

REALIZING RESILIENCE

social equity + economic opportunity



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Institute**

Tampa Bay



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ST. PETERSBURG, FL

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ULI'S RESILIENT CITY WORKSHOP

OVERVIEW

ULI Tampa Bay received a grant from the Urban Land Institute's Urban Resilience Program and the Kresge Foundation to provide technical assistance to the City of St. Petersburg with a particular focus on economic development and social equity strategies.

On December 5th and 6th 2016, ULI Tampa Bay, in partnership with the City of St. Petersburg, convened ULI members and collaborators from New Orleans, Miami, Boston and the Tampa Bay region for a 'Resilient City Workshop'.

After reviewing extensive background materials on the region, the team spent two days in collaborative sessions with over 75 stakeholders, including Mayor Rick Kriseman, City Council members, community leaders, and staff from the city, county and region. At the culmination of the workshop, ULI and the City of St. Petersburg held a Public Open House to report on major take-a-ways from these sessions as well as lessons learned from past experiences.

Addressing a changing environment in an equitable way is a challenge that all Tampa Bay communities must grapple with. This report is intended to be a helpful guide region-wide.

"In order to be a resilient city, you have to be an equitable city too." Jeffrey Hebert, Deputy Mayor & Chief Resilience Officer, City of New Orleans





ST. PETERSBURG, FL INITIATIVES TO DATE

- August 2015: An Executive Order, by Mayor Rick Kriseman, inscribed key benchmarks for sustainability.
- November 21st, 2016: St. Petersburg City Council approved funding for an Integrated Sustainability Action Plan to address climate change and resiliency, for demonstration projects, and to support Pinellas County's Vulnerability Assessment.
- In January 2016: The City of St. Petersburg committed to working towards the goal of 100% clean energy.
- In December 2016: The City of St. Petersburg became a 3-STAR community - one of only 58 communities in the nation to complete a rigorous STAR certification process, a nationally recognized community-wide sustainability rating system.



WATER ALL AROUND

CHALLENGES AND OPPORTUNITIES

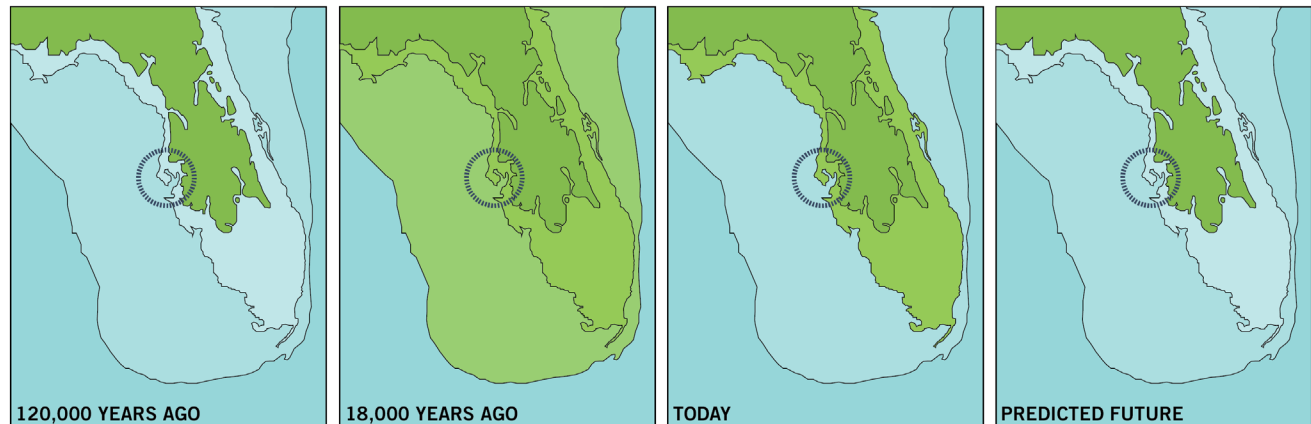
Anchored by the cities of St. Petersburg and Tampa, the Tampa Bay region is known as one of the most vulnerable in the world to wind damage, coastal flooding from storm surge and rising sea levels. The shallow West Florida shelf and the funneling effect of Tampa Bay creates conditions for severe storm surge. With over 50% of the population living less than 10 feet above sea level, these conditions create enormous risk to residents' safety, well-being and property.

The City of St. Petersburg, with 60 miles of coastal frontage, has already felt the impacts of storms over the last couple of years, including flooding that has stressed, damaged and disrupted the infrastructure and operations of the city.

MAPPING SEA LEVEL RISE

The map on the right illustrates a 6 foot sea level rise (SLR) scenario for the City of St. Petersburg and surrounding communities based on National Oceanic and Atmospheric Administration projections. Refer to the Recommended Projection of Sea Level Rise in the Tampa Bay Region for the consensus reached among the Tampa Bay Climate Science Advisory Panel (CSAP) on the future of SLR in Tampa Bay, regionally corrected using the St. Petersburg tide gauge data. The CSAP concludes that this region may experience SLR somewhere between 6 inches to 2.5 feet in 2050 and between 1 to 7 feet in 2100.

The map below illustrates a possible future for Florida. Warming oceans and melting glaciers and ice sheets are raising global sea levels.



COASTLINE MAPPING

Harold Wanless, University of Miami + Arlen Stawasz, Perkins+Will



FACTS

- St. Petersburg is surrounded on 3 sides by water.
- Total population of St. Petersburg is 259,906.
- Approximately 22% of the population of St. Petersburg was below the poverty line in 2015.
- Approximately 91,148 (48%) people live within the Special Flood Hazard Area (SFHA).
- 42,656 homes are within the SFHA.
- 46.6% of people are homeowners within the SFHA.
- 39.4% of population in the SFHA are Age 25 – 54 (many may plan to remain in homes for 20 to 30 more years).
- Riviera Bay and Shore Acres repetitively flood.

