City of Tampa Post Disaster Redevelopment Plan

Task 3: Comprehensive Risk and Vulnerabilities Assessment and Best Practices Technical Memorandum

July 7th, 2025

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Acronyms and Abbreviations

AAA	Adaptation Action Area
AAR	After-Action Report
AEP	Annual Exceedance Probability
BFE	Base flood elevation
BRIC	Building Resilient Infrastructure and Communities
CDC of Tampa	Corporation to Develop Communities of Tampa
CEOP	Comprehensive Emergency Operations Plan
CEMP	Comprehensive Emergency Management Plan
CIP	Capital Improvements Plan
CRA	Community Redevelopment Area
DRC	Disaster Recovery Centers
EOC	Emergency Operations Center
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
HART	Hillsborough Area Regional Transit Authority
HMGP	Hazard Mitigation Grant Program
HUD	US Housing and Urban Development
LMS	Local Mitigation Strategy
MOU	Memorandum of Understanding
NAVD88	North American Vertical Datum of 1988
NDRF	National Disaster Recovery Framework
NOAA	National Oceanic and Atmospheric Administration
OEM	Office of Emergency Management
PDRP	Post Disaster Redevelopment Plan
PIPES	Progressive Infrastructure Plan to Ensure Sustainability
POD	Points of distribution
R.I.C.H. House	Resources in Community Hope House
RSF	Recovery Support Function
SLOSH	Sea, Land, and Overland Surges from Hurricanes
SLR	Sea level rise
TAC	Technical Advisory Committee
TDR	Transfer of Development Rights
TECO	Tampa Electric Company
THA	Tampa Housing Authority
THG	Tampa General Hospital
TM	Technical Memorandum
USF	University of South Florida
VA	Vulnerability Assessment

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1 Introduction

The City of Tampa (City), along with Hillsborough, Pinellas, and Hernando counties (**Figure 1**), is currently developing an individually tailored Post Disaster Redevelopment Plan (PDRP). These PDRPs outline strategies, policies and objectives that can be integrated into existing City programs and Plans to support long-term recovery and guide redevelopment efforts following a disaster. Once completed, the individual PDRPs will be synthesized into a regional Tampa Bay PDRP.

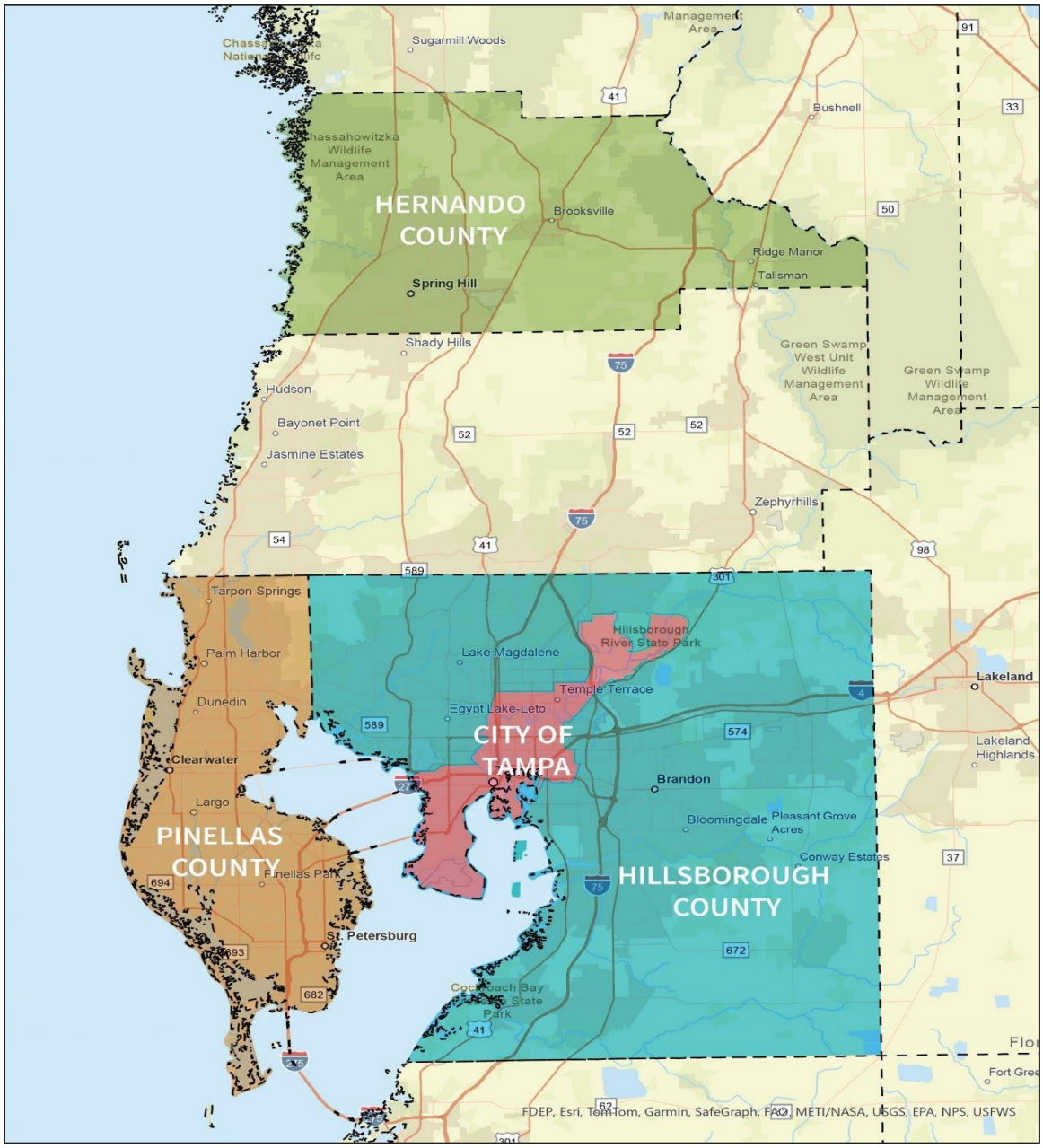


Figure 1: Participating Jurisdictions Developing PDRPs

In 2010, an original PDRP was developed for Hillsborough County and included the cities of Tampa, Plant City, and Temple Terrace. The current effort builds upon that foundation and expands the focus on Tampa-specific challenges and opportunities.

The PDRP serves as a set of guidelines, policies, and procedures designed to facilitate efficient rebuilding while supporting the City's long-term vision for a more resilient and sustainable future. It promotes a seamless transition from short-term recovery to long-term reconstruction, aligning with Tampa's Comprehensive Plan, Strategic Plan, Local Mitigation Strategy (LMS), and land development regulations. The PDRP is also intended to aid leadership in leveraging federal and state funding for disaster mitigation, recovery, and resilience.

The purpose of this technical memorandum (TM) is to present the findings of a citywide risk and vulnerability assessments, evaluate the City's current capacity for post-disaster redevelopment, and identify best practices to enhance and support the City's efforts in this area. This analysis synthesizes data and findings from previous and ongoing climate-related studies, including the Sea Level Rise (SLR) Vulnerability Analysis, the 2025 City of Tampa Vulnerability Analysis (VA), and the Hillsborough County LMS. It also includes scenario-based projections of potential physical and economic impacts the City may face from near- and far-future extreme weather events. Lastly, it presents draft recommended actions for incorporation into the PDRP that builds off of the recommendations of previous resilience work and assists in filling the gaps regarding the City's current capacity to address disaster-related redevelopment.

This TM was developed through an evaluation of future climate-related risks using three modeling techniques that forecast physical and economic impacts of hurricanes, storm surge, and extreme rainfall on the City's infrastructure and economy. The modeling was supplemented by a review of previous City storm damage reports and studies to ensure alignment with existing planning and resilience efforts. **Figure 2** summarizes the components of the risk and vulnerability assessment, which provides a data-driven foundation for shaping PDRP strategies to reduce future losses from flooding and storm events. This analysis also introduces a geospatial element to support stakeholders and subcommittees in developing targeted redevelopment strategies.

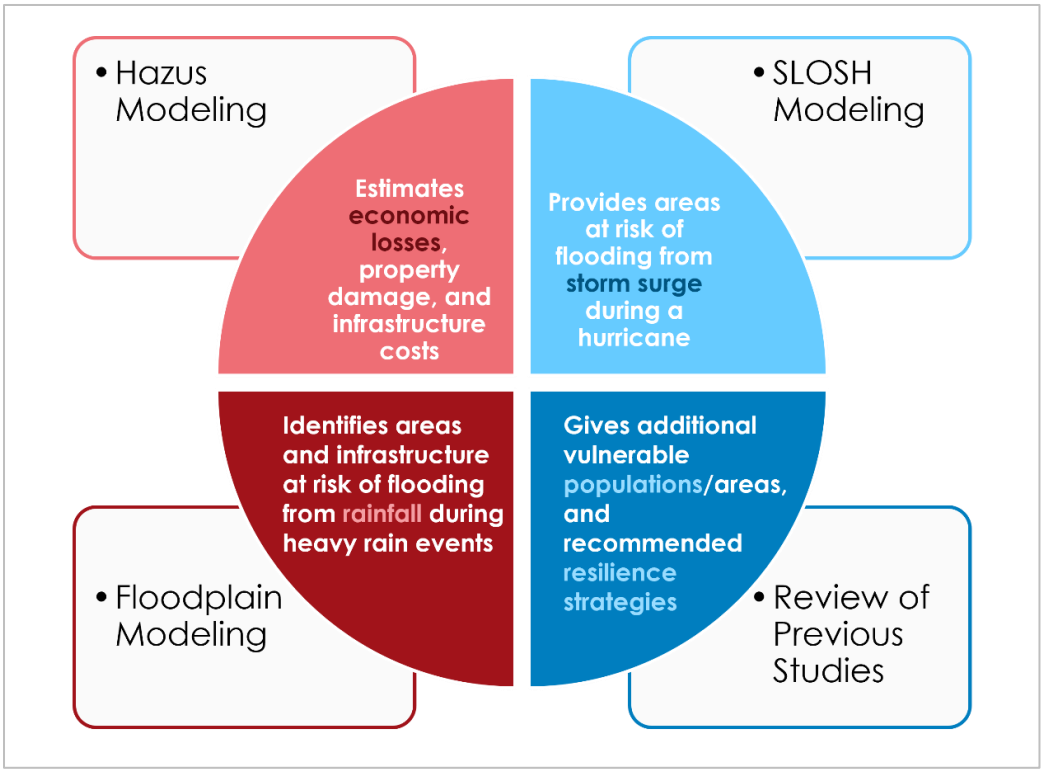


Figure 2: Components of the Risks and Vulnerabilities Assessment

Together, these analyses provide a clearer understanding of the City's exposure to natural hazards and informs priorities for equitable redevelopment and economic vitality. Findings and recommendations from this TM will help shape the PDRP, particularly in the areas of new development or redevelopment regulations, siting temporary or long-term housing, business continuity and economic development, environmental protection and restoration, and community outreach during recovery and redevelopment.

PDRP Implementation Timeframe

The PDRP is useful in assisting a community from advancing through the recovery phase towards redevelopment and back into the preparedness phase of the emergency management cycle. Redevelopment begins after immediate response efforts have stabilized conditions and extend through the restoration and revitalization of housing, infrastructure, economy, and natural systems, as outlined in the Federal Emergency Management Agency's (FEMA) National Disaster Recovery Framework (**Figure 3**). The strategies and best practices identified in this TM are intended to guide Tampa's planning, investment decisions, and redevelopment priorities once emergency response operations conclude, supporting a coordinated, equitable, and resilient redevelopment process that reflects both community needs and long-term goals.

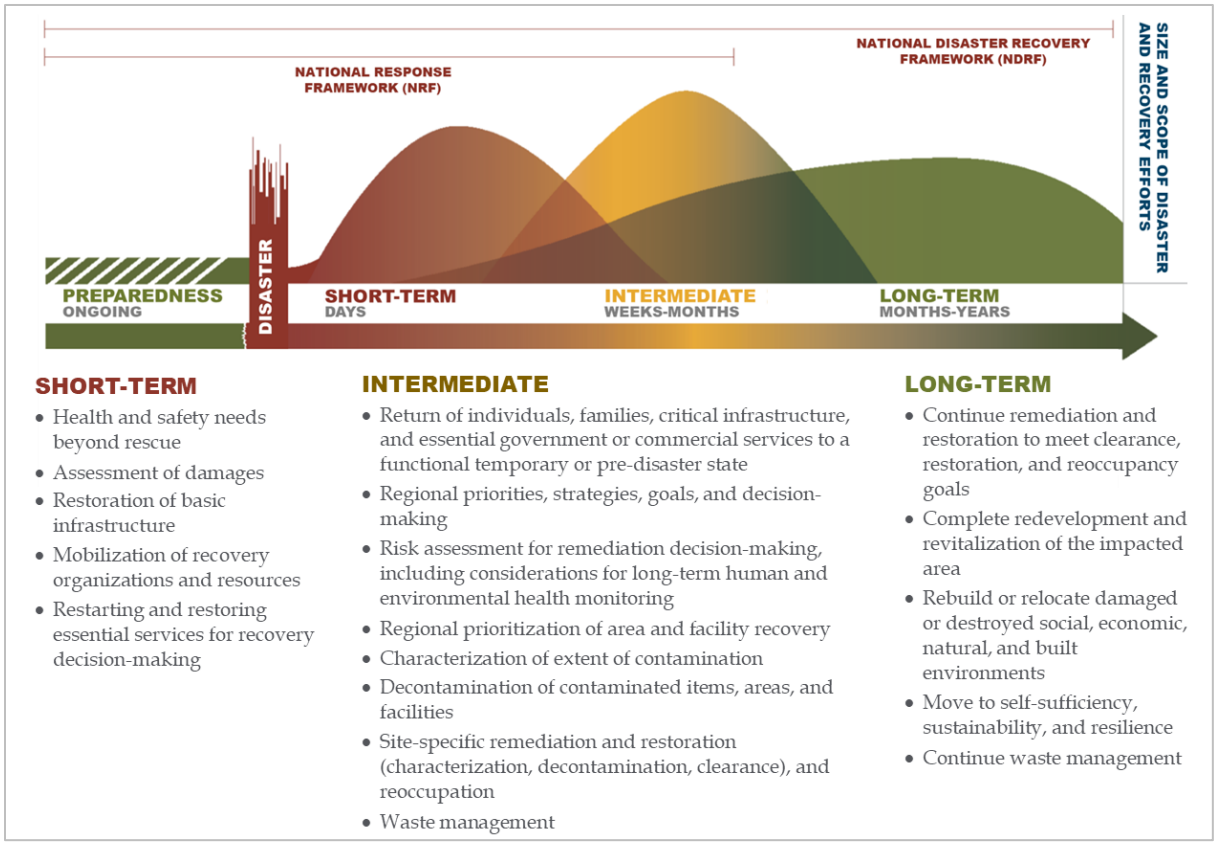


Figure 3: National Disaster Recovery Framework, FEMA[1]

1.1 Project Context

The City of Tampa is a dynamic and fast-growing coastal city located on Florida's Gulf Coast. With a population of over 390,000 residents and a thriving economy anchored by healthcare, tourism, higher education, and port-related industries, Tampa serves as a regional hub for commerce and culture in West Central Florida. The City is home to a diverse range of communities, from historic neighborhoods such as Ybor City and Seminole Heights to waterfront areas like Davis Islands and Palmetto Beach. Tampa's natural and built environment includes an extensive network of stormwater infrastructure, over 500 tidally influenced outfalls, and critical public facilities that support both local quality of life and regional functionality.[2]

Tampa's relatively flat, low-lying geography and coastal exposure place it at high risk from hurricanes, flooding, and sea level rise. These risks were brought into sharp focus during the 2024 hurricane season, when the City experienced back-to-back impacts from two major storms – Hurricane Helene and Hurricane Milton. On September 26, 2024, Hurricane Helene made landfall in Florida's Big Bend region as a Category 4 storm, bringing record-breaking storm surge and

[1] Retrieved from Recovery Begins During Planning and Response | FEMA.gov.
[2] Retrieved from 2020 Sea Level Rise Vulnerability Analysis.

heavy rainfall to the Tampa Bay area. A range of 7 to 8 feet of storm surge inundated low-lying neighborhoods such as Davis Islands and Palmetto Beach, contributing to over $77 million in public property damage and $501 million in private losses within the City (**Figure 4**). Less than two weeks later, on October 9, Hurricane Milton made landfall as a Category 3 hurricane near Siesta Key, generating 93 mph wind gusts and dropping more than 16.5 inches of rain across Tampa. The storm caused widespread power outages, further flooding, and created an additional $263 million in combined public and private damages.[3]

Figure 4: Private Property Damage after Hurricane Helene (2024)[4]

These storms created a rare and compounding series of challenges. In the span of just two weeks, the City of Tampa was forced to manage simultaneous emergency response and long-term recovery operations, including sheltering residents, staging resources, and deploying hundreds of generators to sustain critical services at pump stations, fire stations, and other essential facilities. Debris management continued for months, with crews working around the clock until cleanup operations concluded in early 2025. The storms also underscored longstanding vulnerabilities in drainage, emergency housing capacity, and public infrastructure resilience.

In light of these challenges and in recognition of the growing risks posed by climate change and rapid urbanization, the City of Tampa is developing a PDRP to guide long-term recovery and resilience. The PDRP will provide a coordinated strategy for rebuilding stronger after future disasters, with a focus on housing, infrastructure, economic recovery, public health, and environmental restoration. This effort builds on lessons learned from recent hurricanes and aligns with the City's broader climate adaptation, hazard mitigation, and comprehensive planning goals. By identifying gaps, setting priorities, and engaging key stakeholders, Tampa's PDRP aims to ensure a more resilient future for all residents and communities.

[3] Retrieved from the 2024 Hurricane Helene and Hurricane Milton After-Action Report.

[4] Image curtesy the City of Tampa Vulnerability Assessment (2025).

2 Review of Existing Resilience, Sustainability, and Vulnerability Assessments

The City of Tampa has long understood its vulnerability to hurricanes, tropical storms, and seasonal heavy rains and has conducted numerous risk and resilience studies to understand and overcome the effects of these natural hazards. To build off of this previous work, a review of each study's results was necessary to assist in developing a comprehensive database of analyses and recommended strategies which serve as the foundation for the PDRP.

