772	26.19		X	OUT	N
Skilled Nursing Facility	Glen Oaks Health Care	1100 Pine Street	Clearwater	33756	42.95		X	OUT	N
Skilled Nursing Facility	Golfview Healthcare Center	3636 10th Avenue N	Saint Petersburg	33713	44.53		X	500	N
Skilled Nursing Facility	Gracewood Rehabilitation And Nursing Car	8600 Us Hwy 19 North	Pinellas Park	33782	12.58	4	C	OUT	N
Skilled Nursing Facility	Harbourwood Health And Rehab Center	2855 Gulf To Bay Blvd	Clearwater	33759	28.01		X	OUT	N
Skilled Nursing Facility	Health And Rehabilitation Centre At Dolp	1820 Shore Drive S	Saint Petersburg	33707	4.37	1	A	100	N
Skilled Nursing Facility	Highland Pines Rehabilitation Center	1111 S. Highland Avenue	Clearwater	33756	29.88		X	OUT	N
Skilled Nursing Facility	Jacaranda Manor	4250 66th Street North	Saint Petersburg	33709	14.83	4	D	OUT	N
Skilled Nursing Facility	Largo Health Care Center	9035 Bryan Dairy Road	Largo	33777	11.12	3	B	100	N
Skilled Nursing Facility	Laurellwood Nursing Center	3127 57th Avenue North	Saint Petersburg	33714	45.85		X	OUT	N
Skilled Nursing Facility	Lexington Health And Rehabilitation Cent	6300 46th Avenue North	Saint Petersburg	33709	20.51	5	E	OUT	N
Skilled Nursing Facility	Long Term Care Of St Petersburg	3479 54th Avenue North	Saint Petersburg	33714	49.47		X	OUT	N
Skilled Nursing Facility	Manor Care Nursing Center Dunedin	870 Patricia Avenue	Dunedin	34698	28.18		X	OUT	N
Skilled Nursing Facility	Manor Care Of Palm Harbor	2851 Tampa Road	Palm Harbor	34684	50.79		X	OUT	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
Skilled Nursing Facility	Masonic Home Of Florida	3201 1st Street N E	Saint Petersburg	33704	7.19	3	B	500	N
Skilled Nursing Facility	Mease Continuing Care	910 New York Avenue	Dunedin	34698	32.86		X	OUT	N
Skilled Nursing Facility	Menorah Manor	255 59th Street No	Saint Petersburg	33710	17.66	5	E	500	N
Skilled Nursing Facility	Morton Plant Rehabilitation Center	400 Corbett Street	Belleair	33756	35.96		X	OUT	N
Skilled Nursing Facility	North Rehabilitation Center	1301 16th Street North	Saint Petersburg	33705	46.40		X	OUT	N
Skilled Nursing Facility	Oak Bluffs Nursing Center	420 Bay Avenue	Clearwater	33756	34.67		C	OUT	N
Skilled Nursing Facility	Oak Manor Healthcare & Rehabilitation Ce	3500 Oak Manor Lane	Largo	33774	10.39	4	D	100	N
Skilled Nursing Facility	Palm Garden Of Clearwater	3480 McMullen Booth Road	Clearwater	33761	10.91	3	C	500	Y
Skilled Nursing Facility	Palm Garden Of Largo	10500 Starkey Road	Largo	33777	13.58	3	C	500	N
Skilled Nursing Facility	Palm Garden Of Pinellas	200 16th Avenue, S.E.	Largo	33771	29.75		X	OUT	N
Skilled Nursing Facility	Palm Terrace Of St. Petersburg	521 69th Avenue N	Saint Petersburg	33702	5.05	2	B	100	N
Skilled Nursing Facility	Pasadena Manor Inc	1430 Pasadena Avenue S	South Pasadena	33707	4.51	1	A	100	N
Skilled Nursing Facility	Peninsula Care And Rehabilitation Center	900 Beckett Way	Tarpon Springs	34689	16.40	4	C	OUT	Y
Skilled Nursing Facility	Pinellas Park Care And Rehabilitation Ce	8701 49th Street North	Pinellas Park	33782	11.84	3	C	100	N

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
Skilled Nursing Facility	Pinellas Point Nursing And Rehab Center	5601 31st Street So	Saint Petersburg	33712	5.04	2	B	100	N
Skilled Nursing Facility	Sabal Palms Health Care Center	499 Alternate Keene Road N.E.	Largo	33771	18.17	5	E	OUT	N
Skilled Nursing Facility	Saint Mark Village	2655 Nebraska Avenue	Palm Harbor	34684	70.89		X	OUT	N
Skilled Nursing Facility	Seminole Nursing Pavilion	10800 Temple Terrace	Seminole	33772	23.85		X	OUT	N
Skilled Nursing Facility	Shore Acres Rehabilitation And Health Ce	4500 Indianapolis Street Ne	Saint Petersburg	33703	3.57	1	A	100	N
Skilled Nursing Facility	South Heritage Health & Rehab Center	718 Lakeview Avenue South	Saint Petersburg	33705	6.17	2	B	100	N
Skilled Nursing Facility	Springs At Boca Ciega Bay	1255 Pasadena Avenue S	Saint Petersburg	33707	5.19	1	A	100	N
Skilled Nursing Facility	Stratford Court Of Palm Harbor	45 Katherine Blvd.	Palm Harbor	34684	10.24	3	B	OUT	Y
Skilled Nursing Facility	Sunset Point Rehabilitation And Nursing	1980 Sunset Point Road	Clearwater	33765	60.78		X	OUT	N
Skilled Nursing Facility	Sylvan Health Center	2770 Regency Oaks Blvd	Clearwater	33759	88.29		X	OUT	N
Skilled Nursing Facility	Tandem Health Care Of Safety Harbor	1410 4th Street N.	Safety Harbor	34695	19.59	5	X	OUT	N
Skilled Nursing Facility	Tandem Health Care Of St Petersburg	9393 Park Blvd	Seminole	33777	7.54	2	B	100	N
Skilled Nursing Facility	Tarpon Bayou Center	515 Chesapeake Drive	Tarpon Springs	34689	8.76	2	A	100	N
Skilled Nursing Facility	Tierra Pines Center	7380 Ulmerton Road	Largo	33771	17.94	4	D	OUT	N

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Facility Type	Name	Address	City	Zip Code	DEM Elevation	Surge	Evac Level	Flood Plain	Fire
Skilled Nursing Facility	West Bay Rehabilitation And Nursing Cent	3865 Tampa Road	Oldsmar	34677	11.05	3	C	500	Y
Skilled Nursing Facility	Westchester Gardens Rehab & Care Center	3301 McMullen Booth Road	Clearwater	33761	34.14		X	OUT	Y
Skilled Nursing Facility	Westminster Palms	830 North Shore Drive Ne	Saint Petersburg	33701	5.69	2	C	100	N
Skilled Nursing Facility	Westminster Suncoast	6909 Dr Milk Street South	Saint Petersburg	33705	7.93	2	C	500	N
Skilled Nursing Facility	Wright's Nursing And Rehabilitation Cent	11300 110th Avenue North	Seminole	33778	37.60		X	OUT	N
Residential Treatment Facility	Benedict Haven Inc.	210 72 Avenue, North	Saint Petersburg	33702	6.43	2	B	100	N

