

# 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





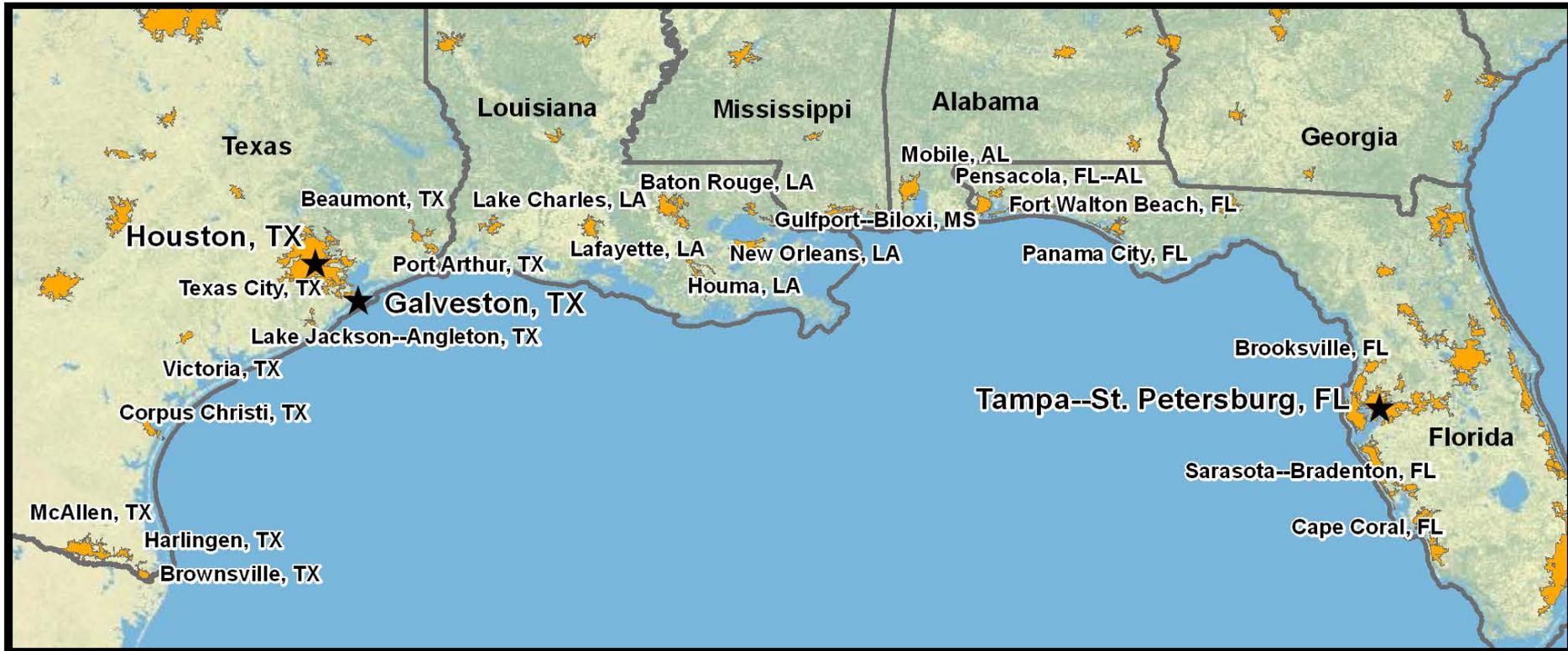
# Transit Agency Participants

- 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>



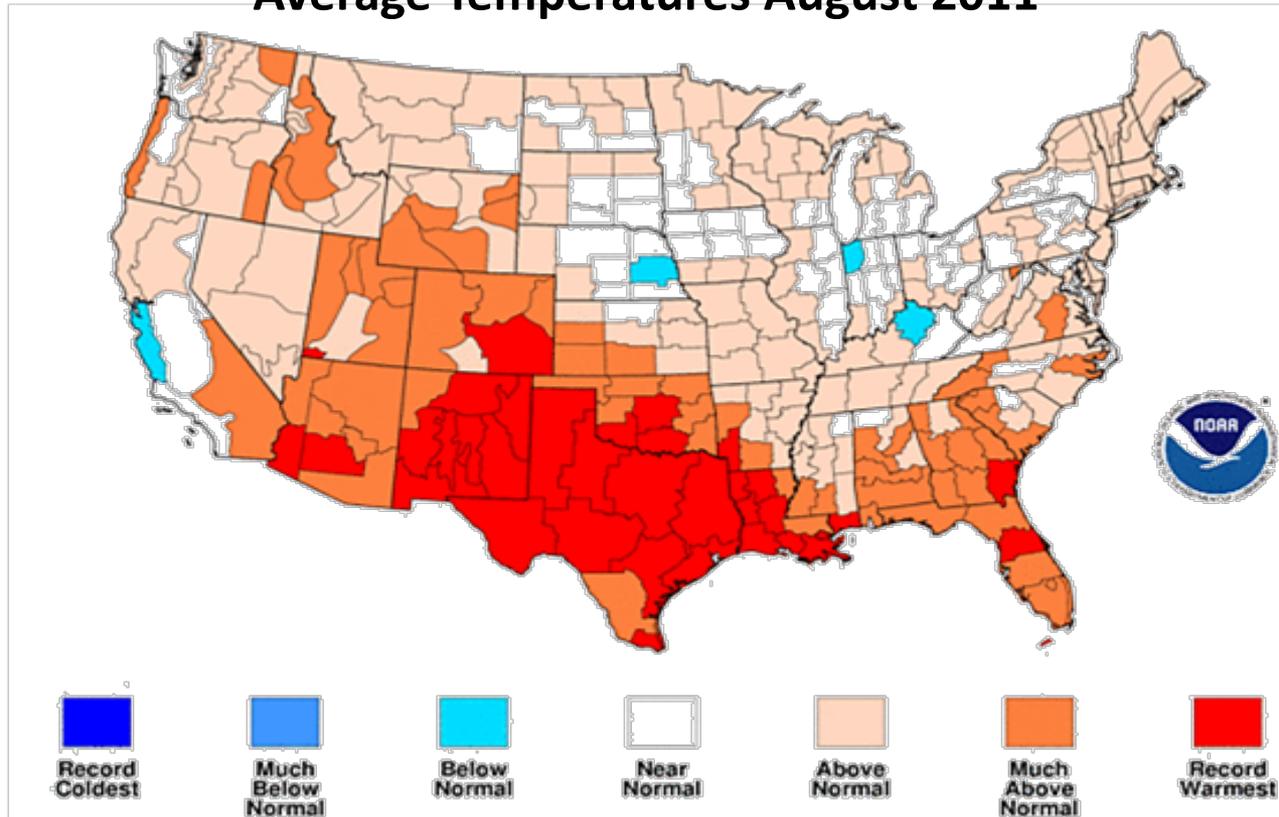
# Gulf Coast Climatic Hazards



# Gulf Coast Climatic Hazards

- Extreme Heat – Recent above average heat in Gulf

Average Temperatures August 2011



<http://www.noaaneews.noaa.gov/stories2011/images/Divisionalfrank-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



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