

Transportation Resilience in the Northeast & Mid-Atlantic Region

Northeast Association of State Transportation Officials
2016 Annual Conference

Jessica Grannis
June 7, 2016

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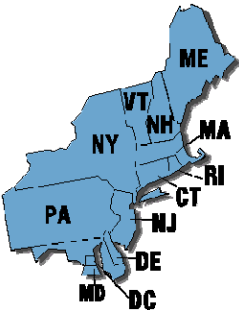
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- Convenes and serves as resource to states on climate and energy issues
- Brings together academics and policymakers to improve climate policy
- Informs the development of:
 - Legislation
 - Regulation
 - Transportation policy
 - Adaptation policy



Transportation and Climate Initiative

- 11 northeast and mid-Atlantic states and the District of Columbia
- TCI launched in 2010
- Working together to reduce energy use and GHG emissions from transportation



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SITE SEARCH

RESOURCES
SECTORS
NETWORKS
MY CLEARINGHOUSE
ABOUT
ADAPTATION PLANS & PROGRESS ▾

Welcome to the Adaptation Clearinghouse

– an online database and networking site that serves policymakers and others who are working to help communities adapt to climate change.

Search the Clearinghouse

By Keyword
By State

SEARCH FOR: RESOURCES
ORGANIZATIONS
USERS
ALL

SEARCH

Featured Resource



Climate Ready Water Utilities Adaptation Strategies Guide for Water Utilities

January 2012

EPA prepared this Guide as part of its [Climate Ready Water Utilities Initiative](#). The Guide presents the projected climate change impacts and adaptation options for drinking water, wastewater, and stormwater utility, for nine regions across the U.S. Detailed examples of adaptation strategies are

Put the Power of the Adaptation Clearinghouse to Work for You

- Customize the Adaptation Clearinghouse to meet your needs
- Receive updates about new resources that match your interest areas
- Connect with other professionals

BECOME A MEMBER
LOGIN

Featured Sectors

-  AIR
-  BIODIVERSITY AND ECOSYSTEMS
-  COASTAL
-  ENERGY

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The screenshot shows the Adaptation Clearinghouse website. The header includes the logo and navigation tabs: RESOURCES, SECTORS, NETWORKS, MY CLEARINGHOUSE, ABOUT, and ADAPTATION PLANS & PROGRESS. The main content area is titled "Transportation" and features a car icon, a "TURN ON EMAIL NOTIFICATIONS" button, and a "Welcome Jessica Grannis" message. Below this is a "Sector Activity" section with a "POPULAR RESOURCES" sidebar and a main content area for "Popular Transportation Resources" showing a resource titled "A Guidebook for Sustainability Performance Measurement for Transportation Agencies" with a 5-star rating.

The screenshot shows the "Transportation Resilience Case Studies" page. A sidebar on the left contains a menu with categories like "POPULAR RESOURCE", "TRANSPORTATION PLANS & ASSESSMENTS", "PLANNING GUIDES", "CLIMATE SCIENCE & TOOLS", "CASE STUDIES", "LAW AND POLICY", "PROJECTS", and "FHWA TEST". The "CASE STUDIES" category is circled in red. The main content area features a search bar, a "SEARCH BY KEYWORD" section, and a resource titled "Maryland Climate Change and Coast Smart Construction Infrastructure Siting and Design Guidelines" with a 5-star rating. A "Receive New Resources by Email" box is also visible at the bottom left.

Case Studies – Adapting Transportation



FHWA → Environment → Climate Change → Adaptation → Case Studies

Climate Change Adaptation and Resilience Case Studies Series

FHWA will be highlighting climate change adaptation and resilience work in the transportation sector through a series of new case studies - check this page often for new additions.

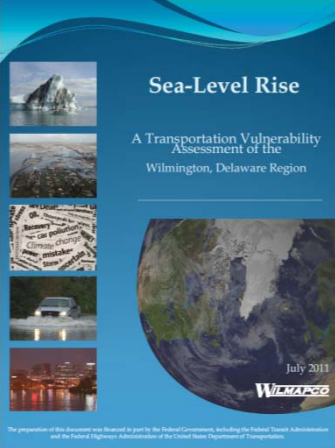
- [Case Study: Flood Levee System Improvements Washington, DC](#)
- [Surfers Point Managed Retreat Project](#)
- [Mainstreaming Climate Change Adaptation Strategies into New York State Department of Transportation's Operations](#)
- [District of Columbia DOT: Climate Change Adaptation Plan](#)
- [State of California Sea-Level Rise Guidance Document](#)
- [Caltrans Guidance on Incorporating Sea Level Rise](#)
- [City of Santa Cruz Climate Adaptation Plan](#)
- [City of Lewes, Delaware Hazard Mitigation and Climate Adaptation Action Plan](#)
- [A Vulnerability Assessment for the Saco Bay Communities of Biddeford, Saco, Old Orchard Beach, and Scarborough](#)
- [Addressing Climate Change Adaptation in Regional Transportation Plans: A Guide for California MPOs and RTPs](#)

