

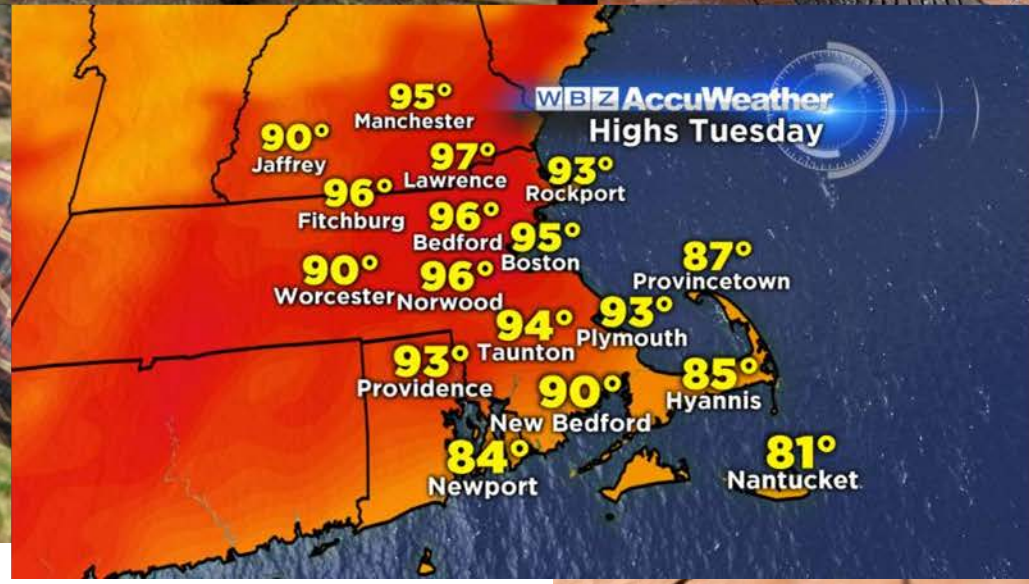


Establishing an Integrated Climate Change Strategy for the Commonwealth


Preparing Urban Forests for Climate Change January 24th, 2017

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INTEGRATED ACTION TO PREVENT
FURTHER CLIMATE CHANGE AND TO WORK
ACROSS GOVERNMENT TO SAFEGUARD
THE PEOPLE, COMMUNITIES,
INFRASTRUCTURE, AND NATURAL
RESOURCES OF OUR COMMONWEALTH
FROM CLIMATE CHANGE IMPACTS.



Data source:
www.cdc.gov
For more info

A person's hand is visible on the right side of the frame, holding a small, round, white object. The background is a soft-focus forest scene with many autumn-colored leaves in shades of orange, yellow, and brown. The lighting is bright and natural, suggesting an outdoor setting. The overall mood is peaceful and connected to nature.

**BUT MANY OF THE SOLUTIONS
CAN COME FROM THE
ENVIRONMENT WHILE
MAKING OUR COMMUNITIES
MORE VIBRANT,
CONNECTING KIDS TO
NATURE, AND PROTECTING
OUR SHARED NATURAL
HERITAGE**



BUILDING ON A STRONG FOUNDATION

ONGOING AND COMPLETED CLIMATE PLANS IN MASSACHUSETTS

Vulnerability and Risk Assessments

- Cambridge
- MAGIC 13 towns
- Fairhaven, Acushnet and New Bedford
- Salem
- Preparing for the Rising Tide, Boston
- Barnstable
- Camp Edwards
- Climate Ready Boston
- Boston Municipal Vulnerability Assessment
- Salem
- Quincy
- Gloucester
- Cape Cod Commission
- Marshfield
- Northampton
- Springfield
- Newton
- Brookline
- Climate Ready Boston
- Pioneer Valley Planning Commission
- Numerous other communities, many funded through CZM Coastal Resiliency Grants

COORDINATING ACTION ACROSS THE
COMMONWEALTH

STATE WIDE

Global Warming Solutions Act

- **GWSA Legislation enacted in 2008, requires:**
 - EEA and MassDEP to collaborate with other agencies to reduce GHG emissions to the limits established in M.G.L. Ch. 21N
 - reductions of GHG emissions by 10-25% below 1990 Baseline Levels by 2020 and 80% reduction by 2050
 - establishment of a GHG emissions registry and reporting system, and publication of an Inventory with comprehensive estimates of GHG emissions in the Commonwealth.