REFERENCES

- A 2008 Organization for Economic Co-operation and Development (OECD) examination of 136 port cities worldwide found that Tampa and St. Petersburg together are one of the most vulnerable regions in the world, among the 10 regions with the most property at risk to wind damage and coastal flooding from storm surge.
- A 2013 report led by the World Bank listed the cities most at risk from flooding, due to rising sea-levels. In terms of overall cost of damage, Tampa- St. Petersburg was the 7th most at risk globally, 4th in the United States.

ST. PETERSBURG, FL INITIATIVES TO DATE

- In 2015, the city, in partnership with the community, committed to the 2020 Plan – a collective impact initiative with the following goals:

- > Reduce poverty in South St. Petersburg by 30% by 2020.
- > Increase employment by 5,000 by 2019 by intensively applying efforts to create jobs (via business & commercial development) and increase employment through high school career academies & other skills gap closing initiatives.
- > Support 500 businesses (including micro & small businesses) to accelerate growth and job creation for South St. Petersburg workers.
- > Focus on men and boys 16+, especially ex-offender fathers, equipping them to work, placing them into jobs and helping them become proactive in their children's lives.

- On June 11, 2015, the South St. Petersburg Community Redevelopment Area (CRA) was established with the purpose of creating a sustainable and durable source of financing to assist private enterprise in remedying blight and poverty in South St. Petersburg.

BUILDING EQUITY

BRIDGING DIVIDES

The adverse effects from environmental threats often impact low income communities (coastal and inland) the hardest, as they can have the most difficulty bouncing back from shocks and stresses.

In the face of climate change and increasing environmental threats, the city's low income communities have a limited capability to move or rebuild following intense storm events. Across the country, low-income communities have, historically, failed to benefit from the "green" investments that aim to reduce the risk of climate change. Many climate policies have often overlooked the magnitude of environmental, economic, and social vulnerabilities that these communities face.

A significant number of St. Petersburg's citizens, predominantly in South St. Petersburg (Southside Community Redevelopment Area or CRA) have disproportionate poverty and unemployment levels. The Southside CRA and other low-income communities have been working diligently for several years to transform into healthy, vibrant communities by empowering businesses, neighborhoods, and citizens through targeted grant funding, education and outreach, workforce readiness, community policing and more. Considering vulnerable populations in resiliency work will help minimize disproportionate effects

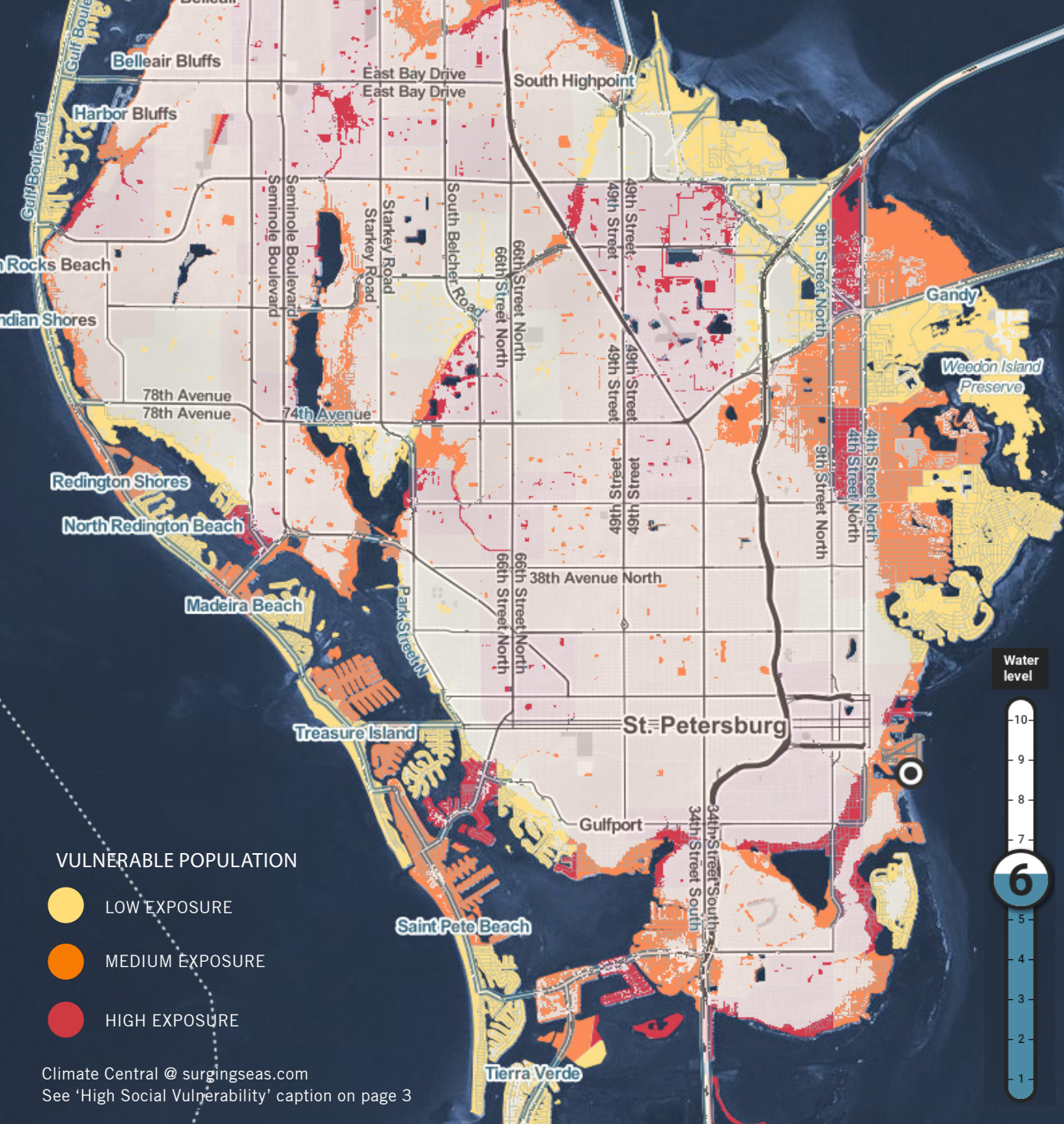
of climate change that could counter that progress.

