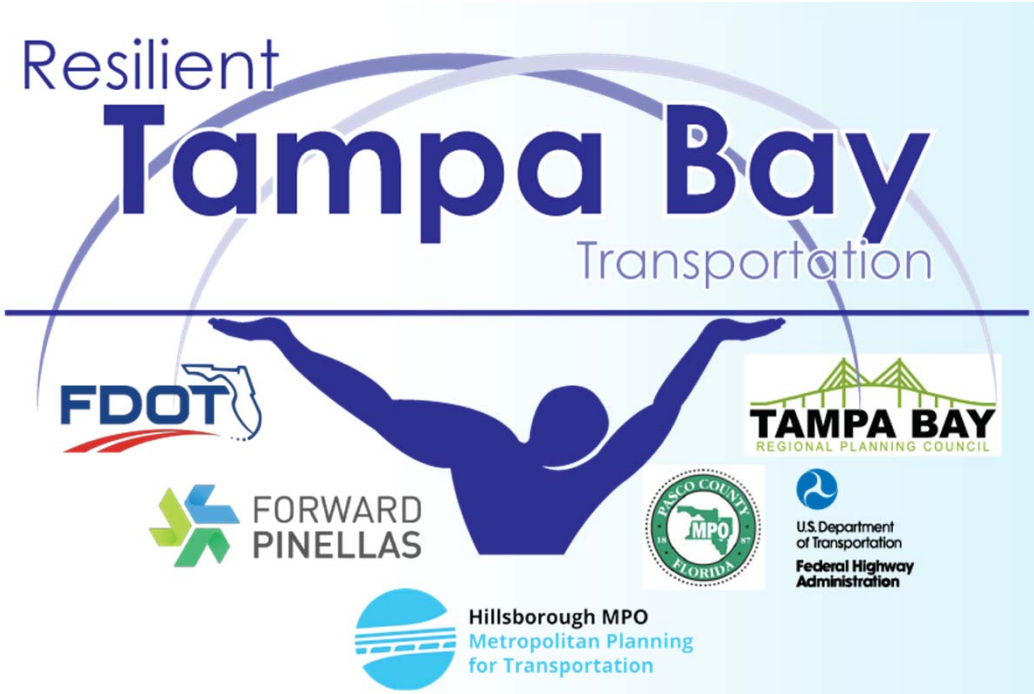


FHWA Resilience & Durability to Extreme Weather Pilot Program – Kick Off Meeting

presented to

Tampa Bay TMA Coordinating Agencies

August 10, 2018

presented by

Allison Yeh, AICP
Hillsborough MPO

Karen Kiselewski, AICP
Cambridge Systematics, Inc.

