

# Planning for Climate Change Impacts



Sustainable/Resilient Communities in Monmouth  
County

September 10, 2008

Jennifer Ewing – Project Manager

# Presentation Overview



- *ICLEI – Overview*
- *ICLEI Programs and Tools*
- *ICLEI's Adaptation Planning Process*
- *Questions*



# Mission

Our mission is to build, serve, and drive a movement of local governments to advance deep reductions in greenhouse gas emissions and achieve tangible improvements in local sustainability.



# ICLEI - A Worldwide Movement of Local Governments

11 Offices

68 Countries

6 Continents (over 1000 members)

490 Members in U.S.

- Climate Change Mitigation
- Climate Adaptation / Resilience
- Sustainability Performance

# ICLEI Communities in Northeast

## Connecticut

- Branford
- Bridgeport
- Fairfield
- Hamden
- Hartford
- Stamford
- Weston
- Westport
- Windham
- Windsor

## Maine

- Augusta
- Bath
- Belfast
- Brunswick
- Falmouth
- Greater Portland Council of Govts.
- Portland
- Waterville

## Massachusetts

- Amherst
- Ayer
- Belmont
- Boston
- Cambridge
- Central Mass RPC

## Massachusetts (contd.)

- Devens
- Greenfield
- Hingham
- Hull
- Ipswich
- Kingston
- Lexington
- Lincoln
- Medford
- Nantucket
- Natick
- Newburyport
- Newton
- Northampton
- Pioneer Valley Planning
- Pittsfield
- Provincetown
- Reading
- Salem
- Shutesbury
- Spencer
- Springfield
- Waltham
- Wellesley
- Williamstown
- Winchester
- Worcester

## New Hampshire

- Dover
- Epping
- Keene
- Nashua
- Portsmouth
- Rochester
- Southwest RPC

## New Jersey

- Belmar
- Galloway
- Hamilton
- Kearny
- Maplewood
- Meadowlands
- Montgomery
- Newark
- North Brunswick
- Parsippany-Troy Hills
- Passaic County
- Somerset County
- West Windsor

## New York

- New York
- Albany
- Babylon
- Bedford
- Brighton

## New York (contd.)

- Clarkstown
- Cortlandt Dobbs Ferry
- Greenburgh
- Huntington
- Ithaca
- Larchmont
- Mamaroneck
- Nassau County
- New Castle
- New Paltz
- New York
- North Castle
- Oneonta
- Orangetown
- Ossining
- Red Hook
- Riverhead
- Rockland County
- Rye
- Saratoga Springs
- Southampton
- Suffolk County
- Syracuse
- Tarrytown
- Tompkins County
- Westchester County
- Woodstock
- Yonkers
- Yorktown



119 Total

## Pennsylvania

- Haverford
- Lower Makefield
- Mt. Lebanon
- Narberth
- Nether Providence
- Philadelphia County
- Pittsburgh
- Radnor
- West Chester
- Upper Dublin

## Rhode Island

- Providence

## Vermont

- Brattleboro
- Burlington
- Montpelier

# How do municipalities benefit from working with ICLEI?

- National and international network of peers
- Emissions Analysis Software and Decision Support Tool
- Standard Methodology and Technical Assistance
- ICLEI Trainings and Events
- Technical, policy, and communications assistance
- Framework for approaching climate protection
- Tools and Resources (publications)
- State Networks



# Mitigation & Adaptation Two Pronged Approach



- **Climate Mitigation** – Focuses on GHG reduction programs beginning with baseline inventories, goal setting, action plan development and implementation.
- **Climate Adaptation** – Focuses on building resiliency to climate change impacts through identifying vulnerable sectors, goal setting, and preparedness planning.

# ICLEI Toolkits, Publications, Templates

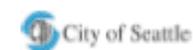
- Climate Action Handbook
- Adaptation Guidebook
- Milestone Guide
- Transportation and Land Use Toolkit
- Urban Forestry Toolkit
- Green Fleets Guide
- Local Climate Programs
- Example Ordinances
- Resolution, Inventory and Action Plan Templates
- Sustainability Planning Toolkit (in development)

[www.icleiusa.org](http://www.icleiusa.org)