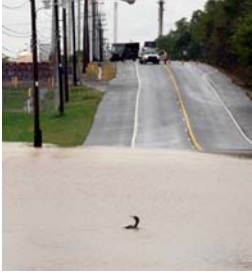
These case studies were developed by the Georgetown Climate Center (GCC) under a cooperative agreement with FHWA and are also available through the GCC [Adaptation Clearinghouse](#).

Stages of Decision-making



Assess
Vulnerability
& Risk





Vulnerability Assessment:
WILMAPCO (DE and MD)

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Adaptation
Planning

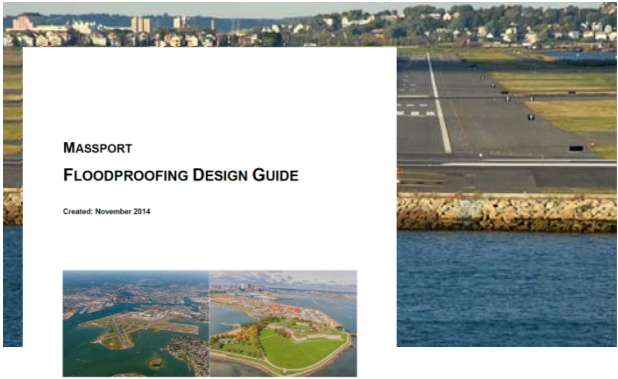






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Design for Resilience



MassPort Floodproofing Design Guidelines

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Design for Resilience

Old Design



Credit: VTrans

New Design



Resilient Rebuilding Post Disaster: Vermont

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Integrate into Operations & Emergency Management

Operational and Emergency Preparedness Strategies:
New York & Atlantic City, NJ

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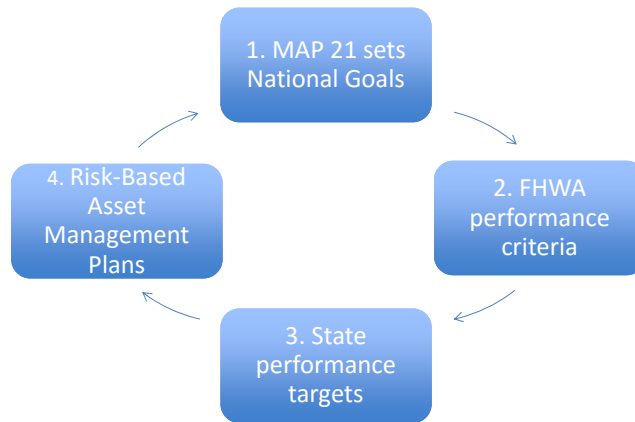
Press of Atlantic City/ Danny Drake

TCI Survey – Adaptation Gaps & Needs

- Insufficient funds for adaptation and challenges justifying added costs
- Using federal funding programs for adaptation
- Understanding interdependencies and impacts at the mega-region level
- Integrating adaptation planning across sectors
- Aligning climate resilience and mitigation policies
- New federal policies – FFRMS, NEPA, Risk-based asset management

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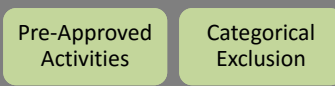
MAP-21: Performance-Based Planning



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Legal Challenges: NEPA

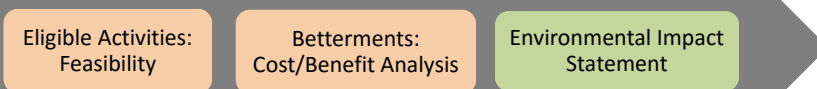
IN-KIND REPLACEMENT



2-3 months



ADAPTIVE REBUILDING



2-3 years


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Legal Challenges: NEPA

IN-KIND REPLACEMENT

Pre-Approved Activities Categorical Exclusion

2-3 months



ADAPTIVE REBUILDING

Programmatic Environmental Impact Statement

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<http://www.georgetownclimate.org/adaptation/>
<http://www.adaptationclearinghouse.org>

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