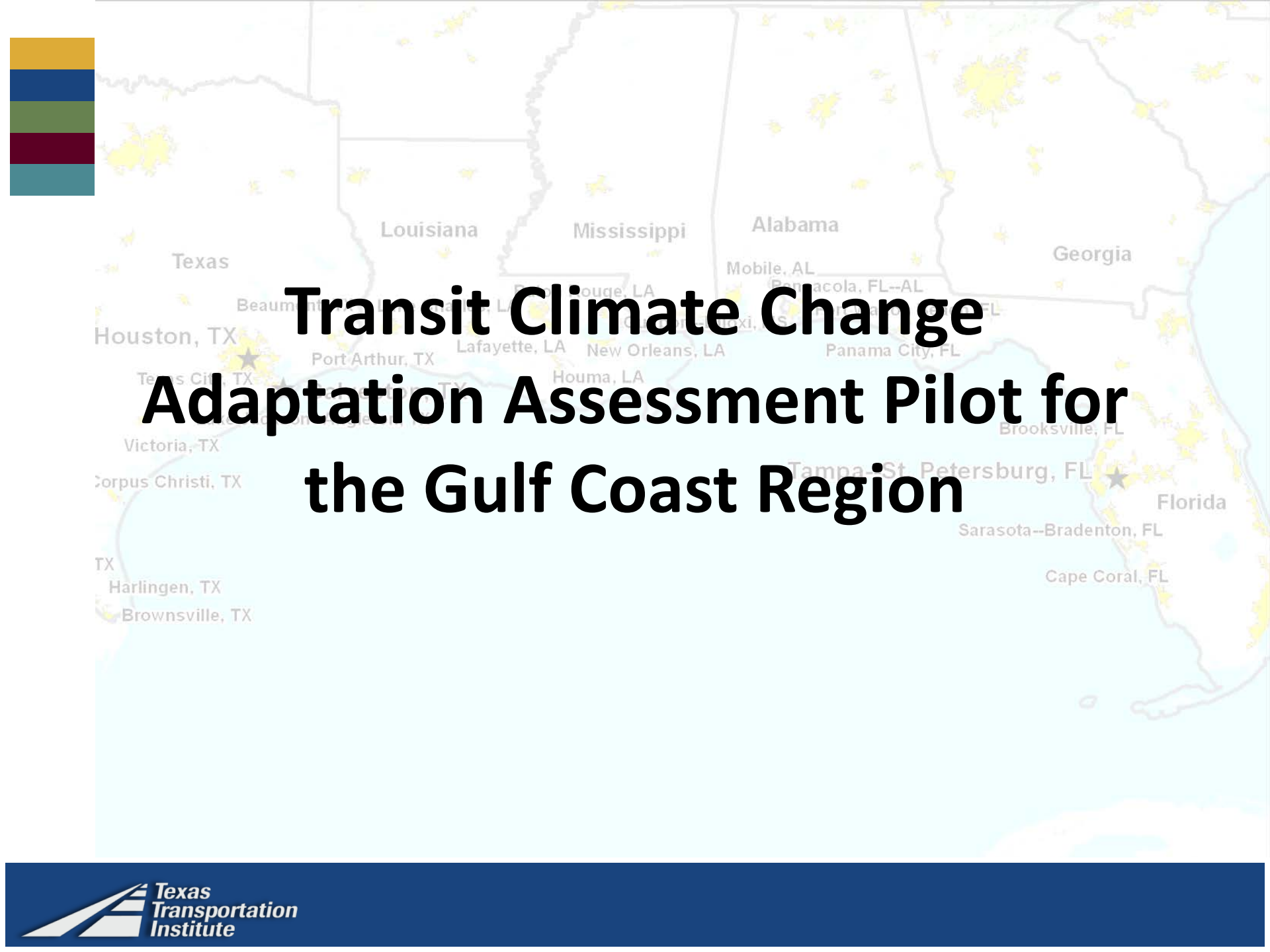




Transit Climate Change Adaptation Assessment Pilot for the Gulf Coast Region



University Participants

- Texas A&M University System
 - Texas Transportation Institute
- Texas A&M University Galveston –
 - Center for Texas Beaches and Shores





