

Collaborating to Increase Resiliency in Our Communities

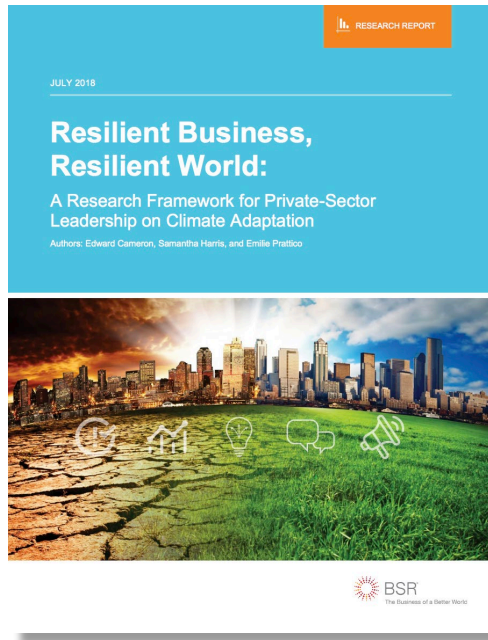
Overview of the Tampa Bay Regional Resilience Coalition



Tampa Bay Regional Planning Council
Sean T. Sullivan, Executive Director



Extreme Weather Events and Climate Change are increasing risks to our communities and economies.



Florida Trend 2018 500 most influential Floridians name **climate change/sea level** rise as a top concern

BSR's Business Resiliency Report, Resilient Business, Resilient World identified **climate change** as the highest impact risk to business out of 29 risks that were reviewed



Impacts of Changing Conditions

\$953,566,850 in damages reported in
TBRPC counties Jan. 2014-June 2019

NOAA Storm Events Database <https://www.ncdc.noaa.gov/stormevents/>



Florida Chamber Foundation 2030 Plan Includes Resilience Goals

HOW DO WE GET THERE?

Infrastructure & Growth Leadership

Efficient and Connected Transportation Systems

- Provide high levels of passenger connectivity options within and between Florida's regions, including rural to urban connections.
- Position Florida's airports, seaports, and spaceports to accommodate growth in demand for trade and visitors.
- Link Florida's trade and visitor gateways to inland corridors to enable efficient global supply chains and delivery networks.
- Transform Florida's major transportation corridors to accommodate multiple modes of transportation and multiple types of infrastructure.
- Support growing demand for a wide range of mobility options — from walking and bicycling to transit and shared vehicles/services.
- Continue to be a leader in research and deployment of emerging transportation technologies including autonomous, connected, shared, and electric vehicles.
- Continue to develop private/public partnerships to invest in future transportation infrastructure.
- Address growing investment needs in transportation as traditional revenue sources erode.

Forward-Looking Land Use and Design Decisions

- Promote sustainable urban and rural development practices that make more efficient use of land and infrastructure and protect natural resources.
- Invest in land preservation efforts to ensure protection of essential habitat, water resources, recreational, agricultural, forestry, and other resource lands.
- Encourage communities and regions to participate in long-range visioning activities that link economic development, land use, infrastructure, community planning, and environmental stewardship decisions.

Resilient Communities and Infrastructure

- Support and incentivize communities to complete vulnerability assessments and develop resilient redesign efforts.
- Identify and implement actions to improve Adaptation Action Areas throughout Florida for coastal communities at risk.
- Encourage and incentivize communities to enter the Community Rating System (CRS) program and reduce their CRS score, making them less vulnerable and reducing flood insurance costs for property owners.
- Make science-based decisions about how to protect, increase responsiveness, and invest in regions and communities at risk from extreme weather, coastal flooding, and other dangers.

Connect Florida's communities to one another and to global markets; support continued economic growth while preserving Florida's essential environmental and community assets.



KEY TARGETS & STRATEGIES

Preparing Florida's infrastructure for smart growth and development

Diverse, attainable housing to meet future demand

Every resident has access to **public and private mobility services**

All major population and economic centers connected to regional, national, and global markets by **high-capacity corridors**

World's **most capable spaceport; top-tier airports, seaports, and surface transportation hubs** in U.S.

