FTA

FEDERAL TRANSIT ADMINISTRATION

FTA's Goals for the Climate Pilots

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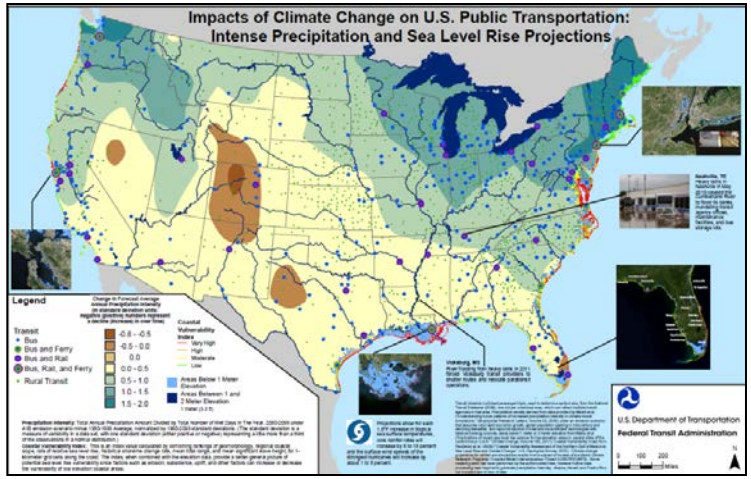
Pilots are Integral Part of FTA Adaptation Initiative

- **Policy Framing:** Dear Colleague Letter and Policy Statement describe climate impacts on FTA goals and commit FTA to action
- **Synthesis:** Report examines climate impacts, strategies, risk management tools
- **Outreach:** Workshops and webinars
- **Pilots:** Delve more in depth on climate impacts on particular transit agencies, potential adaptation strategies, mainstreaming into transit practices

www.fta.dot.gov/adaptation



Objectives

- Increase knowledge of how transit agencies can adapt to climate change
  - Fill gaps (thresholds, costs and savings, strategies, mainstreaming into transit practice)
- Advance the state of the practice in adapting transit assets and operations to the impacts of climate change
- Assess lessons learned for application to other transit providers
- Build strategic partnerships between transit agencies and climate adaptation experts

Need to be able to tell the story to other transit agencies by having concrete examples from the pilots:

- Adaptation is just better planning
- Climate change is another factor we must include
- We must think about future conditions
- Doing this saves us money
- Some are already doing this and having success

(storyline from Susan Hassol)

Kansas City Area Transportation Authority

Things we Decided Not to Focus On

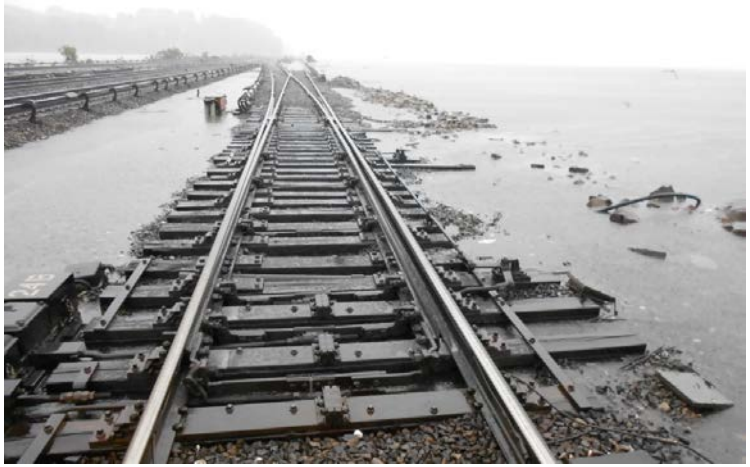
- Piloting a new model. Instead, capitalize on the work already done by FHWA and others:
  - FHWA Conceptual Model, http://www.fhwa.dot.gov/hep/climate/conceptual_model62410.htm
  - New York Climate Adaptation Assessment Guidebook, http://onlinelibrary.wiley.com/doi/10.1111/j.1749-6632.2010.05324.x/pdf
  - University of Washington and King County, WA, Planning for Climate Change: A Guidebook for Local, Regional, and State Governments, http://cses.washington.edu/cig/fpt/guidebook.shtml
  - ICLEI Adaptation Database and Planning Tool (ADAPT), http://www.icleiusa.org/programs/climate/Climate_Adaptation/climate-resilient-communities-program
  - United Kingdom Climate Impacts Program (UKCIP), Risk Framework, http://www.ukcip.org.uk/
- Detailed, original climate science. Instead, focus on what we know (direction of change, increase in extremes, start with thresholds).

"Effective and robust adaptation strategies are not significantly limited by the absence of accurate and precise regional climate predictions. They are limited more by a multitude of technological, institutional, cultural, economic and psychological factors that lie beyond the reach of climate models-and always will."