The City of St. Petersburg has demonstrated a commitment to addressing the physical, economic and social challenges of climate change in a comprehensive and integrated way – one that leads to equity and opportunity for all citizens.

MAPPING SOCIAL VULNERABILITY OF SEA LEVEL RISE

The map to the right illustrates the social vulnerability of a 6 foot sea level rise scenario, depicting the ability of communities in these areas to prepare and respond to hazards like flooding. Sourced from the US Census Bureau, the Hazards and Vulnerability Research Institute Social Vulnerability Index considers the following population characteristics: socioeconomic status, gender, race and ethnicity, employment loss, residential property (value, quality, density), renter population, occupation, family structure, education, availability of medical services, social service dependence & special-needs population.

Note: This map has not been regionally corrected to the St. Petersburg tide gauge data. The data does not consider the economic vulnerability of low income populations outside of the floodzone.



Mayor Rick Kriseman of the City of St. Petersburg, State of the City Address January 14, 2017:

"It is important for the whole community to be resilient not just before and after acute weather events, but during the more gradual changes in our environment, as well. This is not some far-off hypothetical. This is real... The resiliency planning we're doing is a cross-departmental effort - no more silos - and is being done in collaboration with the many storm and sewer analyses and projects underway. We understand that our city is a connected and dynamic living system where cause and effect are considered, and projects that offer multiple benefits will be prioritized."



RECOMMENDATIONS

RESILIENT CITY

As St. Petersburg works towards becoming a more resilient place, the city has an opportunity to implement strategies that can simultaneously address the increasing environmental risks and bridge many of the existing social, cultural and economic divides. Being a resilient city is not just about preparing for the physical inevitabilities of sea level rise and the increasing threat of storms. It is preparing citizens, neighborhoods, businesses and government for whatever shocks the future holds by providing communities with the resources to withstand, respond and thrive in the face of pressures.

Resiliency is defined by the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events. These adverse events can include shocks, such as hurricanes or floods, as well as chronic stresses, such as unemployment, poverty or lack of food access.

The city has already taken a number of steps that serve as an important foundation for improving resiliency. This includes waterfront master planning, fostering partnerships with the county, focusing on emergency

management and targeting investment through the creation of a community redevelopment area (CRA) in south St. Petersburg. Going forward, it is important to stay focused on supporting, connecting and growing these initiatives to remain proactive.

The next section outlines recommendations on steps the City of St. Petersburg can take to enhance its resilience.





+ LEAD BY EXAMPLE: RESILIENT CITY DECISION MAKING

+ ADAPT TO THRIVE: SHIFTING FROM BUSINESS AS USUAL

+ HARNESS OPPORTUNITY: ADAPTING TO THE CHANGING ENVIRONMENT

+ RESILIENT LIVING: CREATING CONNECTED & STRONG NEIGHBORHOODS

+ IDENTIFY MESSENGERS: ESTABLISHING BOLD AND STRATEGIC COMMUNICATIONS

+ COLLABORATION: FORGING NEW PARTNERSHIPS

WHAT WE HEARD FROM STAKEHOLDERS

- St. Pete has the opportunity to lead the region on resiliency issues.
- The cost of inaction should be quantified and understood.
- A new way of thinking is needed. We are in the wrong mindset about solving problems.
- We need to make good land use decisions based on vulnerabilities and the existing capacity of infrastructure, especially those that are being planned and funded now.
- Mitigating and adapting to sea level rise will require local level commitment.
- We need to bridge the economic and physical gaps between downtown and the rest of the city.
- Leadership and communication is critical on this issue.
- Partnership and collaboration across and between jurisdictions is important.

LEAD BY EXAMPLE

RESILIENT CITY DECISION MAKING

The City of St Petersburg can promote positive economic returns and enhanced quality of life for all residents by connecting resilience to opportunity with city wide investments and holistic decision-making. This proactive approach will allow St. Petersburg to lead the Tampa Bay region by example, reinforcing resilience into the bottom line.

While the city has already demonstrated a commitment to these issues, the following strategies would further integrate resilience as a core value in the city's decision-making:

+ Align the city's capital budget around resilience priorities and goals that enhance or produce greater resilience. This does not necessarily mean having to spend additional dollars – it can mean ensuring that existing money is oriented towards or reflective of the city's resilience goals.

+ Integrate resilience goals and decision-making through all functions of city government and across all agencies. By crafting policies and programs based on their potential to create multiple benefits, the city can make itself safer, healthier, and more economically stable using existing resources.

- Consider renaming Office of Sustainability to the Office of Resilience and Sustainability.
- Elevate responsibilities of the head of this office, creating a cabinet-level Chief Resilience Officer role, to ensure the ability to implement change across departments and be involved in budget allocation decision-making.

+ Create and implement the Integrated Sustainability Action Plan and other city resilience planning efforts

within a framework of creating economic opportunity, bridging social and physical divides, and improving climate resilience. Prioritize projects in which multiple benefits can be realized.