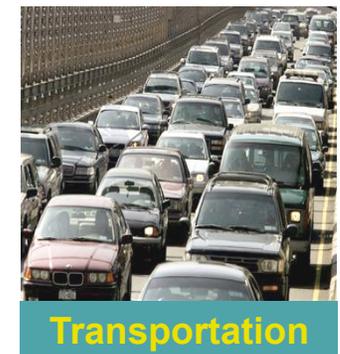
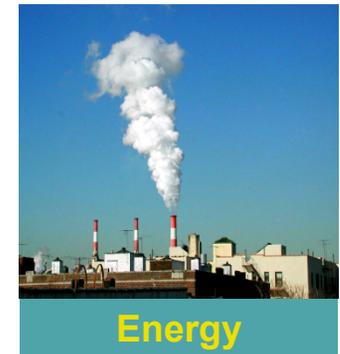
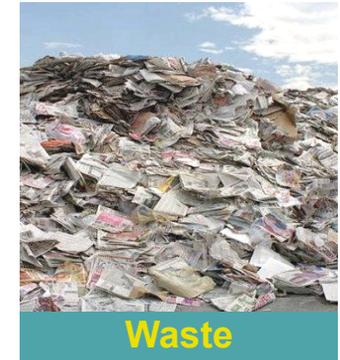
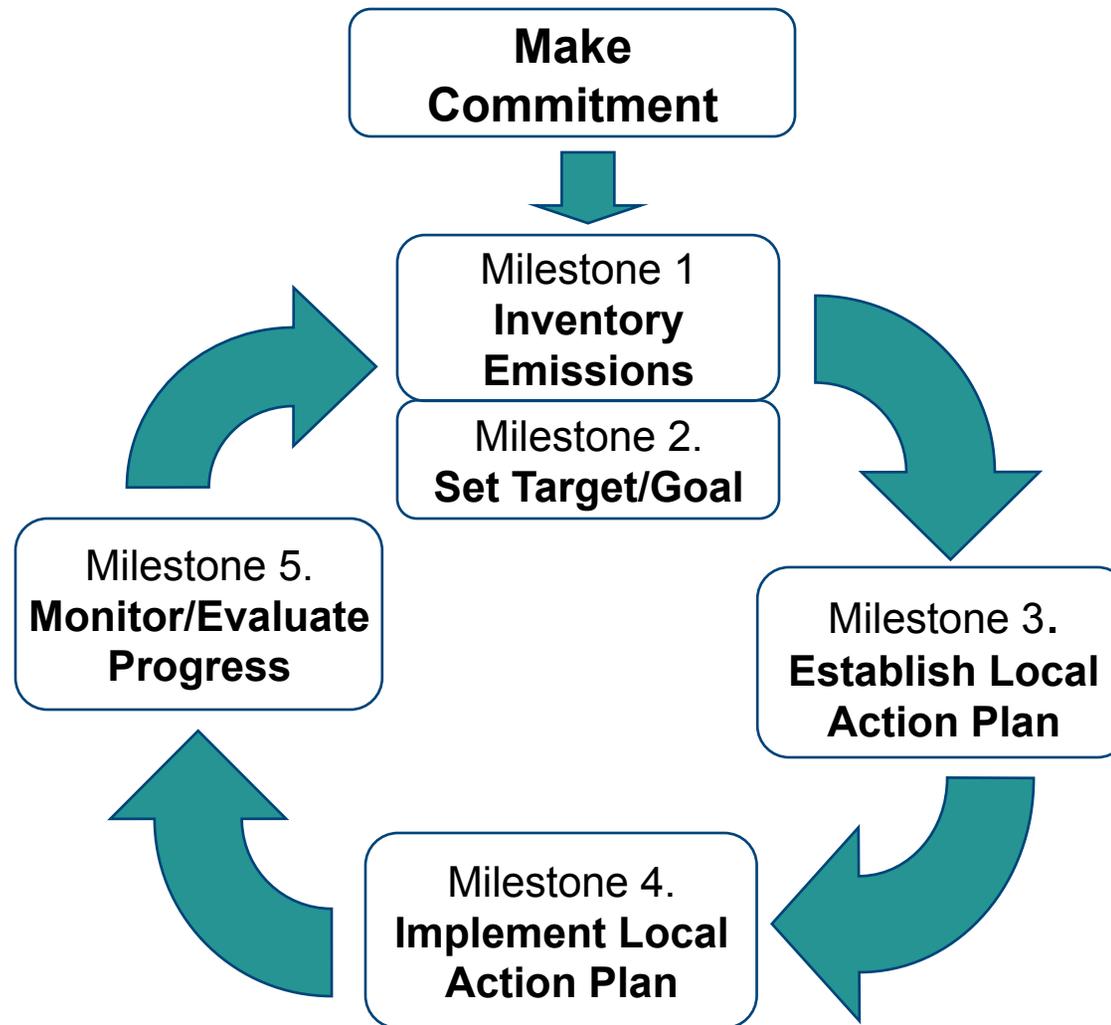
## U.S. MAYORS' CLIMATE PROTECTION AGREEMENT



