

From Recovery to Resilience

Panel: Bouncing Forward

AAPA Emergency Preparation, Response & Recovery Seminar
Corpus Christi, TX

November 14, 2019

Defining Resilience

The capacity of individuals, communities, institutions, and businesses to survive, adapt, and grow in the face of chronic stresses and acute shocks

- Courtesy of 100 Resilient Cities Pioneered by the Rockefeller Foundation

Defining Shocks & Stresses

Shocks

- Large floods event
- Wildfire
- Tornado
- Hurricane
- Earthquake
- Terrorist attack
- Hazardous waste / chemical spill

Stresses

- Poverty / economic inequality
- Public health epidemic (e.g. opioid, flu)
- Economic recession
- Homelessness
- Lack of affordable housing
- Chronic nuisance flooding
- Low education attainment / opportunity

From Recovery to Resilience



Communities can adapt *through* their recovery to reduce their risk.

Planning: Louisiana's Strategic Adaptations for Future Environments (LA SAFE)

- Funded with \$40 million from US HUD grant award
- Statewide policy & planning framework to reduce flood risk – initial 6-parish target area
- One regional and 6 parish-wide adaptation plans completed
- 10 projects selected for funding



Managed Resettlement: Isle de Jean Charles

- Funded with \$48 million US HUD grant award
- Island community has lost 98% of land mass and left out of coastal protection system
- Voluntary relocation to new community, out of harm's way
- Intensive co-design process to preserve sense of community
- New community opens 2022



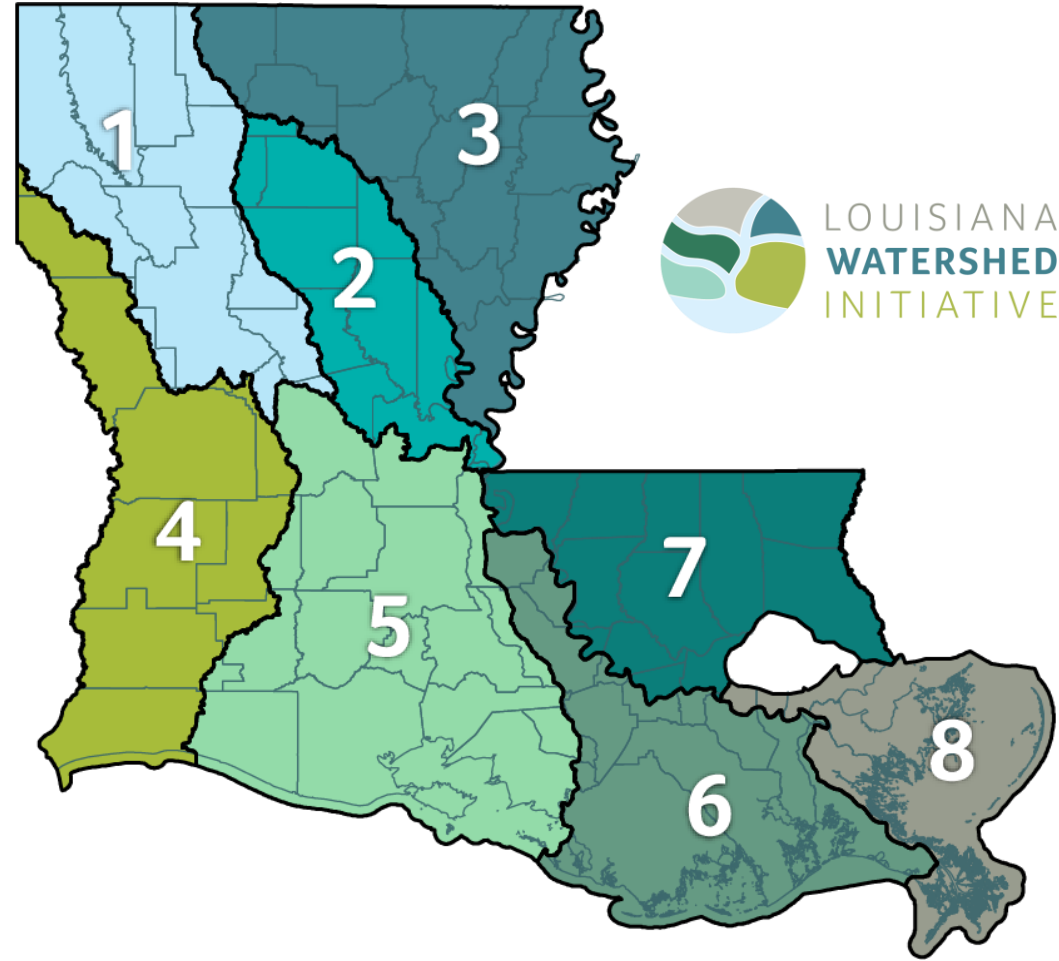
Infrastructure Retrofits: Gentilly Resilience District

