



# Municipal Vulnerability Preparedness Program



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# MA Climate Projections

By end of century:

## Changes in precipitation

- 18% increase in consecutive dry days
- 57% increase in days with > 1 in. rainfall
- 7.3 inches additional annual rainfall

## Rising temperatures

- 10.8°F increase in average annual temperature
- 42% decrease in days/year with min. temperatures < 32° F
- 1,280% increase in 90-degree days/year

## Sea level rise

- 4-10.5 feet along the MA coast

## Extreme weather

- Increase in frequency and magnitude

## Executive Order 569 - 2016



- Comprehensive approach to reduce GHG emissions to combat climate change and prepare for the impacts of climate change
  - State Adaptation Plan
  - Climate Coordinators
  - Agency Vulnerability Assessments
  - Municipal Support

## Environmental Bond - 2018



- \$2.4 billion bond bill with focus on climate change resiliency
- Over \$200 million authorized for climate change adaptation
- Codifies EO 569, including the MVP Program

# Municipal Vulnerability Preparedness (MVP) Program



A state and local partnership to build resilience to climate change by building capacity to respond to climate effects at the local level and pilot innovative adaptation practice



Across the Commonwealth, cities and towns need financial and technical resources to prepare their residents, businesses, and aging infrastructure:

12,000+ culverts and small bridges needing replacement

1,100 municipally-owned coastal structures

300 high-hazard dams

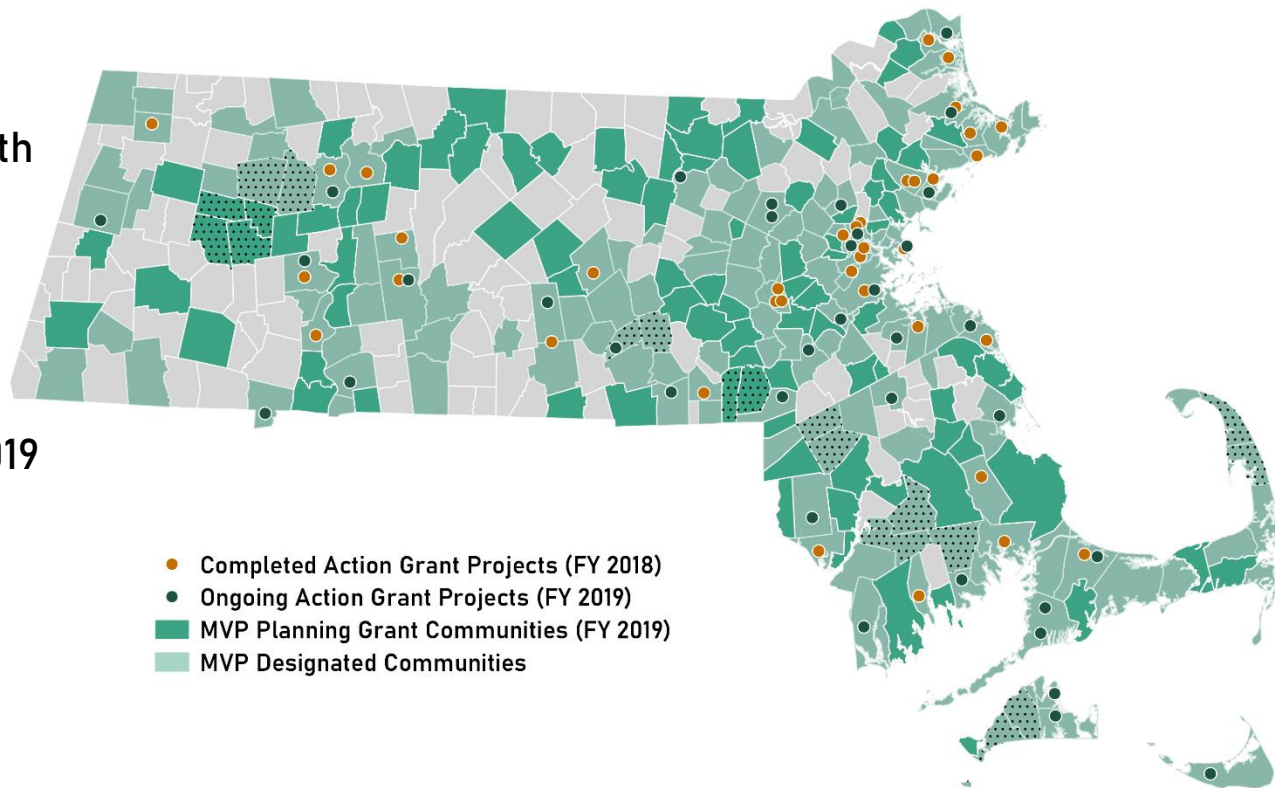
96% DHCD housing developments to see 5.4° increase in max temperature by 2070