## CLIMATE ACTION HANDBOOK



# Climate Change Mitigation 5 Milestone Planning Process

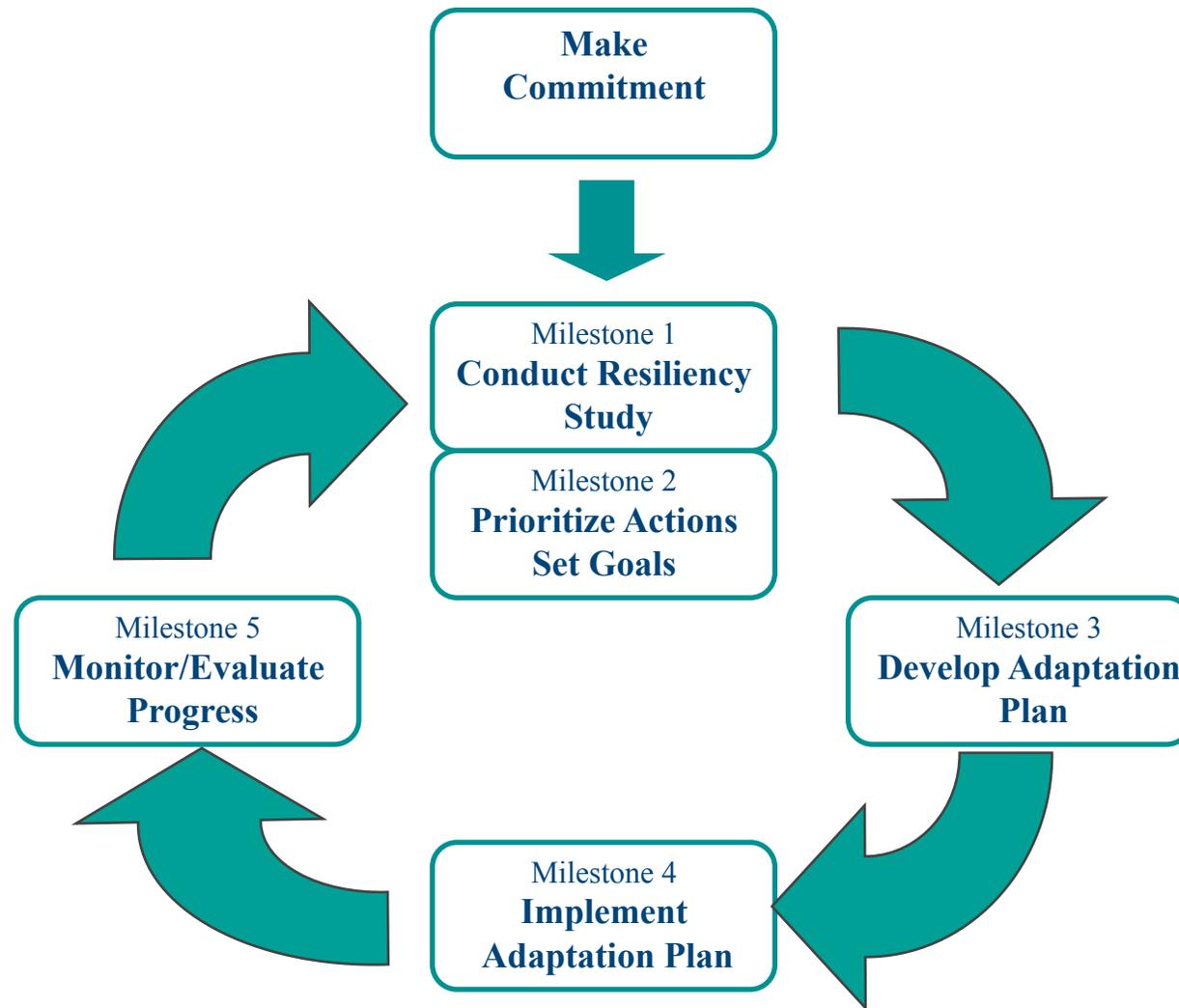


# ICLEI's Adaptation Program Climate Resilient Communities (CRC)

- Recognition of need for climate adaptation as well as mitigation work
- Link local governments to available climate change science
- Identify opportunities for increasing resiliency
- Sustainable Approach
  - Built Environment
  - Natural Environment
  - Social Environment
- Launched ICLEI's Climate Adaptation Program in 2006
- Pilot of Climate Resilient Communities (CRC)
  - Keene, NH
  - Homer, AK
  - Miami-Dade County, FL



