

Climate Smart Communities Webinar

Telephone call-in number

- 1-866-394-2346
- Code: 1982360347#
- No audio signal will be transmitted over the Internet



Welcome

Kim Farrow

Environmental Program Specialist

Office of Climate Change

New York State

Department of Environmental Conservation



Climate Smart Communities Webinar

E-Mail Addresses



- Mark Lowery
mdlowery@gw.dec.state.ny.us
- Kim Farrow
kxfarrow@gw.dec.state.ny.us
- Climate Change Office
climatechange@gw.dec.state.ny.us



Storm Recovery and Preparation Climate Smart Communities

The Role of the National Flood Insurance Program
and the Community Rating System

David Berg, AICP, LEED AP, Cameron Engineering & Associates, LLP
Climate Smart Community Coordinator for Long Island

CSC and Climate Change

- More flooding from climate change
 - More intense rain storms
 - More frequent and severe coastal storms
 - Sea level rise of up to several feet by 2100
- One key goal of CSC – increase local climate resilience
 - Identify local assets and vulnerabilities
 - Take actions to reduce flood damage
- Key goal of the NFIP's Community Rating System
 - Reduce flood damage to insurable property

Community Reconstruction Zones

- State program to assist communities impacted by Hurricanes Sandy and Irene and Tropical Storm Lee
 - \$25M in planning grants to many affected communities
 - Develop strategies to repair, reconstruct, relocate and protect assets
- NFIP's Community Rating System could be an important component of all CRZ plans

Climate Adaptation Assistance



- The CRS could be an important component of many Climate Smart Communities' *Climate Action Plans*
- All communities, especially those subject to flooding, should consider taking the CSC pledge
 - CSC coordinators available to assist CSC communities engage with FEMA and DEC to participate in CRS
 - Info: <http://www.dec.ny.gov/energy/84508.html>
 - Long Island: David Berg, AICP, LEED AP
dberg@cameronengineering.com
516-224-5206

Coming Events

- June 13 – NYIT Energy Conference: Preparing for Climate Change, Old Westbury. Information and registration at http://www.nyit.edu/conferences/energy_conference
- June 20 - Local Government Planning & Zoning Workshop, Troy. Topics: ZBAs, subdivision review, green infrastructure, MS4 permits, form-based codes, and climate and energy. Information and registration at <http://www.cdrpc.org>.