Agenda

- Introductions
- Roundtable
- Project Overview
- Coordination
- Next Steps

Introductions

Resilient Tampa Bay – Transportation: Project Team Leads

Hillsborough MPO
Metropolitan Planning for Transportation

Allison Yeh, AICP, LEED GA
Executive Planner

FDOT

Roger Roscoe
FDOT District 7 Liaison

FORWARD PINELLAS

Rodney S. Chatman, AICP
Planning Division Manager

TAMPA BAY REGIONAL PLANNING COUNCIL

Sean Sullivan
Executive Director

PASCO COUNTY MPO FLORIDA

John Villeneuve
Pasco MPO Director

CAMBRIDGE SYSTEMATICS

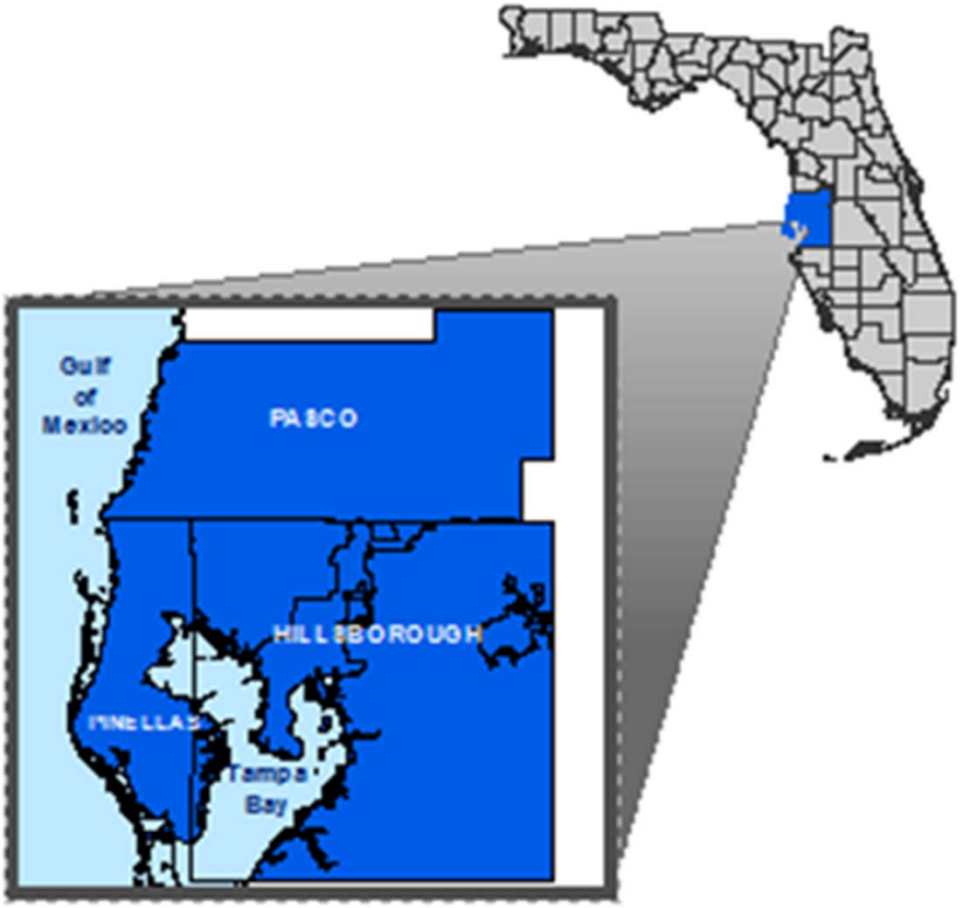
Karen Kiselewski, AICP
Senior Project Manager

FHWA 2018-2020 Pilot Program : Resilience & Durability to Extreme Weather

- 1 of 11 Pilot projects looking at integrating into agency practices, tools & resources , or deployment & monitoring.

- **Tampa Bay TMA**
- Caltrans
- MassDOT
- PennDOT
- Atlanta Regional Commission
- Corpus Christi MPO
- Mid-America Regional Council (Kansas City, MO & Johnson Co, KS)
- UDOT
- Quad Cities - Iowa/Illinois MPO
- Houston-Gaveston Area Council
- Navel Facilities Engineering Command (East and Gulf Coast)

Resilient Tampa Bay – Transportation: Background



- Tampa Bay TMA
  - 2.8M Population
  - 2nd largest pop. In FL.
  - 1000+ miles of shoreline
  - 58% pop. in flood zones
- Regional vulnerability assessment of surface transportation assets
  - Incorporate into LRTPs, hazard mitigation, emergency mgt, and PDRP plans

Roundtable

Project Overview

Purpose

- Provide information and recommendations to ensure the region's **transportation system meets** the near and long term **functional**, **economic**, and **quality of life** goals of Tampa Bay's residents, businesses, and visitors in the face of weather and climate changes

Purpose

- Address FAST Act requirements for MPO long range transportation planning:
  - Consider projects/strategies to improve the resilience and reliability of the transportation system; stormwater mitigation
  - Consultation with agencies and officials responsible for natural disaster risk reduction
- Focus on inland flooding, storm surge, and sea level rise