2.1 Vulnerability Assessment (2025)

The City of Tampa faces escalating risks from storm surge, SLR, and extreme rainfall, now and in the future. While each hazard presents distinct challenges, all are projected to overwhelm low-lying coastal neighborhoods and inland drainage basins, placing homes, infrastructure, and essential services at risk.

According to a recently conducted Vulnerability Assessment, rainfall-driven flooding is the most frequent and widespread hazard. Inland neighborhoods such as University Square, East Tampa, Forest Hills, Tampa Overlook, Tampa Palms, Drew Park, and parts of the South Tampa peninsula as well as Palmetto Beach and Port Tampa Bay are highly susceptible (**Figure 5**). Historic development patterns in these basins have reduced natural drainage capacity – many former sinks no longer function effectively. Flooding during Hurricane Debby (2024), which dropped six inches of rain in 24 hours, illustrated these vulnerabilities when Drew Park roads and highway ramps were submerged. Future conditions will require major interventions such as stormwater pump stations, large-diameter drainage pipes, and property buyouts.

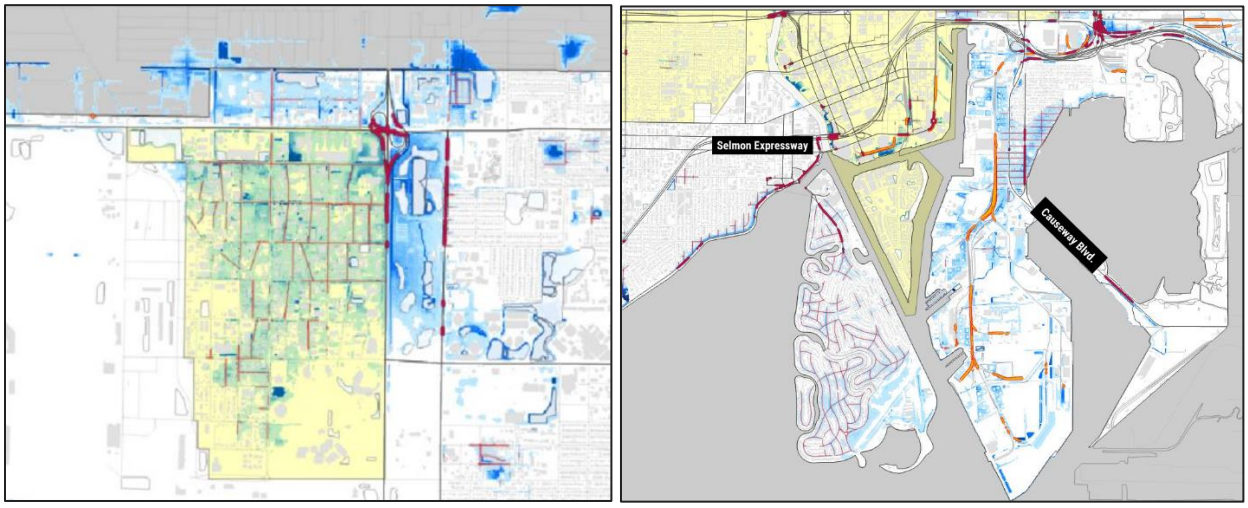


Figure 5: Flooding from 100-Year Event, Drew Park (L) & Palmetto Beach and Port Tampa Bay (R)

Sea-level rise presents a slower developing but compounding risk. Using the National Oceanic and Atmospheric Administration (NOAA) Intermediate-High projection for 2050 (1.44 feet of rise), the study modeled a total stillwater elevation of 3.44 feet NAVD88. While most of Tampa sits above 5 feet (NAVD88), rising seas threaten to submerge many outfalls and elevate groundwater tables, reducing infiltration and allowing saltwater to backflow into inland neighborhoods. Coastal areas such as Palmetto Beach, Old Port Tampa, Bayshore Boulevard, and Sunset Park are among the most exposed, where overtopping of seawalls and backflow through drainage infrastructure could cause frequent tidal flooding (**Figure 6**). Compound flooding, where future sea level rise exacerbates storm surge depths, could bring water levels to 10 – 12 feet NAVD88, similar to that seen during Hurricane Helene (2024), which produced a surge of 7 – 8 feet.

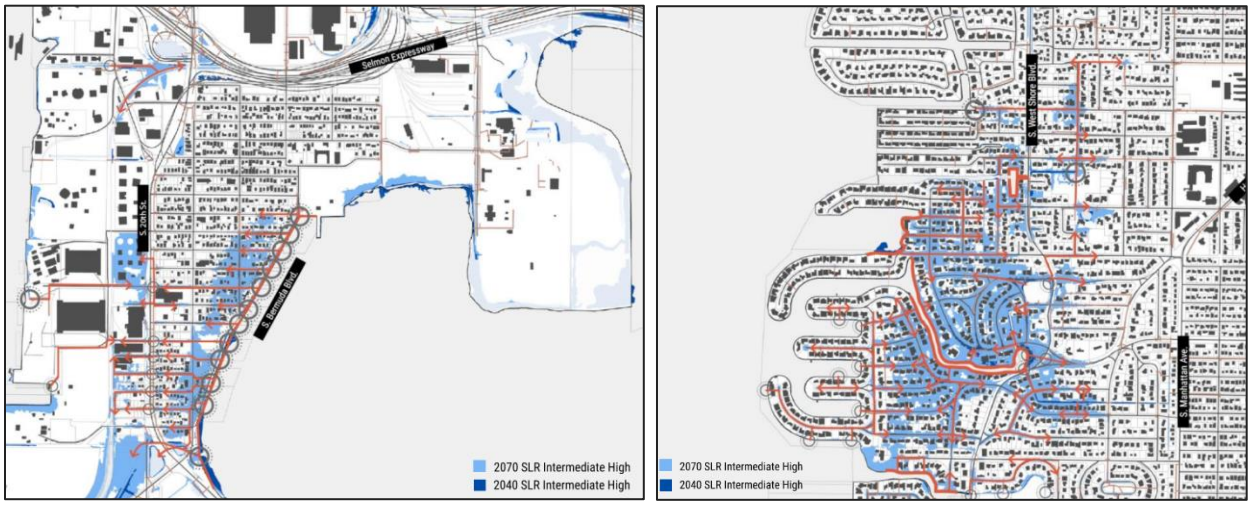


Figure 6: Sea Level Rise Exposure from Intermediate High SLR Scenarios in 2040 and 2070, Palmetto Beach (L) & Sunset Park (R)

Storm surge remains the most acute short-term threat, capable of devastating low-lying areas in a single event. The South Tampa peninsula, including a cluster of retirement homes near Gandy Boulevard, is especially vulnerable (**Figure 7**). Several major roadways, including Courtney Campbell highway and access routes to Tampa General Hospital (THG) on Davis Islands, may be cut off during such events. TGH, the region's only Level I Trauma Center, is a critical facility that must remain accessible during emergencies. Although a preliminary adaptation concept for elevating the hospital's bridge connection has been developed, further engineering studies are needed.

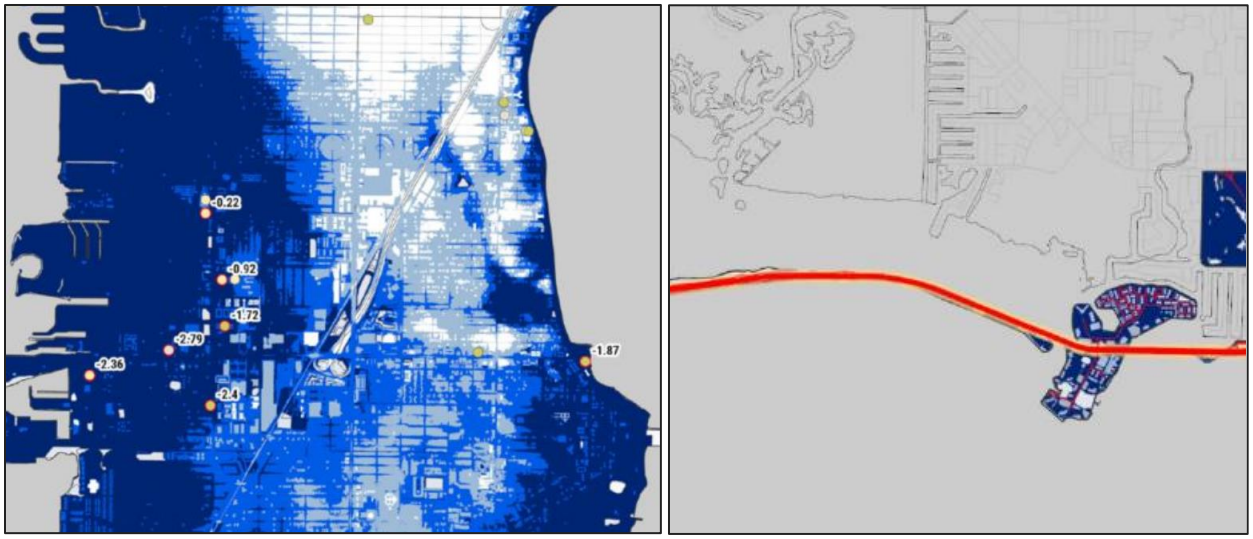


Figure 7: Storm Surge Impacts to Retirement Homes in South Tampa Peninsula (L) & along major roadway Courtney Campbell highway (R)

Essential public infrastructure systems are also at risk. Wastewater lift stations, many of which are located in low-lying areas, are among the City's most vulnerable assets, comprising nearly two-thirds of the City's top 30 prioritized vulnerable assets. Disruptions at these facilities can cause sewer backups and widespread service issues.

Major pipe segments, such as the 54-inch sanitary force main beneath Bermuda Boulevard in Palmetto Beach, are also susceptible to coastal flooding. Roadway flooding, particularly in inland basins, can disrupt emergency access and impede solid waste operations during recovery. Sea level rise also threatens transportation and freight access to Port Tampa Bay, particularly the Hooker's Point rail line and Causeway Boulevard. Recreational spaces such as Picnic Island, Bayshore Linear Park, Tony Janus Park, and Cotanchobee Fort Brooke Park are already experiencing erosion and inundation, which will worsen as sea levels rise.

The results of the Vulnerability Assessment help to highlight the most vulnerable areas and assets of the City due to the occurrence of these natural hazards, now and in the future. Strategies and policies to assist in mitigating the effects of these hazards should be built into the PDRP and considered in current and future redevelopment plans.

2.2 Sea Level Rise Vulnerability Analysis (2020)

The Tampa Sea Level Rise Vulnerability Analysis assessed the vulnerability of stormwater outfalls in areas susceptible to elevated water levels. Specific coastal basins were prioritized for analysis: Davis Islands, Conley, Spring Lake, Buffalo, Cedar Channel, and Downtown (**Figure 8**). The study found significant potential impacts to multiple basins, some of which contain sought-after neighborhoods due to their proximity to well-regarded schools, historic areas, and other characteristics.

In a post-disaster context, the outfall-focused study highlights that the City may be particularly vulnerable to episodic flooding, such as storm surge, and could also face chronic flooding as sea levels rise. Sea-level rise specifically threatens to submerge stormwater outfalls, which would hinder proper drainage and cause water to backflow into communities, leading to inland flooding.

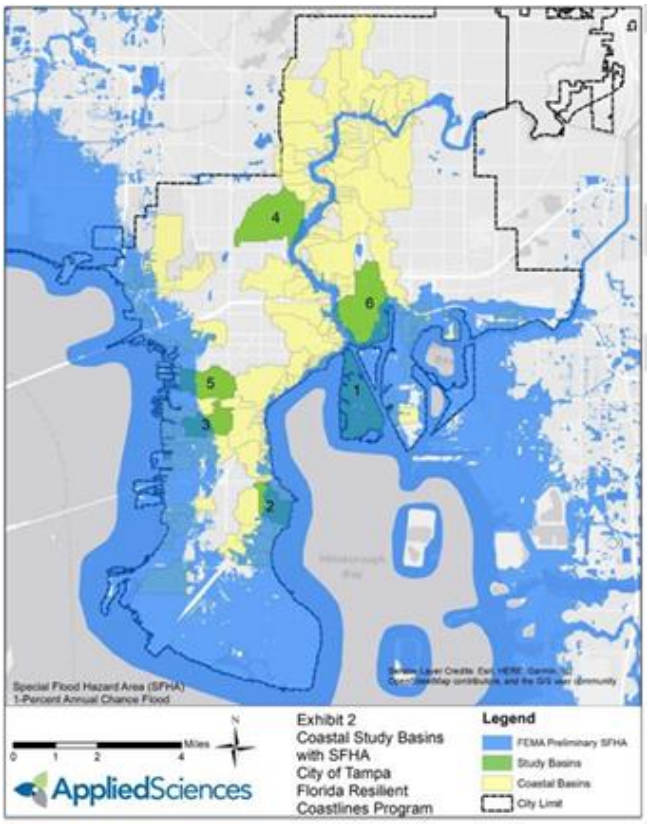


Figure 8: Studied Basins. 1 – Davis Islands Basin, 2 – Conley Basin, 3 – Spring Lake Basin, 4 – Buffalo Basin, 5 – Cedar Channel Basin, 6 – Downtown

Rising water levels will also elevate the groundwater table, increasing its salinity and contributing to increased stormwater runoff by reducing infiltration, which causes water to flow overland more quickly. At the time of the study, the City of Tampa had 563 outfalls that discharged to tidally influenced areas susceptible to sea level rise. A statistically significant sample of these outfalls was chosen to assess vulnerability in basins that are representative of conditions citywide and to develop mitigation strategies.

For the purposes of this study, future water levels were projected according to the NOAA Intermediate High scenario for 2050, a difference of 1.44 feet, combined with a 1-Year Stillwater elevation of 2 feet for a total projected water level of 3.44 (NAVD88).[5] **Table 1** summarizes key flood risks and critical facilities located within each basin.

[5] This Florida Department of Environmental Protection (FDEP)-funded study was completed in June 2020, prior to the establishment of the Resilient Florida grant program and its statutory requirements (Florida Statutes 380.093)

Table 1: Sea Level Rise Vulnerability Analysis Summary

Basin	Key Flood Risks	Critical Facilities in Basin
Davis Island	Seawall overtopping, outfall submergence (~81 outfalls at ~3 ft NAVD88), elevated groundwater; flood depths up to 8.5 ft during 100-year event (Base Flood Elevation (BFE) 11–13 ft)	Tampa General Hospital, Fire Station 17, pump station (Seddon Channel), assisted living facility
Conley	Inundation of 16.5 acres due to undersized Conley box culvert; saltwater intrusion into lake; low elevations and residential density limit mitigation; BFEs 10–12 ft	Ballast Point Elementary School, 2 assisted living facilities
Spring Lake	Nearly 50% of basin in SFHA; intersection at Manhattan Ave and Vasconia St vulnerable at 4 ft NAVD88; backflow from Old Tampa Bay into box culvert during storms	No critical facilities specifically identified in study
Buffalo	Outfall at MLK Blvd impaired under high sea levels; elevations range 0–47.5 ft NAVD88; BFE 11 ft; pump station on Rome Ave nearly impacted	19 facilities: 3 hospitals, 7 ambulatory centers, 2 nursing homes, 5 assisted living, 1 TECO substation, 1 wastewater pump (Rome Ave)
Cedar Channel	Outfall to Old Tampa Bay may fill under SLR; ~25% of basin in SFHA (BFE 11 ft); box culvert along Trask St at risk of backflow to Manhattan Ave	Fire station, water tank, San Carlos wastewater pump, TECO substation, aerial water main (Westshore Blvd Bridge)
Downtown	All 41 stormwater outfalls submerged under modeled stillwater scenario; overtopped seawalls; elevated groundwater; flood depths greatest near Convention Center and Krause pump	Fire station, Tampa Police HQ, pump station, T&I Data Center, Tampa Museum of Art, Fire Signal shop, 1 nursing home, 1 assisted living facility, 4 TECO substations

2.3 Land Regulatory Response to Sea-Level Rise

The Land Regulatory Response to Sea-Level Rise produced a series of documents that articulate the magnitude of sea-level rise, the potential timing of impacts, and the regulatory measures that can be implemented to limit property damage and adjust future development to the reality of higher water levels. For a post-disaster redevelopment context, the study provides several specific policies that could be adopted before or after a disaster to prevent repeated widespread damage.

Coastal waters in Tampa Bay have already risen 7.8 inches since 1946. The pace of sea level rise is expected to accelerate. Estimates range between 2 and 8.5 feet (NAVD88) by the year 2100. For this study, projected sea levels at four planning horizons were assessed:

- NOAA 2045 Intermediate: 1.26 feet
- NOAA 2045 High / 2060 Intermediate: 1.87 feet
- NOAA 2060 High / 2100 Intermediate: 3.90 feet
- NOAA 2100 High: 8.50 feet

Although the projections extend to 2100, low-lying Tampa Bay neighborhoods are already experiencing or could very soon experience the symptoms of chronic flooding. Shores Acres in St. Petersburg offers an object example. In this neighborhood, areas 2 feet (NAVD88) and below flood even in the absence of rain or surge. Instead, the flood water is attributed to regular high tides elevating groundwater levels, causing water to backflow through drainage infrastructure and inundate streets.

In Tampa, areas 2 feet and below (NAVD88) that face potential frontline impacts include the Port Tampa City neighborhood south of Gandy Boulevard, the Bayside West neighborhood immediately north of Gandy Boulevard, the Old Tampa Bay coastline north of I-275, and the areas surrounding McKay Bay. This study's sea level rise projects identify areas at an elevation of 2.1 and 3.5 feet (NAVD88) that may experience the same kind of sunny-day flooding under the intermediate scenario within the next 35 years: Sunset Park, Ballast Point, and Hookers Point areas, the latter of which impacts access to Port Tampa Bay.

Given Tampa's porous soils and higher water table, the first impacts of sea-level rise in many areas of Tampa will be underfoot. As water levels increase, so will groundwater elevations. Higher groundwater elevations, and a corresponding increase in corrosive salinity, can deteriorate pipes and other underground utilities, lower the capacity of detention ponds and stormwater outfalls, and harm vegetation.