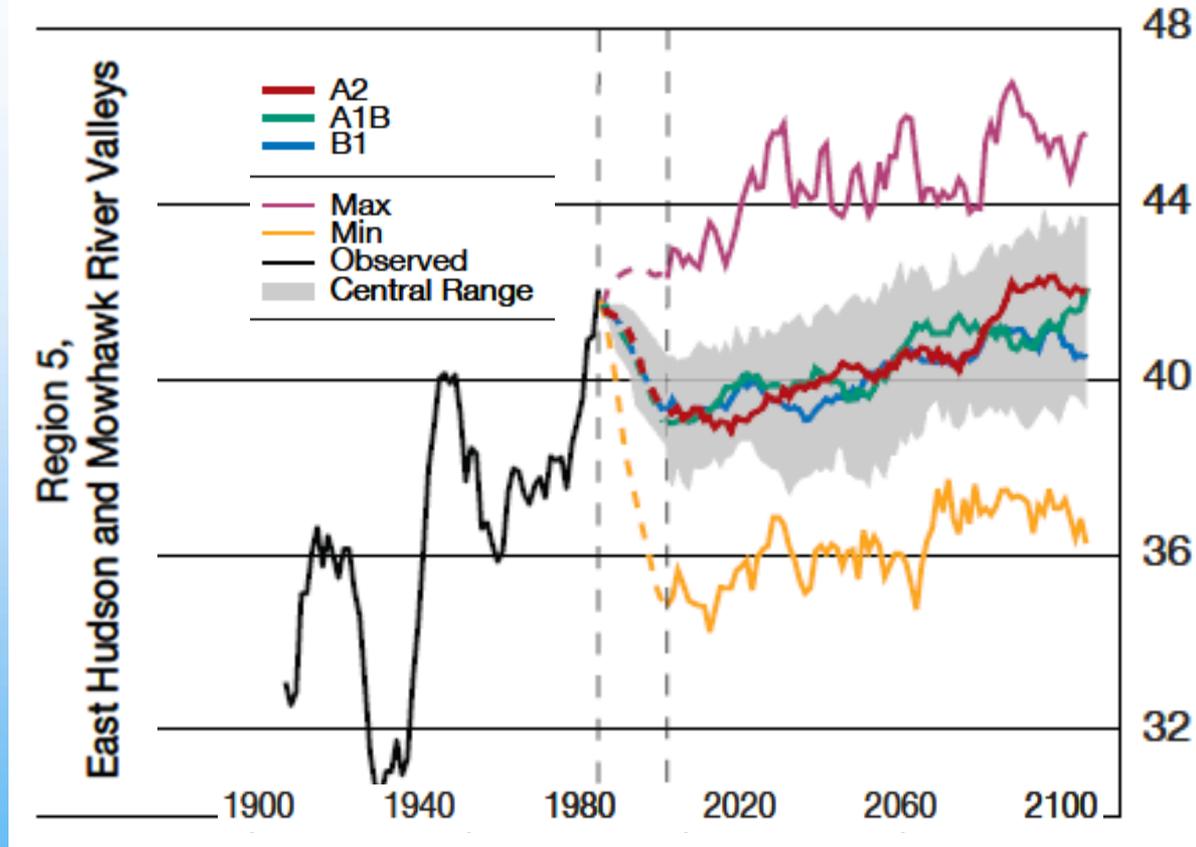
Climate Smart Community Webinars

- June 13, 10:30 a.m. *Beta Testing the Land-use, Transportation and Building Code Toolkit.*

*Do you have ideas for the 2013/14 Climate Smart Communities webinar season?
Send them to Kim Farrow, kxfarrow@gw.dec.state.ny.us .*

Average Precipitation: 1900-2100 (in.)