Work Plan

Climate & Weather

- Obtain Data
- Identify Vulnerable Areas
- Identify at risk Transportation

Fall 2018

Critical Linkages

- Stakeholder Engagement
- Quantitative Analysis of Critical links

Fall 2018
Winter 2019

Adaptation Strategies

- Econometric Analysis
- Adaptation/ Mitigation Strategies
- Include in Decision Making

Winter/ Spring 2019

Final Report

Summer/Fall 2019

Criticality Determination

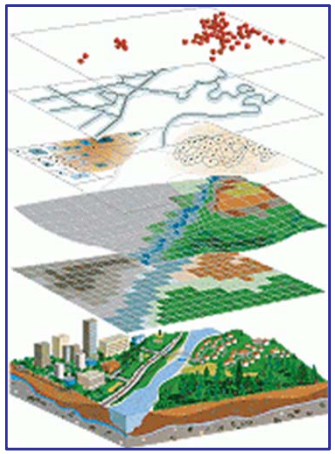
Qualitative Assessment

- Stakeholder and practitioner input
- Persistent flooding locations
- Leveraging prior planning work (Current LRTP, hazard mitigation and local mitigation strategies)

Incorporating stakeholder input into quantitative assessment

Weighting facilities/locations based on stakeholder input

Quantitative Assessment



- GIS-based Quantitative Analysis
- Context Sensitive Criticality Construct (Transportation disadvantaged population, social & economic importance)
- Sensitivity, exposure level and adaptive capacity

Supporting Image Sources: Sustainable Convos, Northern Arizona Healthcare

Modeling Scenarios

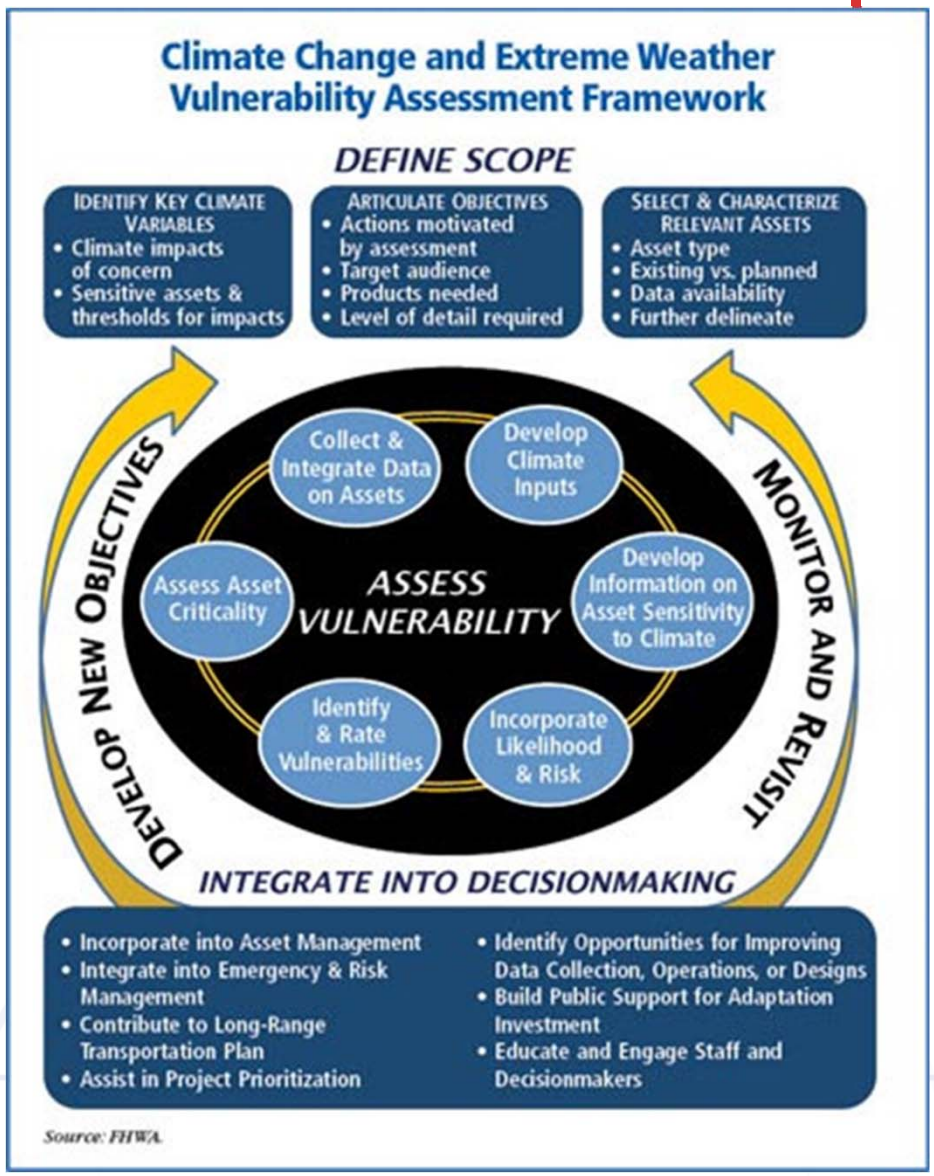
- Sea Level Rise – 2045 NOAA
  - High and Intermediate-Low curves.
- Storm Surge - Current
  - Categories 1, 3, and 5
- Sea Level Rise plus Surge
  - Cat 1 High, Cat 1 Int-Low, Cat 3 High, Cat 3 Int-Low (detailed analysis: Cat 3 High)
- Precipitation
- Transportation – 2040
  - Adopted network and socio-economic data
- Econometric – 2040