Global Warming Solutions Act

In 2010 EEA:

- set goal to reduce emissions by 25% below a 1990 baseline by 2020.
- Issued the “Clean Energy and Climate Plan for 2020” (the 2020 Plan), released in Dec 2010; implementation underway.
- 5-year update of 2020 Plan in Jan 2015
- Other requirements
 - Convene advisory committees
 - Prepare Adaptation Report (released September 2011
<http://www.malegislature.gov/Laws/SessionLaws/Acts/2008/Chapter298>)



Adaptation

- *Climate Change Adaptation Report in 2011*
- Proposed strategies (>200) to adapt and to mitigate impacts
- Addressed effects on:
 - Natural Resources and Habitat
 - Key Infrastructure
 - Human Health and Welfare
 - Local Economy and Government
 - Coastal and Ocean Zones



Clean Energy and Climate Plan

- Provides rationale for GHG emission reduction in Massachusetts (economic, health, security, environmental)
- Outlines 28 policies/strategies to reduce emissions from the four primary emissions sectors, & includes 3 cross-cutting strategies (e.g. MEPA).
- EEA/EOHED/MassDOT collaboration
- GWSA Subcommittees are working on implementation



KAIN & OTHERS VS. THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

On May 17, 2016 the MA Supreme Judicial Court ruled that the steps mandated by the GWSA include promulgation of regulations by the Department of Environment Protection

“establish volumetric limits on multiple greenhouse gas emission sources, expressed in carbon dioxide equivalents, and that such limits must decline on an annual basis.”

G.L. c. 21N, Section 3(d)

EXECUTIVE ORDER 569

ESTABLISHING AN INTEGRATED CLIMATE CHANGE STRATEGY FOR THE COMMONWEALTH

RECOGNIZING THE IMPORTANCE OF CLIMATE CHANGE

- **Climate change is a threat to** Commonwealth's residents, communities and economy.
- **Recognizes the authority under the GWSA** and efforts to lead by example
- **Transportation and energy sectors**
- **Kain decision**
- **Strong and prompt action** beyond emissions reductions is required to meet the serious threat from climate change
- **State agencies and cities and towns** must prepare
- **Only through an integrated strategy** bringing together all parts of state and local government will we be able to address these threats effectively

SECTION 1: MITIGATION

Secretary of EEA

- **IAC and setting limits for 2030 and 2040**
- **Continue to lead by example**
- **Transportation sector**
- **Reform of regional wholesale electric energy and capacity markets to ensure state mandates for clean energy are achieved**
- **Comprehensive energy plan**
- **Ensure that efforts to meet greenhouse gas emissions limits are consistent with adaptation**

SECTION 2: DEP REGS.

Department of Environmental Protection

- **DEP shall promulgate final regulations by August 11, 2017**
- **Establish an internet portall**
- **Revise 310 C.M.R. 60.05 to establish declining annual aggregate emissions limits;**
- **Consider limits from a variety of sectors**
- **Publish draft regs by December**
- **Hold public hearings by February**

SECTION 3: ADAPTATION

Secretary of EEA and Secretary of EOPSS

- **Within 2 years publish a statewide climate adaptation plan**
- **Establish vulnerability assessment frameworks for state agencies and municipalities**
- **Provide technical assistance to cities and towns to complete assessments and identify adaptation strategies**
- **Implement the plan**
- **Update at least every 5 years**

SECTION 4: CLIMATE COORDINATORS

All Cabinet Secretaries will designate a climate coordinator in each executive office

- **Serve as point person**
- **Meet under the leadership of personnel from EEA and EOPSS to assist in the development and implementation of the Climate Adaptation Plan**
- **Within two years of this Order assess the vulnerability to climate change and extreme weather events for the Coordinator's Executive Office**
- **Incorporate results into existing policies and plans for that office**

SECTION 5: TIMELINE

This Executive Order shall be reviewed no later than December 31, 2019, and every five years thereafter.