# Climate Change Adaptation 5 Milestone Planning Process



**Sea Level Rise**



**Extreme Events**



**Global Warming**

# Planning for Adaptation

Planning Area →	Forecasted Change in Climate →	Vulnerability →	Goal 1 →	Action 1
				Action 2
				Action 3
			Goal 2 →	Action 1
				Action 2
				Action 3



# Milestone 1

## Conduct Resiliency Study

- Established a committee
  - Identify who should be involved
  - Mayor, City Manager, Emergency Management, Public Works Director, Planning Director, City Engineer, Local University Representatives, Regional Planning Council Representatives, Climate Scientist, Hospital Representatives, *industry specialist*, etc...
- Identify climate change impacts for your region
  - Assess regional impacts
  - Identify local impacts
- *Begin discussion on vulnerable and resilient social, natural, and built environments*
- Build support and provide education

# Potential Community Vulnerabilities

- Flooding (hurricanes, extreme weather events)
- Building damage (extreme weather events, hurricanes, tornadoes, Nor'easters, ice storms)
- Power outages / damage (ice storms, extreme heat, extreme weather)
- Water pollution / contamination (intense storm events, rainfall events)
- CSO overflows (intense storm events, intense rainfall events)
- Drought (extreme events, increased temperature)
- Public Health impacts (mortality, decreased access to cooling centers, spread of disease)
- Bridges, Roads, Public Transportation (increased extreme weather events, increases



# Milestone 2

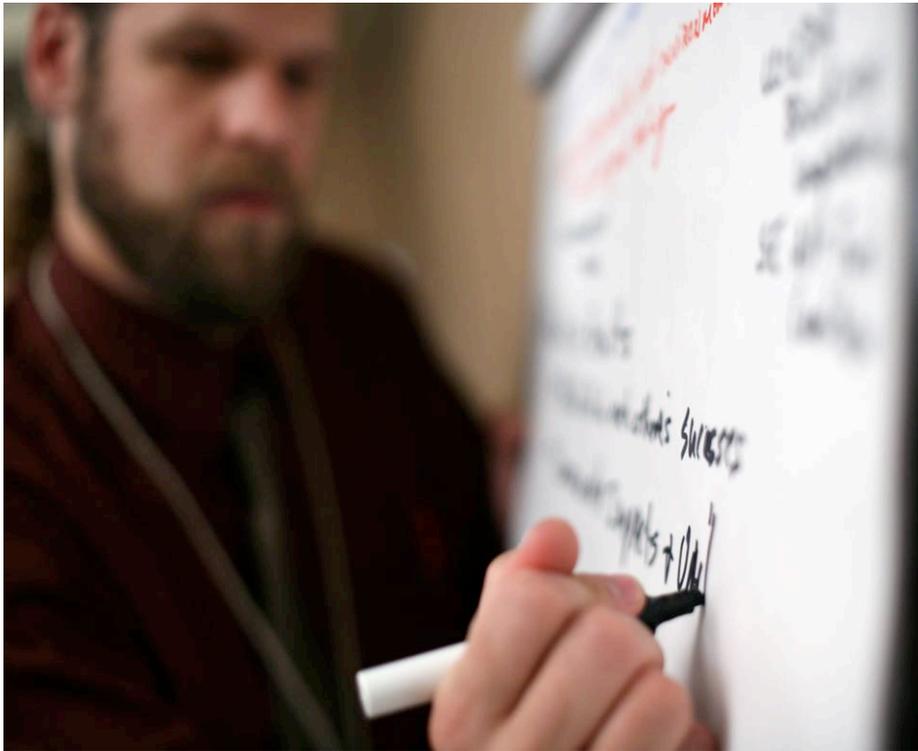
## Prioritize Actions & Set Goals

- Prioritization workshop with Committee members
  - *Assess Climate Change Risks*
  - Risks associated with different sectors
  - *Identify goals and actions*
  - *What are the opportunities?*
  - What actions should be taken?