# Three Years of MVP

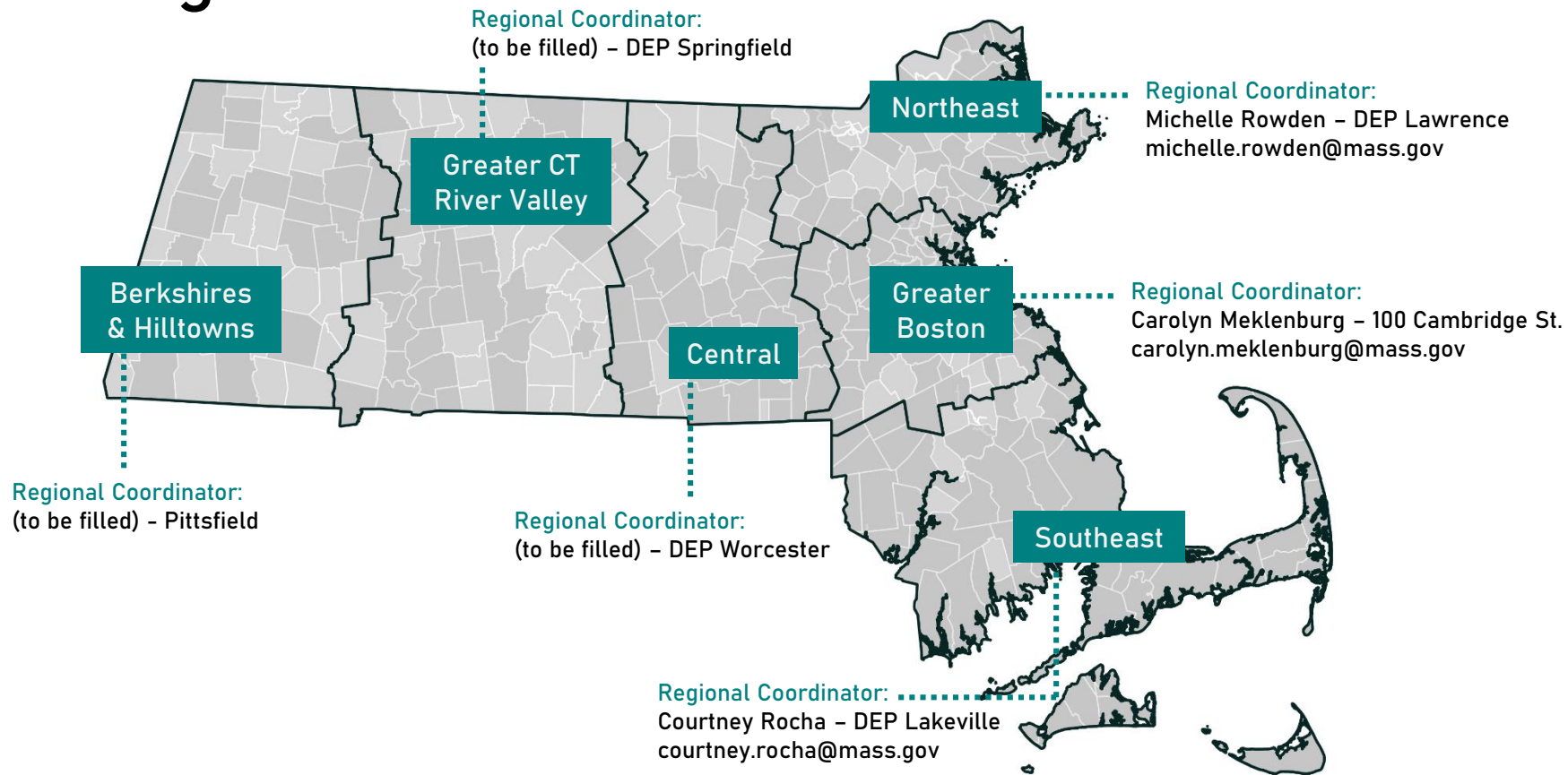
MVP Designations  
71% of the Commonwealth  
249 communities