In the future, flooding currently associated with seasonal or episodic events will become permanent. As early as 2045, Tampa could experience chronic flooding as previously described, although the study found that no roads and structures would be permanently inundated in the 2045 Low and 2045 High/2060 Intermediate model scenarios. Much of the impact at that point will be on publicly owned open or vacant land. By 2060, under the High scenario, areas such as Sunset Beach, Beach Park, and Palmetto Beach – which were carved out of or built over historic wetlands – will experience frequent flooding.

The extent of flooding from the sea level rise intervals evaluated in the study are displayed in **Figure 9**.

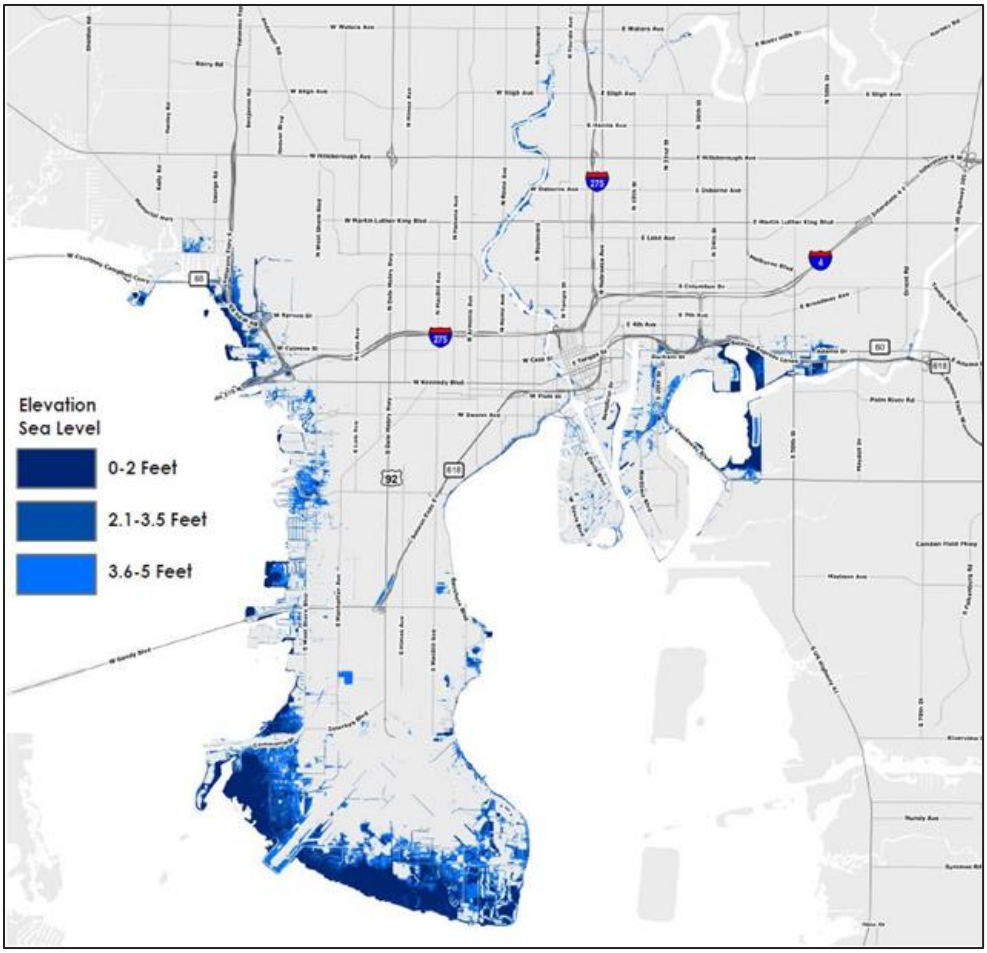


Figure 9: Extent of Flooding from Sea Level Rise

Each neighborhood will be impacted differently according to its topology and proximity to the coast, calling for a place-based regulatory approach that matches policy to the type of projected impact. The study offers a typology of impact that can guide policy approaches:

- Dispersed properties: Areas, like those north I-275 along Old Tampa Bay, that have many potentially impacted properties scattered along the coastline.
- Clustered properties: Areas, like the Ballast Point neighborhood, where many closely located properties are impacted.
- Linear areas: Areas of impact along water features, like a portion of north Bayshore Boulevard.
- Saturated areas: Large swathes of impacted land, like projected inundation that the Sunset Park and surrounding neighborhoods could experience without intervention.

2.4 Community Vulnerability Study (June 2020)

The Community Vulnerability Study developed a comprehensive, risk-based assessment that identified vulnerabilities in Hillsborough County's built, social, and ecological environments for flood and sea-level rise scenarios. As depicted in **Figure 10** and **Figure 11**, the top-ranking areas of vulnerability relevant specifically to the City of Tampa include:

- Private property at the South Tampa peninsula, Davis Islands, and Harbor Island
- Tampa General Hospital
- Hotels on Rocky Point, West Kennedy Boulevard, Davis Islands, Harbor Island, and the Gandy Bridge area. Hotels, generally, are used for sheltering and in post-storm situations for recovery personnel. Hotels built in vulnerable areas reduces the resilience of the community.
- Peter O. Knight Airport and MacDill Airforce Base
- H L Culbreath Bayside Power Station, Tampa's McKay Bay Facility, and the Howard F. Curren Advanced Wastewater Treatment Plant (WWTP)
- Industrial areas including Port Tampa

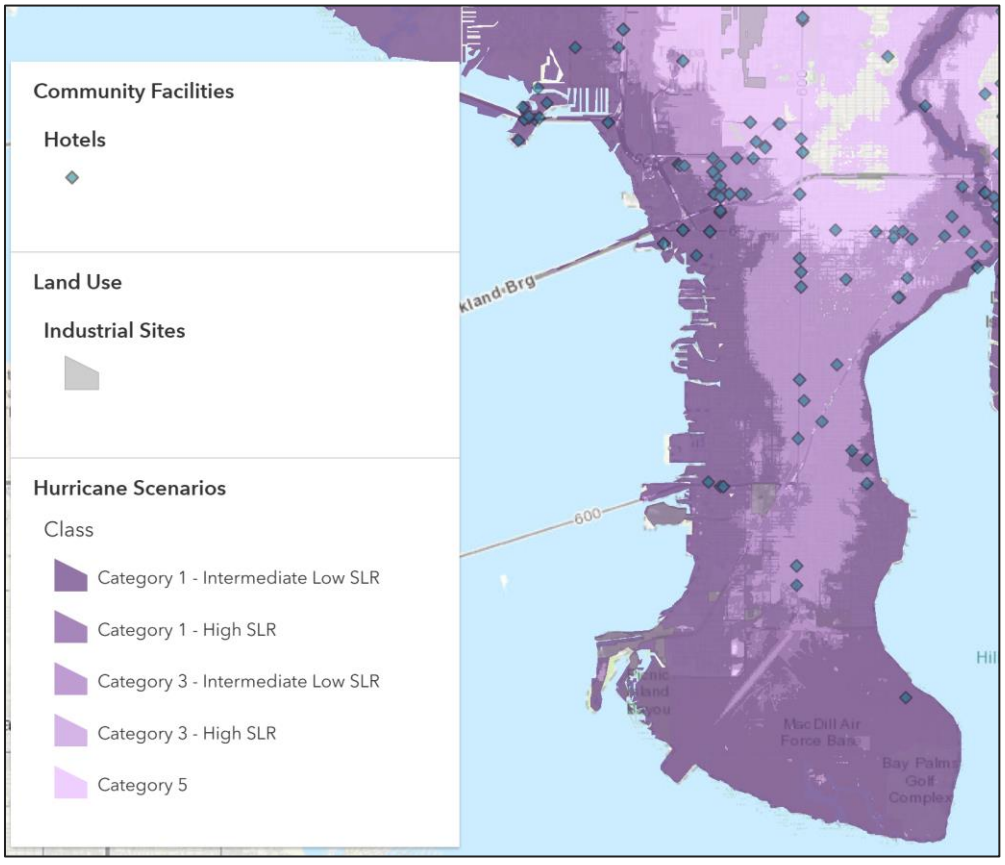


Figure 10: Hotels and Private Property in South Tampa, Peter O. Knight Airport, and Mac Dill Airforce Base

Figure 11: Tampa General Hospital and Hotels on Davis and Harbor Islands (Top) & Industrial Areas, Including Port Tampa (Bottom)

2.5 Hillsborough County Local Mitigation Strategy (2020 Update)

The LMS is a cross-jurisdictional plan designed to mitigate risks from both natural and man-made hazards through public involvement, hazard and risk assessments, and prioritization of mitigation activities and funding sources. While the LMS identifies hazards threats across all participating jurisdictions, this report focuses on those most relevant to the City of Tampa. The City of Tampa is highly vulnerable to several natural hazards, with flooding, tropical cyclones – Minor (Tropical Depression to Category 2) and Major (Category 3 to 5), severe storms, and erosion posing the most significant risks. Moderately vulnerable to tornado, wildfire, extreme heat, drought, and suspect soil.

2.5.1 Flooding

Flooding is a critical risk for Tampa due to its low-lying geography and proximity to coastal waterways. The threat of sea level rise is concerning, as it not only exacerbates coastal flooding but also increases groundwater depths and salinity levels. The rising salinity acts as a corrosive agent to underground infrastructure, worsening stormwater management challenges and potentially disrupting water and wastewater services. The analysis found that nearly 105,000 buildings, valued at approximately $8.8 billion, are at risk from a 10-foot sea level rise, in addition to 48 critical city-owned or operated facilities.

Businesses and structures in the downtown area are highly susceptible to flooding, including the Port Tampa Bay, Tampa International Airport, Tampa General Hospital, the Westshore business district as well as those located along waterways and in coastal areas. Geographically, newer areas of development including Water Street, Sparkman Warf, the Downtown Tampa Riverwalk, and parts of Westshore are highly exposed to coastal flooding. By 2045, areas prone to repetitive flood loss, such as Westshore and Davis Island, will be of particular concern. Additionally, high-density residential areas susceptible to storm surge include South Tampa and Davis Island.

2.5.2 Tropical Cyclone

Tropical cyclones, including hurricanes and tropical storms, are another major threat to the city. While the entire region is susceptible to the effects of tropical cyclones, coastal areas are especially at risk from storm surge, high winds, and heavy rainfall. SLOSH (Sea, Lake, and Overland Surge from Hurricanes) models show that areas like South Tampa, the MacDill Air Force Base, Westshore, and Downtown Tampa (including Ybor City, Channelside, and Harbor Island) are at the highest risk for storm surge impacts. In total, 135 critical facilities in Tampa are exposed to hurricane storm surge, including infrastructure such as Tampa International Airport and Tampa General Hospital.

2.5.3 Severe Storms

Severe storms, which include thunderstorms, lightning, hail, straight-line winds, and heavy rain, are common in the region. Hillsborough County, including Tampa, experiences between 625 and 1,550 lightning strikes per year, making it one of the most lightning-prone areas in Florida. While severe storms typically do not cause extensive structural damage, they can lead to localized flooding, particularly in vulnerable areas. Between 1996 and 2019, lightning strikes in the City of Tampa resulted in 32 injuries and 3 fatalities. Hail is rare, and the impact of straight-line winds is typically minimal on structures, as Florida Building Code requires structures to be built to withstand hurricane force winds.

2.5.4 Erosion

Erosion, which is a direct consequence of storm surge and flooding, poses a significant threat to the City of Tampa. It can undermine natural habitats, degrade water quality, limit future development potential, and compromise the structural integrity of buildings, particularly along riverine and coastal areas. The City of Tampa is at a higher risk of erosion impacts compared to other jurisdictions included in the LMS, due to its proximity to both coastal and river systems.

2.6 Neighborhood Level Studies

Several neighborhood-level studies have been conducted to assess vulnerability and inform targeted resilience strategies in high-risk areas of Tampa. These include the Coastal Area Action Plan Community Lifelines Report, the Davis Stormwater Analysis, and the Port Tampa Bay Vulnerability Assessment.

The Community Lifelines Report applied FEMA's "community lifelines" framework – covering safety and security; food, water, and shelter; health and medical; energy; communications; transportation; and hazardous material facilities – to evaluate critical services relied upon before and after a disaster. The the study involved engaging stakeholders within each of these categories and focused on two highly vulnerable neighborhoods: the South of Gandy area and Palmetto Beach.

In South of Gandy area, interviews suggest that residents perceive current shelters too far away and unfamiliar. These shelters, per state requirements, are located outside evacuation zones A through C.

Palmetto Beach is home to a socially and economically vulnerable population with many residents living in older homes built before the 2022 Florida Building Code. Limited financial capacity to retrofit or rebuild to current standards makes displacement following substantial storm damage a significant concern.

The Davis Islands Stormwater Analysis, recommended in the 2020 Sea Level Rise Vulnerability Analysis, updated local drainage infrastructure data and modeled flood exposure using a 4.5-foot NAVD88 water elevation – comparable to tidal activity from Hurricane Idalia (2023) and the NOAA 2070 Intermediate High SLR scenario. With streets elevations on Davis Islands commonly at 4 and 5 feet (NAVD88), especially in the island's northern access corridors, widespread inundation is possible under these conditions. Perimeter areas at 5 – 6 feet NAVD88 are at risk of seawall overtopping during surge events.

The Port Tampa Bay Vulnerability Assessment highlighted the connectivity between the Port Tampa Bay property on Hookers Point and the rest of the region as one of the most vulnerable spots and includes the Palmetto Beach and 20th Street corridor.

3 Risk and Resilience Modelling Results

This section presents findings from the modeling of hurricane-related structural damage and economic losses, storm surge inundation, and rainfall induced flooding. While the City's VA focuses on projected flood risks from various future hazard scenarios, the analyses in this section evaluate the potential impacts of worst-case hazard events if they were to occur today. Three primary tools were used to conduct this analysis:

- **Hazus**, a regional multi-hazard loss estimation model developed by FEMA and the National Institute of Building Sciences, was used to estimate structural damage, debris volumes, and economic losses resulting from a hypothetical Category 5 hurricane. The model was calibrated using historical storm data – specifically Hurricane Donna (1960) – to generate more localized and realistic loss estimates. These outputs reflect the possible financial burden Tampa could face in terms of building damage and recovery needs following a catastrophic event.
- **SLOSH** (Sea, Lake, and Overland Surges from Hurricanes), developed by NOAA, was used to model storm surge under a Category 5 hurricane. This analysis provides parcel-level insights into projected inundation depth and extent, with particular focus on impacts to residential properties and critical public infrastructure.
- The **FEMA floodplain analysis** evaluates the extent of flooding from 1% and 0.2% annual chance rainfall events, using FEMA's Flood Insurance Rate Maps (FIRMs). This analysis identifies current-day exposure to flooding across a wide distribution of parcels and infrastructure assets – offering a contrast to the more intense, but less frequent, storm surge scenarios modeled using SLOSH.

3.1 Hurricane Wind and Structural Damage

The Hazus model was run for the City of Tampa on December 5, 2024. The two scenarios used to capture anticipated impacts from future hurricanes are:

- Hurricane Donna scenario – historical event that occurred in 1960 which had maximum peak wind gusts of 73 mph
- Worst-case scenario (0.1% AEP) [6] – 1 in 1,000 chance of occurring in a given year

[6] AEP refers to Annual Exceedance Probability, which represents the likelihood of a flood of a given magnitude occurring in any single year. For example, a 1% AEP flood has a 1 in 100 chance of being equaled or exceeded in a given year and is commonly referred to as the "100-year flood."

While the City has historical records and memories of the impacts of Hurricane Donna in 1960, the estimates in this TM depict damage to the City's existing building stock, industries, critical buildings, and infrastructure if a storm like Hurricane Donna were to make landfall today. Damage estimates are in 2024 US dollars. This section compares impacts between the two scenarios, but focus is placed on the worst-case scenario to set the City up for effective recovery and redevelopment should an extreme hurricane make landfall. Estimates from this analysis should also be utilized as policies and programs are refined to mitigate future damage from storms.

3.1.1 Existing Building Stock

132,224 buildings fall within the City's jurisdiction, with a total building stock replacement value of $63,213,093,000. **Figure 12** below shows the building stock replacement value in thousands of dollars, by building occupancy type. About 1% of the building replacement value is the cost of reconstructing governmental facilities and 10.5% is educational institutions. Because residential buildings comprise over 50% of the total building replacement value, both risk and potential damage are more prominent in the residential sector.

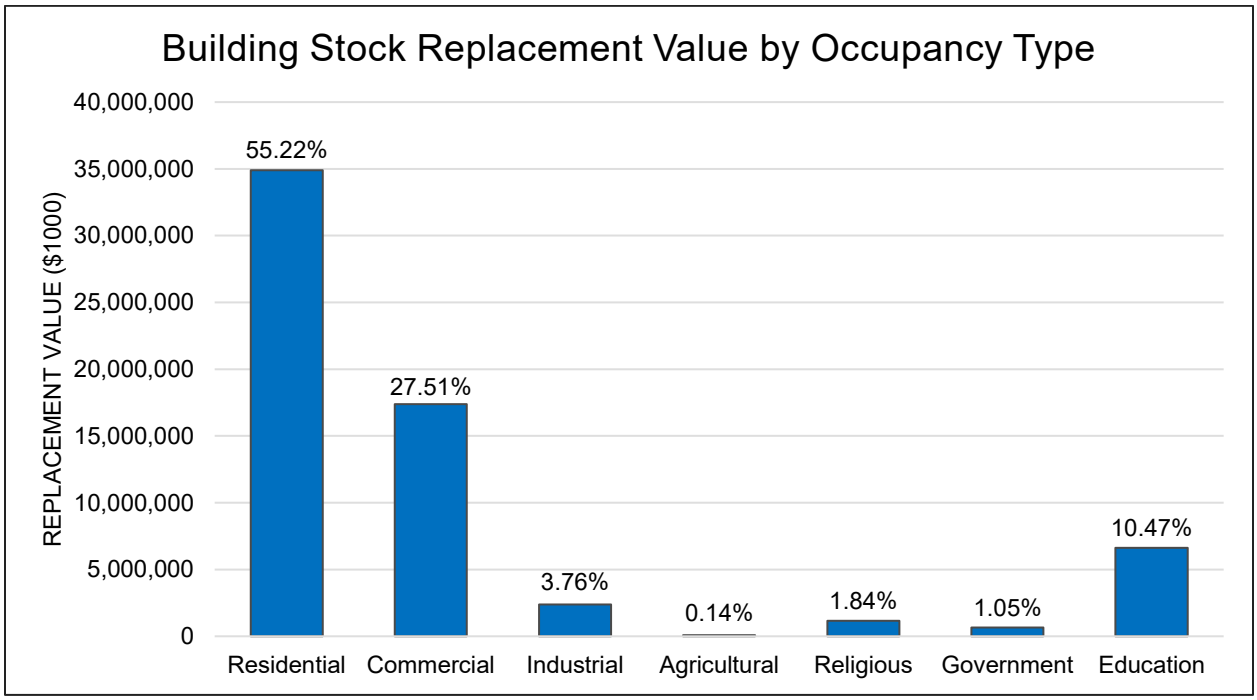


Figure 12: Building Exposure by Occupancy Type

3.1.2 Building Damage and Loss of Use

The building damage and loss of use estimate describes the scale and extent of damage and disruption that may result from a natural hazard event. Potential damages to buildings are categorized as follows:

- None – No damage.
- Minor – Maximum of one broken window, door or garage door. Moderate roof cover loss that can be covered to prevent additional water entering the building. Marks or dents on walls requiring painting or patching for repair.
- Moderate – Major roof cover damage, moderate window breakage, minor roof sheathing failure. Some resulting damage to interior of building from water.
- Severe – Major window damage or roof sheathing loss, significant roof cover loss, extensive interior water damage.
- Destruction – Complete roof failure and/or failure of wall frame, loss of more than 50% of roof sheathing.