100% of Florida residents have access to **high-speed communications connectivity**

Diverse and reliable energy, water, and waste management resources to meet future demand

All Florida residents protected by **resiliency plans**

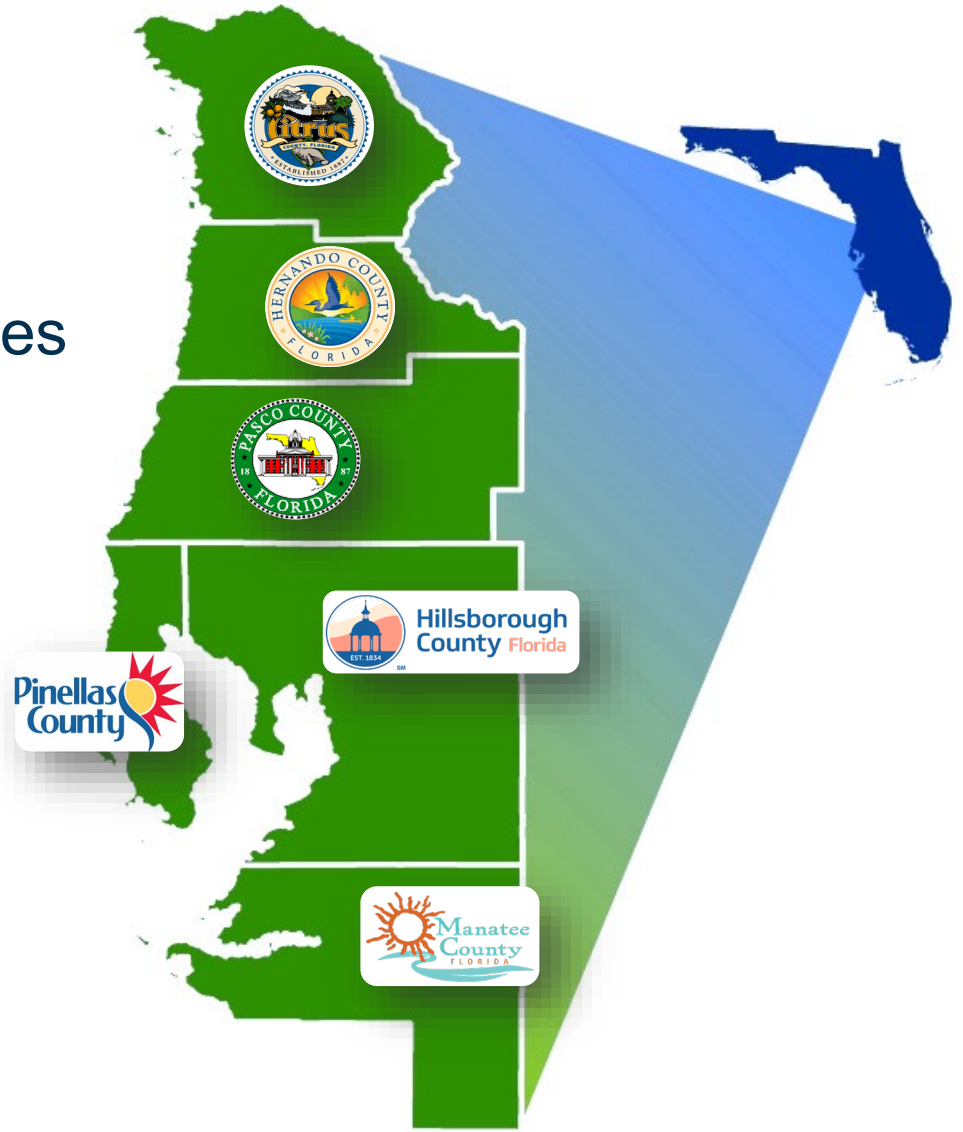
Benefits of a Regional Approach

- Unified voice to address challenging issues, policy
- Advanced planning
- Leverage resources
- Build capacity
- Expand expertise
- Broaden partnerships
- Increase innovation



TBRPC Serves

- 6 Counties
- 21 Municipalities
- 13 Gubernatorial Appointees
- 3 Ex-Officios



Creating the Resilience Coalition in 2018



Coalition Chair Cm. Janet Long and
TBRPC Executive Director Sean Sullivan

- Jan-March - Presentations at Council meetings
- March - Cm. Long proposes formation
- June - Technical Advisory Committee creates Memorandum of Understanding (MOU) which defines road map for collaboration
- July-Sept – Local Governments review and approve
- Oct signing event with 25 Local Governments