## Pinellas County Local Mitigation Strategy

**Table 12-1-2  
Other Critical Facilities Vulnerability Assessment**

Facility Type	Name	Address	City	Zip	DEM Elevation	Evac Zone	Surge	Fire	Flood	Detail
11303	WXGL		ST. PETERSBURG		1.74	A	1	N	100	RADIO COMMUNICATIONS TOWER
11303	WXGL		ST. PETERSBURG		5.52	B	2	N	500	RADIO COMMUNICATIONS TOWER
11303	WRXB		ST. PETERSBURG BEACH		10.76	C	3	N	500	RADIO COMMUNICATIONS TOWER
11303	WQYK-FM		ST. PETERSBURG		14.40	B	3	N	OUT	RADIO COMMUNICATIONS TOWER
11303	WXGL		ST. PETERSBURG		9.64	B	2	Y	100	RADIO COMMUNICATIONS TOWER
11303	WBTP		CLEARWATER		15.05	D	5	N	OUT	RADIO COMMUNICATIONS TOWER
11303	WPOI		ST. PETERSBURG		73.84	X	0	N	OUT	RADIO COMMUNICATIONS TOWER
11303	WXYB		INDIAN ROCKS BEACH		1.13	B	1	N	100	RADIO COMMUNICATIONS TOWER
11303	WWMI		ST. PETERSBURG		1.97	A	1	N	100	RADIO COMMUNICATIONS TOWER
11303	WMGG		LARGO		9.39	C	3	N	OUT	RADIO COMMUNICATIONS TOWER
11303	WTBN		PINELLAS PARK		54.33	X	0	N	OUT	RADIO COMMUNICATIONS TOWER
11303	WTAN		CLEARWATER		5.73	X	2	N	100	RADIO COMMUNICATIONS TOWER

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip	DEM Elevation	Evac Zone	Surge	Fire	Flood	Detail
11303	WYFE		TARPON SPRINGS		14.60	B	3	Y	OUT	RADIO COMMUNICATIONS TOWER
11303	WYUU		SAFETY HARBOR		27.01	X	0	N	OUT	RADIO COMMUNICATIONS TOWER
11303	WXTB		CLEARWATER		9.64	B	2	Y	100	RADIO COMMUNICATIONS TOWER
11303	WXTB		CLEARWATER		5.40	B	2	N	500	RADIO COMMUNICATIONS TOWER
11303	WXTB		CLEARWATER		5.40	B	2	N	500	RADIO COMMUNICATIONS TOWER
11303	WXTB		CLEARWATER		9.64	B	2	Y	100	RADIO COMMUNICATIONS TOWER
11303	W237CW		PINELLAS PARK		17.86	E	5	N	500	RADIO COMMUNICATIONS TOWER
11303	WDAE		ST. PETERSBURG		7.55	A	2	N	100	RADIO COMMUNICATIONS TOWER
11303	WRMD		ST. PETERSBURG		0.97	A	1	N	100	RADIO COMMUNICATIONS TOWER
11303	WFTI-FM		ST. PETERSBURG		32.84	X	0	N	OUT	RADIO COMMUNICATIONS TOWER
11303	W233AV		GULFPORT		50.28	X	0	N	OUT	RADIO COMMUNICATIONS TOWER
11318	PINELLAS CO EMS AUTHORITY/SUNSTAR	12490 ULMERTON RD	LARGO	33774	49.25	X	0	N	OUT	CALL CENTER
11318	PINELLAS COUNTY EMERGENCY MANAGEMENT	400 SOUTH FORT HARRISON AVENUE	CLEARWATER	33756	31.59	X	0	N	OUT	CALL CENTER
11318	CLEARWATER POLICE DEPT HEADQUARTERS	483 MANDALAY AVE STE 208	CLEARWATER	33767	5.40	A	1	N	100	CALL CENTER
11318	ST. PETE BEACH POLICE HEADQUARTERS	200 76TH AVE	ST PETE BEACH	33706	4.47	A	1	N	100	CALL CENTER

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip	DEM Elevation	Evac Zone	Surge	Fire	Flood	Detail
11318	BELLEAIR POLICE DEPT. HEADQUARTERS	901 PONCE DE LEON BLVD	BELLEAIR	33756	47.49	X	0	N	OUT	CALL CENTER
11318	GULFPORT POLICE DEPT HEADQUARTERS	2401 53RD ST S	GULFPORT	33707	16.65	D	4	N	OUT	CALL CENTER
11318	PINELLAS COUNTY SHERIFF'S HEADQUARTERS	10750 ULMERTON RD	LARGO	33778	31.48	X	0	N	OUT	CALL CENTER
11318	PINELLAS PARK POLICE DEPT HEADQUARTERS	7700 59TH ST N	PINELLAS PARK	33781	15.93	C	4	N	OUT	CALL CENTER
11318	TARPON SPRINGS POLICE HEADQUARTERS	444 S HUEY AVE	TARPON SPRINGS	34689	13.02	C	3	Y	500	CALL CENTER
11318	TREASURE ISLAND POLICE DEPT HEADQUARTERS	180 108TH AVE	TREASURE ISLAND	33706	4.90	A	1	N	100	CALL CENTER
11318	LARGO POLICE DEPT. HEADQUARTERS	201 HIGHLAND AVE NE	LARGO	33770	14.68	X	5	N	OUT	CALL CENTER
11318	ST PETERSBURG POLICE DEPT HEADQUARTERS	1300 1ST AVE N	ST PETERSBURG	33705	44.55	X	0	N	OUT	CALL CENTER
74017	PALM HARBOR SPECIAL FIRE CNTRL/RESC DIST	250 W LAKE RD	PALM HARBOR	34684	66.49	X	0	N	OUT	EMS
74017	EAST LAKE TARPON SPECIAL FIRE CNTRL EMS	3375 TARPON LAKE BLVD	PALM HARBOR	34685	7.73	C	2	N	500	EMS
74017	TARPON SPRINGS FIRE RESCUE	444 S HUEY AVE	TARPON SPRINGS	34689	13.02	C	3	Y	500	EMS
74017	AIR AMBULANCE NETWORK	905 E MARTIN LUTHER KING JR DR	TARPON SPRINGS	34689	9.37	B	2	Y	500	EMS
74017	SAFETY HARBOR FIRE RESCUE	700 MAIN ST	SAFETY HARBOR	34695	19.95	X	4	N	OUT	EMS
74017	DUNEDIN FIRE/RESCUE	1042 VIRGINIA ST	DUNEDIN	34698	25.85	X	0	N	OUT	EMS
74017	BAYFRONT MED CTR BAYFLITE 5 AMBULANCE	107 8TH AVE SE	SAINT PETERSBURG	33701	6.26	A	2	N	100	EMS
74017	TREASURE ISLAND FIRE DEPT	180 108TH AVE	TREASURE ISLAND	33706	4.90	A	1	N	100	EMS
74017	CITY OF ST PETE BEACH FIRE/RESCUE	7301 GULF BLVD	ST PETE BEACH	33706	5.95	A	1	N	100	EMS
74017	SOUTH PASADENA FIRE/RESCUE	911 OLEANDER WAY S	SOUTH PASADENA	33707	4.65	X	2	N	100	EMS
74017	CITY OF GULFPORT FIRE DEPARTMENT	2401 53RD ST S	GULFPORT	33707	16.65	D	4	N	OUT	EMS
74017	MADEIRA BEACH FIRE RESCUE	300 MUNICIPAL DR	MADEIRA BEACH	33708	4.81	A	1	N	100	EMS
74017	LEALMAN SPECIAL FIRE CONTROL DIST	4017 56TH AVE N	SAINT PETERSBURG	33714	47.90	X	0	N	OUT	EMS
74017	CLEARWATER FIRE & RESCUE	610 FRANKLIN ST	CLEARWATER	33756	24.46	X	0	N	OUT	EMS