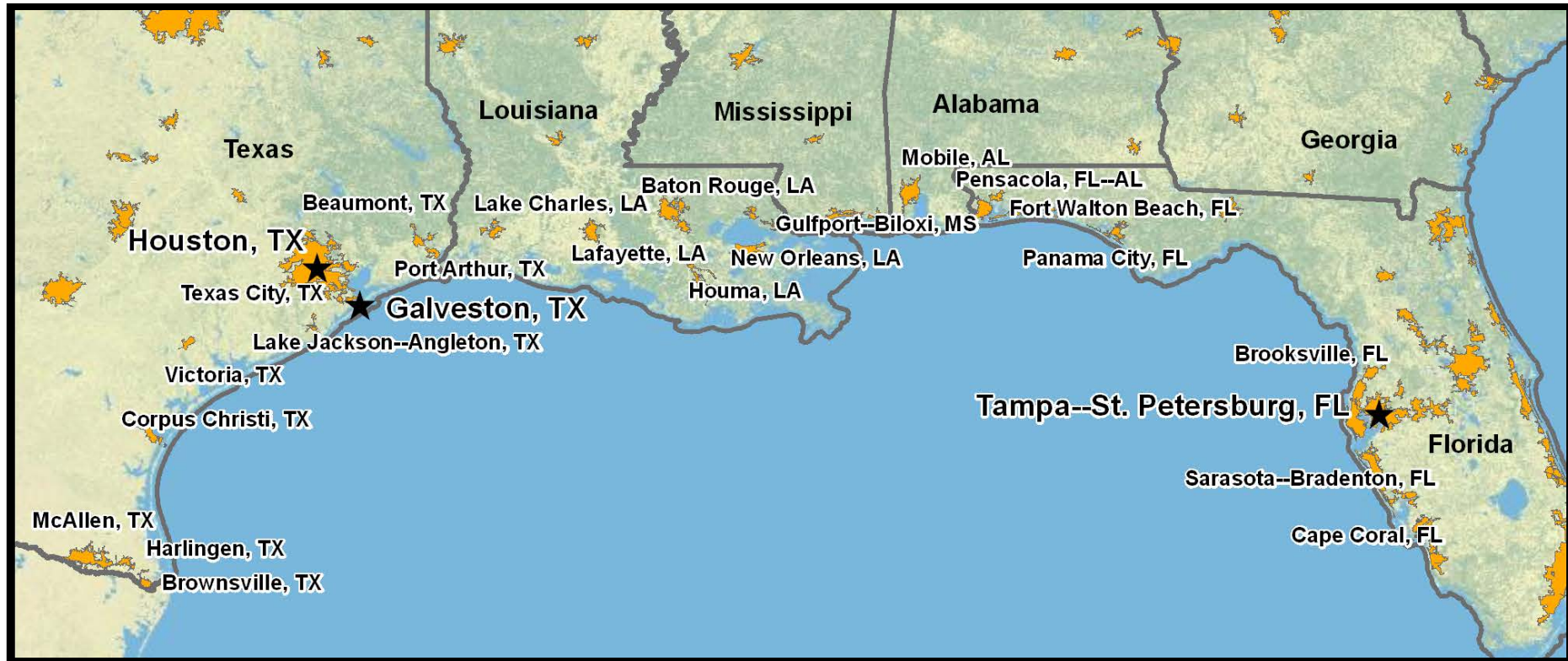
Transit Agency Participants

- Metropolitan Transit Authority of Harris County (Houston METRO)
- City of Galveston (Island Transit)
- Hillsborough Area Regional Transit (HART)





Gulf Coast Study Area





Impact of Climate on Gulf Coast Transit Agencies

- Destruction of capital assets
- Breakdown of transit operations
- Reduction in levels of service
- Decrease of passenger comfort and safety



Gulf Coast Climatic Hazards

- High winds and flooding
 - Tropical Storm Allison (2001)
 - Hurricane Katrina 175 MPG (2005)
 - Hurricane Ike 145 MPH (2008)
 - Hurricane Gustav 150 MPH wind (2008)





Gulf Coast Climatic Hazards



Tampa September 25, 2011

<http://www2.tbo.com/news/breaking-news/2011/sep/25/2/heavy-rains-flooding-streets-in-tampa-ar-260521/>



Gulf Coast Climatic Hazards



Houston January 9, 2012

<http://www.chron.com/news/houston-texas/article/Flash-flooding-plagues-Houston-after-heavy-storms-2450155.php#photo-2010514>