Resiliency Coalition

Currently 28 Local Governments



***Working together to
increase coordination
collaboration
consistency
to create more
resilient, vibrant
communities.***

Municipalities

1. Bradenton Beach -- June 2019
2. Clearwater
3. Dunedin
4. Gulfport
5. Holmes Beach – May 2019
6. Indian Rocks Beach
7. Indian Shores
8. Largo
9. Madeira Beach
10. New Port Richey
11. Oldsmar
12. Palmetto
13. Redington Beach
14. Safety Harbor
15. Sarasota
16. Seminole
17. South Pasadena
18. St. Petersburg
19. St. Pete Beach
20. Tampa
21. Tarpon Springs
22. Treasure Island

Counties

1. Citrus County
2. Hernando County
3. Hillsborough County
4. Manatee County
5. Pasco County
6. Pinellas County



Janet C. Long
Coalition Chair,
Pinellas County
Commissioner

Coalition Structure

- **Coordinating Organization**
 - TBRPC
- **Steering Committee**
 - Elected officials on TBRPC Council
- **Management & Planning Committee**
 - Senior Staff from MOU Local Governments
 - Multi-jurisdictional Agencies with planning, policy and budget authority.
- **Partners**
 - Private sector, non-profits, universities etc.
- **Workgroups**
 - Elected officials, staff, Partners, and local community

Coalition Partners (partial list)

- Chambers of Commerce – Clearwater, Manatee County, St. Petersburg, Tampa Bay Beaches
- AECOM, Atkins Global, Jacobs, Taylor Engineering, VHB, Stantec
- Florida Floodplain Managers Association
- Coca Cola
- Florida Council of Churches
- Clearwater Gas Systems
- Filtrex International
- Florida Climate Institute
- University of South Florida
- Brown & Brown Insurance
- Coastal Risk Consulting
- Cushman & Wakefield
- Duke, TECO

Coalition Workgroups

Support Foundation Building Activities in 2019-2020

Risk & Vulnerability Assessments

Energy Resiliency

Capital Improvement & Finance

Geospatial Data

Planning & Policy

Municipal Excellence

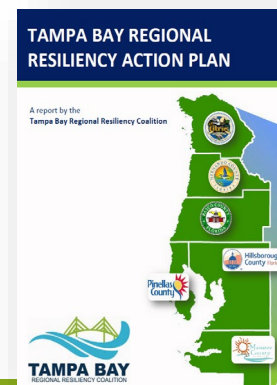
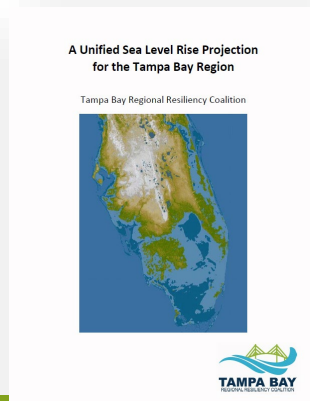
Communications & Engagement

Resilient Shorelines & Spaces

Include Local Government Staff and Stakeholder Partners

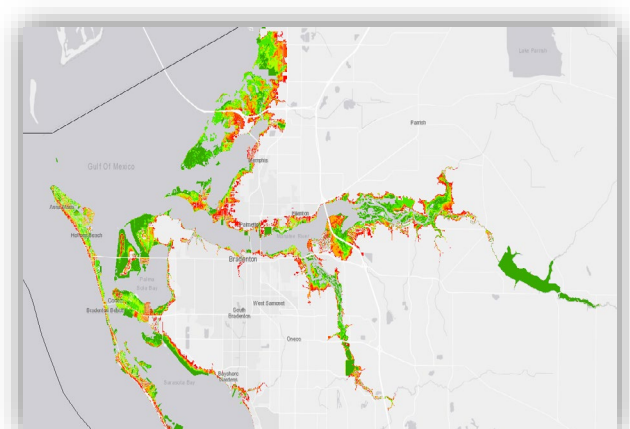
Resilience Action Work Plan 2019

1. Guidance Document for Integrating Climate Hazards and SLR into Planning and Programs
2. Integrated Risk & Vulnerability Assessment Methodologies
3. Capital Planning Tool and Process to Review SLR
4. Shoreline & Seawall Guidance Document
5. Resilience Planning Framework – how we move forward