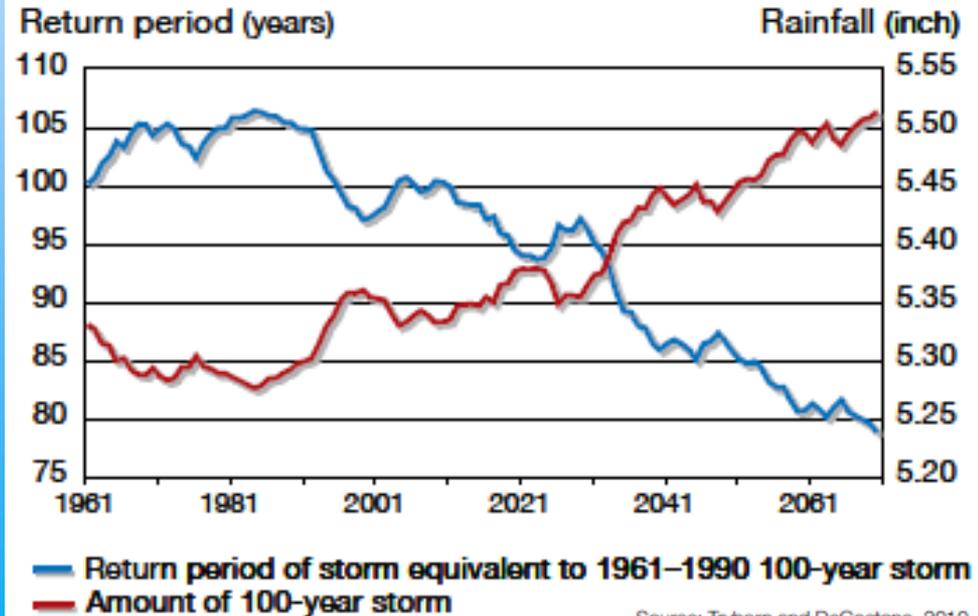
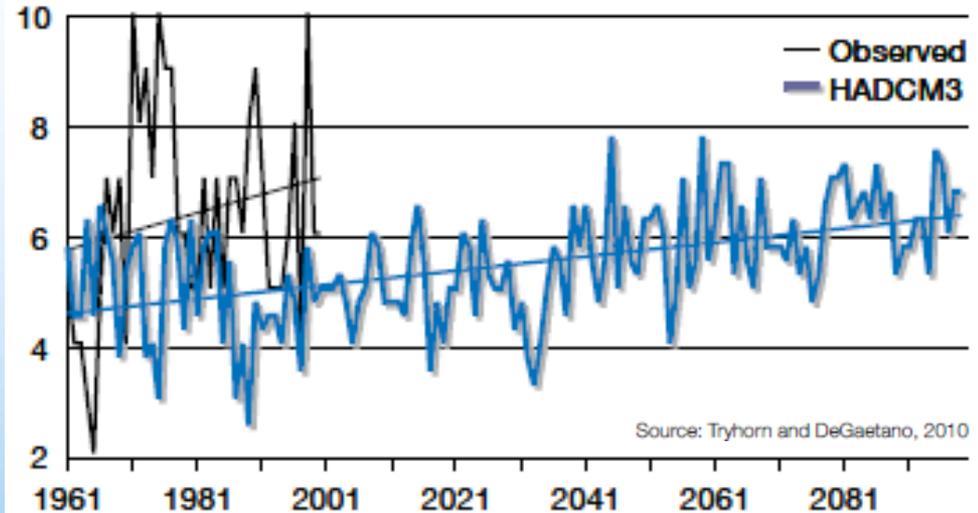
- Slightly more precipitation
 - 5-10% by 2080s
- More summer downpours
- More extreme snow/ice events
- More short-term droughts
 - Exacerbated by heat



Intense Precipitation and Flooding

- Observed and projected increases in heavy rainfall, especially in winter
- Potential increase in sub-daily rainfall intensity
 - Most likely to cause floods
- Change in maximum flows uncertain

Number events >1 inch per year



Water Effects

- Less frequent summer rainfall may affect water supply
 - Primarily on smaller water systems and wells
- Reduced flows on larger rivers
 - Possible water conflicts (e.g., agriculture vs. domestic)
- Increased water temperatures
 - Affect aquatic health and ability to assimilate wastewater effluent
- Flooding has potential to increase water pollution
 - WWTPs in floodplains
 - Toxics
- Changes in accretion/scour likely with changes in maximum stream flows, velocity
- Landslides



NYS Sea-level Rise Projections

	Baseline (1971 – 2000)	2020s	2050s	2080s	2100
Mid-Hudson and Capital Region					
Sea Level Rise ¹	NA	1 to 4	5 to 9	8 to 18	11 to 26
Sea Level Rise ² Rapid Ice Melt	NA	4 to 9	17 to 26	37 to 50	52 to 68
Lower Hudson Valley, Long Island, New York City					
Sea Level Rise ¹	NA	2 to 5 in	7 to 12 in	12 to 23 in	15 to 30 in
Sea Level Rise ² Rapid Ice Melt	NA	5 to 10 in	19 to 29 in	41 to 55 in	56 to 72 in

¹ Shown is the central range (middle 67%) of values from model-based probabilities rounded to the nearest inch.