+ Invest wisely with a data driven approach and gain a full understanding of the costs associated with inaction vs. investment.

- Pinellas County's Vulnerability Assessment will help identify exposures and the associated costs of disasters in various scenarios to the city's infrastructure.
- Consider partnering with a reinsurance company to take advantage of sophisticated resource based risk mapping tools to make the most fiscally appropriate decisions between hardening assets and risk transfer.
- Partner with the Trust for Public Land to create a digital map and tool that can be used to determine areas of investment based on multiple variables.

+ Implement a 'Resilient project review' at the municipal level for city funded projects and/or those that have stormwater management and green infrastructure components.

+ Target critical city infrastructure/buildings that could benefit from building hardening, emergency planning and other improvements using resilience features as a case-study for learning and future roll out.

+ Invest in city sponsored, neighborhood scale demonstration projects using innovative technology and solutions to improve energy efficiency and resilience – promoting the city as a leader and resulting in cost savings.

+ Leverage opportunities for private sector investment in projects and strategies that improve resilience.

- Incentivize private investment in local resilience building in select areas to catalyze local economic development.

MIAMI-DADE COUNTY'S BUDGET IS FOCUSED ON RESILIENCE

- Explore public private partnerships to improve climate resilience efforts and create business and employment opportunities.

+ Stakeholder engagement, partnerships, and decision-making in resilience planning should include “cost of doing nothing” discussions. See page 14 for detailed strategies.

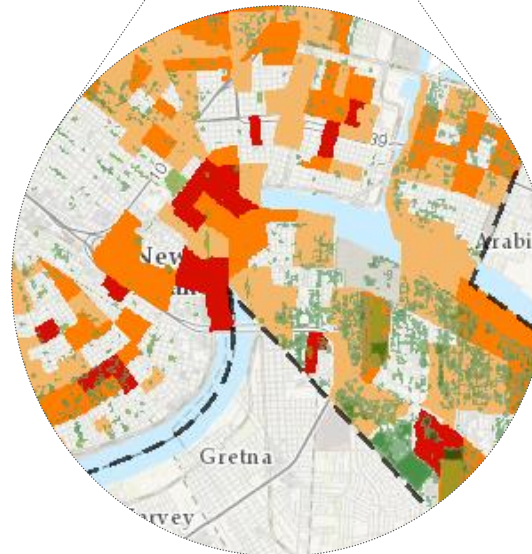
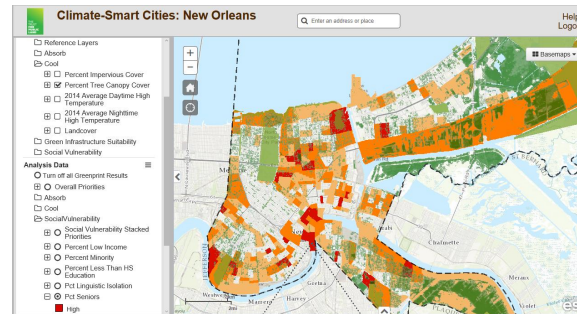
CLIMATE SMART CITIES TOOL

The Trust for Public Land applies its expertise in climate research, computer-assisted mapping, and urban design to help cities “connect, cool, absorb, and protect”—the four pillars of TPL’s climate strategy.

The Trust for Public Land (TPL) in partnership with the City of Boston, Greenovate, and Boston Harbor Now is preparing Boston for the many impacts of a changing climate through the development of data-driven planning strategies and green infrastructure solutions that will advance equity and make the city more resilient.

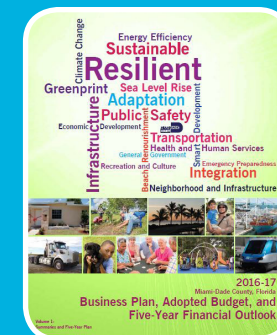
In addition, ULI Boston is partnering with the Trust for Public Land to add an additional layer of data points to the Climate-Smart Cities tool, to allow the real estate industry ability to analyze points of interest at the parcel level.

In New Orleans, the Trust for Public Land’s Climate-Smart Cities team is working with public agencies, neighborhoods, funders, and researchers to help the city develop green infrastructure where it’s needed most. They are developing a GIS-driven tool that combines geographic data about climate-related threats like flooding with data on public health, income, and neighborhood access to green space to help planners prioritize projects.



In 2016, Miami-Dade County adopted a budget focused on allocating resources to enhance the resilience of the county and the residents’ quality of life. The county defined four dimensions of resilience that serve as pillars of their framework: 1) health & wellbeing 2) economy & society 3) infrastructure & environment and 4) leadership & strategy. By analyzing the services the county provides to residents through a new prism, the county focused on making community a safe place to live with employment opportunities, cultural and recreational options, social services and communications channels within a government committed to protecting and maintaining our natural and man-made assets. One example of the positive impact of this strategy is that the Miami-Dade Parks Department is now factoring sea level rise into park designs.

“A local government budget is one of the most important tools available.” James Murley, Miami-Dade’s Chief Resilience Officer



WHAT WE HEARD FROM STAKEHOLDERS

- It is difficult for small businesses to shift their focus and resources from their immediate needs toward long-term emergency planning.
- Money talks. Businesses need to see tangible financial risks and rewards before they will act.
- Affordability is an issue from both a retail leasing and workforce housing perspective.
- Having a high percentage of renters makes post-disaster small business recovery especially vulnerable. Most renters do not return, creating employee and customer shortages for local businesses.
- St. Pete has a large number of jobs in the hospitality and service industries. These jobs are hard to recover quickly post-disaster.