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Facility Type	Name	Address	City	Zip	DEM Elevation	Evac Zone	Surge	Fire	Flood	Detail
74017	AIR MD AMBULANCE	4707 140TH AVE BLDG	CLEARWATER	33762	12.16	C	3	N	OUT	EMS
74017	PINELLAS PARK FIRE RESCUE-MAIN	11350 43RD ST N	CLEARWATER	33762	12.92	C	3	N	500	EMS
74017	LARGO FIRE AND RESCUE	201 HIGHLAND AVE NE	LARGO	33770	14.68	X	5	N	OUT	EMS
74017	CITY OF SEMINOLE FIRE RESCUE	11195 70TH AVE	SEMINOLE	33772	37.45	X	0	N	OUT	EMS
74017	PINELLAS CO EMS AUTHORITY/SUNSTAR	12490 ULMERTON RD	LARGO	33774	49.25	X	0	N	OUT	EMS
74017	PINELLAS PARK FIRE RESC-82ND AVE N	5000 82ND AVE N	PINELLAS PARK	33781	15.73	X	4	N	100	EMS
74017	PINELLAS PARK FIRE RESCUE	6565 94TH AVE N	PINELLAS PARK	33782	16.56	C	4	N	OUT	EMS
74017	PINELLAS SUNCOAST FIRE/RESCUE	304 1ST ST	INDIAN ROCKS BEACH	33785	4.38	A	1	N	100	EMS
74017	OLDSMAR FIRE/RESCUE	225 PINE AVE N	OLDSMAR	34677	13.40	C	3	Y	500	EMS
74026	LARGO FD ST 42	151 BELCHER RD N	LARGO	33771	17.68	D	4	N	OUT	FIRE STATION
74026	CITY OF SEMINOLE ST 31	13091 88TH AVE	SEMINOLE	33776	60.08	X	0	N	OUT	FIRE STATION
74026	OLDSMAR FIRE DEPARTMENT	100 STATE ST W	OLDSMAR	34677	10.63	B	2	N	100	FIRE STATION
74026	TARPON SPRINGS ST 70	1025 GULF RD	TARPON SPRINGS	34689	11.92	X	2	N	100	FIRE STATION
74026	DUNEDIN ST 60	1046 VIRGINIA ST	DUNEDIN	34698	27.15	X	0	N	OUT	FIRE STATION
74026	REDINGTON BEACH FIRE DEPARTMENT	105 164TH AVE	REDINGTON BEACH	33708	4.05	X	1	N	100	FIRE STATION
74026	CITY OF SEMINOLE ST 32	10780 110TH AVE	SEMINOLE	33778	30.32	X	0	N	OUT	FIRE STATION
74026	SEMINOLE VOLUNTEER FIRE DEPARTMENT	11195 70TH AVE N	SEMINOLE	33772	39.54	X	0	N	OUT	FIRE STATION
74026	PALM HARBOR ST 66	1123 ILLINOIS AVE	PALM HARBOR	34683	33.49	X	0	N	OUT	FIRE STATION
74026	PINELLAS PARK ST 35	11350 43RD ST N	CLEARWATER	33762	13.22	C	3	N	500	FIRE STATION
74026	ST PETERSBURG ST 13	11600 ROOSEVELT BLVD N	ST PETERSBURG	33716	9.03	X	2	N	100	FIRE STATION
74026	LARGO FD ST 39	12398 134TH AVE	LARGO	33774	48.84	X	0	N	OUT	FIRE STATION
74026	PINELLAS SUNCOAST ST 28	13501 94TH AVE	SEMINOLE	33776	51.26	X	0	N	OUT	FIRE STATION
74026	PINELLAS PARK ST 36	13801 EVERGREEN AVE	CLEARWATER	33762	7.36	B	2	Y	100	FIRE STATION
74026	CLEARWATER ST 47	1460 LAKEVIEW RD	CLEARWATER	33756	50.68	X	0	N	OUT	FIRE STATION
74026	ST PETERSBURG ST 12	1651 BAYOU GRANDE BLVD NE	ST PETERSBURG	33703	4.76	A	1	N	100	FIRE STATION

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip	DEM Elevation	Evac Zone	Surge	Fire	Flood	Detail
74026	CLEARWATER ST 48	1700 N BELCHER RD	CLEARWATER	33765	45.33	X	0	N	OUT	FIRE STATION
74026	CLEARWATER FIRE STATION 51	1720 OVERBROOK AVENUE	CLEARWATER	33755	22.21	X	5	N	OUT	FIRE STATION
74026	PINELLAS SUNCOAST ST 26	17715 GULF BLVD	REDINGTON SHORES	33708	4.19	A	1	N	100	FIRE STATION
74026	TREASURE ISLAND ST 24	180 108TH AVE	TREASURE ISLAND	33706	4.98	A	1	N	100	FIRE STATION
74026	LARGO FD ST 41	180 4TH ST SW	LARGO	33770	69.75	X	0	N	OUT	FIRE STATION
74026	EAST LAKE ST 56	1933 E LAKE RD	PALM HARBOR	34685	10.97	B	3	Y	OUT	FIRE STATION
74026	DUNEDIN ST 61	1941 ED ECKERT DR	DUNEDIN	34698	11.86	B	3	N	500	FIRE STATION
74026	ST PETE BEACH ST 22	1950 PASS A GRILLE WAY	ST PETE BEACH	33706	4.22	A	1	N	100	FIRE STATION
74026	LARGO FIRE DEPARTMENT AND RESCUE	201 HIGHLAND AVE	LARGO	33779	13.32	D	5	N	OUT	FIRE STATION
74026	OLDSMAR ST 54	225 PINE AVE N	OLDSMAR	34677	14.19	C	3	Y	500	FIRE STATION
74026	PALM HARBOR ST 67	2300 GLENEAGLES PKWY	PALM HARBOR	34683	30.47	X	0	Y	OUT	FIRE STATION
74026	PALM HARBOR ST 65	250 W LAKE RD	PALM HARBOR	34684	66.53	X	0	N	OUT	FIRE STATION
74026	ST PETERSBURG ST 4	2501 4TH ST N	ST PETERSBURG	33704	34.49	X	0	N	OUT	FIRE STATION
74026	CLEARWATER ST 50	2681 COUNTRYSIDE BLVD	CLEARWATER	33761	99.17	X	0	N	OUT	FIRE STATION
74026	ST PETERSBURG ST 10	2800 30TH AVE N	ST PETERSBURG	33713	52.58	X	0	N	OUT	FIRE STATION
74026	DUNEDIN ST 62	2833 BELCHER RD	DUNEDIN	34698	71.49	X	0	N	OUT	FIRE STATION
74026	LARGO FD ST 37	2905 W BAY DR	BELLEAIR BLUFFS	33770	46.57	X	0	N	OUT	FIRE STATION
74026	LARGO FD ST 40	2990 WHITNEY RD	CLEARWATER	33760	12.57	B	3	N	500	FIRE STATION
74026	MADEIRA BEACH FD ST 25	300 MUNICIPAL DR	MADEIRA BEACH	33708	6.78	A	2	N	100	FIRE STATION
74026	PALM HARBOR ST 68	3007 ALT 19 N	PALM HARBOR	34683	13.33	B	3	N	500	FIRE STATION
74026	PINELLAS SUNCOAST ST 27	304 1ST ST	INDIAN ROCKS BEACH	33785	4.51	A	1	N	100	FIRE STATION
74026	SAFETY HARBOR FD ST 53	3095 MCMULLEN BOOTH RD	SAFETY HARBOR	34695	56.77	X	0	Y	OUT	FIRE STATION
74026	ST PETERSBURG ST 3	3101 5TH AVE S	ST PETERSBURG	33712	46.97	X	0	N	OUT	FIRE STATION
74026	TARPON SPRINGS FIRE DEPARTMENT STATION 1	325 LEMON ST	TARPON SPRINGS	34689	19.92	X	4	N	OUT	FIRE STATION
74026	EAST LAKE ST 58	3280 KEYSTONE RD	TARPON SPRINGS	34688	21.65	D	4	Y	OUT	FIRE STATION