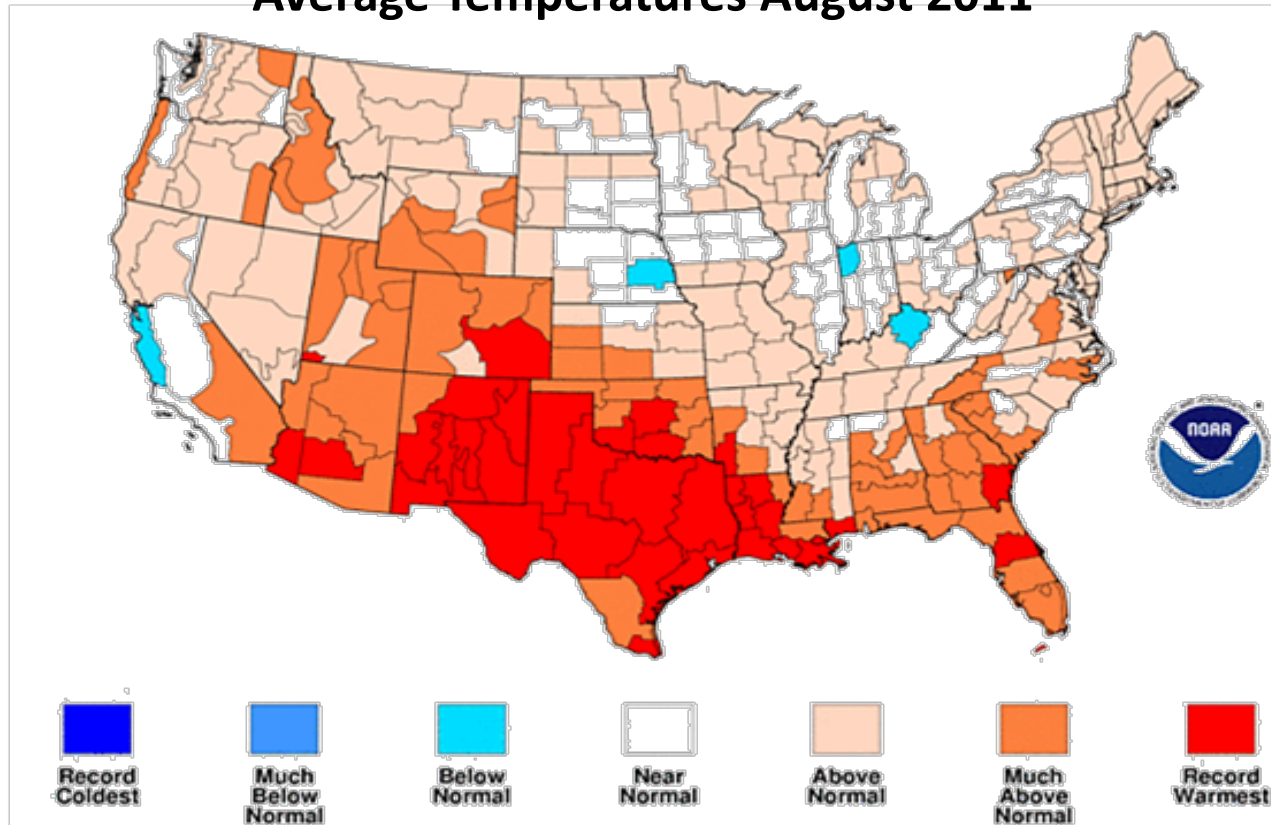
Gulf Coast Climatic Hazards



Gulf Coast Climatic Hazards

- **Extreme Heat** – Recent above average heat in Gulf

Average Temperatures August 2011



<http://www.noaanews.noaa.gov/stories2011/images/Divisionaltrank-201108-201108.png>



Pilot Approach

Review of Current Literature and Studies



Outreach and Involvement of Transit Agencies



Assessment of Agency Risk

- Data Collection and Spatial Analysis



Outcomes: Best Practices and Strategy Development

- Develop in Coordination with Partners



Pilot Outcomes

- Develop climate change adaptation strategies
 - Protect transit agency capital assets
 - Mitigate the influence of inclement weather on transit operations
 - Minimize the impact service quality
 - Ensure the safety and comfort to transit passengers
- Strategies will be implementable, easily replicated, and lead to savings for the transit agency



Contacts

Linda K. Cherrington
Texas Transportation Institute
L-Cherrington@tamu.edu
713-686-2971, ext 15140 (Houston)
409-740-4734 (Galveston)

Matt Sandidge
Texas Transportation Institute
S-Sandidge@ttimail.tamu.edu
979-458-0233