A future storm similar to Hurricane Donna that impacts the City of Tampa is estimated to cause at least moderate damage to 14 buildings, with none expected to be completely destroyed. To contrast, a 0.1% AEP storm could cause moderate damage to approximately 36,200 (27%) buildings and completely destroy about 6,500 buildings (5%).

Among these, 31,000 buildings facing moderate damage and 6,100 expected to be destroyed are residential structures, highlighting the vulnerability of housing stock to severe hurricane events. The remaining impacted buildings include commercial, industrial, government, educational, and religious structures, with varying degrees of damage across occupancy types. **Table 2** presents the number of buildings likely to be damaged by building occupancy type between the two scenarios.

Table 2: Expected Damage by Occupancy

Building Type	Damage Level				
	None	Minor	Moderate	Severe	Destruction
Hurricane Donna Scenario					
Agriculture	206	1	0	0	0
Commercial	13,239	66	3	0	0
Education	304	3	0	0	0
Government	283	2	0	0	0
Industrial	1,828	8	1	0	0
Religion	904	5	0	0	0
Residential	115,164	196	0	0	0
Total	**131,929**	**281**	**14**	**0**	**0**
Worst-Case Scenario (0.1% AEP)					
Agriculture	25	28	42	73	39
Commercial	2,697	2,691	3,957	3,726	237
Education	52	56	121	78	0

Building Type	Damage Level				
	None	Minor	Moderate	Severe	Destruction
Government	52	56	96	80	0
Industrial	309	271	469	702	86
Religion	166	179	269	294	1
Residential	21,723	43,051	31,242	13,221	6,134
Total	**25,025**	**46,332**	**36,195**	**18,175**	**6,497**

Among the City's buildings, 11 hospitals with a total bed capacity of 4,010, 147 schools, 21 fire stations, 13 police stations, and one emergency operations facility were identified as essential facilities. The Hurricane Donna scenario is expected to cause minimal damage to essential facilities, with all facilities operational within one day.

However, in the worst-case scenario, at least moderate damage is estimated for the majority of the City's critical facilities, including the only Emergency Operations Center (EOC) building. It is estimated that it could take up to 30 days for hospitals to be fully operational.

Table 3 outlines the expected loss of service and the time required to restore operations to critical facilities from a worst-case scenario storm.

Table 3: Potential Damage to Essential Facilities, 0.1% AEP Event

Classification	Total Facilities	Probability of at Least Moderate Damage > 50% (# of facilities)	Probability of Complete Damage > 50% (# of facilities)	Expected Loss of Use < 1 day
EOCs	**1**	**1**	**0**	**1**
Fire Stations	**21**	**16**	**0**	**21**
Hospitals	**11**	**11**	**0**	**0**
Police Stations	**13**	**13**	**0**	**13**
Schools	**147**	**147**	**0**	**0**

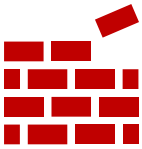
The findings suggest that the scale of structural damage and loss of use could influence redevelopment timelines and priorities across the City. The extent of residential building damage indicates that housing recovery and neighborhood redevelopment are key components of long-term redevelopment efforts. The concentration of residential damage also suggests that community stability and economic recovery could be influenced by housing availability and reconstruction timelines.

The analysis shows that essential facilities could experience widespread disruption in a worst-case scenario. This loss of critical services may impact public safety, access to healthcare, and emergency response capacity.

3.1.3 Debris Generation

A storm similar to Hurricane Donna is estimated to generate a total of 12,616 tons of debris, whereas a worst-case scenario storm could generate up to 1,458,894 tons – 115 times the amount produced by the Hurricane Donna scenario. For comparison, Hurricanes Milton and Helene generated approximately 1.9 million tons of debris combined, based on records provided by the City.[7]

Debris Categories include:



Brick/Wood

- Hurricane Donna Scenario: 1,542 tons (~12%) – Estimated 62 truckloads (25-ton capacity)
- Worst-Case Scenario: 1,153,495 tons (~79%) – Estimated 49,793 truckloads (25-ton capacity)

Reinforced Concrete/Steel

- Hurricane Donna Scenario: 0 tons
- Worst-Case Scenario: 91,319 tons (~6%)

Eligible Tree Debris

- Hurricane Donna Scenario: 6,997 tons (~55%) – Truckloads vary based on compaction (4-10 cubic yards per ton)
- Worst-Case Scenario: 132,960 tons (~9%)

Other Tree Debris

- Hurricane Donna Scenario: 4,077 tons (~32%)
- Worst-Case Scenario: 81,120 tons (~6%)

The Hurricane Donna Scenario represents a manageable debris load, similar to past events the City has successfully handled using existing protocols, where tree debris makes up the largest proportion of total waste.

[7] A total of 1,373,612 cubic yards of debris – across all types – was recorded. To estimate the total in U.S. tons, a standard conversion factor of 1.4 was applied, resulting in approximately 1.9 million tons of debris.

However, a worst-case storm event would introduce a drastically larger challenge, producing over 1.4 million tons of debris, with the majority consisting of building materials (brick, wood, concrete, and steel). This scale of destruction would require massive expansion of removal operations, stretching existing capacity for debris clearance, landfill space, transportation logistics, and long-term environmental impacts.

A debris load of this magnitude could significantly complicate recovery timelines, infrastructure accessibility, and overall redevelopment efforts. The ability to clear debris efficiently may determine how quickly essential services are restored and when reconstruction can begin.

The distribution of debris types suggests potential logistical challenges in terms of landfill capacity, transportation routes, and regulatory approvals for debris processing. The availability of staging areas and access to disposal facilities may also impact the speed and cost of debris removal.

The amount and type of debris generated may also be influenced by the age and resilience of existing structures, as older or non-hurricane-resistant buildings are more likely to sustain severe damage and contribute to higher debris volumes. This pattern points at the relationship between building characteristics and debris management needs, which may influence redevelopment planning decisions related to building codes and land use strategies. Understanding how building characteristics affect debris generation may be an important consideration as subcommittees assess long-term recovery and mitigation strategies.

3.1.4 Social Impacts

The Hazus model indicates that a storm similar to Hurricane Donna would cause minimal displacement, with no households expected to be displaced and no individuals seeking shelter. However, in the worst-case scenario, up to 20,183 households (about 5% of the population) could be displaced, with nearly all of them – 19,162 people – requiring temporary public shelter. This contrast indicates that while the City is well-prepared for storms of moderate severity, more extreme events could place strain on shelter capacity and emergency response systems.

A large-scale displacement event could affect multiple aspects of long-term recovery and redevelopment, including housing availability, social services, and economic stability. The ability to accommodate displaced residents may depend on factors such as existing shelter capacity, coordination with regional and state emergency management agencies, and the availability of temporary and permanent housing solutions. Extended displacement may introduce additional challenges related to healthcare access, employment stability, and community cohesion, particularly in high-risk areas.

3.1.5 Economic Loss

The disparity between the economic losses from a storm similar to Hurricane Donna and a worst-case scenario indicates the potential financial strain on the City of Tampa following a major disaster. In a Hurricane Donna-like event, the total estimated economic loss is $42.3 million, which represents less than 1% of the City's total building replacement value. However, in a worst-case scenario, economic losses could reach $19.3 billion, or 30.6% of the total building value.

These losses fall into two primary categories:

- Direct property damage losses – The estimated cost to repair or replace damaged buildings and their contents.
- Business interruption losses – Losses associated with temporary business closures and operational disruptions, including relocation costs and lost wages for displaced residents.

In the worst-case scenario, most of the losses stem from direct property damage, with residential buildings accounting for over 50% of the total damage. Business interruption losses represent approximately 17% of total economic losses, impacting employment, income, and commercial activity across multiple sectors.

Table 4 below provides a breakdown of the total loss associated with buildings in the worst-case scenario, in thousands of dollars.

Table 4: Building-Related Economic Loss Estimates, 0.1% AEP Event

Damage Area	Residential	Commercial	Industrial	Others	Total
Property Damage					
Building	6,041,076	2,542,837	239,634	1,238,942	10,262,489
Content	2,401,119	1,683,536	421,058	957,153	5,462,867
Inventory	0	285,115	63,206	12,385	360,706
Subtotal	8,442,195	4,511,488	923,897	2,208,481	16,086,063
Business Interruption Loss					
Income	19,833	483,396	5,614	15,519	524,361
Relocation	765,153	391,644	26,296	286,265	1,462,867
Rental	328,523	227,984	4,948	29,645	591,100
Wage	46,683	557,840	9,160	47,088	660,771
Subtotal	1,160,191	1,660,863	46,018	378,518	3,245,590
Total	**9,602,386**	**6,172,351**	**969,916**	**2,586,999**	**19,331,653**

The scale of economic losses in a worst-case scenario suggests that long-term redevelopment efforts may be influenced by the ability to restore key industries, stabilize the workforce, and

address financial shortfalls resulting from property damage and business closures. The City's ability to recover may depend on factors such as the resilience of critical infrastructure, the adaptability of local businesses, and the effectiveness of financial recovery mechanisms.

A major disaster could also have broader economic consequences, including population displacement, reductions in consumer spending, and long-term shifts in property values. Disruptions to industries such as tourism, retail, and port operations could result in prolonged revenue losses for both businesses and the City.

3.2 Storm Surge and Coastal Inundation

The Category 5 storm surge scenario, modeled using NOAA's SLOSH tool, provides a high-end estimate of flood exposure in Tampa during a severe hurricane event. While extreme, this scenario represents a very possible hazard condition that demonstrates the scale of potential impacts to critical infrastructure, essential services, and the built environment. **Figure 13** visualizes the projected extent and depth of storm surge flooding, with areas such as the South Tampa Peninsula, Davis Islands, Palmetto Beach, and East Side Commercial area in addition to Channel District Community Redevelopment Area (CRA), Ybor City 1 and 2 CRAs, Tampa Heights Riverfront CRA, Downtown Core and Non-Core CRAs, and portions along Hillsborough River expected to experience inundation depths exceeding 16 feet.

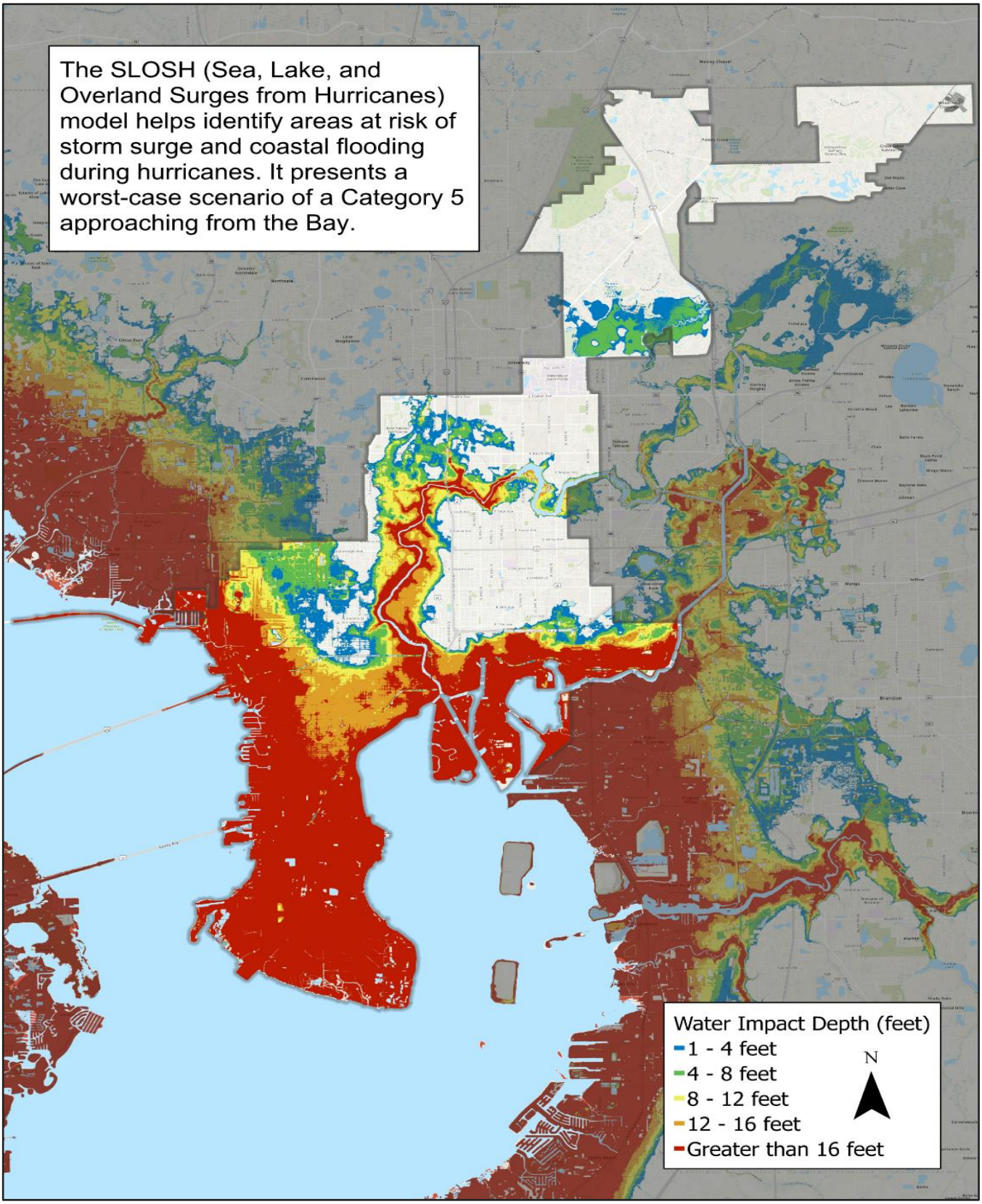


Figure 13: Modeled Storm Surge from a Category 5 Hurricane

The results reinforce core findings from the VA: that critical infrastructure, essential services, and densely developed neighborhoods – particularly in the southern portion of the City – are especially vulnerable to coastal flooding. Under the Category 5 scenario, more than 50,000 single-family homes, nearly 200 nursing and elder care facilities, and almost 5,000 commercial, industrial, and office properties fall within the projected surge zone. In addition to private property, the storm surge scenario would affect a wide range of public infrastructure and critical services, including:

- 5 hospitals
- 42 schools
- 14 fire stations
- 16 police stations
- 1,059 miles of major roadway
- 79 miles of evacuation routes
- 71 communication facilities
- 67 solid and hazardous waste facilities
- 37 electric production and supply facilities
- 36 affordable housing properties
- 30 wastewater treatment facilities and lift stations
- 26 superfund and brownfield sites
- 13 drinking water facilities
- 11 state government facilities
- 9 community centers
- 5 correctional facilities
- 6 disaster debris management sites
- 5 local government facilities
- 3 risk shelters
- 1 logistical staging area

While the SLOSH model doesn't offer damage estimates, it has been determined that the total taxable value of affected parcels exceeds $45 billion.

3.3 Rainfall Driven Flood Risk and Vulnerable Areas

The FEMA floodplain analysis identifies areas within the City of Tampa that fall inside the 100-year (1% annual chance) and 500-year (0.2% annual chance) floodplains, as defined by FEMA's FIRMs. These zones represent flood events that are more likely to occur or reoccur in any given year than a major storm surge scenario. While storm surge may result in more severe impacts when it occurs, FEMA floodplains capture the higher-probability, chronic flood risks that regularly affect neighborhoods, infrastructure, and essential services – particularly during heavy rainfall events. **Figure 14** shows the extent of the 100-year and 500-year floodplains overlaid with the City boundary, indicating areas where private property and public infrastructure intersect with mapped flood hazard areas.