## Pinellas County Local Mitigation Strategy

Facility Type	Name	Address	City	Zip	DEM Elevation	Evac Zone	Surge	Fire	Flood	Detail
74026	EAST LAKE ST 57	3375 TARPON LAKE BLVD	PALM HARBOR	34685	8.85	B	3	N	500	FIRE STATION
74026	LEALMAN FD ST 18	4017 56TH AVE N	ST PETERSBURG	33714	48.40	X	0	N	OUT	FIRE STATION
74026	TARPON SPRINGS ST 69	444 S HUEY AVE	TARPON SPRINGS	34689	11.81	C	3	Y	500	FIRE STATION
74026	ST PETERSBURG ST 1 (AND HAZMAT - ST 5)	455 8TH ST S	ST PETERSBURG	33701	44.38	X	0	N	OUT	FIRE STATION
74026	ST PETERSBURG-CLEARWATER INT AIRPORT FD	4660 RESCUE WAY	CLEARWATER	33762	7.00	B	2	N	100	FIRE STATION
74026	ST PETERSBURG ST 8	4701 9TH ST S	ST PETERSBURG	33705	5.78	B	2	N	100	FIRE STATION
74026	ST PETERSBURG ST 9	475 66TH ST N	ST PETERSBURG	33710	21.37	X	5	N	OUT	FIRE STATION
74026	ST PETERSBURG ST 6	4825 9TH AVE N	ST PETERSBURG	33713	53.82	X	0	N	OUT	FIRE STATION
74026	PINELLAS PARK ST 33	5000 82ND AVE	PINELLAS PARK	33781	15.60	X	4	N	100	FIRE STATION
74026	ST PETERSBURG ST 11	5050 31ST ST S	ST PETERSBURG	33712	13.87	C	4	N	OUT	FIRE STATION
74026	GULFPORT FD ST 17	5314 23RD AVE S	GULFPORT	33707	17.51	X	5	N	OUT	FIRE STATION
74026	CLEARWATER ST 46	534 MANDALAY AVE	CLEARWATER BEACH	33767	4.78	A	1	N	100	FIRE STATION
74026	ST PETERSBURG ST 2	540 SANDS POINT DR	ST PETERSBURG	33715	10.73	A	3	N	100	FIRE STATION
74026	CLEARWATER FIRE STATION 49	565 SKY HARBOR DRIVE	CLEARWATER	33759	34.79	D	0	N	OUT	FIRE STATION
74026	CLEARWATER ST 45	610 FRANKLIN ST	CLEARWATER	33756	26.37	X	0	N	OUT	FIRE STATION
74026	PINELLAS PARK ST 34	6565 94TH AVE	PINELLAS PARK	33782	16.66	C	4	N	OUT	FIRE STATION
74026	LEALMAN STATION 19	6694 46TH AVE. N.	ST. PETERSBURG	33709	17.30	X	4	N	OUT	FIRE STATION
74026	BELLEAIR BLUFFS FD ST 43	682 INDIAN ROCKS RD N	BELLEAIR BLUFFS	33770	45.79	X	0	N	OUT	FIRE STATION
74026	ST PETERSBURG ST 7	6995 DR ML KING ST N	ST PETERSBURG	33702	6.00	X	2	N	100	FIRE STATION
74026	ST. PETERSBURG FIRE DEPARTMENT STATION 7	6975 9TH ST. N.	SAINT PETERSBURG	33701	6.00	X	2	N	100	FIRE STATION
74026	SAFETY HARBOR FD ST 52	700 MAIN ST	SAFETY HARBOR	34695	19.92	X	4	N	OUT	FIRE STATION
74026	ST PETE BEACH ST 23	7301 GULF BLVD	ST PETE BEACH	33706	5.83	A	1	N	100	FIRE STATION
74026	DUNEDIN FIRE DEPARTMENTS	750 MILWAUKEE AVE	DUNEDIN	34698	32.87	X	0	N	OUT	FIRE STATION
74026	LARGO FD ST 38	7630 ULMERTON RD	LARGO	33771	18.42	X	4	N	OUT	FIRE STATION
74026	CLEARWATER FIRE FIGHTERS	806 LAKEVIEW ROAD	CLEARWATER	33756	47.52	X	0	N	OUT	FIRE STATION

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Facility Type	Name	Address	City	Zip	DEM Elevation	Evac Zone	Surge	Fire	Flood	Detail
74026	PINELLAS PARK FIRE DEPARTMENTS	8580 66TH ST	PINELLAS PARK	33781	13.98	X	3	N	500	FIRE STATION
74026	CITY OF SEMINOLE FIRE & RESCUE STATION 30	8971 STARKEY RD	SEMINOLE	33777	13.89	X	3	N	OUT	FIRE STATION
74026	BELLEAIR FIRE DEPARTMENT	901 PONCE DE LEON BLVD	BELLEAIR	33756	47.49	X	0	N	OUT	FIRE STATION
74026	SOUTH PASADENA ST 20	911 OLEANDER WAY S	SOUTH PASADENA	33707	6.60	A	2	N	100	FIRE STATION
74026	CLEARWATER ST 44	950 GULF BLVD	CLEARWATER	33786	6.68	A	2	N	100	FIRE STATION
74034	F.B.I. PINELLAS RESIDENT OFFICE	601 CLEVELAND ST	CLEARWATER	33755	29.24	X	0	N	OUT	LAW ENFORCEMENT
74034	CLEARWATER POLICE DEPT PATROL DISTRICT II/HQ	645 PIERCE ST	CLEARWATER	33756	27.42	X	0	N	OUT	LAW ENFORCEMENT
74034	CLEARWATER POLICE DEPT PATROL DISTRICT III	2851 N MCMULLEN BOOTH RD	CLEARWATER	33761	55.68	X	0	N	OUT	LAW ENFORCEMENT
74034	CLEARWATER POLICE DEPT HEADQUARTERS	483 MANDALAY AVE STE 208	CLEARWATER	33767	5.40	A	1	N	100	LAW ENFORCEMENT
74034	US DEPT OF FISH & WILDLIFE LAW ENFORCEMENT TAMPA/ST. PETERSBURG PORT OFFICE	9549 KOGER BLVD	SAINT PETERSBURG	33702	6.34	B	2	N	100	LAW ENFORCEMENT
74034	ST. PETE BEACH POLICE HEADQUARTERS	200 76TH AVE	ST PETE BEACH	33706	4.47	A	1	N	100	LAW ENFORCEMENT
74034	BELLEAIR BEACH POLICE DEPT HEADQUARTERS	444 CAUSEWAY BLVD	BELLEAIR BEACH	33786	4.14	A	1	N	100	LAW ENFORCEMENT
74034	BELLEAIR POLICE DEPT. HEADQUARTERS	901 PONCE DE LEON BLVD	BELLEAIR	33756	47.49	X	0	N	OUT	LAW ENFORCEMENT
74034	CLEARWATER POLICE DEPT PATROL DISTRICT 1	700 BAYWAY BLVD	CLEARWATER	33767	4.35	X	1	N	100	LAW ENFORCEMENT
74034	GULFPORT POLICE DEPT HEADQUARTERS	2401 53RD ST S	GULFPORT	33707	16.65	D	4	N	OUT	LAW ENFORCEMENT
74034	PINELLAS COUNTY SHERIFF'S HEADQUARTERS	10750 ULMERTON RD	LARGO	33778	31.48	X	0	N	OUT	LAW ENFORCEMENT
74034	PINELLAS PARK POLICE DEPT HEADQUARTERS	7700 59TH ST N	PINELLAS PARK	33781	15.93	C	4	N	OUT	LAW ENFORCEMENT
74034	PINELLAS COUNTY SHERIFF NORTH DIST.	737 LOUDEN AVE	DUNEDIN	34698	28.40	X	0	N	OUT	LAW ENFORCEMENT
74034	TARPON SPRINGS POLICE HEADQUARTERS	444 S HUEY AVE	TARPON SPRINGS	34689	13.02	C	3	Y	500	LAW ENFORCEMENT
74034	LARGO POLICE DEPT. HEADQUARTERS	201 HIGHLAND AVE NE	LARGO	33770	14.68	X	5	N	OUT	LAW ENFORCEMENT