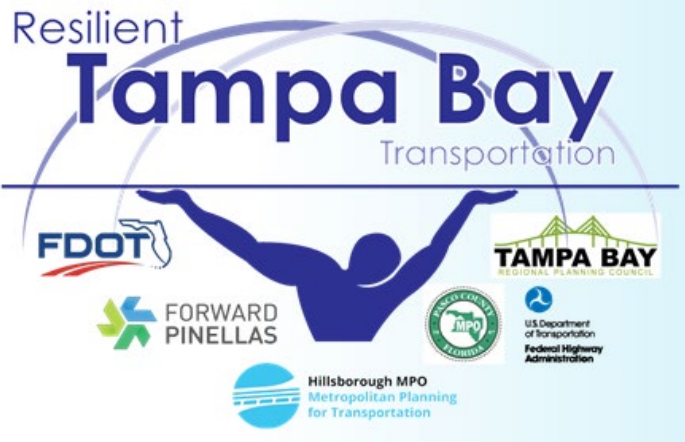
Local Government Actions

- HR: Creating new resilience positions, teams
- Science and Policy: Mapping, GIS data, conducting vulnerability assessments, updating Comp Plans, Peril of Flood,
- Financial: Consider SLR in capital improvement project review process, add \$ for assessments, create utility fees
- Community Engagement meetings, surveys
- More!



Changing Conditions and Extreme Weather

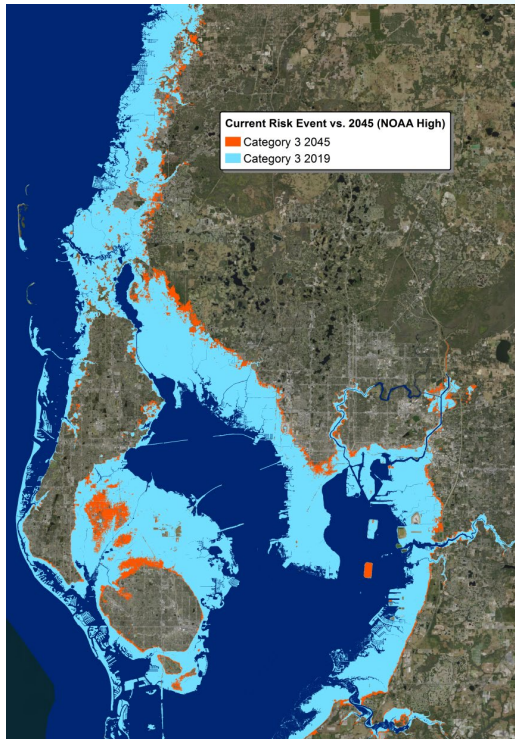
Transportation Assessment



FHWA Resilience and Durability Assessment Pilot Project

TBRPC, Pinellas, Hillsborough, Pasco MPOs

- 9 inches in 24 hours
- 33 inches in 3 days
- Plus Cat. 1,2,3
- Sea Level Rise up to 2045
- Inform the Long Range Transportation Plan Update
 - Lessons from Hurricane Harvey -- stalled storm could *double or triple* rainfall totals.
 - Climate models predict an uptick in frequency -- increase in rate (inches/hour)

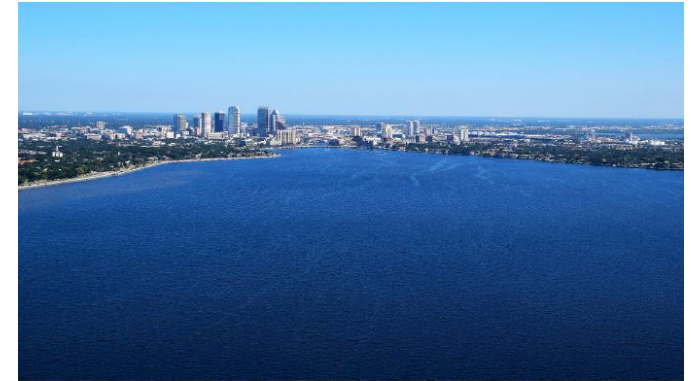


Memorandum of Understanding

Tampa Bay Climate Science Advisory Panel (CSAP)