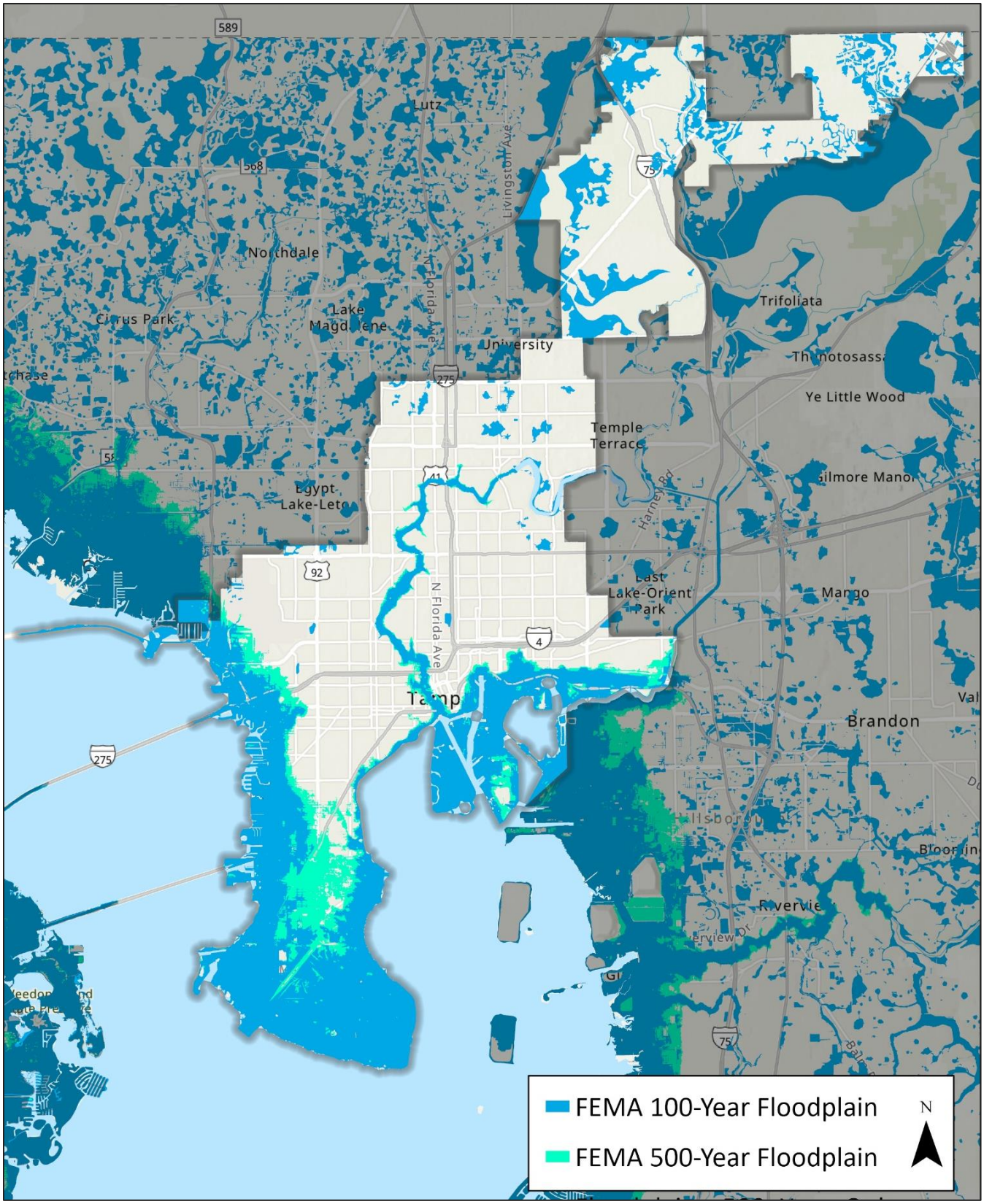


Figure 14: FEMA Floodplains

The results support findings from the rainfall-driven flood scenarios in the VA: widespread exposure across both residential and non-residential properties, as well as critical facilities. These impacts are not confined to the coastline; inland neighborhoods across the City are also highly vulnerable, including Tampa Heights Riverfront CRA, portions of West Tampa CRA, land along the Hillsborough River, and portions of North Tampa. In total, the 100-year and 500-year flood zones encompass over 24,000 single family residential parcels, about 2,000 multi-family residential properties, 28 nursing and elder care facilities, and nearly 2,000 commercial, industrial, and office properties. Public infrastructure and critical services located in these floodplain areas include:

- 3 hospitals
- 13 schools
- 4 fire stations
- 4 police stations
- 501 miles of major roadway
- 40 miles of evacuation routes
- 33 communication facilities
- 30 solid and hazardous waste facilities
- 20 electric production and supply facilities
- 20 wastewater treatment facilities and lift stations
- 13 affordable housing properties
- 9 superfund and brownfield sites
- 4 disaster debris management sites
- 3 community centers
- 2 drinking water facilities
- 2 correctional facilities
- 2 state government facilities
- 2 stormwater treatment facilities and pump stations

The combined taxable value of all parcels within FEMA-designated floodplains is estimated at about $28 billion. Properties located in the 100-year floodplain are also subject to FEMA's substantial damage and substantial improvement regulations. If a building is damaged by flooding and repair costs exceed 50% of its pre-damaged market value, it must be brought into compliance with current local floodplain regulations – often requiring elevation or floodproofing.[8] These build-back requirements can have major financial and design implications for homeowners, developers, and the City. As such, understanding where properties fall within regulated floodplains is essential for planning resilient and cost-effective post-disaster redevelopment.

[8] More information available at Understanding Substantial Improvement and Substantial Damage | FEMA.gov.

4 Summary of High-Risk Areas

Based on the information provided, these are the highest risk areas on which the PDRP should focus. The insights gained from this assessment enable the City to prioritize redevelopment actions, allocate resources efficiently, and tailor strategies to support community resilience and economic vitality in avoidance of the effects of future natural disasters.

Table 5 summarizes areas within the City that face the greatest exposure to flooding and coastal hazards, drawing on historical storm impacts, modeled scenarios, prior vulnerability assessments, and recent damage assessments from Hurricane Helene and Hurricane Milton. These locations are visualized in **Figure 15** with each high-risk area color-coded by hazard type and labeled by ID number for reference. The map also overlays flood-damaged properties from recent storm events to validate the high-risk areas and ground the analysis in observed impacts. This analysis consolidates findings from the VA, SLR Vulnerability Analysis, FEMA floodplain maps, and other studies to support a place-based understanding of risk. These areas should be prioritized for future adaptation planning, infrastructure investments, and post-disaster redevelopment strategies.

Table 5: City of Tampa High Risk Areas

Map ID	High Risk Area	Hazard	Study/Source
1	University Square	Rainfall-Induced Flooding	VA, Public Damage from Flooding (Hurricane Milton)
2	Tampa Overlook	Rainfall-Induced Flooding	VA, Public Damage from Flooding (Hurricane Milton)
3	Forest Hills	Rainfall-Induced Flooding	VA, Residential Damage from Flooding (Hurricane Milton)
4	Palmetto Beach	Storm Surge, SLR, Rainfall-Induced Flooding	Land Regulatory Response to SLR, SLOSH, VA, Community Lifelines Report, FEMA Floodplain Analysis, Residential Damage from Flooding (Hurricane Helene)
5	Davis Islands (including Bridge Connection, Tampa General Hospital, and Peter O. Knight Airport)	Storm Surge, SLR, Rainfall-Induced Flooding	SLOSH, Sea Level Rise Vulnerability Analysis, Davis Islands Stormwater Analysis, LMS, Community Vulnerability Study, FEMA Floodplain Analysis, VA, Public and Residential Damage from Flooding (Hurricane Helene), Public Damage from Flooding (Hurricane Milton)

Map ID	High Risk Area	Hazard	Study/Source
6	Harbor Island	Storm Surge, SLR, Rainfall-Induced Flooding	SLOSH, Community Vulnerability Study, LMS, FEMA Floodplain Analysis
7	Port Tampa Area (including Port of Tampa, Hooker's Point, 20th St Corridor, Howard F. Curren Advanced WWPT)	Storm Surge, SLR, Rainfall-Induced Flooding	Land Regulatory Response to SLR, SLOSH, FEMA Floodplain Analysis, VA, Community Vulnerability Study, Howard F. Curren Advanced Wastewater Treatment Plant Vulnerability Assessment, Public Damage from Flooding (Hurricane Helene)
8	McKay Bay Area (including McKay Bay Facility)	Storm Surge, SLR, Rainfall-Induced Flooding	Land Regulatory Response to SLR, SLOSH, FEMA Floodplain Analysis, VA, Community Vulnerability Study
9	Bayshore Blvd (including Bayshore Linear Park)	Erosion, Storm Surge, SLR, Rainfall-Induced Flooding	Land Regulatory Response to SLR, LMS, VA, SLOSH, FEMA Floodplain Analysis, Public Damage from Flooding (Hurricane Helene)
10	Downtown Area (including Cotanchobee Fort Brooke Park, Downtown Tampa, Channel District)	Erosion, Storm Surge, SLR, Rainfall-Induced Flooding	SLOSH, FEMA Floodplain Analysis, VA, LMS, Community Vulnerability Study, Sea Level Rise Vulnerability Analysis, Commercial Damage from Flooding (Hurricane Helene)
11	Hyde Park Area (including Tony Jannus Park)	Erosion, Storm Surge, SLR, Rainfall-Induced Flooding	VA, SLOSH, FEMA Floodplain Analysis, Residential Damage from Flooding (Hurricane Helene), Residential Damage from Flooding (Hurricane Milton)
12	Ybor City	Storm Surge	SLOSH, Local Mitigation Strategy
13	East Tampa	Rainfall-Induced Flooding	VA, Public Damage from Flooding (Hurricane Milton)
14	Tampa Heights Riverfront	Storm Surge, Rainfall-Induced Flooding	SLOSH, FEMA Floodplain Analysis, Public Damage from Flooding (Hurricane Helene)
15	Buffalo Basin (including Rome Ave Corridor and between Columbus Dr and Hillsborough Ave)	Storm Surge, SLR, Rainfall-Induced Flooding	Sea Level Rise Vulnerability Analysis, Residential Damage from Flooding (Hurricane Helene), Public Damage from Flooding (Hurricane Milton)

Map ID	High Risk Area	Hazard	Study/Source
16	West Tampa Area near Hillsborough River Area	Storm Surge, Rainfall-Induced Flooding	SLOSH, FEMA Floodplain Analysis, Residential Damage from Flooding (Hurricane Helene)
17	Tampa Palms	Rainfall-Induced Flooding	VA
18	West Meadows and Grand Hampton	Rainfall-Induced Flooding	FEMA Floodplain Analysis
19	Drew Park	Rainfall-Induced Flooding	VA, Residential Damage from Flooding (Hurricane Milton)
20	Westshore	Storm Surge, SLR, Rainfall-Induced Flooding	LMS, SLOSH, FEMA Floodplain Analysis
21	North of I-275 along Old Tampa Bay	Storm Surge, SLR, Rainfall-Induced Flooding	Land Regulatory Response to SLR, SLOSH, FEMA Floodplain Analysis
22	Courtney Campbell Causeway	Storm Surge	SLOSH, VA
23	Rocky Point	Storm Surge, SLR, Rainfall-Induced Flooding	Community Vulnerability Study, FEMA Floodplain Analysis
24	Tampa International Airport	Storm Surge, Rainfall-Induced Flooding	LMS, FEMA Floodplain Analysis, Public Damage from Flooding (Hurricane Milton)
25	Old Port Tampa	Storm Surge, SLR, Rainfall-Induced Flooding	SLOSH, Vulnerability Assessment, FEMA Floodplain Analysis, Public and Residential Damage from Flooding (Hurricane Helene), Public and Residential Damage from Flooding (Hurricane Milton)
26	Sunset Beach	Storm Surge, SLR, Rainfall-Induced Flooding	Land Regulatory Response to SLR, LMS, VA, SLOSH, FEMA Floodplain Analysis, Residential Damage from Flooding (Hurricane Helene)
27	Ballast Point	Storm Surge, SLR, Rainfall-Induced Flooding	Land Regulatory Response to SLR, Coastal Area Action Plan, Sea Level Rise Vulnerability Analysis, SLOSH, FEMA Floodplain Analysis, Public and Residential Damage from Flooding (Hurricane Helene), Public and Residential Damage from Flooding (Hurricane Milton)
28	Bayside West	Storm Surge, SLR, Rainfall-Induced Flooding	Land Regulatory Response to SLR, SLOSH, FEMA Floodplain Analysis, Residential Damage from Flooding (Hurricane Helene)

Map ID	High Risk Area	Hazard	Study/Source
29	Gandy Boulevard (including Gandy Bridge)	Storm Surge, SLR, Rainfall-Induced Flooding	SLOSH, VA, FEMA Floodplain Analysis
30	MacDill Air Force Base	Storm Surge, SLR, Rainfall-Induced Flooding	LMS, Community Vulnerability Study, SLOSH, FEMA Floodplain Analysis
31	Picnic Island	Erosion, Storm Surge, SLR, Rainfall-Induced Flooding	VA, SLOSH, FEMA Floodplain Analysis
32	Conley Basin	Storm Surge, SLR, Rainfall-Induced Flooding	Sea Level Rise Vulnerability Analysis, SLOSH, FEMA Floodplain Analysis, Residential Damage from Flooding (Hurricane Helene), Residential Damage from Flooding (Hurricane Milton)
33	Spring Lake Basin	Storm Surge, SLR, Rainfall-Induced Flooding	Sea Level Rise Vulnerability Analysis, SLOSH, FEMA Floodplain Analysis, Residential Damage from Flooding (Hurricane Helene), Residential Damage from Flooding (Hurricane Milton)
34	Cedar Channel Basin	Storm Surge, SLR, Rainfall-Induced Flooding	Sea Level Rise Vulnerability Analysis, SLOSH, FEMA Floodplain Analysis, Residential Damage from Flooding (Hurricane Helene)
35	Beach Park	Storm Surge, SLR, Rainfall-Induced Flooding	Land Regulatory Response to SLR, SLOSH, FEMA Floodplain Analysis, Residential Damage from Flooding (Hurricane Helene), Residential Damage from Flooding (Hurricane Milton)
36	South of Gandy Area	Storm Surge, SLR, Rainfall-Induced Flooding	Community Lifelines Report, SLOSH, FEMA Floodplain Analysis, Residential Damage from Flooding (Hurricane Helene), Public and Residential Damage from Flooding (Hurricane Milton)
37	West Kennedy Boulevard	SLR, Storm Surge	Community Vulnerability Study
38	East Side Commercial Area	Storm Surge, Rainfall-Induced Flooding	VA, SLOSH, FEMA Floodplain Analysis

Map ID	High Risk Area	Hazard	Study/Source
39	Fair Oaks Manhattan	Storm Surge, Rainfall-Induced Flooding	VA, SLOSH, FEMA Floodplain Analysis, Residential Damage from Flooding (Hurricane Helene), Public and Residential Damage from Flooding (Hurricane Milton)
40	Palma Ceia/Bayshore Beautiful Area	Storm Surge, Rainfall-Induced Flooding	SLOSH, VA, Public and Residential Damage from Flooding (Hurricane Helene), Public and Residential Damage from Flooding (Hurricane Milton)

Many of Tampa's designated Community Redevelopment Areas overlap with areas that are highly vulnerable to flooding, storm surge, and sea level rise, as visualized in **Figure 16**. While CRAs operate independently from the City, the City plays a key role in coordinating with CRA leadership to support redevelopment efforts that are informed by up-to-date hazard and vulnerability data. By engaging CRAs in the PDRP process and sharing findings from recent modeling and assessments, the City can help guide strategies that incorporate climate adaptation, equitable redevelopment, and hazard mitigation into CRA planning and investment decisions. Mapping where CRAs and high-risk areas overlap allows for more targeted collaboration and neighborhood-scale approaches to resilience.