Marine research boat docked in St. Pete's Bayboro Marine Research Cluster area

ADAPT TO THRIVE

SHIFTING FROM BUSINESS AS USUAL

In order to respond to the economic imperative to prepare for the challenges of sea level rise, the city's economic development and resilience initiatives should work in lockstep to realize the co-benefits of resilience investments and ensure they are experienced equitably throughout the city. Businesses, large and small, being prepared, empowered and invested in the resilience efforts of the city is a critical component.

Currently, training is offered to businesses through the St. Pete Greenhouse and the city's emergency management staff, particularly as new businesses ask for assistance. The current city initiatives can be expanded into a long-term plan to offer assistance and facilitate collaboration among the business community for resiliency.

+ Lean on experts to help communicate risk and mitigation strategies to the business community.

- Engage the reinsurance industry, which has some of the best climate change risk modeling in the world and a vested interest in making businesses more resilient.
- Partner with a reinsurance representative to present to business leaders, the chamber, downtown partnership, etc. "In Miami, when we brought in the insurance industry, we started capturing the attention of businesses." James Murley, CRO for Miami-Dade County
- Use business groups, such as the Chambers of Commerce and providers of business services, as conduits to raise awareness and encourage action.

+ Focus on small business resilience. Work to ensure

small businesses are able to get back online post-disaster to ensure individual and neighborhood recovery, particularly in south St. Petersburg.

Steps can include:

- Provide outreach, education and technical assistance to small businesses to create disaster preparedness and business continuity plans.
 - Work with the county, the St. Pete Greenhouse and/or the Tampa Bay Regional Planning Council to combine existing resources and create a simple, customizable disaster preparedness planning blueprint for small businesses.
 - Use existing neighborhood networks to inventory which small-businesses have/do not have plans and communicate opportunities for technical assistance.
- + Position the city as a pioneer** in resilience and create value out of the opportunity.
- Mitigation and adaptation can be leveraged as an economic development tool. The city's investment in resilience, efficiency and lowered risk can help attract new businesses and investment.
 - Home to the largest marine and environmental sciences community in the Southeast, St. Petersburg has the shared interest and opportunity to collaborate and co-brand its resilience work with one of the city's largest business sectors.
 - Incorporate a strong resilience component and potential demonstration project in the development of the Innovation District.

+ Forge partnerships with local entities. In concert with the 2020 Plan, forge a partnership between the city, local colleges, job training organizations and anchor institutions to anticipate opportunities, provide skills

training and create pathways to jobs related to the city's upcoming infrastructure and resilience investments.

+ **Expand on existing city and partner initiatives** to identify the sector-specific job training efforts locally that could benefit from a focus on resiliency or identify

NEW ORLEANS ASSET ANALYSIS

The City of New Orleans is undergoing an analysis of all of the sewage and water assets around the city with the help of global reinsurer Swiss RE and Veolia, a resource management company. This effort will connect sea level rise projections and hurricane models to understand what the investment will be overtime to harden or move vulnerable assets, while simultaneously managing the billions of dollars in spending on upgrading sewage and water systems.



Career fair at Pinellas Technical College



St. Pete's 'Not My Son' community outreach campaign

"Of necessity, most business people are focused on the immediate and not on the long term. The challenge is to raise climate change to a front of mind issue and the goal is get businesses to harden themselves so they can bounce back faster." Lex Kelso, Principal Green Coast Enterprises, LLC

NOLA NETWORK FOR ECONOMIC OPPORTUNITY

The City of New Orleans Network for Economic Opportunity (the Network) focuses on connecting disadvantaged job seekers and businesses to opportunities. Since launching in 2014, the Network's key initiatives have included:

- *Policy improvements, such as strengthening enforcement and compliance with the disadvantaged business enterprise (DBE) program and executing a local hiring initiative to employ residents.*
- *Opportunity centers, where workforce development organizations provide foundational skill development.*
- *Case management and supportive services .*
- *Sector-specific job training to increase opportunities through partnerships with large employers and projects including the new airport terminal, new hospitals, and the Sewerage & Water Board of New Orleans (SWBNO).*

WHAT WE HEARD FROM STAKEHOLDERS

- St. Petersburg has 6,159 acres of parkland.
- Connections are lacking between the Southside CRA & downtown.
- The city should explore and embrace the opportunities that may come with the challenges of sea level rise and climate change.
- The city's aging infrastructure needs to be made more resilient.
- When it comes to climate change, the problems we have are local.
- We need to be evidence based and solution oriented.
- The city should celebrate the leadership of current green building projects.



HARNESS OPPORTUNITY

ADAPTING TO THE CHANGING ENVIRONMENT

Through innovative demonstration projects, policies and programs, the city can encourage physical and cultural shifts to more resilient design and thinking.

By adapting the City of St. Petersburg to the natural environment and the increasing risks of climate change, opportunities can be created for all residents to thrive. Successful adaptation will mean creating resilient systems and a culture of environmental awareness among all.

+ **Take advantage of existing assets** and redevelopment opportunities to lead the way.

- Investigate opportunities to utilize the existing extensive park system in all areas of the city to create multi-functional green spaces for retention, absorption and distribution of water integrated into recreation features. Choose projects where multiple benefits can be gained, including raising awareness among vulnerable populations.
- Plan and design for a future where city green space and parks can serve as a first defense against the vulnerabilities of climate change and storm surge.
- Explore code changes that may be required and work with parks and recreation to consider parks in a green infrastructure context.
- Seize the opportunity of significant signature projects, including the pier and the Tropicana Field site to mandate, create and integrate resilience features and outcomes that are physical, economic and social in nature.