Action Grant Projects  
FY 18: 37  
FY 19: 36  
FY 20: Released Sept. 2019

Total Awards  
\$17M+ in planning and  
action grants to date



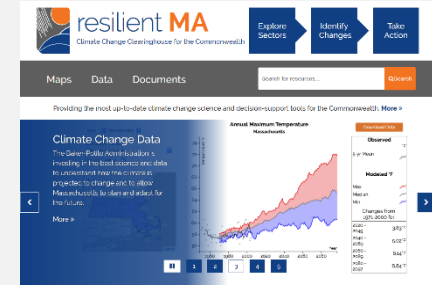
# MVP Regions



# MVP Principles

A community-led, accessible process that

- Employs local knowledge and buy-in
- Utilizes partnerships and leverages existing efforts
- Is based in best available climate projections and data
- Incorporates principles of nature-based solutions
- Demonstrates pilot potential and is proactive
- Reaches and responds to risks faced by EJ communities and vulnerable populations



## Why nature-based?

Where appropriate, nature-based solutions can be more cost-effective, protect water quality and quantity, sustain lands that provide food and recreation opportunities, reduce erosion, and minimize temperature increases associated with developed areas and climate change.

# MVP Resources



## MVP Planning Grant

- RFR open end of Sept 2019, rolling until mid-January
- \$15,000- \$100,000 per plan, completed by 6/30/2020
- Some expanded scopes
- *\$1M available*



## MVP Action Grant

- RFR open end of Sept 2019, closes 6 weeks later
- Open to MVP communities
- \$25,000- \$2M per project, completed by 6/30/2020 or 6/30/2021
- *\$10M available annually*

# Details and Timeline – Planning Grant

- Approximately \$1 million to award, up-front payment model
- RFR release: Late September 2019
- Applications due: Rolling until mid-January 2020 - see RFR for details (moving away from paper applications)
- Award announcement: Rolling
- Projects start: Anticipated January 2020
- Projects end: June 30, 2020

# MVP PLANNING Grant

**Lead a community-driven planning process to understand climate vulnerabilities and identify priority adaptation actions.**

**Utilize state-certified MVP providers, toolkit, and climate data to develop an MVP Plan through workshops and community outreach**

**Be designated as an MVP Community and eligible for Action Grant funding**

**Submit regular progress reports**

**Findings inform State Adaptation Plan**

# ***Role of Municipality***

- **Procure** a state certified MVP provider
- Establish a **core team**
- Work with MVP provider to **identify and engage stakeholders**
- **Commit** to continue municipal outreach and engagement
- **Use the completed plan** to inform existing planning and project activities