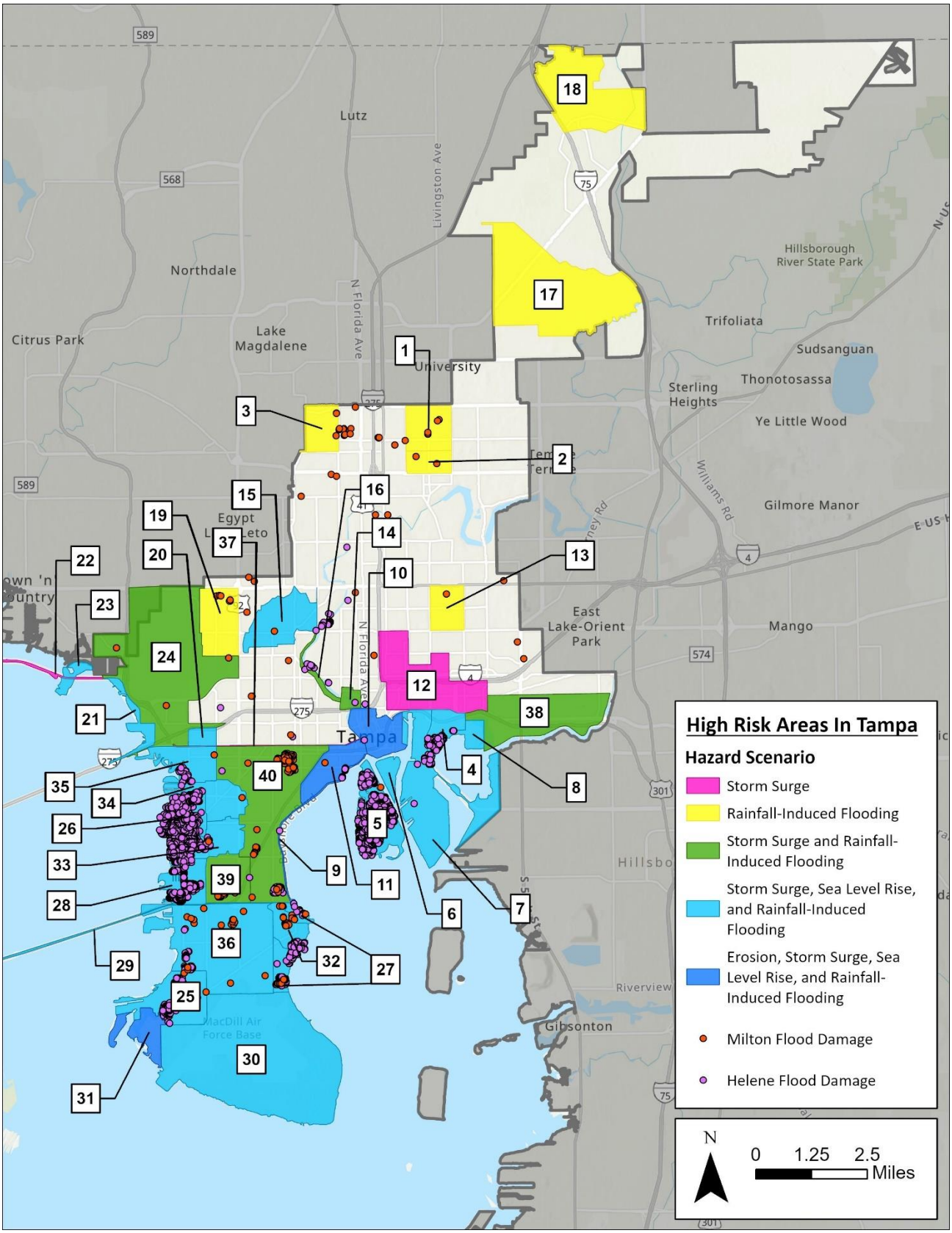


Figure 15: High Risk Areas in Tampa by Hazard Type/Combination

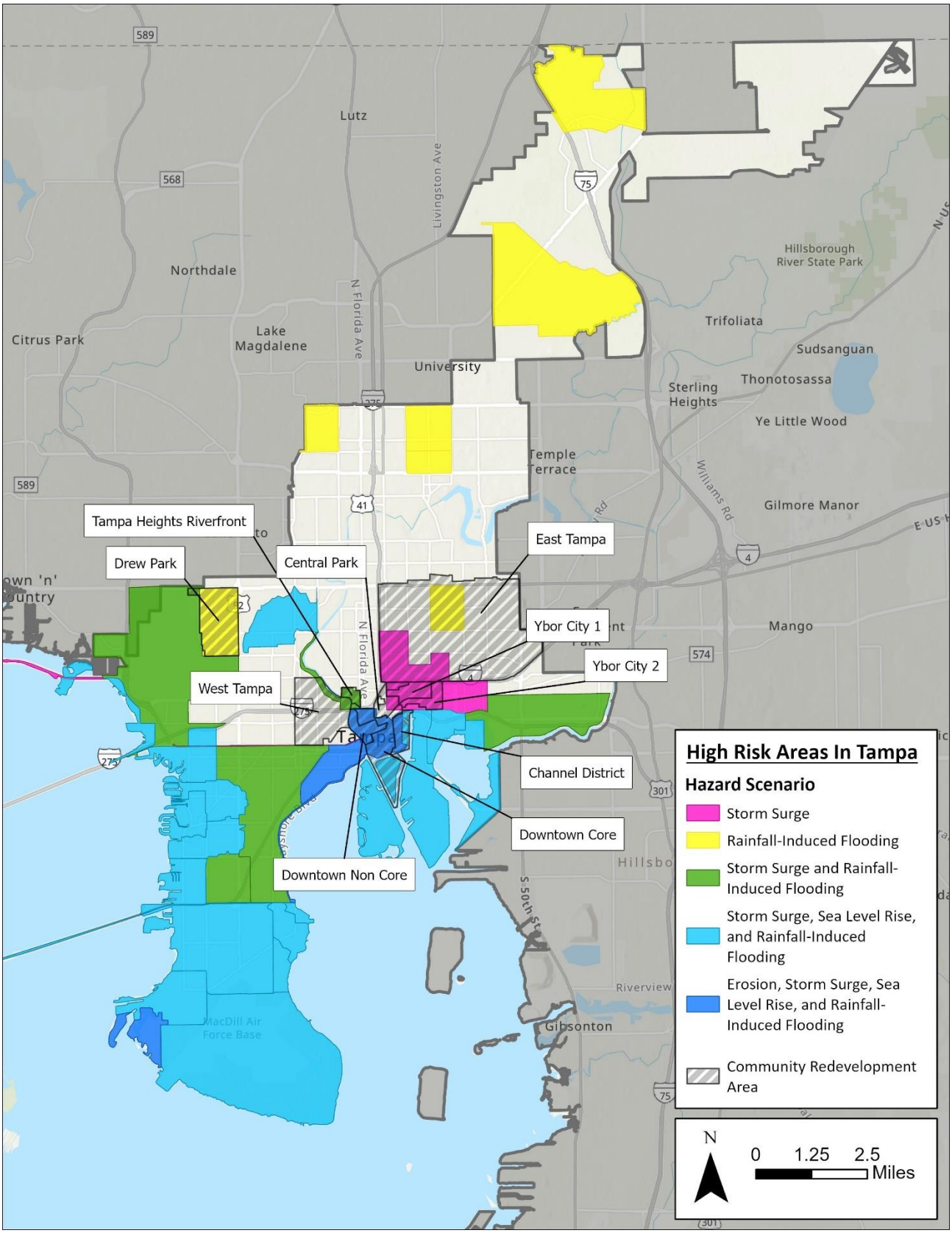


Figure 16: High Risk Areas and Community Redevelopment Areas in Tampa

5 Consideration of Recommended Strategies, Policies, and Actions

This chapter consolidates relevant findings and insights from previous climate-related studies and ongoing planning efforts, including the Coastal Area Action Plan, to provide a holistic understanding for the City of Tampa's PDRP. The purpose is to prioritize and filter recommendations that remain relevant and actionable, presenting them as strategic options for inclusion in the PDRP.

In a post-disaster redevelopment context, best practices play an important role in strengthening a community's long-term resilience to natural hazards. However, they are not always urgent or immediately actionable in the aftermath of a disaster. Resilience is an ongoing, adaptive process, and while best practices offer valuable guidance for shaping recovery strategies, they are often considered supplementary during the earliest phases of redevelopment planning.

In contrast, areas for improvement represent more targeted, location-specific strategies that address known risks identified in the City's previous studies. These recommendations reflect the immediate and near-term actions the City should prioritize before or during the early stages of recovery and redevelopment. They are designed to directly support at-risk neighborhoods, infrastructure, and vulnerable populations.

The following best practices and areas for improvement, presented in **Table 6**, were identified across the studies reviewed and are offered as a foundation for resilience-building efforts.

Table 6: Best Practices and Areas for Improvement

Best Practices (Resilience Foundations)	Areas for Improvement (Urgent Actions & Priorities)
Conduct a citywide seawall and shoreline inventory, including ownership, material, condition, and height.	Install duckbill-style backflow preventers.
Coordinate seawall upgrades with Army Corps of Engineers dredging projects; offer loans for conversion to living shorelines.	Use pumps, large-scale piping, and buyouts in flood-prone areas.
Create a living shoreline master plan; prioritize repetitive loss areas.	Apply for federal funding to upgrade access to Tampa General Hospital.
Create a map of future groundwater conditions based on SLR scenarios.	Continue strategic acquisition and demolition of high-risk, flood-prone properties.
Require removal of old septic tanks during property transfers or utility hookups, where possible.	Impose a temporary post-storm building moratorium.

Best Practices (Resilience Foundations)	Areas for Improvement (Urgent Actions & Priorities)
Coordinate stormwater planning with park development.	Adopt a citywide seawall ordinance with a 4.5 feet NAVD88 standard, where feasible that incorporates living shoreline provisions along with standards for height, materials, maintenance and repair, phasing or retrofit requirements, and/or enforcement and variance protocols.
Implement resilient building standards in Special Flood Hazard Areas.	Develop local scale sheltering systems potentially via resilience hubs in community and staff identified areas of need such as East Tampa, the University of South Forida campus, South of Gandy area, and Lowry Park. Explore associated funding mechanisms.
Support regional transit (e.g., Brightline/bus and rail) to reduce dependence on vulnerable roadways, enhance mobility options during recovery and redevelopment, and support economic revitalization in impacted areas.	Commit to Protect (protect critical infrastructure with engineered solutions and stricter building standards), Accommodation (accommodate water through wetlands, green space, and elevated structures), and Density Reduction strategies (reduce density through land acquisition and zoning changes to minimize future exposure and long-term risk) in high-risk areas.
Coordinate capital project timelines with TECO storm upgrades.	Require new development to retain more stormwater onsite.
Incorporate future rainfall and groundwater into the City of Tampa Stormwater Technical Manual; use future conditions data in Capital Improvement Plan (CIP) and permitting processes.	Implement a Transfer of Development Rights (TDR) program to shift development inland.
Use future groundwater conditions in utility and infrastructure design.	Delineate prioritized post-disaster assistance areas and provide homeowner instructions on how to floodproof.
Allow buildings to measure height from design flood elevation or reference plan; increase design flood elevations by 2 feet in specific zones; create design guidelines for elevated buildings.	Identify and prioritize Adaptation Action Areas (AAAs), including Port Tampa and neighborhoods south of Westshore (e.g., Beach Park Isles, Culbreath Isles, Sunset Park area, Belmar Shores, and Belmar Gardens).
Pilot and encourage green infrastructure practices for new residential and commercial development.	Develop minimum roadway elevation criteria and protect emergency routes; establish and maintain LOS for access roads.
Encourage small shops and services in residential neighborhoods to support local recovery and reduce reliance on large, hazard-exposed commercial corridors.	Adopt flexible shoreline planning strategies (e.g., increased setbacks, buffer zones).

Best Practices (Resilience Foundations)	Areas for Improvement (Urgent Actions & Priorities)
Maintain a flood risk management program and outreach strategy.	Use land use and zoning tools to reduce displacement risk in high-vulnerability areas by supporting local ownership and resilience upgrades, creating tools to support low-income homeowners, and preserving housing options for long-time residents during redevelopment.
Protect historically significant structures through tailored redevelopment, specifically in Palmetto Beach.	Reconstruct Bermuda Blvd as a complete street with integrated flood mitigation.
Refine post-storm debris handling; pre-arrange hauling contracts.	Update outreach using CDC SVI data and multilingual channels.
Ensure shelter communications are multilingual and culturally inclusive.	Revise CHHA policies to restrict density increases or require mitigation through FLUM amendments.
	Prioritize infrastructure service reliability through increased maintenance, particularly in historically underserved communities.

6 Implementation of the PDRP

The City of Tampa is developing a new standalone Post Disaster Redevelopment Plan to guide long-term recovery and redevelopment after major hurricanes and flood events. This section explains how the new PDRP will fit into Tampa's existing emergency management framework, which currently includes the City's Comprehensive Emergency Operations Plan (CEOP) and Hillsborough County's Comprehensive Emergency Management Plan (CEMP). It outlines the transition of responsibilities from immediate disaster response (covered by the CEOP/CEMP) to long-term redevelopment (covered by the PDRP) and compares roles of City and County entities in each phase of a disaster. The section also assesses Tampa's capacity to implement the PDRP – highlighting strengths, identifying gaps (legal authority, staffing and governance, partnerships and coordination, and plans and policies), and recommending strategies to strengthen recovery capacity. The goal is to provide City staff, leadership, and the public with a clear understanding of how Tampa will manage hurricane and flood recovery from initial response through long-term resilience-building.

6.1 Relationship Between City CEOP, County CEMP, and the PDRP

The City of Tampa's CEOP is the City's all-hazards plan for disaster response and short-term recovery. It provides a coordinated framework for City departments to prepare for, respond to, and begin recovering from emergencies.[9] During an event like a hurricane, the CEOP activates lifesaving operations, directs infrastructure protection and damage assessment, and guides service restoration in Tampa. The Emergency Operations Center, led by the Fire Chief in their role as Emergency Manager, manages these efforts. The CEOP aligns with the Hillsborough County CEMP, which governs regional coordination, sheltering, and resource deployment. Updated in 2024, Tampa's CEOP integrates state and county protocols to ensure seamless coordination during disaster operations.

The Hillsborough County CEMP is the countywide plan that coordinates disaster management across all jurisdictions, including Tampa, providing a unified framework for all phases of emergency management.[10] In large-scale disasters, the County EOC manages regional activities (e.g., evacuations, sheltering, mutual aid) and interfaces with state and federal partners. Tampa's CEOP functions within this system, managing tactical operations locally while supporting the County's broader efforts. The two EOCs work in tandem during emergencies, with the City focusing on operations within its boundaries and the County providing regional support.

The Post-Disaster Redevelopment Plan addresses long-term recovery and redevelopment after the lifesaving objectives are met. It outlines strategies for rebuilding homes, restoring infrastructure, restarting the economy, and reducing future risk through hazard mitigation.

[9] Full document available at City of Tampa 2024 CEOP.

[10] Full document available at Hillsborough County 2024 CEMP.

Unlike the CEOP or CEMP, which focus on immediate response and short-term recovery, the PDRP provides a framework for decisions that unfold over months and years. While Tampa was previously included in Hillsborough County's 2010 PDRP, the City is now developing its own standalone PDRP to better reflect local priorities and integrate with its Comprehensive Plan to serve as Tampa's blueprint for equitable and resilient recovery after major disasters.

By design, these plans operate on different time scales but are meant to transition seamlessly. The CEOP/CEMP handle the emergency and short-term recovery, then hand off to the PDRP for the long haul. The following sections describe this phase-by-phase progression and the shifting responsibilities from response to long-term redevelopment.

Disaster Phases: From Response to Long-Term Recovery

Disaster recovery is typically described in phases – preparedness, response, short-term recovery, and long-term recovery. Each phase involves different activities, stakeholders, and planning tools.

- **Preparedness** activities occur before a disaster and involve both emergency response readiness and long-term recovery planning. The CEOP and CEMP focus on life-safety preparedness (training, coordination, equipment), while the PDRP builds readiness for redevelopment – defining future land use policies, recovery roles, and mitigation actions.
- **Response** begins as a disaster unfolds. The CEOP and CEMP direct lifesaving actions and stabilization efforts through the EOCs. The PDRP remains inactive during this phase but may indirectly influence early response through pre-established priorities or resources.
- **Short-Term Recovery** overlaps with the end of response and focuses on restoring critical services and assessing damage. The CEOP and CEMP remain in effect, but the PDRP begins to inform decisions with long-term implications – such as temporary housing siting, demolition criteria, and infrastructure repair standards. Tampa's CEOP activates Recovery Support Functions (RSFs), which serve as a bridge to the PDRP.
- **Long-Term Recovery** is led by the PDRP and may span several years. It involves rebuilding homes, restoring infrastructure, revitalizing the economy, and improving community resilience. The City will implement a formal recovery structure – such as a Recovery Task Force and designated Recovery Leader – supported by continued coordination with Hillsborough County and state/federal agencies.

Table 7 (below) compares responsibilities across the CEOP, CEMP, and PDRP, by phase, illustrating the evolution of leadership – from City-led response (supported by the County), to shared efforts during short-term recovery, to City-directed long-term redevelopment with County support. Overlap exists between the roles and responsibilities in the long-term recovery phase of the City's CEOP and the PDRP because the PDRP operates within and enhances the CEOP's long-term recovery framework.

Table 7: Comparison of Roles/Responsibilities in City of Tampa's CEOP, Hillsborough County's CEMP, and the City's PDRP

Disaster Phase	City of Tampa (CEOP)	Hillsborough County (CEMP)	City of Tampa (PDRP)
Preparedness (Blue skies)	• Maintain and update the CEOP and department emergency procedures • Train staff and conduct joint exercises • Harden critical infrastructure • Coordinate mitigation planning with the County LMS • Support pre-disaster recovery planning	• Maintain County CEMP and integrate municipal plans • Conduct countywide trainings and preparedness campaigns • Maintain County EOC readiness and mutual aid agreements • Execute mitigation projects via LMS to protect regional infrastructure	• Define long-term recovery policies and capacity building (coordinated by City Planning/Office of Emergency Management (OEM)) • Align PDRP goals with the City's Comprehensive Plan • Engage stakeholders and community in planning (public workshops on rebuilding priorities) • Train a core Recovery Task Force or staff who will lead post-disaster efforts • Establish disaster recovery ordinances or agreements for redevelopment in advance
Response (During Disaster and Immediate Aftermath)	• Activate City EOC led by the Fire Chief to direct emergency operations • Conduct evacuations, road clearance, and rescue missions • Operate City shelters and staging areas in coordination with County • Submit situation reports to the County and request additional resources • Initiate damage assessments and local emergency orders	• Activate County EOC for regional coordination • Issue evacuation orders and coordinate public shelters for evacuees • Facilitate mutual aid or National Guard support for Tampa, if needed • Manage regional public communication through the County Joint Information Center	• PDRP has no operational role in response phase; this phase is managed under CEOP/CEMP. • Monitor damage impacts for future recovery needs • Reference any pre-arranged recovery actions or policies (e.g. pre-approved disaster debris sites) that can expedite later efforts • Prepare to transition into long-term recovery
Short-Term Recovery (Days to Weeks/Months After)	• Continue EOC operations for critical service restoration (e.g. debris removal) • Assess and document damages to seek FEMA aid	• Lead regional debris removal contracting and operations • Operate Disaster Recovery Centers (DRCs) with FEMA for countywide access	• Activate Recovery Task Force or steering committee • Guide short-term decisions that influence rebuilding (e.g. temporary housing site selection)

Disaster Phase	City of Tampa (CEOP)	Hillsborough County (CEMP)	City of Tampa (PDRP)
	• Provide interim housing options (e.g. non-congregate shelters) • Begin RSFs for housing, infrastructure, and economic recovery • Work with City Council on emergency ordinances to support rebuilding (e.g. fee waivers) • Tampa OEM and leadership start handing off coordination to long-term recovery leads once immediate structure and safety tasks are under control	• Coordinate points of distribution (PODs) for food and water with City support • Facilitate regional recovery programs (e.g. Public Assistance and Individual Assistance submission) • County emergency management will plan the demobilization of the County EOC and may convene a Long-Term Recovery Committee (with City participation) to address human services unmet needs	• Begin public engagement related to redevelopment goals • Launch initial recovery programs (e.g. a Recovery Center to offer permitting help and rebuilding information to homeowners, or economic relief programs for small businesses) • The PDRP team works closely with any Federal Disaster Recovery Coordinator or state recovery agencies that arrive, using the PDRP as the City's blueprint to advocate for resources and policy support
Long-Term Recovery (Months to Years After)	• Lead redevelopment across City departments per PDRP (e.g. Housing for reconstruction programs, Public works for infrastructure projects) • Mayor and Council set policy direction (e.g. approve recovery budget, approve resilient land development changes, pass redevelopment ordinances to facilitate rebuilding) • City Finance department manages recovery funds and insurance claims • Conduct public engagement and progress reporting (e.g. recovery dashboard, regular town halls) • Collaborate with County and update City plans with resilience measures with lessons learned	• Oversee regional recovery consistency and shared grant administration • Host cross-jurisdictional recovery check-ins to share progress, resolve conflicts, and jointly advocate for additional resources from the State or Congress if needed • Maintain long-term human service delivery through County departments and relationships with nonprofit partners • Incorporate recovery lessons learned into the next CEMP revision and mitigation plans	• Lead and coordinate all redevelopment initiatives within Tampa through RSF working groups that report to the City's Recovery Task Force leadership • Implement projects and policies in the PDRP (e.g. stormwater retrofits, affordable and resilient housing rebuilds, relocate or flood-proof critical utilities, restore wetlands for surge protection) • Secure and manage long-term funding, including for mitigation projects (FEMA HMGP, HUD, state grants) • Track and adapt recovery implementation based on progress • Transition back to normal operations and preparedness after recovery goals are met

6.2 Capacity of Local Government Resources

Implementing an ambitious PDRP in the City of Tampa requires sufficient capacity in legal authority, staffing and governance, partnerships and coordination, and plans and policies. As the largest City in Hillsborough County, Tampa has significant resources and experience with disaster response, but long-term recovery poses unique challenges. Below is an analysis of Tampa's capacity to carry out PDRP initiatives, including organizational strengths, potential gaps, and constraints in a post-hurricane or post-flood context. This includes a review of whether local planning frameworks align with the goals and priorities of post-disaster redevelopment. City staff are central to executing the strategies outlined in the PDRP. As such, gaps in staffing capacity or institutional support may limit the effectiveness or speed of implementation.