+ **Plan for and design city infrastructure** for a longer life to ensure long term resilience. Actively advocate for

amendments to state and federal policies that would allow infrastructure repair/replacement funds/grants to be used not just to rebuild the way things were, but to be stronger and more resilient.

+ **Actively encourage and pursue new funding sources** for the design and installation of green infrastructure.

+ **Rethink FEMA repetitive loss areas.** Consider investing funds into community-wide green infrastructure projects that reduce risk and provide benefits for more residents. The City of New Orleans has implemented this strategy and can provide helpful guidance.

+ **Continue to strive towards and invest in the city's 100% renewable energy goal.**

- Provide incentives for projects with features that are energy efficient and resilient.
- Reducing energy use and water use at a building by building level helps to relieve stress on existing and future infrastructure.
- Improve energy efficient codes and standards to make commitment to renewable energy more impactful, and realized faster.

+ **Integrate resilient policies into the city legislative framework.**

• Explore implementation of an Adaptation Action Area(s), an optional comprehensive plan designation, as a redevelopment tool to improve both resilience and equity. Identify areas that experience flooding and/or are vulnerable to the related impacts of rising sea levels for prioritizing funding for infrastructure needs and adaptation planning. See *Miami's Arch Creek Basin and the ULI Advisory Services panel, as a framework for putting social equity at the forefront of the climate action agenda.* <http://uli.org/advisory-service-panels/miami-florida-advisory-services-panels/>

"There are opportunities for small, fundable demonstration projects that address both resiliency and community building at the same time. This is a great way to try new things without having to change all the rules yet." Katharine Burgess, Director of Resilience, Urban Land Institute

"There is a higher cost to reactive planning than proactive planning and being proactive can actually pay off". Arlen Stawasz, Resiliency Strategist, Perkins+Will



- Mandate that climate change and sea level rise be considered for new and redevelopment projects above a certain size threshold for public and private projects.

+ Implement innovative programs to spur investment in resilience.

- Ensure city stormwater management projects are highly visible and also serve to elevate awareness and provide public education.
- Consider a resilient retrofit program to incentivize property owners to incorporate resilience measures such as hardening and weatherization on their own property.
- Encourage land stewardship by introducing a 'greening' vacant lot program that can help reduce stormwater runoff, provide opportunities for food growing, act as a demonstration project and encourage community cohesion and reinvestment while beautifying an area.
- Introduce a resilient city design competition to motivate talent from across Tampa Bay and the country to tackle local resilience challenges in innovative ways.

RESILIENT BUILDING TOOLKIT

- Fast Track Permitting
- Refund of permit fees (up to a certain \$\$ threshold)
- Impact fee reductions
- Require LEED for buildings over a certain square footage
- Require developers to complete a "Climate Change Preparedness and Resiliency Checklist" as a prerequisite to development of new buildings over a certain size (See Boston, MA)
- Density bonuses to encourage development in the right areas, or areas that need economic development
- Parking reduction for projects that locate near mass transit, and/or provide increased pedestrian opportunities
- Explore future micro-grid opportunities

NOLA TAKES ACTION ON URBAN WATER MANAGEMENT

The City of New Orleans is building a series of green infrastructure demonstration projects to show the public how underutilized spaces can be developed to retain stormwater and designed to make neighborhoods more attractive. This includes transforming vacant lots into rain gardens that draw runoff from the street, store it temporarily, and capture many of the pollutants it carries. Innovative green infrastructure solutions such as green roofs, bioswales, and pervious pavement are being funded.

Revisions to the Comprehensive Zoning Ordinance now require the mitigation of runoff associated with new development or reconstruction at certain targets, using on-site water catchment techniques to slow surface flow and, in turn, reduce subsidence rates throughout the city.



Demonstration raingarden in New Orleans

WHAT WE HEARD FROM STAKEHOLDERS

- Neighborhoods need to be more walkable to improve community connectivity.
- There needs to be more communication about programs available for low income residents to encourage homeownership.
- There is a high number of renters in flood prone areas.
- Cost of homeownership is rising.
- There is a need to start seeing City of St. Petersburg as a cohesive whole.
- There is a perception that downtown is not for everyone.
- The cost of complying and/cost of insurance could be incentives to proactively prepare for resilience.
- There will be a tension between preservation and preparation.
- Programs are needed to help with existing housing stock.

RESILIENT LIVING

CREATING CONNECTED & STRONG NEIGHBORHOODS

As the city makes decisions to adapt to the changing environment, investments with multiple benefits that serve to improve the stability, health and housing of all residents, – particularly those that are most vulnerable– should be prioritized.

Investments that create opportunities for all community members are investments in resilience.

+ **Integrate decision-making on city resources** and investments in resilience with efforts to improve social equity outcomes in the south St. Petersburg CRA, including the 2020 taskforce and plan. Leverage the existing strong partnerships such as between the city, Urban League and the Chamber of Commerce. The STAR Communities framework can serve as a facilitation tool for achieving this goal. (See sidebar on pg. 18)

+ **Strengthen multi-modal connections** between and within low-income neighborhoods and downtown St. Petersburg.

+ **Make streetscape improvements with resilient design features** to help catalyze growth and increase connectivity in redevelopment areas.

+ **Engage and collaborate with the City of St. Petersburg Housing Authority**, a large landowner in the city, to become a partner with the city on investing in resilience measures that improve equity outcomes.

+ **Invest in household stability** to ensure individuals, neighborhoods and communities can 'bounce back' from the stressors of climate change and storms.

- Promote homeownership and make home retrofits more feasible for low-income communities.
 - Promote social enterprise endeavors such as home and cooperative gardening, education and agricultural assistance programs.
 - Continue to use HOME, CDBG, neighborhood stabilization resources and CRA resources to close the gap in making home retrofits.
 - Partner with organizations in the private sector to develop an emergency savings account program to help individuals and families save.
 - Consider a Citywide rental registry that connects landowners with positive economic opportunities (low interest financing, renovation money).
- + **Ensure information on programs are readily available**, integrated into other existing programs/tools and widely promoted in order to cultivate a culture of awareness about resilience.