# Statistics from FY19 Round – Planning Grants

\$2.2 million in  
total funds  
awarded

92  
communities  
awarded

Average grant  
was \$27.5K

# Planning Grant – Application Components

- Cover sheet (appendix to RFR)
- Application (appendix to RFR), including:
  - Signed letter of support from top municipal official
  - Statement of commitment
  - Name and qualifications of municipal project lead
  - Letters of support from key municipal/community partners
  - Description of how municipality will use results to inform other planning efforts
  - Description of status of Hazard Mitigation planning
  - Description of need to address climate change
  - Indication of presence of Environmental Justice communities or other vulnerable populations
  - Details on any request for expanded scope funds (and accompanied by a completed scope and budget template attached to RFR)

# Details and Timeline – Action Grants

- Approximately \$10 million to award
- RFR release: Late September 2019
- Applications due: Early to mid-November- see RFR for details (moving away from paper applications)
- Award announcement: Anticipated January 2020
- Projects start: Anticipated January 2020
- Projects end: June 30, 2020 OR June 30, 2021
- Fully reimbursable model (as tasks are completed and invoiced for)
- 25% match – cash or in-kind (could be federal or private foundation grants, but not other state grants)

# MVP ACTION Grant

**Implement priority  
adaptation actions  
identified through the  
planning process**

**Clearly demonstrate  
how you're  
incorporating climate  
change data to  
redesign and  
reconsider**

**Utilize nature-based  
solutions and reach  
EJ communities**

# MVP Action Grants: Project Types

- Detailed Vulnerability and Risk Assessment\*
- Community Outreach and Education
- Local Bylaws, Ordinances, Plans, and Other Management Measures\*\*
- Redesigns and Retrofits\*\*\*
- Nature-Based Flood Protection, Drought Mitigation, Water Quality, and Water Infiltration Techniques
- Nature-Based, Infrastructure and Technology Solutions to Reduce Vulnerability to Extreme Heat and Poor Air Quality