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Facility Type	Name	Address	City	Zip	DEM Elevation	Evac Zone	Surge	Fire	Flood	Detail
74034	ST PETERSBURG POLICE DEPT HEADQUARTERS	1300 1ST AVE N	ST PETERSBURG	33705	44.55	X	0	N	OUT	LAW ENFORCEMENT
74034	PINELLAS COUNTY PUBLIC SCHOOLS POLICE DEPARTMENT	11111 BELCHER ROAD SOUTH	LARGO	33773	17.26	D	4	N	OUT	LAW ENFORCEMENT
74034	PINELLAS COUNTY CRIMINAL ADM	14250 49TH ST N # D4100	CLEARWATER	33762	12.86	B	3	N	OUT	LAW ENFORCEMENT
74034	TREASURE ISLAND POLICE DEPT HEADQUARTERS	180 108TH AVE	TREASURE ISLAND	33706	4.90	A	1	N	100	LAW ENFORCEMENT
74034	FLORIDA DEPT OF LAW ENFORCEMENT CLEARWATER FIELD OFFICE	601 CLEVELAND ST	CLEARWATER	33755	29.01	X	0	N	OUT	LAW ENFORCEMENT
74034	FLORIDA HIGHWAY PATROL TROOP C	7651 US HIGHWAY 19 N	PINELLAS PARK	33781	14.32	D	4	N	OUT	LAW ENFORCEMENT
74034	INDIAN SHORES POLICE DEPT HEADQUARTERS	19305 GULF BLVD	INDIAN SHORES	33785	5.48	A	1	N	100	LAW ENFORCEMENT
74034	KENNETH CITY POLICE DEPT HEADQUARTERS	4600 58TH ST N	KENNETH CITY	33709	19.42	X	5	N	500	LAW ENFORCEMENT
74034	POLICE DOG NAR,PER	13903 BREWSTER DR, 33774	UNINCORPORATED	33774	38.26	X	0	N	OUT	LAW ENFORCEMENT
74034	CLEARWATER POLICE DEPARTMENT	1498 S MARTIN LUTHER KING, 33756	CLEARWATER	33756	58.55	X	0	N	OUT	LAW ENFORCEMENT
74034	POLICE K-9 DOG NAR TOOK NO	5714 BAY PINES LAKES BLVD, 33708	UNINCORPORATED	33708	9.89	C	3	N	100	LAW ENFORCEMENT
74034	EST FENCE,POLICE K-9 DOG	7791 EATON CT N, 33709	UNINCORPORATED	UNINC	10.76	B	2	N	100	LAW ENFORCEMENT
74034	CLEARWATER POLICE DEPARTMENT SUBSTATION	1310 N MARTIN LUTHER KING, 33755	CLEARWATER	33755	22.34	X	5	N	OUT	LAW ENFORCEMENT
74034	NRA - POLICE DOG, ROOF 00S	1930 HASTINGS DR, 33763	CLEARWATER	33763	63.31	X	0	N	OUT	LAW ENFORCEMENT
74034	PINELLAS COUNTY SHERIFFS HELI-PORT	SPADCO DR, 33762	UNINCORPORATED	33762	7.12	B	2	N	100	LAW ENFORCEMENT
74034	UNIVERSITY OF SOUTH FLORIDA ST. POLICE DEPT	140 SEVENTH AVENUE SOUTH	ST. PETERSBURG	33701	4.12	B	2	N	100	LAW ENFORCEMENT
74034	POLICE DOG	97 TROPIC BLVD W, 33770	LARGO	33770	28.69	X	0	N	OUT	LAW ENFORCEMENT
74044	PINELLAS COUNTY EMERGENCY MANAGEMENT	400 SOUTH FORT HARRISON AVENUE	CLEARWATER	33756	31.59	X	0	N	OUT	EOC
74044	SAINT PETERSBURG EMERGENCY MANAGEMENT- EMERGENCY OPERATIONS CENTER		SAINT PETERSBURG	33701	46.24	X	0	N	OUT	EOC

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Facility Type	Name	Address	City	Zip	DEM Elevation	Evac Zone	Surge	Fire	Flood	Detail
75018	PINELLAS MAINTENANCE	5211 Ulmerton Road	Clearwater		15.92	C	4	N	OUT	FUEL FACILITY - DOT
75030	PINELLAS COUNTY RESOURCE RECOV		PINELLAS PARK	33716	9.87	C	3	N	100	ELECTRIC POWER PLANT
81006	CLEARWATER AIR PARK		CLEARWATER		70.20	X	0	N	OUT	AIRPORT
81006	ALBERT WHITTED		ST PETERSBURG		3.93	A	1	N	100	AIRPORT
81006	ST PETERSBURG-CLEARWATER INTL	ST PETERSBURG-CLEARWATER INTL	ST PETERSBURG-CLEARWATER	33762	6.04	B	2	N	100	AIRPORT
81026	PINELLAS COUNTY SHERRIFF'S BUILDING		LARGO		30.51	X	0	N	OUT	HELIPORT/HELIPAD
81026	HELEN ELLIS HOSPITAL		TARPON SPRINGS		33.39	B	0	N	OUT	HELIPORT/HELIPAD
81026	DUNEDIN		DUNEDIN		5.94	X	2	N	100	HELIPORT/HELIPAD
81026	MEASE HOSPITAL EMERGENCY		DUNEDIN		33.32	X	0	N	OUT	HELIPORT/HELIPAD
81026	PINELLAS COUNTY MOSQUITO CONTROL		PINELLAS PARK		13.38	C	3	Y	500	HELIPORT/HELIPAD
81026	MORTON PLANT HOSPITAL		CLEARWATER		19.89	X	0	N	OUT	HELIPORT/HELIPAD
81026	GULF AEROSPACE		OLDSMAR		11.99	B	2	N	500	HELIPORT/HELIPAD
81026	JOHNSON		SAFETY HARBOR		58.35	X	0	N	OUT	HELIPORT/HELIPAD
81026	MEASE HOSPITAL COUNTRYSIDE		SAFETY HARBOR		33.62	X	0	Y	OUT	HELIPORT/HELIPAD
81026	BAY PINES VETERANS ADMINISTRATION		ST PETERSBURG		8.21	B	2	N	100	HELIPORT/HELIPAD
81026	FLORIDA POWER CORP GENERAL HQ HELISTOP		ST PETERSBURG		20.25	D	5	N	OUT	HELIPORT/HELIPAD
81026	BAYFRONT MEDICAL CENTER INC		ST PETERSBURG		33.40	X	0	N	OUT	HELIPORT/HELIPAD
81044	WEEDON ISLAND, FL		WEEDON ISLAND		0.75	B	1	N	100	COMMERCIAL PORTS
88012	WTSP		ST. PETERSBURG		10.57	B	2	N	500	TELEVISION
88012	WSPF-CA		ST. PETERSBURG		23.22	E	0	N	OUT	TELEVISION
88012	WTOG		ST. PETERSBURG		74.39	X	0	Y	OUT	TELEVISION
88012	WZRA-CA		OLDSMAR		3.76	A	1	N	100	TELEVISION
88012	WZRA-CA		OLDSMAR		5.40	B	2	N	500	TELEVISION
88012	WTSP		ST. PETERSBURG		10.57	B	2	N	500	TELEVISION
88012	WARP-CA		TAMPA-ST. PETERSBURG		3.48	A	1	Y	100	TELEVISION
88012	WTOG		ST. PETERSBURG		76.16	X	0	Y	OUT	TELEVISION
88012	WMOR-LP		ST. PETERSBURG		3.90	B	2	N	100	TELEVISION
88012	WTTA		ST. PETERSBURG		73.91	X	0	Y	OUT	TELEVISION
88012	WTSP		ST. PETERSBURG		10.57	B	2	N	500	TELEVISION