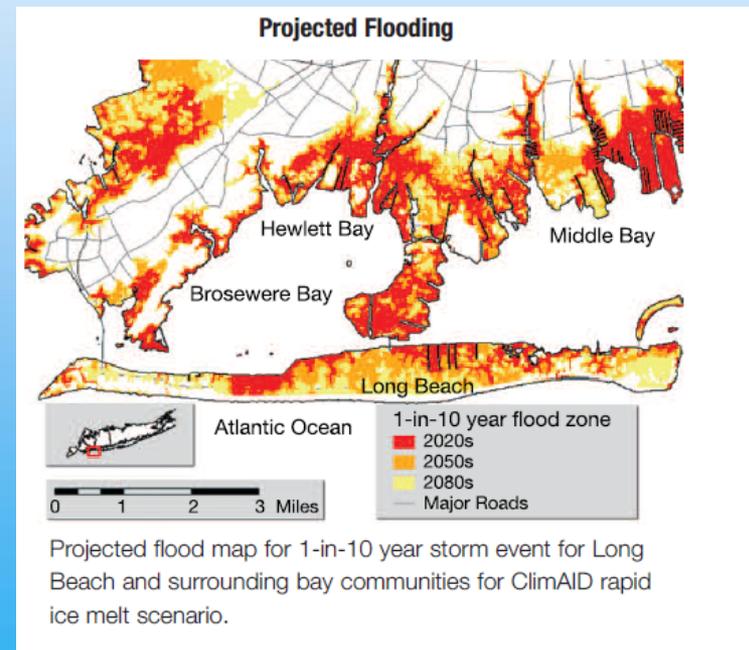
² The rapid ice melt scenario is based on acceleration of recent rates of ice melt in the Greenland and West Antarctic Ice sheets and paleoclimate studies.

- 100-yr coastal flood to 25-yr, by 2100 (SLR alone)
- Enhanced storm surge
- More severe storms

Coastal Effects



- ✓ Alteration of barrier islands
 - Strong coastal storm surge
 - Beach erosion, dune overwash, new inlet creation
- ✓ Inundation of coastal populations due to sea level rise
 - More frequent flooding in areas now near sea level
- ✓ Loss of coastal wetlands and salt marsh stress
 - Reduced species diversity
- ✓ Migration of cold water species
 - Blue claw crabs replace lobster
- ✓ Salt water intrusion on the Hudson
 - Tides, storm surge and salt water propagate upriver





The New York State Department of Environmental Conservation

Division of Water

Bureau of Flood Protection and Dam Safety

Floodplain Management Section

NYS NFIP Coordinating Agency



DEC NFIP COORDINATORS

CENTRAL OFFICE



Bill Nechamen, CFM

518-402-8146

Kelli Higgins-Roche, CFM

518-408-0340

Rick Tuers

518-402-8148



DEC NFIP Regional Coordinators

REGIONAL OFFICES



Region 1: Long Island

Eric Star

631-444-0423

Region 2: New York City

Jean Occidental

718-482-4935



What Is the Special Flood Hazard Area?

It is the blue shaded area on the Flood Insurance Rate Map, commonly known as the 100-year flood plain, but more accurately thought of as the area that has a 1% chance or greater of experiencing a flood in any given year. This flood is called the “base flood.”



The Base Flood

- 1% chance of being equaled or exceeded each year.
- Same Probability Every Year
- 26% chance of occurring in a 30-yr period
- 63% chance of occurring in a 100-yr period
- Chance of Fire is under 5% over 30 years
- Chance of '500-Year Flood' is 6% over 30 years
- Is often erroneously called the 100-year flood



The Base Flood Elevation

- The elevation of the 1 percent chance flood



Floodplain 101 in Two Slides

- NO BASEMENTS
- Studied Floodplains: Lowest floor at least 2 ft above BFE (R324.1.3.3, R324.2.1)
- Coastal V Zones: Lowest structural member at least 2 ft above BFE (R324.3.2)
- Unstudied Floodplains: Lowest floor at least 3 ft above highest adjacent grade
- Almost all Development Requires Permits
- Floodway Development Requires Study



Slide Two

- Storage of Materials may Require Permit
- Stuff FLOATS...Anchor Everything!
- New Structures Require Elevation Certificates (R324.1.9)
- Floodplain Residence May Need Rescue!
- Keep the Bulldozer out of the Creek!
- Call DEC with Questions