A rendering from FARROC Design Competition, Queens, NY

There is going to be a tension between wanting to incentivize people to move to less vulnerable areas and protecting the less vulnerable areas from gentrification and displacing current populations that are there. Hard choices and policy decisions are going to have to be made considering social equity concerns alongside the vulnerabilities.” Leigh Fletcher, Partner, Fletcher & Fischer

“There is a real need to focus on homeownership in flood prone areas in a way that ensures investments in the home result in houses more resilient to storm events. To do this, there needs to be some type of affordable way to enable homeowners to make improvements to their properties.” Leroy Moore, Chief Operating Officer, Tampa Housing Authority



Encore!, Tampa, FL



Encore!, Tampa, FL

ENCORE CASE STUDY

ENCORE!® is a public-private partnership between the Tampa Housing Authority, Bank of America, and City of Tampa. This \$425 million 40-acre sustainable master-planned, mixed-use redevelopment community just north of Downtown Tampa’s urban core will be home to professionals, families and active seniors – a multigenerational mix of 2,500 people and will create 1,000 permanent jobs.

ENCORE! Tampa has a commitment to being sustainable. Encore’s plan targets Gold certification under the Leadership in Energy and Environmental Design for Neighborhood Development (LEED ND) program. Each of its buildings has been, or is on track to be, certified LEED Gold or Silver. ENCORE! also uses innovative and efficient districtwide approaches for stormwater management and cooling. On premise, in what is called the Technology Park, the District Chiller Plant supplies the entire community with chilled water to cool all of the buildings on site, instead of using traditional and much less efficient HVAC air conditioning equipment. The ENCORE! Tampa development designed a solution to keep its storm water from flooding the neighborhood, by capturing it on-site and reusing it for irrigation. An 18,000-square-foot vault, which holds up to 35,000 cubic feet of storm water, lies beneath the park collecting all the road water and any runoff from the properties. ENCORE! is able to irrigate the entire property with this reused water.

Read more at <http://casestudies.uli.org/encore/>

MANDATING CLIMATE TRAININGS FOR ALL STAFF IN BROWARD COUNTY

Broward County, Florida has mandatory climate trainings for all county staff, in recognition of the need for all employees to work together and apply their skills and knowledge to address the environmental challenges faced by the County. With the help of representatives from the CLEO Institute and staff experts in the field, county staff learn how global climate change translates to local challenges and opportunities, how to apply tools and resources, and engage in activities to connect their role at the county with the county's overall goals for adaptation and mitigation.

Trainings are specific to different divisions/ departments, including: Libraries, Cultural Division, Parks & Recreation, Public Works, Water & Wastewater Services, Airport, Port Everglades, Human Services, Transportation, Environmental Protection and Growth Management.

IDENTIFY MESSENGERS

ESTABLISHING BOLD AND STRATEGIC COMMUNICATIONS

Often an afterthought from a resources perspective, the importance of a robust communications strategy, at the center of a resilience action plan, cannot be understated.

The city, with the support of a diverse coalition of partners, will need an agile and comprehensive communications strategy to:

- > Build consensus and stakeholder acknowledgment that St. Petersburg's waterfront is both a risk factor and the city's competitive edge.
- > Create an inclusive call to action, and empower St. Petersburg's diverse citizenry with educational outreach, tools for adaptation and mitigation, and access to economic indicators that help illustrate return on investment.
- > Demonstrate that St. Petersburg is a thriving, modern city up to the challenge of living with water.
- > Ensure all citizens and businesses are prepared to respond and have the capacity to help each other during emergencies.

+ Boldly brand the city's resilience initiative and invest in a highly visible public outreach campaign.

- Consider engaging a strategic communications firm to help communicate risks, change behaviors and celebrate the city's investment in resilience. A professional firm has the talent and resources to expertly target messaging, raise the profile of the initiative, position the city as a resilience leader, quantify communication goals and track progress across a mix of mediums. Seek funding through foundation funding resources such as the Tampa Bay Community Foundation, Kresge Foundation, etc.

- Translate complicated climate science and infrastructure improvement plans into language and mediums that are easily understood by the diverse set of stakeholders.

+ Promote transparency and allow the community to easily track the city's progress.

- Utilize the framework and metrics of the STAR community rating system, particular around equity, to communicate performance to the public.

+ Break down silos at the city level, and conduct cross-departmental communications training to promote climate resilience fluency among the city staff.

+ Ensure every 'weather' event becomes an opportunity for public education and the rallying of support for the city's initiatives and the need for action.

ST PETERSBURG, FL STAR COMMUNITIES

The STAR Community Rating System® (STAR) provides a clear, data-driven approach to assessing social, economic and environmental progress. Built by and for local governments, STAR is a catalyst for local action and is transforming the way that communities address their social, economic and environmental progress.