2019 Report

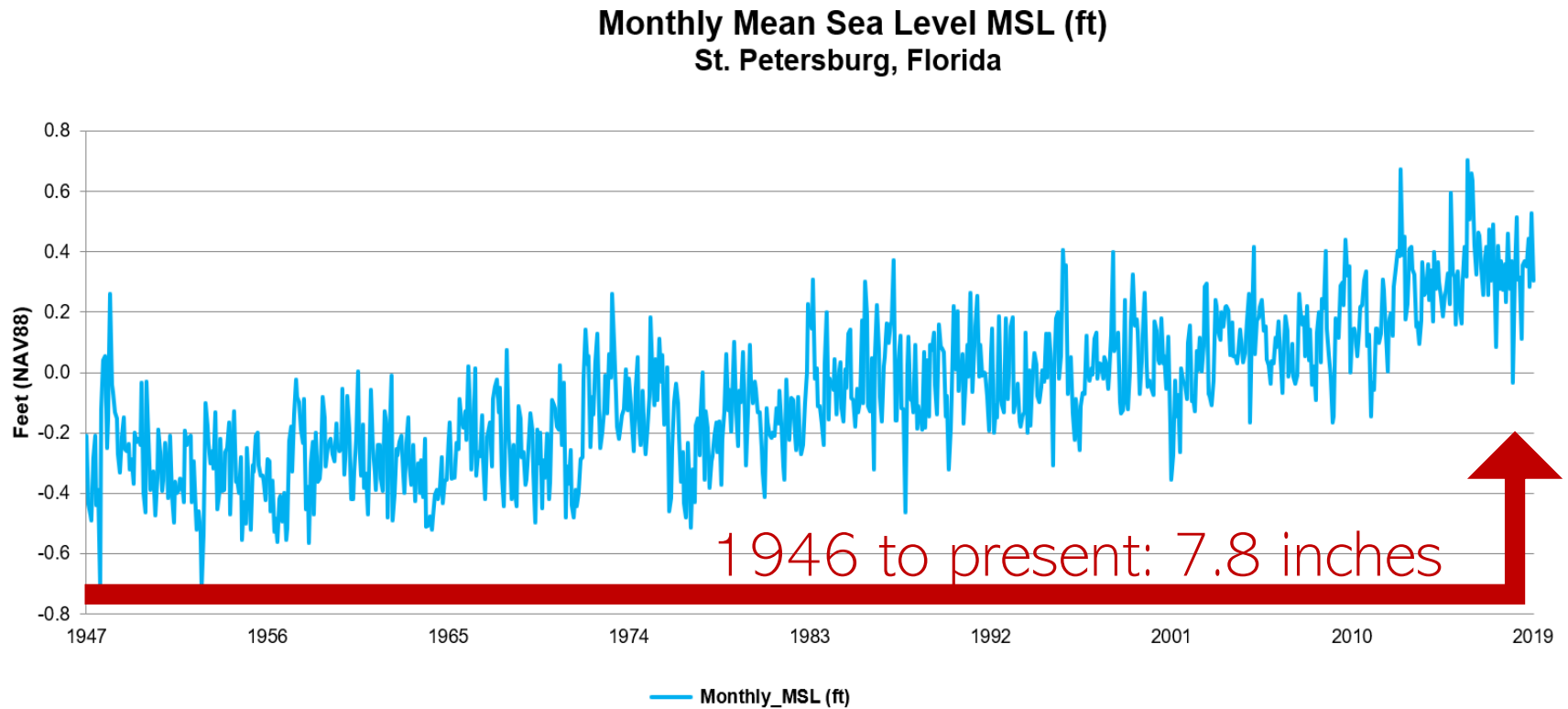
Recommended Sea Level Rise Projections



RECOMMENDED PROJECTIONS OF
Sea Level Rise
in the Tampa Bay Region



Recent Local Historical Sea Level Rise



Tampa Bay Climate Science Advisory Panel

2017 Projections are Higher Than Previous Projection

Updated Recommendation

Year	NOAA Int-Low (feet)	NOAA Intermediate (feet)	NOAA High (feet)
2000 ³	0	0	0
2030	0.56	0.79	1.25
2040	0.72	1.08	1.77
2050	0.95	1.44	2.56
2060	1.15	1.87	3.48
2070	1.35	2.33	4.56
2080	1.54	2.82	5.71
2090	1.71	3.38	7.05
2100	1.90	3.90	8.50