The conceptual framework for implementing the PDRP consists of:

- Nurturing and ongoing Post-Disaster Redevelopment Stakeholder Structure and meet occasionally to track the implementation of the PDRP recommendations
- Set up processes for creating the organizational structure required for long-term redevelopment processes that are sustainable over a 3- to 5-year period of implementation
- Develop inclusive lists of organizations and resources that may be available to assist in pre- and post-disaster plan implementation
- Align the goals and strategies of the PDRP with those already established in the City's existing long-term plans, such as the Comprehensive Plan, Capital Improvements Plan, and Climate Action and Equity Plan, and others to reinforce, rather than contradict, the City's vision for growth, land use, infrastructure investment, and resilience
- Capitalize on disaster mitigation and public assistance funds to improve disaster resiliency through pre-disaster research, training, and project planning
- Incrementally prepare the community for a more rapid and high-quality disaster recovery through implementation of priority pre-disaster actions each year
- Revisit the assumptions and actions of the PDRP every 5 years to adjust for changes in the community and to continually improve the plan

6.2.1 Legal Authority

The City of Tampa possesses the legal authority to implement a Post-Disaster Redevelopment Plan through a combination of state mandates, local ordinances, integration with existing policy frameworks, and legislative powers to enact supportive ordinances. The multi-faceted legal framework described below enables Tampa to effectively plan for and execute long-term recovery and redevelopment efforts following disasters.

State Mandates and Enabling Laws: Under Florida Statutes, Section 163.3178(2)(f), all coastal counties and municipalities are required to include post-disaster redevelopment strategies within the Coastal Management Element of their Comprehensive Plan. As a coastal city, Tampa is encouraged to develop and maintain a PDRP that addresses long-term recovery, redevelopment following disasters, and informs the Coastal Management Element.

Additionally, Florida's State Emergency Management Act (Chapter 252, F.S.) grants local governments broad powers during a declared emergency. These powers (Section 252.38, F.S.) allow the City to waive procedures, enter contracts, curtail certain activities, or take necessary actions to protect public health and safety. Some long-term recovery actions will occur under a local state of emergency declaration, utilizing these emergency powers in the immediate aftermath (e.g. to enact temporary moratoria on building in unsafe areas or to expedite permitting). This means Tampa's legal authority for initial recovery is intertwined with its emergency powers under state laws.

Plan Adoption and Policy Integration: The City of Tampa's Comprehensive Plan includes policies that support post-disaster redevelopment and align with state requirements, broader land use objectives, infrastructure planning, and sustainability goals. Integrating the PDRP into this existing planning framework will support its functions as a core component of the City's long-term vision. Formal adoption of the PDRP by resolution of the City Council is recommended to establish its authority and secure commitment from elected leadership.

Tampa's Comprehensive Emergency Operations Plan outlines the City's responsibilities across all phases of disaster response and recovery. It includes provisions for long-term recovery activities, such as infrastructure repair, continuity of operations, and coordination with state and federal agencies for assistance. The CEOP provides the operational context in which the PDRP is activated and implemented.

Tampa's PDRP is also designed to align with the broader Hillsborough County PDRP as well as those of neighboring coastal counties: Hernando and Pinellas. This regional coordination enhances consistency across jurisdictional boundaries, facilitates resource sharing, and fosters unified communication strategies and consistent implementation of policy throughout the region.

Local Ordinances and Codes: The City's Charter and Municipal Code give it "home rule" authority to manage local affairs, including land use and development decisions vital to redevelopment. In addition to planning frameworks, the City has a range of zoning, building, and land development regulations that can be adjusted or enforced to support recovery and redevelopment efforts. The City's ability to enact and modify these regulations provides the flexibility needed to facilitate safe and resilient rebuilding in post-disaster conditions.

To specifically empower post-disaster action, a dedicated Post-Disaster Redevelopment Ordinance can be a powerful tool. Hillsborough County's Ordinance 93-20 is a model example; it established a Post-Disaster Redevelopment Task Force, defined roles like Recovery Coordinators, and set policies for rebuilding. Such an ordinance could codify the existence of the PDRP, create a City Recovery Task Force or similar body in law, and enable tools like emergency building permit moratoria, fast-track permitting processes, or temporary land use changes when needed. Hillsborough County's 2010 PDRP specifically encourages Tampa and other municipalities to adopt an ordinance mirroring Ordinance 93-20 to provide a legal foundation for their PDRP implementation.[11]

6.2.2 Staffing and Governance

Implementing the PDRP requires an effective governance structure and sufficient staffing to manage the long-term recovery process. Successful execution of PDRP priorities will depend on the City's capacity to dedicate staff time, technical expertise, and interdepartmental coordination to long-term recovery and redevelopment. This subsection reviews Tampa's current organizational capacity and what structures are or should be in place for post-disaster governance. **Figure 17** provides an example of a disaster recovery governance structure with defined leadership roles, a recovery task force, and Recovery Support Function teams.

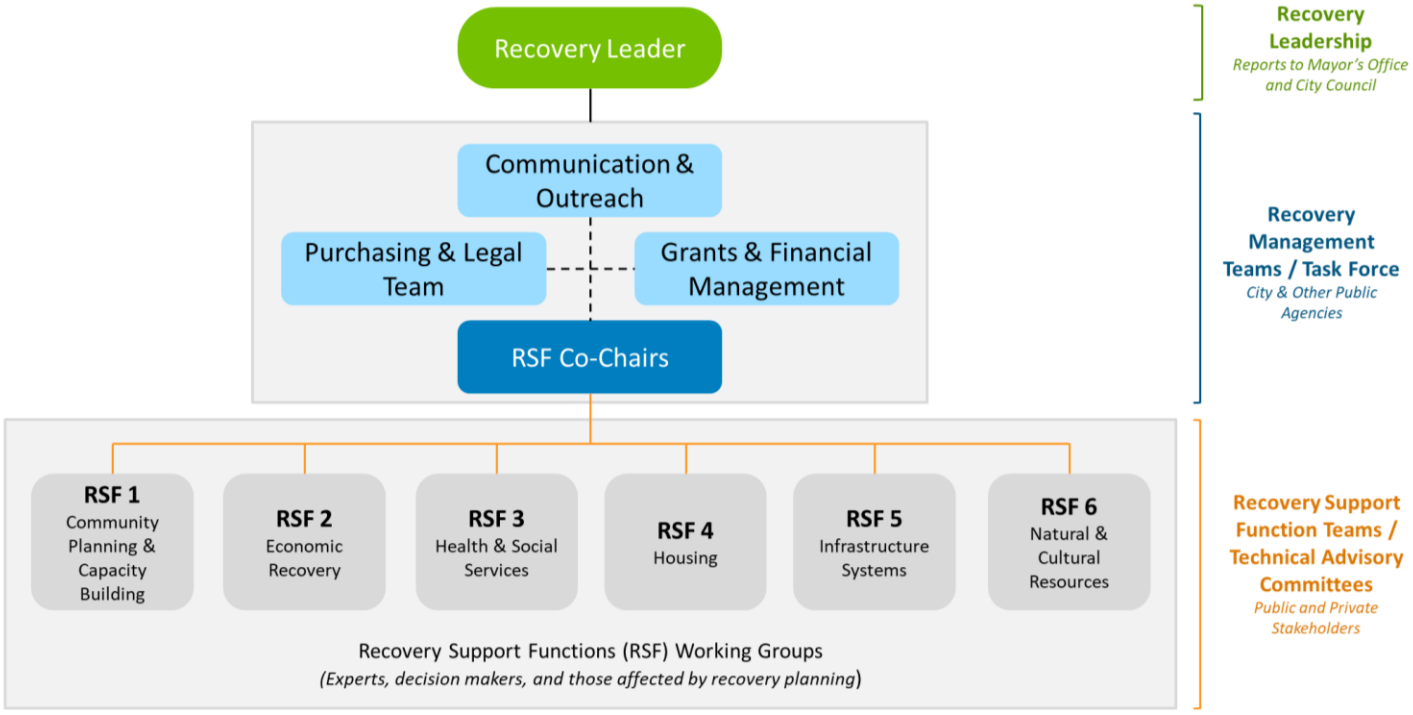


Figure 17: Example Disaster Recovery Governance Structure

[11] Hillsborough County 2010 PDRP, p. 2-2. Retrieved from: 2010 PDRP.

Existing Emergency Management Structure for Recovery: Organizationally, Tampa benefits from a capable and experienced Office of Emergency Management, housed within Tampa Fire Rescue. The CEOP includes a framework for long-term recovery coordination built around Recovery Support Functions. There are six RSFs defined for Tampa, mirroring the major areas of recovery needs identified by the National Disaster Recovery Framework (NDRF):

- RSF 1 – Community Planning and Capacity Building
- RSF 2 – Economic Recovery
- RSF 3 – Health and Social Services Recovery
- RSF 4 – Housing Recovery
- RSF 5 – Infrastructure Systems Recovery
- RSF 6 – Natural and Cultural Resources Recovery

For each RSF, the CEOP designates a primary City department as the coordinating lead (Co-Chairs in **Figure 17**), with a network of supporting agencies and partners. According to the CEOP, Tampa's intent is that each RSF group will do some pre-disaster planning for their recovery function and stand ready to mobilize after a disaster to coordinate solutions in that area. This aligns with best practices from the NDRF, as that foundation enables a quicker transition from emergency response to long-term recovery.[12] The RSF teams form the backbone of a City Recovery Operations Center, focusing on problem-solving beyond the scope of immediate emergency services. While the City does provide a clear structure (RSFs) and activation procedure for long-term recovery, it's unclear if the City convenes its RSF chairs for regular standalone meetings outside of the general emergency planning meetings. The CEOP language suggests that they should be meeting year-round in preparedness mode, but if these meetings occur, they are likely informal or internal.

Importantly, Tampa's RSF framework is integrated with Hillsborough County's recovery structure. Because the County PDRP and Ordinance 93-20 already defined similar functional areas (via Technical Advisory Committees and coordinator roles), the City's RSFs are not standalone silos – they coordinate with County agencies and the State/federal RSFs.

Proposed Recovery Governance (PDRP Implementation Structure): At present, long-term recovery coordination in Tampa and Hillsborough County is guided by plans but lacks an active, standing forum. The County's 2010 PDRP put in place an intergovernmental Task Force and sector committees, but these have not been regularly convened or institutionalized in practice. The City of Tampa is technically part of the County's Task Force and has incorporated a recovery structure (RSFs) into its emergency plan, but this too is a framework that has not yet operated in a real

[12] Retrieved from National Disaster Recovery Framework.

prolonged recovery operation. This means there is something of a governance gap as Tampa develops its standalone PDRP.

Moving forward, implementing a new PDRP is an opportunity to activate and update the dormant structures and formalize regular coordination activities. Tampa can coordinate with Hillsborough County to either reinvigorate the countywide Redevelopment Task Force (ensuring the City's priorities are represented) or establish a City-focused Recovery Management Team/Task Force that interfaces with the County and State. Given that the ordinance-established County Task Force already exists, the path of least resistance may be to leverage that body. If the County is amenable, this could restore a recurring interagency recovery meeting that benefits both the City and County.

Roles and Staffing: An important capacity consideration is who will staff the long-term recovery efforts. City departments will be heavily taxed after a major disaster; the same Public Works staff fixing roads in the short term might also be needed to plan infrastructure upgrades in the long term, for example. The PDRP calls for identifying specific positions or persons to fill critical recovery roles in advance. These roles might include a Local Disaster Recovery Leader – the overall coordinator for recovery – as well as administrative support for managing finances and documentation and section chiefs or coordinators for each RSF. As previously mentioned, the CEOP designates a primary City department as the coordinating lead for each RSF. The RSF teams defined in the CEOP will need to be fleshed out and actively maintained. The new PDRP can assign specific persons or subcommittees to each RSF, make sure they meet periodically, and possibly conduct small-scale recovery exercises or scenario discussions (e.g. "one year after a Category 3 hurricane" tabletop session for each RSF).

Decision-Making and Leadership: Governance also involves how decisions will be made and who has authority. In Tampa's context, the Mayor and City Council will play vital roles in recovery – the Mayor provides overall leadership and can champion initiatives (and may also serve as or appoint the primary Recovery Leader), while the Council will be needed to pass ordinances or budget allocations to support reconstruction. The PDRP should establish a clear hierarchy or framework for recovery decisions.

6.2.3 Partnerships and Interagency Coordination

Post-disaster redevelopment requires coordination well beyond City departments. Local nonprofit organizations, community-based groups, private sector partners, and regional, state, and federal agencies all have roles in advancing equitable recovery, expanding service delivery, and supporting long-term resilience goals.

Tampa has strong ties with Hillsborough County Emergency Management and past joint disaster experience has created a solid base for interagency cooperation. This partnership is formalized through a recovery-specific framework, the Post-Disaster Redevelopment Task Force, established

by County Ordinance 93-20 in 1993. The 2010 PDRP explicitly expanded the Task Force's role to serve as an advisory body to not just the County Commission but also to the Tampa City Council and other city commissions. Since the PDRP's adoption in 2010, long-term recovery coordination has been handled through existing emergency management structures and specific recovery programs rather than a standing Task Force. The coordination that does occur pre-disaster tends to be folded into other forums, such as the Hillsborough County Local Mitigation Strategy working group, which meets regularly to plan hazard mitigation.

At the state level, the Florida Division of Emergency Management (FDEM) and other state agencies coordinate with local jurisdictions during disasters but do not maintain a permanent recovery task force specific to Tampa. Nonprofit and community-based partners and the business community are typically engaged through the activation of or ad hoc participation in RSF teams. For example, after Hurricane Irma (2017), Tampa hosted workshops with nearly 60 local businesses and organizations to improve disaster recovery preparedness, emphasizing that "active engagement with Tampa-area businesses help meet unmet needs for residents when disaster strikes."[13] This kind of outreach aligns with RSF 2 (Economic) and RSF 3 (Health/Social) goals, even if it wasn't explicitly labeled as an RSF meeting. In the absence of a major disaster, these long-term recovery relationships are maintained through periodic training, joint exercises, and informal collaboration, rather than a standing recovery coalition.

While the basic architecture for interagency coordination exists as it relates to long-term recovery, its implementation is largely reactive and event-specific. This presents an opportunity for the City of Tampa to strengthen pre-disaster partnerships and clarify roles across agencies in advance of future events. As outlined in **Table 8**, several entities have clear authorities, assets, or missions that align with long-term redevelopment and should be prioritized for formal coordination. By cultivating these relationships – through updated memoranda of understanding (MOUs), regular recovery-focused meetings, inclusion of additional stakeholders in the City's RSF teams, or joint planning exercises – the City can improve its ability to activate a well-coordinated, citywide recovery effort when it is most needed and ensure that partners are engaged before the next disaster.

Table 8: Priority Partners Supporting Long-Term Recovery and Redevelopment

Partner Organization	Contribution to PDRP Implementation
Hillsborough County Government	A critical regional partner across planning, infrastructure, stormwater, emergency management, and public health. Many City recovery efforts require close coordination with County departments for funding, service continuity, and policy alignment.

[13] International Association of Emergency Managers. Retrieved from USA Region 4.

Partner Organization	Contribution to PDRP Implementation
Hillsborough County Public School District	The district can support long-term recovery by offering school facilities as shelters or distribution sites and by collaborating with the City on resilience upgrades. Post-disaster, the district can also facilitate the continuation of youth services and community programming at schools located in impacted areas.
TECO (Tampa Electric Company)	Collaborates with the City on long-term infrastructure resilience improvements, including utility undergrounding, microgrid planning, and coordinated capital improvements. TECO's storm hardening investments can be aligned with redevelopment priorities and critical infrastructure upgrades in vulnerable areas.
University of South Florida (USF)	USF can provide technical support in hazard modeling, public health, urban planning, and resilience research. The university can also offer surge staffing, student interns, or GIS and economic impact analyses to assist the City during recovery.
The Nature Conservancy and Tampa Bay Estuary Program	These organizations can assist with natural resource restoration projects, integration of green infrastructure, and implementation of nature-based solutions, particularly in coastal and flood-prone areas.
Community-Based Organizations (e.g., CDC of Tampa, R.I.C.H. House)	These groups provide trusted community access points and can support outreach, distribution of resources, and culturally competent engagement during recovery. They also help identify needs among historically underserved communities.
Healthcare Providers (e.g. Tampa General Hospital, BayCare Health, AdventHealth)	Healthcare partners are critical for ensuring continuity of care post-disaster and preparing for access challenges during long-term recovery. These providers also support planning for residents with access and functional needs.
MacDill Air Force Base	As a major federal presence in the City, MacDill Air Force Base is a key partner in long-term land use coordination, infrastructure resilience planning, and intergovernmental communication. Its strategic location along the waterfront necessitates alignment between the City's redevelopment goals and base operations, particularly regarding evacuation routes, transportation infrastructure, and shoreline adaptation measures.
Tampa Bay Economic Prosperity Foundation/ Tampa Bay Economic Development Council	These partners promote business continuity, job recovery, and economic diversification. They can help the City coordinate outreach to impacted businesses and develop recovery-focused incentive programs.
CareerSource Tampa Bay	Provides workforce development programs, job placement, and skills training. CareerSource can assist displaced workers and help align training programs with reconstruction and redevelopment needs.