As of December 2016 St. Petersburg is recognized as a 3-STAR community and is currently using STAR to document existing and planned community-wide sustainability efforts. The results will guide the City's sustainability planning efforts through revisions of existing plans and codes as well as highlight needed planning efforts including Climate Action and Resiliency Planning. STAR assessment benefits community by:

- Demonstrating commitment to data-driven approach
- Strengthening local metrics
- Increasing transparency through reporting
- Establishing a baseline and identifying gaps & priorities
- Building a brand and culture of local sustainability
- Begin incorporating sustainable practices within the DNA of city operations and practices

"Sometimes you aren't your own best messenger" --Jeffrey Hebert, Deputy Mayor & Chief Resilience Officer, City of New Orleans

"It is important to bridge the divides and develop communication strategies that make the whole of the community feel included in this process while also communicating about what resiliency planning can do to improve lives. It's not just a defense mechanism. It can also be a prosperity mechanism." Taylor Ralph, REAL Building Consultants



A student of Catalyst Miami holds up a solar bug he created



Local St. Petersburg children learn how to cook healthy meals for the whole family at Childs Park Test Kitchen

WHAT WE HEARD FROM STAKEHOLDERS

- There is a feeling of community distrust and old wounds in the southside.
- People feel like they are being told, and not included in decision making.
- In every stakeholder meeting, (science to social equity) people expressed communication as the number one issue.
- It's hard to make the threat feel real with no recent environmental disaster as a call to action. However, the sewage issue could be repositioned as a rallying point.
- We are currently preaching to the choir. We need to establish ways to communicate opportunities and risks to the larger population.



EVACUTEER - THE POWER OF US

In New Orleans, a sculpture on the street corner doubles as a designated evacuation meeting place in case of emergency. The program is called Evacuteer.

COLLABORATION

FORGING NEW PARTNERSHIPS

A resilient planning solution must not only protect the city's built and natural environment but also ensure that vulnerable communities can access resources and strengthen the social networks that both enrich life every day and offer lifelines during extreme events. This can only be accomplished through partnerships that build trust and social cohesion, identify and create champions, increase climate literacy and encourage collaboration.

+ Use existing social/community group networks and meeting schedules to connect with constituents.

- Before asking for buy-in on resilience work:
 - Attend meetings outside of City Hall
 - Listen, listen, listen!

Be prepared to address old wounds and mistrust, particularly in vulnerable communities.

+ Build social cohesion and expand reach by cultivating a new network of unexpected climate resilience champions.

- Spread the message beyond the science, planning, resilience-minded community groups.
- Articulate the linkages of resilience work with the missions of organizations not typically drawn to the topic of resilience (such as: leadership classes, anti-poverty, social, economic/business development, neighborhood, arts, tech, food, and health organizations).
- Highlight mutual benefits and empower these existing networks and organizations to become community advocates for resilience programs.

+ Continue to collaborate with and leverage the expertise of a diverse ecosystem of national and local partner organizations.

• Involve these community partners and their resources in the city's strategic communications planning efforts

+ Place extra emphasis on harnessing and utilizing the relationship between local universities and the city.

• Consider collaborating on projects such as a "Knowledge, Attitudes and Practices" (KAP) Survey of the community as it relates to climate change and community resilience.

• Continue to partner on energy goals.

+ Attract the support and interest of the private sector to be involved in high visibility, high profile activities.

• Partner with the reinsurance industry and banks to communicate financial risks.

• Partner with businesses that have significant experience in product distribution and logistics to access those existing networks in a catastrophic event.

+ Brainstorm creative outreach opportunities to promote emergency preparedness, strengthen the social fabric and raise awareness of climate threats and opportunities. Some examples include:

• Block parties with music and food to encourage neighbors to meet one another and learn about emergency preparedness (weather related and otherwise). The community will identify neighborhood leaders or "block captains" who volunteer to be trained in emergency response strategies.

• Partner with local artists to visualize risks and build awareness in unique ways, such as temporary exhibits on the waterfront, artistic demonstration of sea level rise projections, and collaboration with the mural arts program.

• Consider partnering with tech incubators and schools like the Iron Yard to create an emergency preparedness/resilience app.

"You can use your existing community organizations to become environmental champions. This is great way and great model to increase collaboration between community partners throughout St. Petersburg". Zelalem Adefris, Climate Resilience Program Manager, Catalyst Miami

"Create an ecosystem of partnerships between existing groups to work towards becoming a resilient city." Leigh Fletcher, Partner, Fletcher & Fischer



CATALYST MIAMI'S: CLEAR PROGRAM

Catalyst Miami is an anti-poverty nonprofit organization with a mission to develop and support individual leaders and strong organizations that work together to improve health, economic opportunity, and civic engagement in the Miami-Dade community.

In response to the challenges that Miami-Dade County's 2.7 million residents are likely to face as a consequence of climate change and sea level rise, Catalyst established the CLEAR Miami (Community Leadership on the Environment, Advocacy, and Resilience) program. CLEAR Miami is a 12-week training program focused on climate resilience education and leadership, which provides graduates with a groundwork to become climate resilience educators, leaders, and innovators in their own communities and beyond. By the end of the program the graduates have taken on community projects that include: incorporating environmental concerns in neighborhood coalitions, cleaning up garbage and promoting recycling in their neighborhoods, and promoting emergency preparedness.



WATERLICHT ROOSEGAARDE, AMSTERDAM, NETHERLANDS

Waterlicht consists of wavy lines of light made with the latest LED technology, software and lenses. As a virtual flood, it shows how high the water could reach without human intervention.



Future resilience leaders attend CLEAR Miami



The Urban Land Institute is a 501(c)(3) nonprofit research and education organization supported by its members. Founded in 1936, the institute now has more than 40,000 members worldwide, representing the entire spectrum of land use and real estate development disciplines, working in private enterprise and public service, including developers, architects, planners, engineers, lawyers, bankers, economic development professionals, among others. As the preeminent, multidisciplinary real estate forum, ULI facilitates the open exchange of ideas, information, and experience among local, national, and international industry leaders and policy makers dedicated to creating better places.

The mission of the Urban Land Institute is to provide leadership in the responsible use of land and to help sustain and create thriving communities. The Tampa Bay District Council serves seven counties in this region and has over 400 members.