

# Climate Change in New York State

What can we expect?  
What's being done?

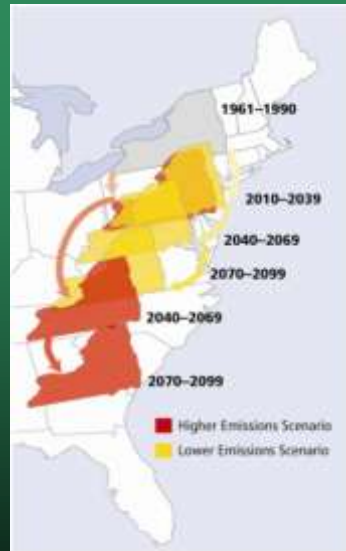
Office of Climate Change  
<http://www.dec.ny.gov>

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## Summer Heat Index

How hot will summers "feel" in Upstate New York?

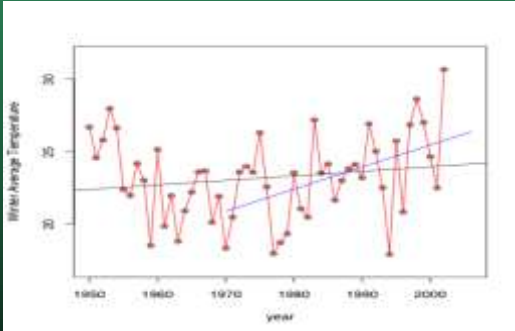


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## Warming is Already Evident

Since 1970:



- Northeast annual average temperature up 1.4°F
- New York annual average temperature up almost 2°F
- New York winter temperatures almost 5°F warmer

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## Rainfall Projections

- More total precipitation in the Northeast
- More rain in winter
- More frequent extreme storms
- Heavier rain during storm events



Wallkill in New Paltz  
March, 2005

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## New York City: 100-Year Flood



Credit: Applied Science Associates, Inc.. Source: Google, Sanborn Map Company, Inc., NECA, 2007 (see: [www.climatechoices.org/nyc/](http://www.climatechoices.org/nyc/)).

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## Drought Projections

- Warmer summers
- Drier soils
- Periodic drought
- Longer periods of low streamflow



Plattekill, Summer 2005

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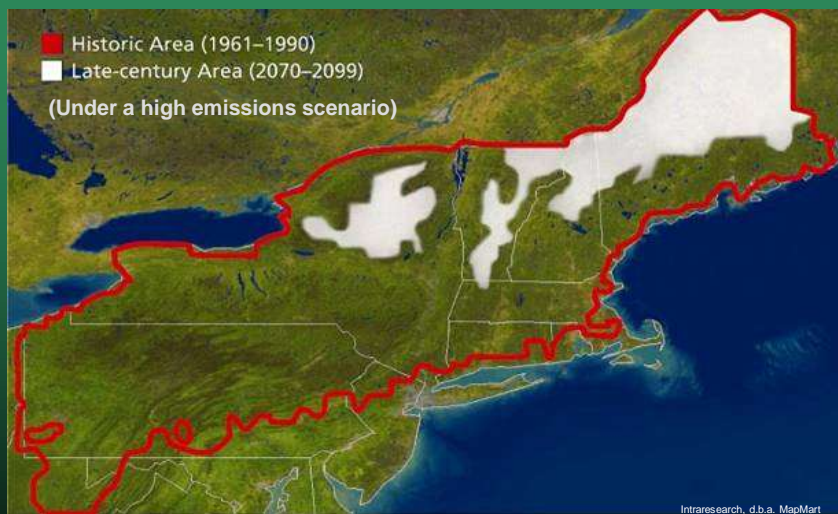
## Projected Great Lakes Impacts

- Average lake levels are expected to decline
- Pressure will grow to increase water extraction from the Great Lakes
- Deep-water refuges will remain, but shallow areas may see dead zones and fish kills
- Lower lake levels will require more dredging and other shipping-and boating-related adjustments