# Milestone 3

## Develop Adaptation Plan



- Framework (roadmap) for approaching adaptation
- Outlines preparedness Goals
- Actions to achieve Goals
- Timelines and associated costs with actions
- NOTE: both opportunities and measures to increase resiliency should be explored

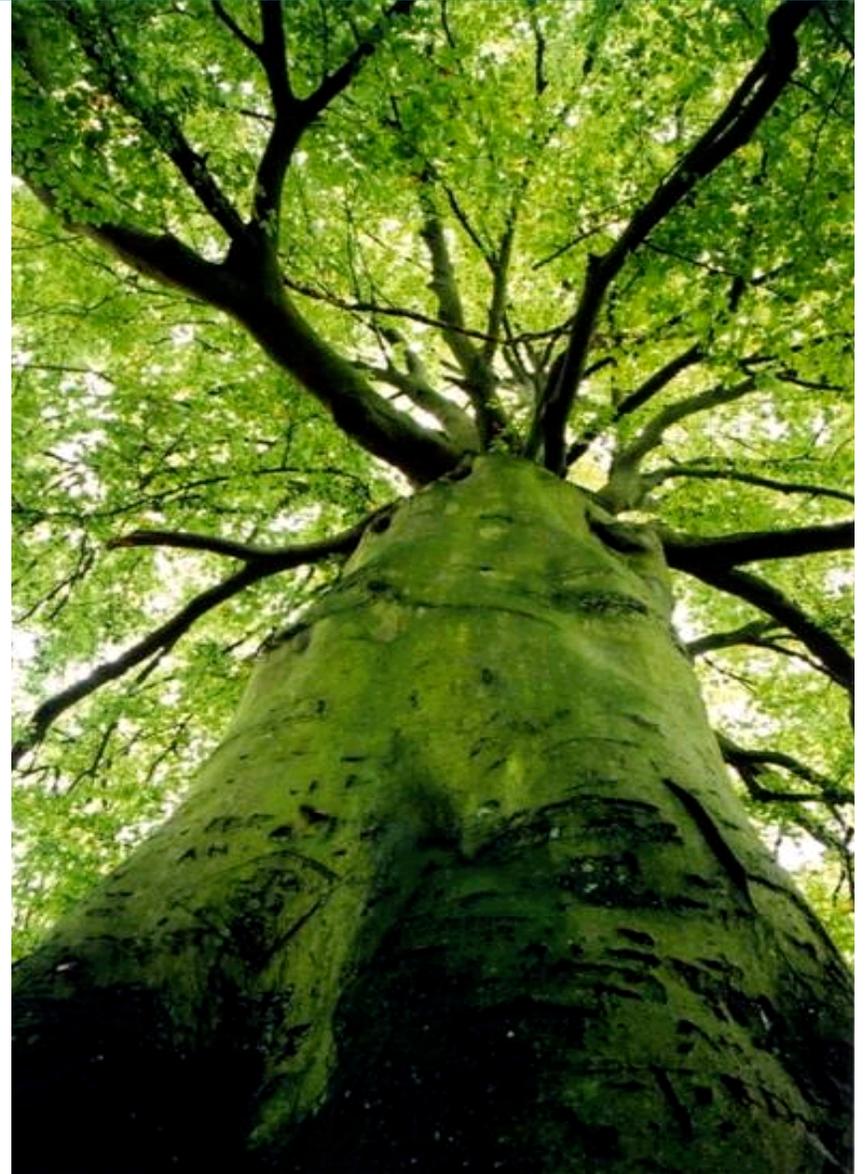
**START**

A dashed teal line starts from the 'START' box and moves horizontally to the right. It then curves upwards and to the right, ending in a solid teal arrow pointing towards the right side of the slide.

# Milestone 4

## Implement the Plan

- **UPDATE existing community plan**
  - Evaluate opportunity for integrating results into comprehensive plans
- ***IMPLEMENT identified actions***
  - Create and adopt policy
  - Identify funding, staffing, other resource needs, etc.
  - Create a timeline and stick to it



# Milestone 5

## Monitor, Evaluate, & Update

- Continue implementation and keep track of progress
- Report progress to the elected officials, community, and funders
- 2 to 5 years in – take stock and evaluate focus
- Revisit updated climate forecasts
- Change course, if needed
- Update the plan



# Best Practice Example Halifax

## Sustainable Mitigation & Adaptation Risk Toolkit (ClimateSMART)

- Recognizing municipalities vulnerability to climate impacts
- Developed to mainstream climate change mitigation and adaptation into municipal decision-making
- Utilizes all three orders of government and private sector
- Developed in March 2004 as prototype
- Tools Developed:
  - Vulnerability Assessment
  - Community Action Guide to Climate Change and Emergency Preparedness
  - Cost-Benefit Analysis
  - Developers – [www.halifax.ca/climate/](http://www.halifax.ca/climate/) Climate Change Risk Management Guide





---

Jennifer Ewing  
Project Manager  
[jennifer.ewing@iclei.org](mailto:jennifer.ewing@iclei.org)  
212-788-1629