\* Most common project type

\*\* Second-most common project type

\*\*\*Third-most common project type

# MVP Action Grants: Project Types (cont.)

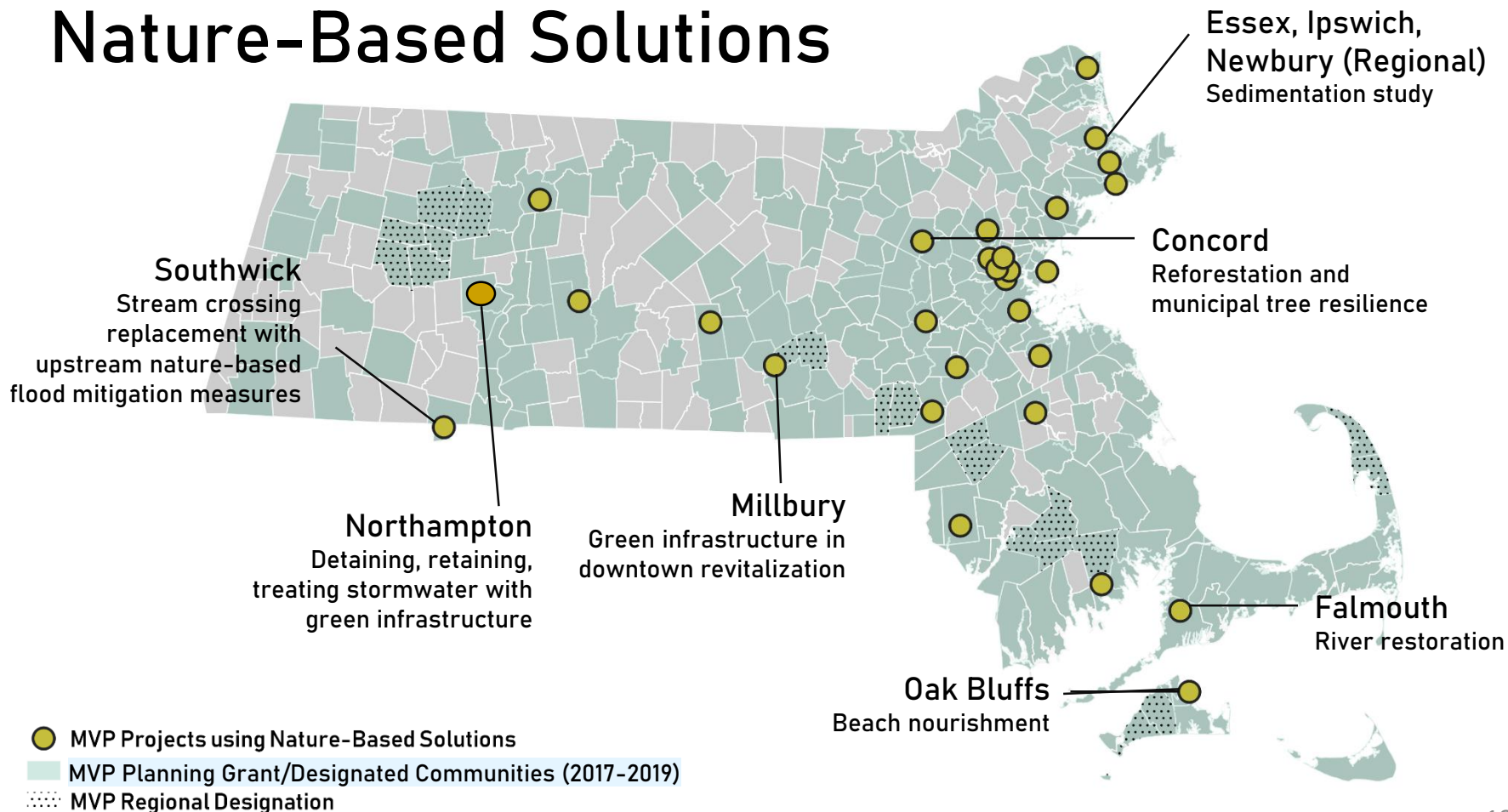


- Nature-Based Solutions to Reduce Vulnerability to other Climate Change Impacts
- Ecological Restoration and Habitat Management to Increase Resiliency

## NEW IN 2019

- Energy Resilience
  - Chemical Safety
  - Land Acquisition for Resilience
  - Subsidized Low-Income Housing Resilience Strategies
- + Expanded eligibility of project location 17

# Nature-Based Solutions



# Competitive Evaluation Criteria

- **Project Description, Rationale, and Public Benefits**
  - Why project was chosen, what the objectives are, how it will positively impact the community
  - Reflects priorities in MVP report
  - Incorporates up-to-date climate science and data on future conditions
  - Improves resilience for Environmental Justice and/or vulnerable populations
  - Public or regional benefits
  - Includes MVP yearly progress report
- **Need for Assistance**
  - Narrative of why funding is needed (to be combined with an assessment by EEA)
- **Project Feasibility & Management**
  - Technical, financial, and management capacity to take on project
  - Landowner, public, and/or partner support
  - Lack of regulatory hurdles to complete project within timeframe

# Competitive Evaluation Criteria

- **Project Transferability, Measurement of Success, and Maintenance**
  - Transferability of project to other communities
  - Measurement and monitoring of project success
  - Plan for maintenance or updates to project
- **Community Outreach, Education, and Engagement**
  - Community engagement strategy and mechanisms
  - Engagement of EJ or other vulnerable communities
  - Degree to which feedback will be incorporated into project
- **Incorporation of Nature-Based Solutions and Strategies**
  - How NBS will be used and why a specific strategy was chosen, including how the strategy will reduce maintenance costs and foster co-benefits
  - If an NBS solution was not chosen, can get partial points for explaining why not and demonstrating that future climate change projections are going to be incorporated

# Competitive Evaluation Criteria

- **Timeline, Scope, and Budget** (including 25% local match of total project cost)
  - Clear project timeline
  - Clear scope and capability of being completed in allotted time period
  - Clear budget delineated across fiscal years
- **Overall Project Quality**
  - Determined by reviewers