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## The Changing Face of Winter



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## Now - The Upside

- Climate change is making us “green” our economy and increase sustainability
- Renewable energy is becoming an integral part of the world energy mix
- In New York, RGGI is creating market incentives for low-carbon and non-carbon electricity technologies

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## What NYS is Doing

- Office of Climate Change
- International Carbon Action Partnership
- The Climate Registry
- Sea Level Rise Task Force
- Regional Greenhouse Gas Initiative
- GHG vehicle emission standards
- 15% reduction in electricity use by 2015
- Renewable Portfolio Standard: 25% by 2013
- Professional and public education

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# NYS Climate Change Office

*Focusing state responses to climate change*

- Created in 2007, staff of 12
  - Other DEC programs also integrating climate change
- Analyzes climate science
  - Provides reliable information to support policy, regulation
  - Promotes strategic technologies
- Builds climate partnerships
  - Works to empower governments, NGOs, individuals
  - Partners with local, state, federal agencies
  - Promotes planning, coordination and action

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## Science and Analysis

Climate Change Office

Scientific/technical support for programs to mitigate and adapt to climate change

- Economist
- Engineer
- Climatologist
- Research Scientist

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## Programs and Partnerships

Climate Change Office

### Climate change lens for decision-making

- New York State Agencies
- DEC Programs
- Municipal Governments
- Universities/other Institutions
- Businesses
- Individuals

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## International Carbon Action Partnership

- Public entities with mandatory cap-trade systems work together on CO<sub>2</sub> trading
- Extends global carbon market
- Encourages consistent international regulatory framework
- Additional emissions reduction policies to complement carbon markets

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# The Climate Registry

- Common system to measure, track, verify, report GHG emissions
- Largest climate initiative in North America
  - States with more than 80% of U.S. population
  - Canadian provinces, Mexican states, Indian tribes



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# The Climate Registry

## New York's Involvement

- Charter member (since May, 2007)
- Benefits
  - Participate in reporting protocol development
  - Share information with other states' climate change staff and decision makers
  - Gain access to verified data for comparison with sector estimates



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## New York State Sea Level Rise Task Force

- Established 2007, 16 members, DEC chair
- Report due late 2009
  - Impacts of sea level rise
  - Recommendations for protecting at-risk coastlines and habitats
  - Suggested adaptation measures
  - Recommended regulatory or statutory changes

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## Regional Greenhouse Gas Initiative (RGGI)

- Ten-state regional program to cap and reduce carbon emissions
- Focus on electric power sector
- Region wide and state-specific caps
- Auction based allowance distribution

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## Greenhouse Gas Vehicle Emission Standards

- **2004:** California adopts first regulation of CO<sub>2</sub> as tailpipe emission
- **2005:** CA requests EPA waiver to allow CO<sub>2</sub> standard; New York proposes to adopt CA standard
- **2007:** EPA denies waiver for CO<sub>2</sub> standard
- **2008:** New York and 14 other states sue EPA to allow CO<sub>2</sub> standard to proceed

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## What You Can Do

- Turn off lights, computers, and appliances when not in use
- Replace incandescent light bulbs with compact fluorescents
- Walk, bike or carpool
- Buy Energy Star appliances
- Support renewable energy, buy green power or carbon offsets
- Drive the speed limit

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## What You Can Do

- Encourage action by
  - Universities
  - Local Governments
  - Businesses
- Join The Climate Registry
- Commit to reducing GHG emissions
- Support Smart Growth
- Plan for Adaptation

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**Climate Change in the U.S. Northeast**  
A Report of the Northeast-Legacy Advisory Committee

**Confronting Climate Change in the U.S. Northeast**  
SCIENCE, IMPACTS, AND SOLUTIONS

Prepared for the Northeast Climate Change Assessment Program  
by Peter C. Howarth, Joshua J. McGuire, Jerry M. Moulton, Catherine C. Moore, and Donald J. Wuebbler

2008

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

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# QUESTIONS?

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