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Facility Type	Name	Address	City	Zip	DEM Elevation	Evac Zone	Surge	Fire	Flood	Detail
88012	WCLF		CLEARWATER		73.84	X	0	N	OUT	TELEVISION
88012	WMOR-TV		LAKELAND		73.84	X	0	N	OUT	TELEVISION
88012	WTTA		ST. PETERSBURG		73.91	X	0	Y	OUT	TELEVISION
88012	WTTA		ST. PETERSBURG		73.91	X	0	Y	OUT	TELEVISION
88012	WXAX-LP		CLEARWATER		6.15	B	2	Y	100	TELEVISION
88012	WXAX-LP		CLEARWATER		76.16	X	0	Y	OUT	TELEVISION
88012	W43CE		LEALMAN		5.40	B	2	N	500	TELEVISION
88012	W36CO		ST. PETERSBURG		58.06	X	0	N	OUT	TELEVISION
88012	W33CC		ST. PETERSBURG		9.43	C	3	N	100	TELEVISION
88012	WPDS-LP		LARGO, ETC.		70.09	X	0	N	OUT	TELEVISION
88012	WXPX		BRADENTON		73.84	X	0	N	OUT	TELEVISION
88012	WVEA-TV		VENICE		73.84	X	0	N	OUT	TELEVISION
11303	WCTQ		SARASOTA		7.91	B	2	N	500	RADIO COMMUNICATIONS TOWER
11303	WBTP		CLEARWATER		3.48	A	1	Y	100	RADIO COMMUNICATIONS TOWER
81006	SARASOTA/BRADENTON INTL	SARASOTA MANATEE ARPT AUTH, 6	SARASOTA/BRADENTON	34243	21.51	E	0	N	OUT	AIRPORT
88012	WWSB		SARASOTA		34.93	X	0	N	OUT	TELEVISION
88012	WWSB		SARASOTA		34.93	X	0	N	OUT	TELEVISION
88012	WWSB		SARASOTA		34.93	X	0	N	OUT	TELEVISION

**APPENDIX 13  
FLOOD MANAGEMENT PROGRAMS AND REPETITIVE LOSS PROPERTY  
INVENTORY**

# Pinellas County Local Mitigation Strategy

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## APPENDIX 13: FLOOD MANAGEMENT PROGRAMS AND REPETITIVE LOSS PROPERTY INVENTORY

### Overview

In addition to the potential for injury or loss of life from coastal or inland flooding is potential property loss. The National Flood Insurance Program (NFIP) was created to provide home and business owners with property insurance against the flood hazard. In order to participate in the NFIP and provide property owners with the ability to obtain flood insurance, local governments must adopt key Land Development Regulations (LDRs) within the floodplain as well as manage a program designed to minimize the community's vulnerability.



FEMA has reported the following statistics with regard to the flood policies within the State of Florida as compared to other states (<http://bsa.nfipstat.fema.gov/reports/1011.htm>). These facts show the overall importance of the NFIP to the state and the level of flooding concern.

**Table 13- 1: Flood Policies in Force  
(as of 6/30/2014)**

Top 5 states	Total Policies	Total Value of Insured Properties	Total Premiums of Policies in Force
Florida	2,007,265	\$ 475,532,376,500	\$ 1,065,801,733
Texas	613,505	\$ 158,435,243,100	\$ 380,842,793
Louisiana	473,537	\$ 112,783,427,000	\$ 366,421,758
California	240,503	\$ 64,159,270,500	\$ 211,132,333
New Jersey	239,478	\$ 57,172,538,700	\$ 241,577,140
Total US Policies	5,388,158	\$ 1,277,920,367,400	\$ 3,795,555,026

As of June 2014, Florida residents purchased 37% of all NFIP policies in the United States. The NFIP Insurance Report (8/28/2014) is presented in Table 13-2 which provides flood insurance information for each jurisdiction.

Mitigation programs are working as new buildings are constructed to current codes. The county and its jurisdictions strive to reduce their vulnerability to flooding through LDRs, code enforcement, and they actively seek to assist homeowners and businesses elevate or flood proof their structures. Those communities who choose to do so may include their Floodplain Action Plan and Annual Reports in the (optional) Appendix 15 of the Local Mitigation Strategy.

# Pinellas County Local Mitigation Strategy

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## National Flood Insurance Plan Participation

The municipalities participating in the LMS also participate in the NFIP. The specifics vary from jurisdiction to jurisdiction. Typical plans for NFIP participation are presented below:

- **Maintenance of the Flood Insurance Rate Maps (FIRM).** The jurisdictions maintain the most recent set of FIRM maps so as to be able to provide guidance for construction within the floodplain. These maps were updated during FEMA's Map Modernization process. Many communities link to the FEMA website for digital FIRMs.
- **Flood Elevation Certificates** are filed both electronically and in hard copy.
- Continue to provide the **Map Determination Service**, including the publicizing of the service.
- If needed, each community has a **designated floodplain manager**.
- Most communities participate in the **Community Rating System (CRS)**, remain in compliance through annual CRS recertification and are engaged in no activities designed to lower our CRS score. Activities include drainage system maintenance, distribution of information on floodproofing, prohibiting stream dumping, and maintaining a *Disaster Response and Recovery Plan*.
- **Enforcement of adopted Land Development Regulations** which sets down the standards for construction or substantial improvement of structures within the floodplain. Also, the jurisdictions have updated their LDRs to conform to recent state changes, CRS Program Best Practices, and NPDES requirements.
  - All construction within the V and A zones must meet NFIP requirements. All development is regulated with regard to surface water runoff.
  - Detention and retention are required to be designed for the 100-year storm unless connected to a conveyance facility.
  - Enforces the elevation of all new and substantially improved structures.
  - All CRS communities send flood proofing information and insurance information annually to the residents of each repetitive loss area.
  - Maintenance of stormwater systems, including the inspection of privately-owned drainage systems and remove, or cause to be removed, obstructions in channels or waterways. This includes routine inspection, removal of debris, repairs, top and slope mowing, and aquatic maintenance.
  - Prohibits stream dumping
  - Encourage the elevation/retrofitting of structures to FBC requirements through the enforcement of the 50% rule, through the distribution of information to repetitive loss areas and SFHA.
- **Conservation/ Recreational Opportunities** - Open areas are retained for wetland and floodplain purposes through the use of Land Use designations such as Open Space / Recreation, Conservation and Preservation land uses. They may be further protected by some communities by dedicating land in perpetuity to that use for protection of the wetland, floodplain or uplands.
- **Community assistance and outreach.** The jurisdictions provide community assistance in many forms, including providing information on the FIRM and flood zones, maintaining a Flood Library of relevant documents at the local libraries, and making disaster preparedness documents available online. Websites link to the county emergency management site for a mitigation / preparedness video library and additional information. It also includes the annual mail-out of flood proofing information to the residents of each repetitive loss area as well as providing flood information to banks, lending institutions, etc.