Adaptation Strategies

- Physical asset adaptations
  - Design changes
- Natural landscapes
  - Topographical changes
  - Vegetation
  - Wave mitigation
- Water management
  - Drainage and flood control

Integration into LRTPs

- Regional and per-county representative projects
- Cost estimates for planning purposes



Coordination

Data/Information Coordination

One Bay

Tampa Bay RPC

Local Government Public Works

Hillsborough County Perils of Flood Act Matrix of Impacts Initiative

Pinellas County Restore Act Vulnerability Assessment

Tampa Sea Level Rise Vulnerability Assessment

Local Mitigation Strategies
Post Disaster Redevelopment Plans

Resilient Tampa Bay Transportation: Durability & Resilience to Extreme Weather Pilot

Tampa Bay RPC

Transit Agency Asset and Operational Plans

MPO Long Range Transportation Plans

Resilient Tampa Bay Transportation

Resilience Coordination

- What key climate/weather resilience projects or programs are currently underway?
- What does your organization need to move forward?
- What timelines and scenarios are being considered?

Source: Getty Images

Flooding Coordination

- Do you have areas with repeat flooding?
- Do you have projects in capital improvement programs or plans?
- Do you have other related information to share?

Bayshore Boulevard, Tampa, 2004

Technical Coordination

- How can we best work *together*?
  - Project team
  - Local Mitigation Strategy (LMS) working groups
  - Public works or stormwater officials
  - Electronic surveys and webinars