Partner Organization	Contribution to PDRP Implementation
Local and National Nonprofits (e.g., American Red Cross, Rebuilding Together Tampa Bay, Feeding Tampa Bay)	These organizations can assist with emergency relief, home repair, food distribution, sheltering, and direct services. Pre-disaster MOUs can clarify roles and speed deployment post-event.
Greater Tampa Chamber of Commerce	Supports business resilience and recovery planning, small business engagement, and coordination of reopening strategies post-disaster; can also help communicate regulatory changes to the business community.
Private Developers and Builders (e.g., Tampa Housing Authority partners, infill builders)	Help drive housing redevelopment, resilient design, and reconstruction of mixed-use districts. Early coordination with developers ensures alignment with City plans and land use goals.
Tampa Housing Authority (THA)	A valuable partner in repairing, rebuilding, and expanding affordable housing. THA can also support relocation planning, access to HUD programs, and integration of resilience strategies in new developments.
Habitat for Humanity of Hillsborough County	Partners on long-term affordable housing redevelopment, particularly for low-income homeowners in repetitive loss areas. Can assist with rebuilding to higher flood standards and integrating resilience into future housing stock.
Property Owners	Owners of large or vacant parcels can facilitate infill redevelopment or be key players in land swaps, buyouts, or adaptive reuse strategies post-disaster. Partnerships with these stakeholders can accelerate implementation of housing and infrastructure priorities.
Downtown Tampa and Neighborhood Associations	Serve as conduits for community feedback during redevelopment planning and can help the City identify neighborhood-specific priorities, coordinate volunteer resources, and implement community-led revitalization initiatives.
Media Outlets (e.g., WUSF, Tampa Bay Times)	Support sustained public communication of redevelopment priorities, planning milestones, and available resources. Can help build transparency and public trust by reporting on plan progress and recovery outcomes.
HART (Hillsborough Area Regional Transit Authority)	Coordinates long-term transit planning and resilient infrastructure restoration. Partners with the City to align future transit investments with redevelopment areas, especially those housing vulnerable populations or economic centers.

6.2.4 Plans and Policies

A strong foundation of local plans, ordinances, and administrative procedures is central for effective post-disaster redevelopment. These documents guide investment decisions, shape land use and infrastructure outcomes, and ensure that redevelopment efforts are consistent with the City's long-term vision. Expanding and aligning these frameworks with resilience and redevelopment objectives strengthens the City's ability to respond and adapt after a disaster as well as mitigate the impacts of disasters through blue-skies actions. Further, relevant plans in place position Tampa well for state and federal coordination and financing.

The review of existing plans, conducted as part of Task 4, helps identify areas of alignment with the PDRP as well as opportunities to improve consistency across policy documents. These findings help illuminate strengths, gaps, and potential barriers to implementation, providing a basis for refining strategies and prioritizing future planning efforts.

Table 9 summarizes the City's planning and policy capacity to implement PDRP priorities. It notes whether relevant plans exist, if they've been updated recently, and if revisions are recommended to improve alignment with PDRP goals. Plan updates, particularly of the PDRP, should occur every five years to reflect changes in infrastructure, demographics, and hazard conditions. Additional details on specific strategies to address policy gaps are provided in Section 6.4 of this document.

Table 9: Analysis of Planning and Policy Capacity to Support PDRP Implementation

☑ Yes ✖ No ⚠ Recommended Improvement 🔄 In Progress	**Does the City have this plan? If not, is it addressed through other plans?**	**Has this plan been updated in the last 5 years?**	**Are there identified revisions and/or updates needed to this plan?**
Emergency Management Plan	☑	☑	
Local Mitigation Strategy	☑	🔄	⚠
Comprehensive Plan	☑	🔄	⚠
Post-Disaster Redevelopment Plan	☑	🔄	
Capital Improvements Plan	☑	☑	⚠
Climate Action and Equity Plan	☑	☑	

☑ Yes ✗ No ⚠ Recommended Improvement 🔄 In Progress	Does the City have this plan? If not, is it addressed through other plans?	Has this plan been updated in the last 5 years?	Are there identified revisions and/or updates needed to this plan?
Coastal Management Element (Comp Plan)	☑	☑	
Debris Management Plan	✗		
Disaster Cost Recovery Plan	✗		
Economic Development Plan	✗		
Resilience Plan	☑	☑	
Evacuation Plan	☑	☑	
Open Space/ Greenway Master Plan	☑	☑	
Natural Resource/ Conservation Plan	✗		
Historic Preservation Ordinance	☑	☑	
Land Development Code	☑	🔄	⚠
Building Code	☑	☑	⚠
Stormwater Management Plan	☑	☑	
Continuity of Operations Plan	☑	☑	
Flood Response/ Mitigation Plan (VA, PIPES)	☑	☑	
Urban Forest Management Plan	☑	🔄	
Watershed Management Plan	☑	☑	
Strategic Vision Plan	☑	☑	
Recovery Plan	☑	☑	

6.3 Recommendations for Improving Capacity

During the 2025 post-disaster redevelopment process, several capability gaps were identified across local policies, procedures, and staffing resources that could limit the City's ability to implement an efficient and equitable redevelopment plan. These gaps offer an opportunity for the City to invest time and resources in pre-disaster planning, streamlined coordination, and strengthened institutional capacity to manage long-term redevelopment. The following recommendations (**Table 10**) reflect priority actions the City can pursue to build resilience, expand capacity, and operationalize the vision for a prepared, adaptive, and vibrant City of Tampa.

Table 10: Recommendations for Improving Capacity

Need: PDRP Recovery Governance Structure	**Recommendation: Establish a Permanent PDRP Recovery Governance Structure** Develop and staff an organizational chart (as suggested in Section 6.2.2) and ensure all participants understand their roles. This structure should be documented in both the PDRP and referenced in the CEOP/CEMP. The positions needing dedicated staff include: • Recovery Manager • Recovery Management Team: Grants & Financial Management, Communication & Outreach, and Purchasing & Legal • Assign staffing and partnership support to the RSF Teams
Need: Formalized Post-Disaster Legal Authorities	**Recommendation: Formalize Legal Authority for Long-Term Recovery** Codify a disaster recovery ordinance that clearly establishes legal authority and procedures for long-term recovery that: • Create Recovery Management Team (Task Force) that meets annually pre-disaster to review roles, update procedures, and identify planning gaps and is activated post-disaster to set priorities, monitor recovery and redevelopment, and adjust the work plan • Define the roles of a Disaster Recovery Leader, department responsibilities, and enabling tools • Formally adopt the PDRP by resolution of City Council to secure commitment from elected leadership
Need: Strengthen Partnerships and Coordination Mechanisms	**Recommendation: Formalize Partnerships and Coordination Mechanisms** Develop or update MOUs with healthcare providers, utility companies, NGOs, and business sector/housing partners to: • Request major external stakeholder involvement in the City's RSF Teams Improve communication and reduce the learning curve between Tampa and its partners when a disaster strikes

Need: Expanded Focus on Long-Term Recovery in Training Programs	**Recommendation: Broaden Staff and Partner Training to Include Long-Term Redevelopment Roles** The City is actively training for emergency response and short-term disaster recovery, including damage assessments. To build on this foundation, existing training should be expanded to cover long-term redevelopment roles outlined in the PDRP. This may include: • Orientation to long-term PDRP responsibilities • Planning for transition from response to sustained redevelopment • Simulations addressing infrastructure, housing, and economic recovery challenges under various scenarios (e.g. "one year after a Category 3 hurricane" tabletop session for each RSF)
Need: Debris Removal Plan	**Recommendation: Draft and Maintain a Debris Removal Plan** Although the City has debris removal contracts and staging areas in place, it lacks a formal plan. A comprehensive Debris Management Plan should: • Identify backup and specialized staging sites by debris type • Establish operational procedures for debris sorting, disposal, and permitting • Ensure FEMA compliance and align with regional strategies
Need: Consistent and Equitable Public Communication	**Recommendation: Establish a Public Engagement Plan for Redevelopment** Establish a communication strategy that: • Includes blue-skies communications to the public explaining what to expect after a disaster in terms of city recovery processes and how the public will be involved in decisions • Post-disaster, shares post-disaster redevelopment progress transparently • Uses plain language, visuals, and multilingual outreach • Engages community-based organizations in two-way feedback, particularly in high-risk areas
Need: Maintain and Update the PDRP Regularly	**Recommendation: Treat the PDRP as a living document** Capacity improves when plans are current and reflect the latest knowledge. Tampa should establish a schedule for reviewing and updating the PDRP to: • Incorporate lessons learned after any disaster (even a minor one) • Keep contact lists and action items relevant and actionable
Need: Mitigation Integration Across Plans	**Recommendation: Incorporate the Findings of the 2025 VA into the Hillsborough County LMS** Key findings from the Vulnerability Assessment should be integrated into the Hillsborough County LMS to: • Ensure alignment between mitigation and redevelopment goals • Support eligibility for FEMA funding (BRIC, HMGP) • Advance joint planning for infrastructure and emergency services

Need: Alignment of Planning and Regulatory Frameworks with Risk Data	**Recommendation: Use the Findings of the 2025 VA and the PDRP Risks and Vulnerabilities Assessment to inform the Comprehensive Plan Policies, Code of Ordinances Chapter 5 (Building Code), and Code of Ordinances Chapter 27 (Land Development Regulations)** The City should use the 2025 VA and PDRP risk assessments to guide policy updates by: • Restricting and/or regulating the development in high-risk areas • Encouraging resilient, higher elevation infill and redevelopment • Updating regulations to reflect future flood conditions and infrastructure needs
Need: Integration of Long-Term Redevelopment Priorities into Capital Planning	**Recommendation: Integrate Long-Term Redevelopment into Capital Improvement Planning** Ensure post-disaster infrastructure priorities are reflected in the City's CIP to support strategic, phased investments over time. This includes: • Identifying redevelopment projects that address infrastructure vulnerabilities and support equitable growth • Aligning long-term infrastructure upgrades with resilience goals, including flood risk reduction and energy reliability • Coordinating with finance and planning departments to incorporate redevelopment priorities into annual CIP cycles and funding strategies

6.5 Plan Maintenance and Review

Treating the PDRP as a living document means it must be routinely updated to remain current with latest knowledge and lessons learned. The City of Tampa should establish a formal schedule and process for periodic review and maintenance of the PDRP to ensure it stays relevant and actionable. Key components of this maintenance process include:

6.5.1 Recovery Plan Coordination and Scheduled Plan Reviews

The Recovery Coordinator, or designee within the Emergency Management Division, should oversee all PDRP updates. At a minimum, the Recovery Coordinator should facilitate a coordination meeting annually, preferably before each hurricane season, to discuss needed modifications.

After each disaster – whether minor or major – the City's established After-Action Report (AAR) process yields insights into response performance, coordination, and system stress points. The Recovery Leader should review each AAR for lessons learned that extend beyond immediate response and into longer-term redevelopment, triggering a review of the corresponding PDRP sections. The goal is to bridge emergency response and long-term recovery planning, ensuring

consistent and continuous improvement across the disaster cycle. Following each AAR, the Recovery Management Team should convene a PDRP Integration Meeting to evaluate whether lessons learned necessitate updates to the PDRP's strategies, actions, or coordination procedures. These findings may result in:

- Updates to recovery coordination protocols
- Revisions to RSF responsibilities or contact lists
- Amendments to project prioritization frameworks
- Inclusion of new mitigation or redevelopment strategies

Any such changes would be categorized as either administrative or technical amendments, depending on the scope, and should following the maintenance protocols in Sections 6.5.2 and 6.5.3.

A comprehensive update should occur every 5 years as a deeper revision of the PDRP. A 5-year update involves re-examining the entire plan in light of new research, new development patterns, and any changes in laws or recovery programs. It should incorporate new hazard vulnerability data, changes in community demographics or infrastructure, updated funding sources, and new recovery ideas into the PDRP. Ideally, this major update should coincide with the 5-year update cycle of the LMS and/or the Comprehensive Plan's Evaluation and Appraisal Report cycle to promote consistency across plans and allow for joint stakeholder meetings.

6.5.2 Administrative Changes

Administrative changes are minor edits that keep the PDRP accurate in its details. This includes routine updates like contact lists, phone numbers, department names, and titles or staffing changes. The Recovery Coordinator (or designated staff) can make administrative updates as needed at any time. These do not substantially change the PDRP's strategies. Such minor revisions should be recorded (e.g. in a revision log or footnote) but do not require formal re-approval.

6.5.3 Technical Changes

Technical, or substantive, amendments involve more significant changes to the PDRP's content or procedures. These could include major changes in the recovery governance structure, new policies or ordinances affecting post-disaster redevelopment, changes in legislation, updates to the Comprehensive Plan and significant changes to infrastructure or resources, or revised recovery strategies and action plans. When substantial changes are necessary – for instance, after a major disaster reveals a gap in the plan, or if federal/state legislation or guidance on recovery planning is updated – a formal amendment process should be followed. Draft technical amendments should be reviewed and approved by the Plan's key stakeholders who endorsed the original PDRP. This would typically include the Recovery Leader, the City's Emergency Management Director, relevant department heads, and the RSF co-chairs. Upon approval, the

amended sections should be integrated into the Plan and communicated to all agencies involved in long-term recovery. Technical amendments may also be forwarded to the Mayor's Office and County Council for awareness or formal adoption if required by local policy.

6.5.4 Dual-Format System

Although the City's PDRP will be professionally formatted for public use and engagement, maintaining its relevance requires a practical strategy for keeping content current between formal design updates. To support long-term functionally, the City should implement a dual-format system to allow internal staff to make timely updates without specialized software:

- A designed PDF version (InDesign) for public distribution, maintained and versioned by the Recovery Management Task Force or consultant.
- A "working" version (Word or Excel) containing editable sections. The following components should remain modular and editable outside the designed layout:
  - Contact and leadership directories
  - Recovery strategy tables, implementation timelines, and progress tracking
  - Recovery implementation tools designed to operationalize the PDRP such as project prioritization matrices, funding decision trees or tracker templates, or [temporary infrastructure or housing] site suitability worksheets
  - Lessons learned and After-Action Report integration logs
  - Funding and resource inventories
  - RSF membership and assignments

An accompanying Plan Maintenance Log should be used to document each change, its approval, and the date of incorporation. This log ensures transparency and supports version control. Additionally, the City should receive full access to the original design files and brief guidance on how to update or repackage the plan over time. Integrating editable elements into internal platforms (e.g. SharePoint or Teams) can further streamline collaboration across departments.

7 Summary of Findings and Their Relevance to PDRP

This risk and vulnerability assessment provides a data-driven foundation for the City of Tampa's PDRP. By identifying the potential impacts of hurricanes, storm surge, flooding, and economic disruption, the analysis informs strategic planning efforts aimed at building a more resilient, adaptive, and sustainable future. The findings highlight areas of high vulnerability, quantify potential economic losses, and identify social impacts that may complicate long-term redevelopment efforts.

The insights gained from this assessment enable the City to prioritize redevelopment actions, allocate resources efficiently, and tailor strategies to support community resilience and economic vitality. The detailed breakdown of vulnerabilities by geographic area and infrastructure type provides subcommittees with the necessary context to make informed decisions that align with the City's vision for sustainable growth and resilience.

7.1 Key Takeaways for Subcommittee Consideration

- Develop strategies to increase the City's human and financial resources capacity to implement the PDRP
- Evaluate land use and housing strategies in high-risk areas and coordinate with CRAs to support adaptive development and reduce long-term exposure.
    - Consider overlay districts and options for a transfer of development rights program
    - Consider revising CRA plans to include infrastructure resilience projects
    - Consider a CRA-wide resilience policy and associated "Resilience Checklist"
    - Consider resilience grant/loan programs, administered by CRAs
- Assess opportunities for voluntary buyouts and land conservation in areas with older, non-conforming structures.
- Plan for temporary housing placement and phased reconstruction by identifying available land and integrating debris removal logistics
- Develop strategies to support long-term housing stability, including affordable and resilient housing, in light of potential displacement of up to 20,000 households.
- Analyze business continuity and workforce recovery strategies to address varying economic losses across hurricane scenarios
- Focus redevelopment efforts on mixed-use areas to support faster recovery, reduce economic disruption, and lessen reliance on single-use commercial corridors that may be slower to rebound after a disaster
- Expand public-private partnerships and incentive programs to support business recovery in key commercial and industrial zones

- Integrate economic vulnerability data into long-term planning to reduce exposure in high-loss sectors and promote adaptive reuse
- Coordinate debris management planning to handle up to 1.4 million tons of waste, considering landfill capacity and phased redevelopment goals
- Prioritize upgrades to vulnerable transportation, utility, and emergency systems to improve service continuity and recovery speed
- Align infrastructure investments with adaptive reuse, strategic densification, and sustainable development principles
- Strengthen healthcare facility resilience and emergency response capacity to support at-risk populations post-disaster
- Coordinate with nonprofit and healthcare partners to develop an integrated plan for delivering health and social service during recovery and into long-term redevelopment – especially for residents with limited access, including seniors, people with disabilities, and low-income households
- Expand partnerships across public health, behavioral health, and social support networks to enable coordinated, equitable service delivery
- Plan for long-term sheltering and displacement-related needs as part of community resilience planning
- Integrate environmental sustainability into redevelopment strategies to protect ecosystems and reduce future hazard exposure
- Prioritize nature-based solutions such as living shorelines and green infrastructure to improve flood resilience and ecological function
- Incorporate urban forestry and debris reuse into debris management planning to support replanting efforts and accelerate restoration of Tampa's tree canopy after storms
- Apply storm-scaping principles – such as selecting wind- and salt-tolerant vegetation – to public landscaping and park restoration projects
- Prepare for revenue shortfalls and property devaluation following a major disaster by integrating resilience financing tools (e.g., bonds, grants, insurance)
- Align post-disaster financial strategies with redevelopment priorities to ensure efficient, equitable investment recovery
- Leverage public-private partnerships and flexible funding sources to support infrastructure upgrades and affordable housing development
- Develop financial recovery frameworks that support both immediate stabilization and long-term economic renewal
- Design public engagement strategies that anticipate extended recovery timelines and large-scale displacement
- Ensure communication plans are inclusive, multilingual, and culturally sensitive to effectively reach all segments of the community

- Encourage community participation in visioning and decision-making to build shared ownership of redevelopment strategies
- Establish clear channels for ongoing feedback and transparency throughout the redevelopment process