- Funded with \$141 million US HUD grant award
- Combination of interventions to improve resilience in disadvantaged community
- Includes green infrastructure, energy redundancy, increased flood storage, & workforce development
- \$200 million in projects currently in design & construction



Louisiana Watershed Initiative

- Funded with \$1.2 billion CBDG-Mitigation appropriation
- Statewide floodplain management program for regional watershed planning
- Employs systems-based thinking to develop comprehensive solutions
- Coordinates federal, state and local agencies, supported by latest science and expertise



Lessons Learned

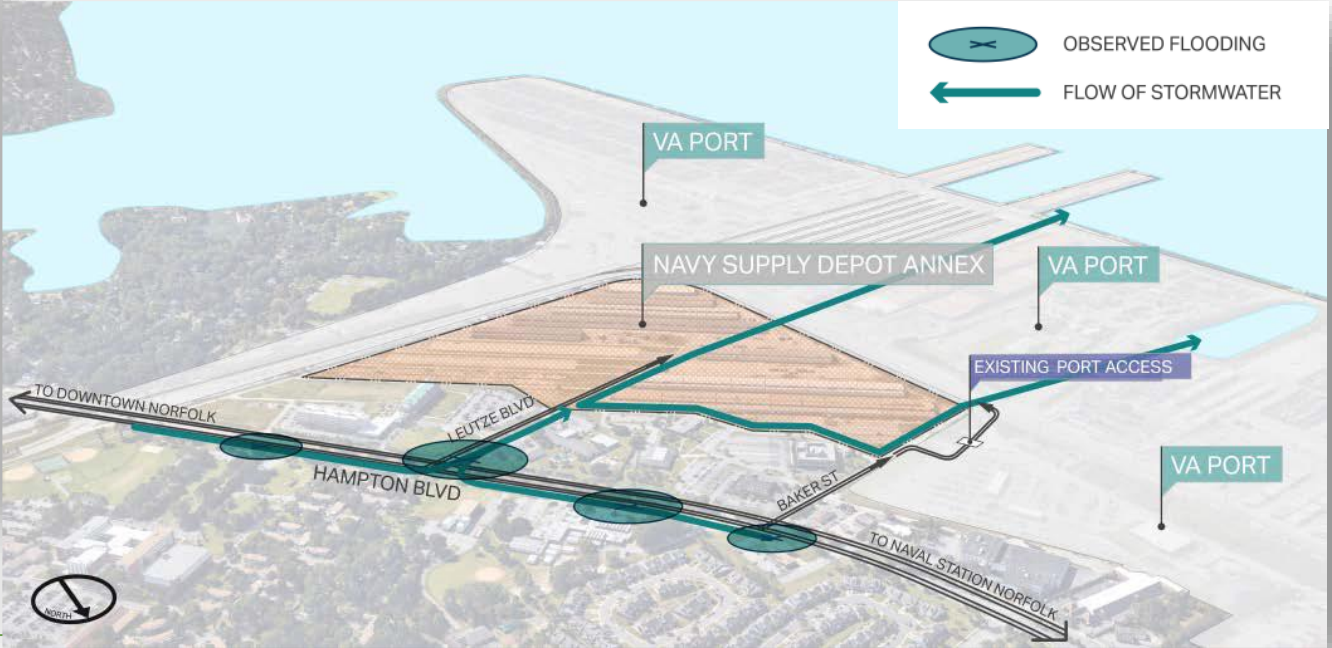
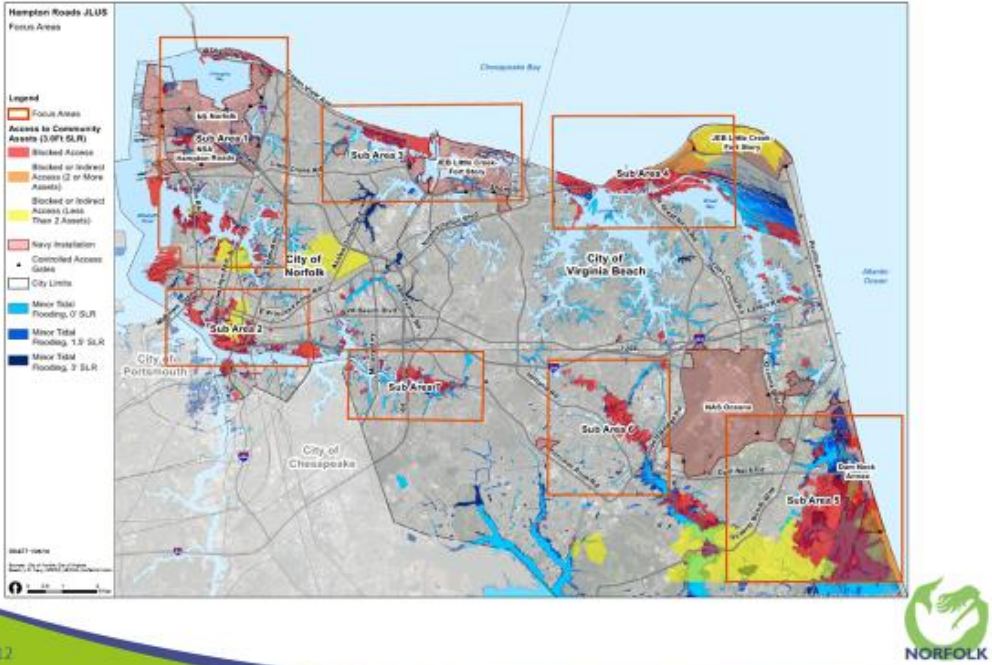
- ✓ Establish resilient recovery mechanism(s) prior to next disaster occurrence
- ✓ Anticipate future risks through smarter decisions rather than “options of last resort”
- ✓ Allocate resources based on damage but also on future risk
- ✓ Focus on both people and physical environment, not on just one or the other
- ✓ Provide robust and sustained communication regarding risk
- ✓ Harness the market to leverage greater outcomes
- ✓ Align local and regional plans with investments to maximize benefits