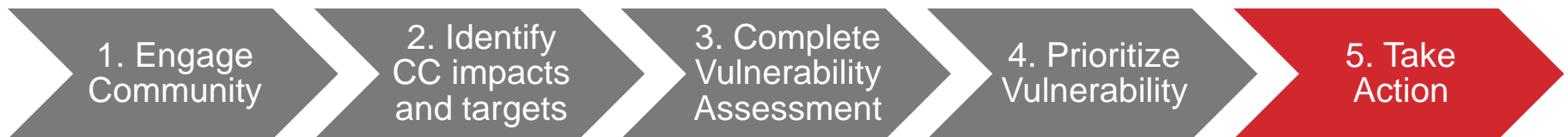
LOCAL-STATE PARTNERSHIPS

TOWNS & CITIES

MUNICIPAL VULNERABILITY PREPAREDNESS



Climate MVP Communities: local impacts, local action

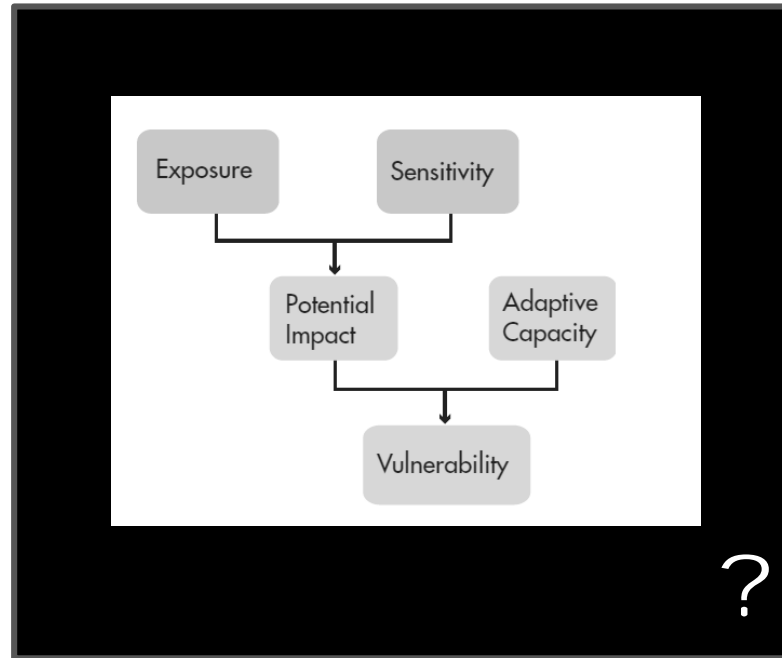


EMPOWERING COMMUNITIES & INFORMING STATEWIDE ACTION

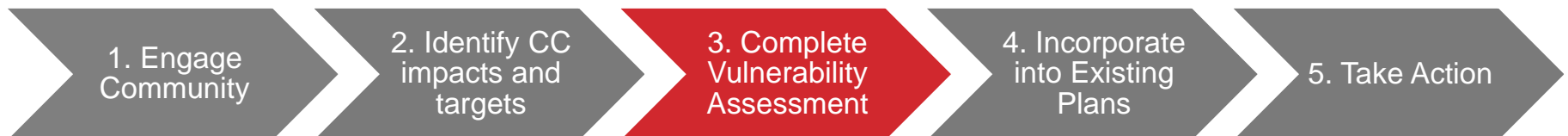
- **Strategic investments:** Understanding community vulnerability to climate impacts.
- **Accessibility:** Easily accessible template
- **Partnerships:** Bring together state agencies, NGO and business partners, universities, RPAs, and municipalities
- **Frame** coordinated statewide efforts.
 - Structure and revise grant opportunities
 - Inform budgets to direct \$ towards highest priorities
 - Identify opportunities and barriers in policy and regulations
 - Identify opportunities to increase technical capacity
 - Direct investment in critical natural infrastructure

3. VULNERABILITY ASSESSMENT

- Targets
- Existing Data
- Exposure Data
- Local knowledge



- Relative vulnerabilities
- Factors contributing to vulnerability
- Level of confidence



INTEGRATED WITH A STATE WEBSITE

1. MVP Portal provides critical structure for process
2. Provides climate data
3. Provides geospatial data at the town level
4. Runs vulnerability assessment
5. Connects to adaptation actions and grant opportunities
6. Specifically designed for cities and towns

MA CLIMATE CLEARINGHOUSE