## Pinellas County Local Mitigation Strategy

**Table 13- 2: NFIP Policy Report**

**8/28/2014**

CID	Community Name	Total Premium	V-Zone	A-Zone	Total No. of Policies	Total Coverage	Total Claims Since 1978	Total Paid Since 1978
125089	BELLEAIR BEACH, CITY OF	\$ 1,514,391	87	988	1,083	\$ 265,167,800	671	\$ 11,343,094
120239	BELLEAIR BLUFFS, CITY OF	\$ 73,584	0	35	174	\$ 43,302,200	9	\$ 303,302
125090	BELLEAIR SHORE, TOWN OF	\$ 81,049	10	30	40	\$ 11,888,500	49	\$ 607,039
125088	BELLEAIR, TOWN OF	\$ 575,077	22	425	801	\$ 221,235,800	120	\$ 1,795,671
125096	CLEARWATER, CITY OF	\$ 8,394,896	709	9,080	11,948	\$ 2,835,961,000	1,348	\$ 11,678,193
125103	DUNEDIN, CITY OF	\$ 3,836,522	792	2,596	4,370	\$ 839,028,300	693	\$ 9,059,258
125108	GULFPORT, CITY OF	\$ 1,584,787	203	2,171	2,759	\$ 504,958,800	254	\$ 1,069,527
125117	INDIAN ROCKS BEACH, CITY OF	\$ 2,511,022	118	2,780	2,898	\$ 625,755,900	904	\$ 6,333,713
125118	INDIAN SHORES, TOWN OF	\$ 1,310,492	163	2,581	2,744	\$ 531,008,400	270	\$ 2,019,024
120245	KENNETH CITY, TOWN OF	\$ 186,084	0	202	334	\$ 61,376,900	16	\$ 15,187
125122	LARGO, CITY OF	\$ 1,756,309	1	1,253	2,866	\$ 589,527,900	231	\$ 1,329,284
125127	MADEIRA BEACH, CITY OF	\$ 3,049,863	330	2,976	3,306	\$ 701,373,000	1,934	\$ 15,464,387
125133	NORTH REDINGTON BEACH, TOWN OF	\$ 1,085,842	63	1,378	1,441	\$ 274,541,800	193	\$ 1,256,240
120250	OLDSMAR, CITY OF	\$ 2,012,116	19	1,756	2,516	\$ 652,108,700	287	\$ 2,283,003
125139	PINELLAS COUNTY *	\$ 23,471,396	370	24,874	36,389	\$ 8,190,674,700	2,881	\$ 21,696,379
120251	PINELLAS PARK, CITY OF	\$ 2,165,346	0	1,326	3,662	\$ 834,044,400	613	\$ 2,698,292
125140	REDINGTON BEACH, TOWN OF	\$ 1,223,287	45	701	746	\$ 175,425,600	1,041	\$ 8,666,426
125141	REDINGTON SHORES, TOWN OF	\$ 1,143,265	41	1,623	1,664	\$ 379,158,000	426	\$ 2,026,566
125143	SAFETY HARBOR, CITY OF	\$ 700,519	1	378	1,205	\$ 325,297,100	64	\$ 592,980
120257	SEMINOLE, CITY OF	\$ 356,711	0	792	992	\$ 175,727,800	37	\$ 68,367
125151	SOUTH PASADENA, CITY OF	\$ 1,387,527	39	2,808	2,847	\$ 543,828,300	72	\$ 254,523
125149	ST. PETE BEACH, CITY OF	\$ 6,969,505	385	6,697	7,082	\$ 1,439,666,900	1,358	\$ 8,865,347
125148	ST. PETERSBURG, CITY OF	\$ 34,208,874	582	31,268	36,970	\$ 7,858,585,700	5,741	\$ 55,583,708
120259	TARPON SPRINGS, CITY OF	\$ 3,351,806	163	2,918	3,684	\$ 842,860,600	546	\$ 6,293,609
125153	TREASURE ISLAND, CITY OF	\$ 4,685,088	431	5,120	5,551	\$ 1,091,493,400	1,413	\$ 8,018,053
	COUNTY TOTAL :	\$ 107,635,358	4,574	106,756	138,072	\$ 30,013,997,500	21,171	\$ 179,321,172

# Pinellas County Local Mitigation Strategy

## Community Rating System (CRS) Programs

Because flooding – both coastal and inland flooding – is considered the most critical hazard facing the county, all jurisdictions participate in the NFIP and have a floodplain management program. Many of the communities also participate in the Community Rating System (CRS) and strive to reduce the risk in their communities.

CRS provides flood insurance premium discounts to NFIP-participating communities that take extra measures to manage floodplains above the minimum requirements. A point system is used to determine a CRS rating from 10 to 1, with lower scores indicating better ratings. A community that does not participate in CRS or that does not maintain the minimum number of credit points would be considered a Class 10 community. The more measures a community takes to minimize or eliminate exposure to floods, the more CRS points are awarded, the lower their CRS Class Rating and the higher the discount on flood insurance premiums. A list of CRS communities is available on FEMA’s Web site at <http://www.fema.gov/library/viewRecord.do?id=3629> (FEMA, 2012b). The unincorporated areas of Pinellas County and most of the incorporated communities participate in the CRS program. CRS class ratings for each of these communities are shown in Table 13-3.

**Table 13- 3: Pinellas County CRS Program Ratings**

Community	Community Identification Number	CRS Class Rating
Pinellas County (unincorporated areas)	125139	7
Belleair, Town of	125088	Not participating
Belleair Beach, City of	125089	7
Belleair Bluffs, City of	120239	Not participating
Belleair Shore, Town of	125090	Not participating
Clearwater, City of	125096	7
Dunedin, City of	125103	6
Gulfport, City of	125108	6
Indian Rocks Beach, City of	125117	7
Indian Shores, Town of	125118	6
Kenneth City, Town of	120245	8
Largo, City of	125122	7
Madeira Beach, City of	125127	6
North Redington Beach, Town of	125133	7
Oldsmar, City of	120250	6
Pinellas Park, City of	120251	6
Redington Beach, Town of	125140	7
Redington Shores, Town of	125141	7
Safety Harbor, City of	125143	7
Seminole, City of	120257	Not participating
South Pasadena, City of	125151	7
St. Pete Beach, City of	125149	7
St. Petersburg, City of	125148	6
Tarpon Springs, City of	120259	7
Treasure Island, City of	125153	6

Source: FEMA, May 2014

# Pinellas County Local Mitigation Strategy

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## Managing Repetitive Loss Properties

One of the key elements in a floodplain management plan is the mitigation of repetitive loss properties. A repetitive loss property is defined as property for which two or more losses of at least \$1,000 each have been paid by the National Flood Insurance Program (NFIP) over a rolling 10- year period.

Pinellas County has 7% of all the NFIP policies in the state with 15% of the total number of repetitive loss structures in the state. This illustrates that Pinellas County is very vulnerable to coastal and inland flooding and that most residents and businesses in the floodplain purchase flood insurance.

The distribution of the structures by jurisdiction is presented in Table 13-3. The list of the repetitive loss properties is not available in documents for public review because of security and privacy regulations. The Repetitive Loss Inventory is for official use only (FOUO) and was provided on CD to the official local jurisdiction representative on the LMS.

The areas with the highest number of repetitive loss locations are the geographic areas with the highest historic flooding. These include the barrier island communities and along the Intra Coastal Waterway, the historic area in Tarpon Springs, the Gandy and Shore Acres communities in the City of St. Petersburg. (See Map 13-1).

The location of specific areas in the community where flooding continues to be a problem allow planners to identify where mitigation efforts should be concentrated. For many of these areas, mitigation will involve significant property owner investment and will probably be delayed until redevelopment/ reconstruction occurs. New construction or significant remodeling will require adherence to current floodplain management regulations will be enforced.