# Statistics from FY19 Round – Action Grants

\$26 million in total  
funds requested by  
all applicants

\$12 million in  
funds awarded to  
36 projects

32 projects not  
funded

Average grant was  
\$390,000

# Example Action Grant Projects

## Land Acquisition for Resilience

### Mattapoisett



Purchased 120 acres of forest, streams, freshwater wetlands and coastal salt marsh as conservation land to prevent development in vulnerable areas



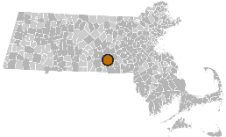
Data utilization

Proactive

# Example Action Grant Projects

Nature-Based Flood Protection, Drought Prevention, Water Quality, and Water Infiltration Techniques

## Millbury



Utilizing green infrastructure like stormwater planters, bioretention bump outs, rain gardens, and other measures like porous pavers and pervious pavement to reduce heat island effects and stormwater runoff into the Blackstone River.



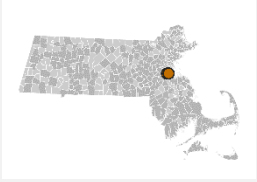
Nature-based solutions

# Example Action Grant Projects

Local Bylaws, Ordinances, Plans, and Other Management Measures

Redesigns and Retrofits

## Boston



Developing its first ever resilient building code so that development in the future floodplain is prepared for at least three feet of sea level rise, the likely scenario by late century.



Proactive

Pilot potential

Retrofitting a major waterfront park into a legacy park that uses nature-based solutions to address climate vulnerabilities while providing important access to recreation for residents.



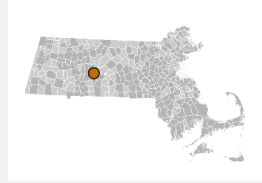
Nature-based solutions

Community co-benefits

# Example Action Grant Projects

Nature-Based Flood Protection, Drought Mitigation, Water Quality, and Water Infiltration Techniques

## Belchertown



Designing and permitting for a replacement water storage tank that would increase storage capacity and resiliency to drought, and completing a feasibility/ concept design of a rainwater harvesting system at Belchertown High School to irrigate the athletic fields.



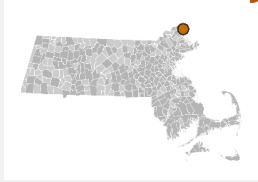
Nature-based solutions

Pilot potential

# Example Action Grant Projects

## Redesigns and Retrofits

### Salisbury



Increasing the resilience of the neighborhood of Ring's Island by raising its access/egress roads and by improving tidal flushing through culvert replacements



Vulnerable communities

# Action Grant – Application Components

- Completed application template (appendix to RFR)
- Completed budget template (appendix to RFR) with clear delineation between fiscal years
- MVP yearly progress report (appendix to RFR)
- Statement of match (described in RFR)
- Letters of support from landowner (if applicable), partners, the public

# MVP Regional Coordinator Office Hours

Regional Coordinator	Contact Information	Pre-RFR Release Office Hours	Post-RFR Release Office Hours (while application is open)
Michelle Rowden – Northeast Regional Coordinator	978-242-1358 michelle.rowden@mass.gov	Reach out to schedule a time to chat	Tuesdays 10am-12pm
Courtney Rocha – Southeast Regional Coordinator	617-877-3072 courtney.rocha@mass.gov	9/23/19 – 1:00-3:00pm <b>OR</b> reach out to schedule a time to chat	Thursdays 1-3pm

## Next Steps: Climate Change & the Commonwealth

# Bill S.10:

## An Act for Climate Change Adaptation Infrastructure Investments in the Commonwealth

- Building on success of existing programs like MVP: Proposed new source of revenue for loans, grants, and technical assistance to municipalities and regional partnerships for priority adaptation projects
  - Proposed deeds excise increase → est. \$137M annually (\$1B in ten years)
  - Recurring, long-term revenue stream for multi-year project feasibility





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<https://www.mass.gov/municipal-vulnerability-preparedness-program>