Table 1. Sea Level Change Relative to the Year 2000 for St. Petersburg, Florida in Feet Above Local Mean Sea Level (LMSL)

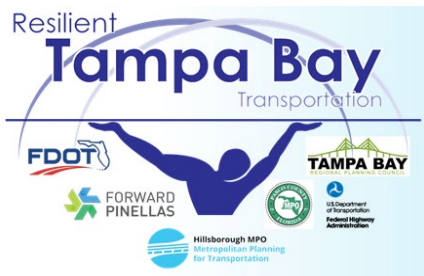
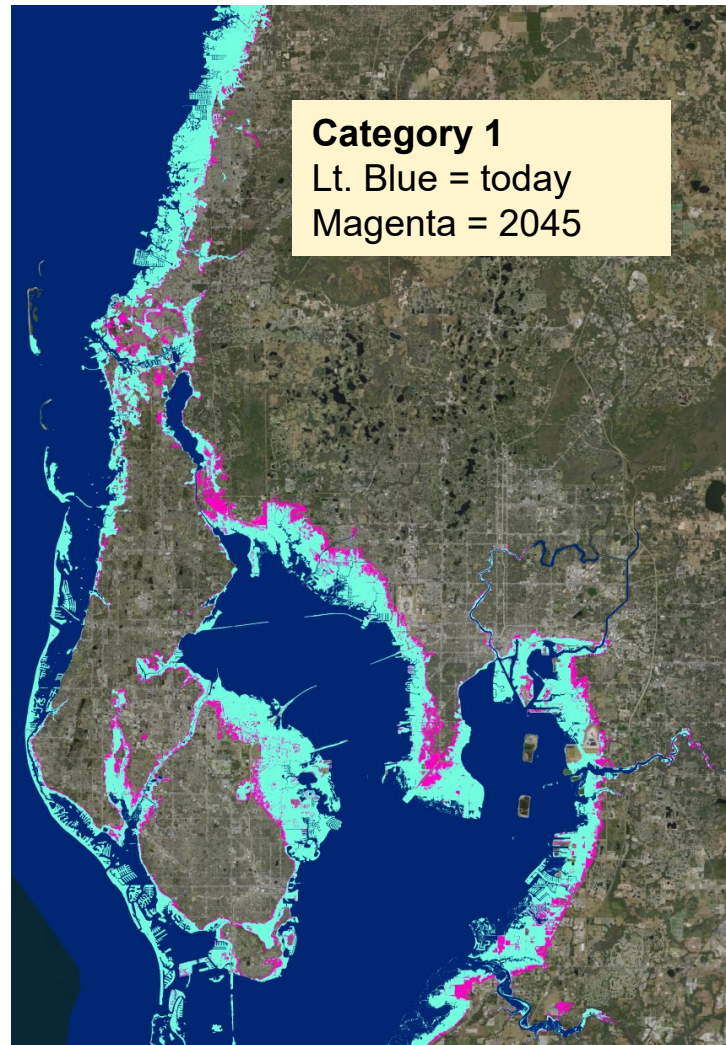
Provided by the Tampa Bay Climate Science Advisory Panel

Small Increases in Sea level impacts stormwater drainage



Current water levels are already higher than the bottom of the outfalls.

Sea Level Rise Exacerbates Storm Surge



Notes: 2045 was used for the FHWA project for LRTP update
NOAA High for 2045 = 2.16 feet

Local Governments Resilience Building

Rockefeller Resilient 100 Cities 2018 Evaluation -- “Institutionalizing” Resilience

1. Dedicated resilience staff (Chief Resilience Officer or lead/coordinator)
2. Implement cross-sectoral and multi-jurisdictional planning
3. Reduce operational silos
4. Increase consistency among internal plans
5. Active, ongoing commitment from elected leaders
6. Involve partners from civil, private, and multilateral-sector organizations
7. Change capital improvement budget review procedures
8. Leverage funds for resilience-building efforts