**Table 13- 4: Repetitive Loss Properties**

Community Name	Rep Loss	SF	2-4	Condo	Other	Non-Res	Properties Mitigated
Belleair	7	7	0	0	0	0	0
Belleair Beach	59	22	8	8	17	4	4
Belleair Shore	6	6	0	0	0	0	1
Clearwater	88	63	2	5	9	9	3
Dunedin	100	99	0	0	1	0	18
Gulfport	13	5	3	2	1	2	0
Indian Rocks Beach	40	30	9	0	0	1	7
Indian Shores	18	5	4	1	7	1	8
Kenneth City	0	0	0	0	0	0	0
Largo	17	13	1	0	1	2	7
Madeira Beach	172	120	36	2	4	10	31
North Redington Beach	6	3	0	1	1	1	1
Oldsmar	7	6	1	0	0	0	2
Pinellas County	131	110	7	3	0	11	39

## Pinellas County Local Mitigation Strategy

Community Name	Rep Loss	SF	2-4	Condo	Other	Non-Res	Properties Mitigated
Pinellas Park	24	21	0	0	1	2	21
Redington Beach	92	89	0	2	1	0	4
Redington Shores	22	14	6	0	1	1	8
Safety Harbor	5	1	1	0	0	3	3
South Pasadena	4	3	1	0	0	0	2
St. Pete Beach	75	42	7	3	6	17	7
St. Petersburg	405	379	6	3	3	14	37
Tarpon Springs	71	56	8	0	0	7	2
Treasure Island	140	78	35	4	10	13	21
	1502	1172	135	34	63	98	226

Source: FEMA, Repetitive Loss Listing 2014

**Table 13- 5: Repetitive Loss Properties by Occupancy**

Single Family	2-4 Family	Condo	Non-Residential	Other
1172	135	34	98	63

Source: FEMA, Repetitive Loss Listing 2014

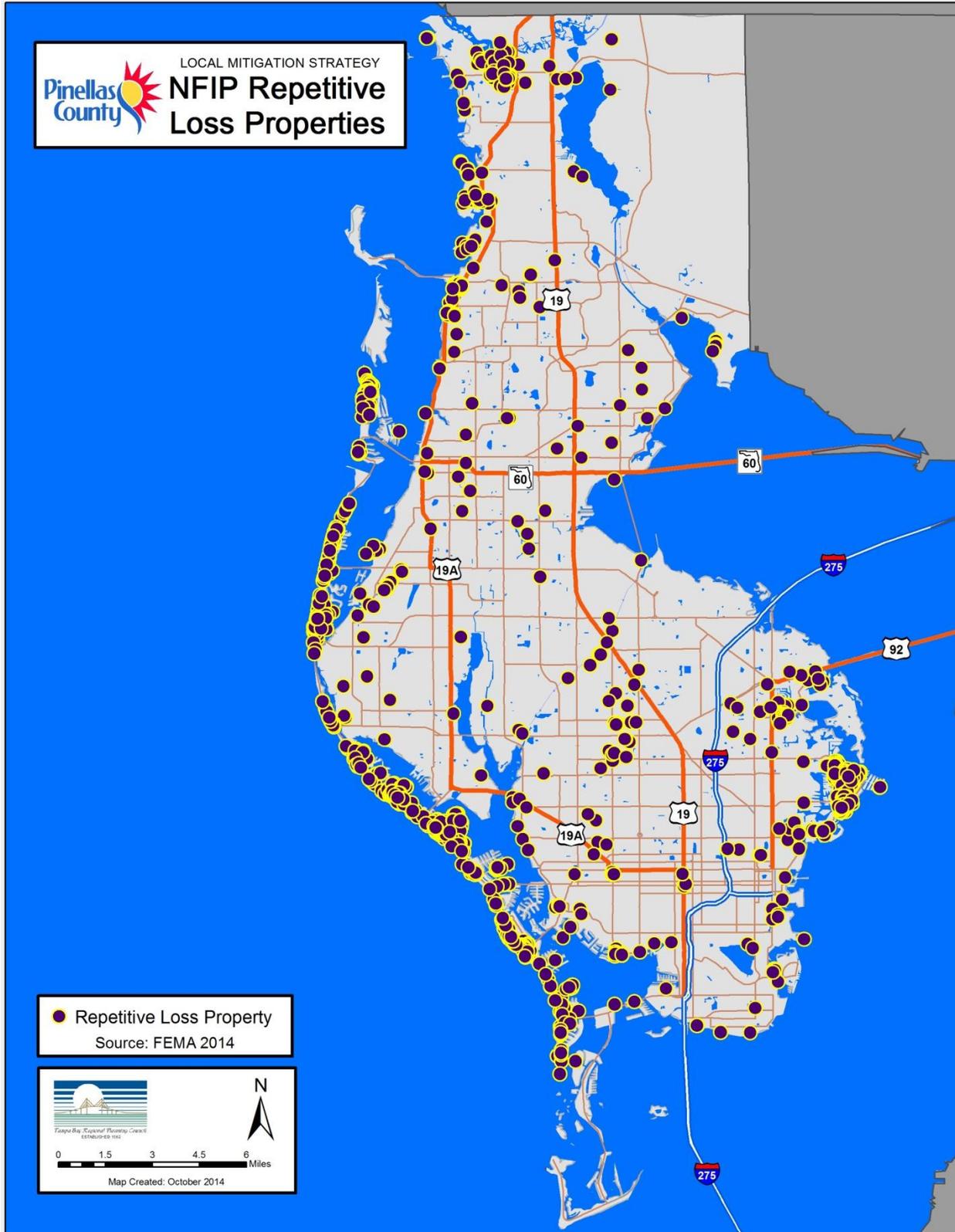
**Table 13- 6: Repetitive Loss Properties by Flood Zone**

A-Zone 100-year	B-Zone 500 year	Velocity Zone	C/D	X
1,262	11	132	51	46

Source: FEMA, Repetitive Loss Listing 2014

# Pinellas County Local Mitigation Strategy

Map 13- 1: Pinellas County Repetitive Loss Property Areas and Areas of Historic Flooding



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**APPENDIX 14**  
**COUNTY AND MUNICIPAL RESOLUTIONS ADOPTING THE PINELLAS**  
**COUNTY LOCAL MITIGATION STRATEGY**

# Pinellas County Local Mitigation Strategy

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**APPENDIX 15**  
**LOCAL FLOODPLAIN MANAGEMENT ACTION PLAN**

# Pinellas County Local Mitigation Strategy

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## APPENDIX 15: LOCAL FLOODPLAIN MANAGEMENT ACTION PLAN

The Community Rating System (CRS) is part of the National Flood Insurance Program (NFIP). Local governments participating in the CRS go beyond the minimum standards for floodplain management. By performing tasks and services that further reduce the effects of the flooding hazard; these communities are rewarded with discounts on flood insurance premiums for residents and businesses.



A community can voluntarily develop and adopt a floodplain management plan (FMP) in order to improve its CRS rating. When a community exceeds nine repetitive loss properties (a repetitive loss property is one for which two or more claims of more than \$1000 have been paid by the NFIP within any ten-year period since 1978), such an FMP is required. An FMP is similar to a Local Mitigation Strategy in that both must follow certain steps, including involving other agencies during the planning process, developing a risk assessment, putting together a mitigation strategy, adopting the plan and then maintaining it. FEMA “encourages jurisdictions to integrate the CRS planning steps into their multi-hazard mitigation plans.”

While a multi-hazard mitigation plan such as this one that addresses floods could qualify for possible activities and drafting an action plan. These two undertakings have resulted in analyses and responses that are unique to the communities undertaking them. Presented here are the mitigation strategies and the action plans for those communities who have chosen to perform these additional activities.

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