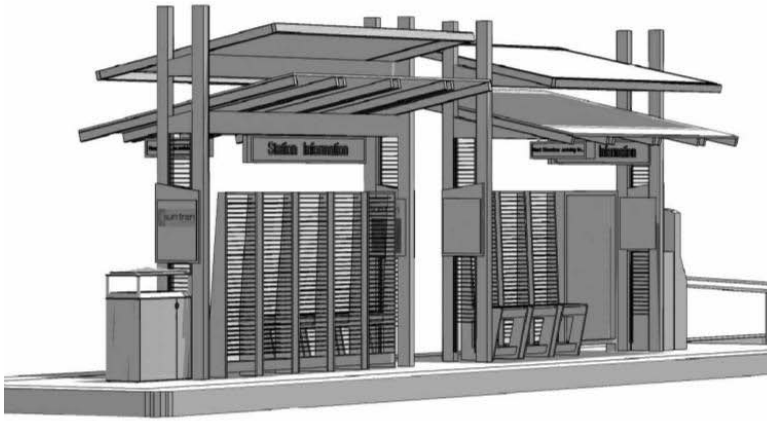
- Hulme and Dessai, 2008, Nature, 453:979

General Approach

- Identify climate hazards
- Characterize risk on transit assets and operations
- Develop initial adaptation strategies
- Link strategies to organizational structures
- Final Report

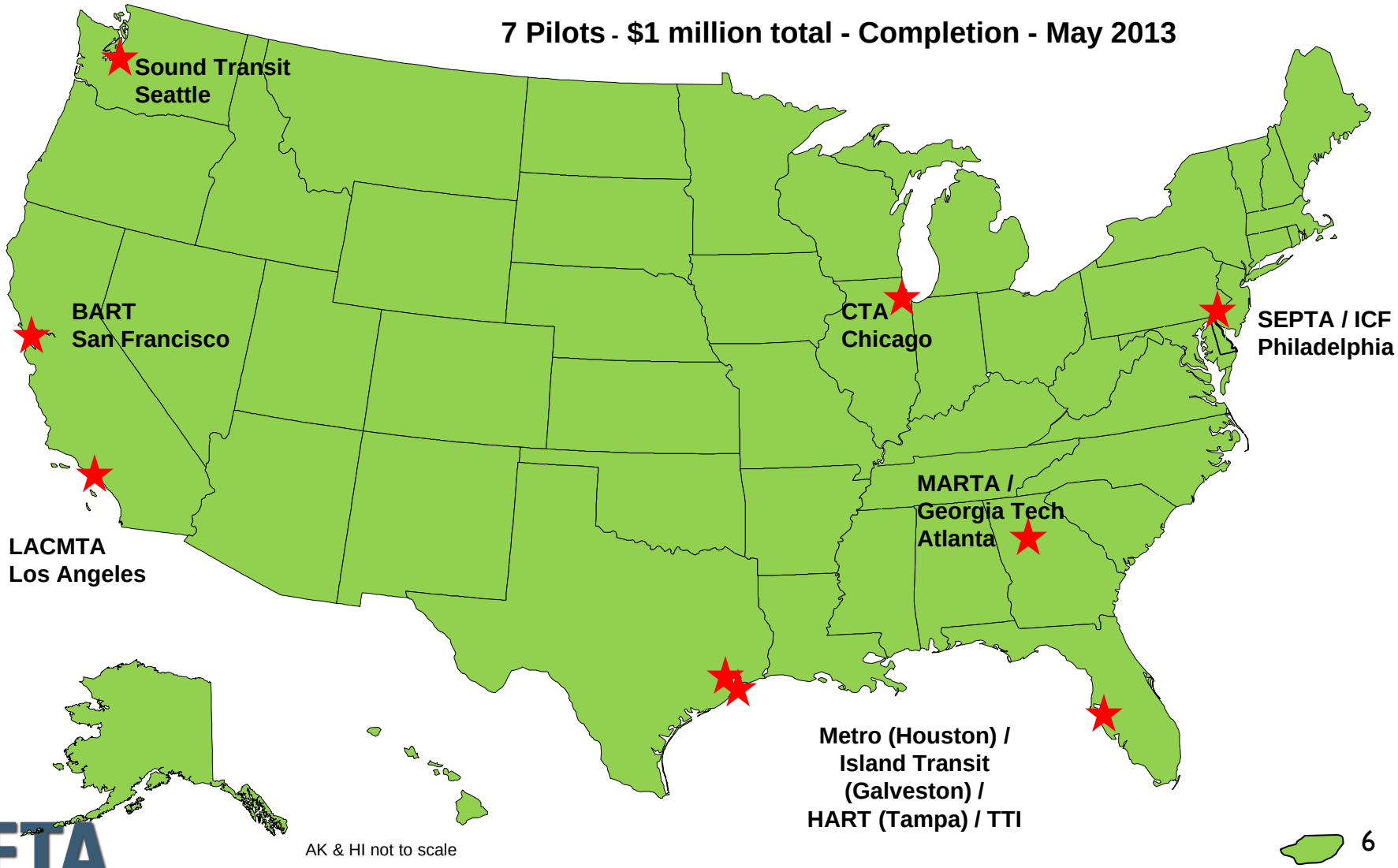


New York MTA



Tucson Department of Transportation

FTA Climate Adaptation Pilots



Key Findings for Transit from FHWA Pilots

Project	Transit Analysis	Methodologies of Interest
San Francisco	Risk profiles of Bay Area Rapid Transit District (BART) assets	Method of taking shoreline assets (wetlands, levees, etc) into account when determining vulnerability of coastal transportation assets Risk profile template.
New Jersey	Analysis of New Jersey Transit track and bus routes vulnerable to coastal flooding from sea level rise, storm surge, and rainfall related inland flooding.	Method for estimating future increase in floodplain area due to heavier rainfall from climate change.
Washington State	Analysis of impact of climate change on Washington State Ferries (ferries are considered transit and receive FTA funding)	Workshop format for conducting vulnerability assessment with local maintenance staff and subject matter experts. Introductory video.
Oahu	Flooding risks to transit facility	Broad stakeholder input followed by high level analysis.
Gulf Coast Study Phase II	1 of 2 bus maintenance facilities owned by Waves Transit of Mobile, AL highly vulnerable to sea level rise and storm surge, as are several bus routes.	Very detailed climate analysis and storm surge modeling.

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