Port Resilience Challenges?

- Ports must adapt to sea level rise and riverine flood risk
- Ports are dependent on the stability of local workforce and their ability to return after an event
 - Resilience of local community / housing stock / economy
- Ports are interdependent with municipal infrastructure and utilities
 - Power back up & redundancy
 - Fresh water supply, drainage, wastewater
 - Rail / highway / multi-modal interconnection
- Integrating these risks into the Port's Capital Planning to they can be addressed proactively

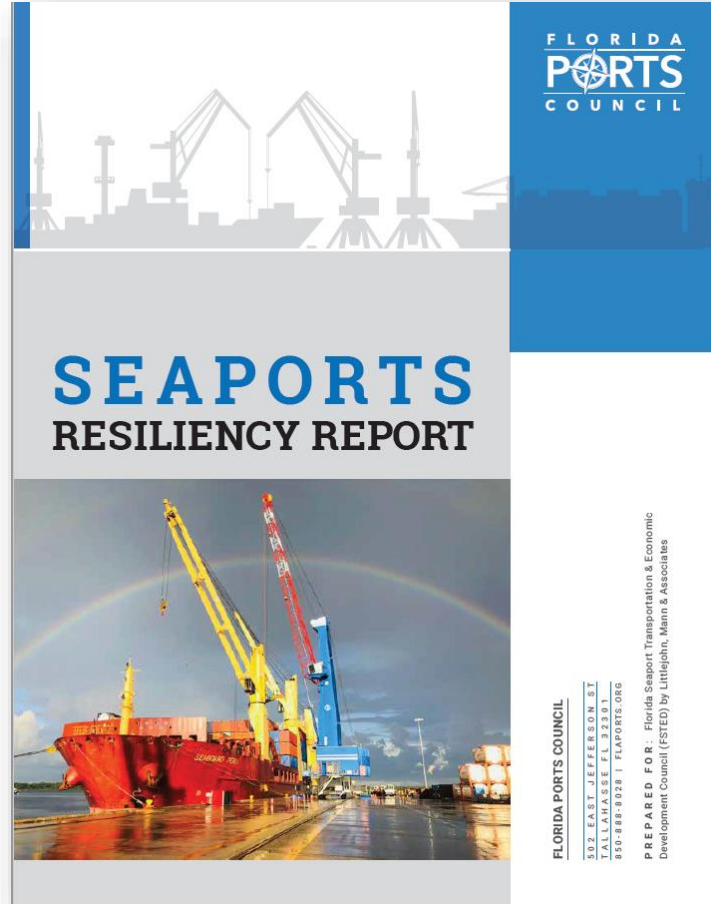
Example: Port of VA / Norfolk / Virginia Beach / US Navy

Joint Land Use Study on Impact of Sea Level Rise



Hampton Boulevard North – Existing Drainage Pattern Near Baker Street

Example: Florida Seaports Resiliency Report



“Seaports are not stand-alone facilities, but rather, are integral components of national, regional, and local economies.”

Case Studies Featured:

- **Port Everglades:** Elevating underground security & data communications network
- **JAXPORT:** River gauge monitoring system that provides data on environmental conditions and storm surge
- **Port Everglades and Port Tampa Bay:** Agreements with utility to prioritize restoration of power to fueling infrastructure and harden it against future shocks
- **Port Panama City:** Donated the use of 17 acres for hurricane relief staging areas

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