Hurricane Irma, Citgo Station,
Crowdsourced Photo Tampa Bay Times

Next Steps

Contact Information

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Cambridge Systematics

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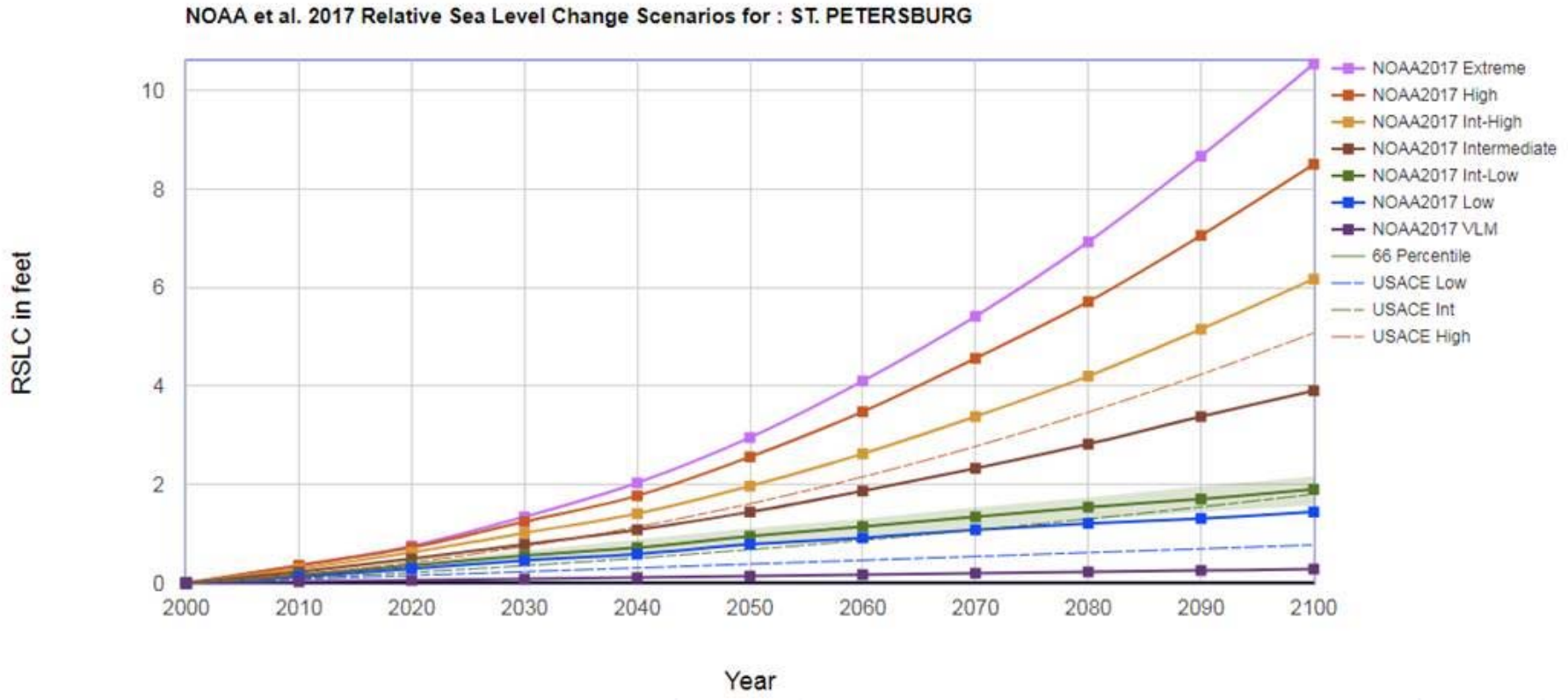
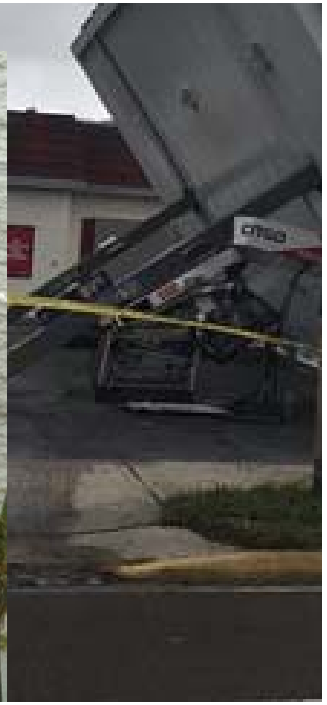
954-331-6116

Thank you!

Project: Resilient Tampa Bay
Gauge/Grid Selected: ST. PETERSBURG
NOAA2017 VLM: 0.00285 feet/yr
66 Percentile Confidence Range for the Intermediate Low Scenario is shown
All values expressed in feet
Lines shown are the result of interpolation between values plotted
USACE SLC Curves are show as dashed lines using the 2006 published SLC rate of 0.0077 feet/yr



ast of US 19 in Palm
3/3/2015. JIM DAMASKE |



Linkages to the Long Range Planning Process