



NEW YORK STATE ASSOCIATION OF MPOs

CLIMATE CHANGE WORKING GROUP

August 16, 2017

Webinar Meeting

10:00 AM – 11:30 AM

MEETING NOTES

1. Participating

- CDTC, Jennifer Ceponis (Chair)
- AGFTC, Jack Mance
- CS, Rich Denbow
- DCTC, Mark Debald
- FHWA HQ, Heather Holsinger
- NYMTC, Gerry Bogacz
- NYSDEC, Lois New
- NYSDEC, Mark Lowery
- NYSDOT, Colleen Smith-Lemmon
- NYSERDA, Adam Ruder
- OCTC, Julie Richmond

2. New York's Changing Flood Risk & the Community Risk & Resiliency Act

Lowery provided a briefing on the Community Risk and Resiliency Act (CRRRA). In the aftermath of Irene, Lee, Sandy and several other flood events, the NYS Legislature adopted and Governor Cuomo signed CRRRA in 2014. CRRRA has five major provisions that require:

- DEC to adopt regulations establishing science-based state sea level rise projections;
- Applicants in several specific permitting & funding programs to demonstrate consideration of future risk due to sea-level rise, storm surge & flooding;
- Consideration of SLR, storm surge and flooding in public infrastructure projects and some facility-siting regulations;
- Department of State (DOS), in consultation with DEC, to prepare model local laws concerning climate risk including sea level rise, storm surges and flooding, and to make such model laws available to municipalities; and
- DEC, in consultation with DOS, to develop guidance on implementation of the law and on use of natural resources and nature-based features to enhance resiliency.

For permitting, CRRRA affects a relatively narrow scope of programs; the permit program applies to major projects in a specific set of topic areas. CRRRA does not amend the building code or directly alter permit issuance standards.

CRRRA created a legislative mandate for DEC to propose new State Flood Risk Management Guidance (SFRMG). The SFRMG will provide nonbinding technical guidance to agencies and program units responsible for the programs referenced in CRRRA. It will recommend specific

flood-risk management guidelines for each of a variety of building and infrastructure types. Each of agency, however, will have ultimate responsibility to incorporate those recommended guidelines into program-specific guidance and, perhaps, operating regulations, consistent with the program's authorizing statute. The recommended guidelines would also be available for voluntary use by state planning, regulatory, or funding programs that are not covered by CRRRA. They could also be adopted for local planning, zoning and floodplain management purposes, although CRRRA does not require municipalities to do so. CRRRA does not give DEC authority to require anything new, only to develop the guidance.

DEC is nearing completion of a draft SFRMG document. The draft is the result of an intensive interagency effort involving 16 state agencies over the past 18 months. DEC will release a draft SFRMG in late September. As affected DEC programs determine how to incorporate the recommended guidelines, they will determine what additional information applicants will be required to submit as part of their applications in the affected programs. DEC has established an internal workgroup and charged it with identifying these additional information needs and developing means to assist applicants in providing that information as efficiently as possible.

DEC and DOS are also working on three other guidance documents required by CRRRA:

- Smart Growth Public Infrastructure Project Assessment Guidance, which is primarily directed to state agencies. DEC intends to release this draft guidance for public comment at the same time the SFRMG is released.
- Natural Resiliency Measures Guidance, which is intended to provide information that will allow applicants and agency staff to consider use of natural resources and nature-based features during project planning and the permit application process.
- A compendium of model local laws with associated commentary.

DEC will also make available step-by-step directions for calculation of flood-risk management elevations and is planning new guidance to include requirements for installation and replacement of bridges and culverts that incorporates the SFRMG guidelines.

Lowery provided details about the guidelines. In general, the draft SFRMG recommends that applicants be required to demonstrate they have considered the highest of the following three flood-risk management guidelines:

- The vertical flood elevation and corresponding horizontal floodplain that result from adding two feet (three feet for critical facilities) of freeboard to the base flood elevation and extending this level to its intersection with the ground.
- The vertical flood elevation and corresponding horizontal floodplain associated with the 0.2-percent annual chance flood.
- The vertical flood elevation and corresponding horizontal floodplain determined by a climate-informed science approach in which adequate, actionable science is available.

Lowery closed by pointing out that the state continues to develop information resources based on these recommended guidelines, and reviewed some of these resources. He added that President Trump intends to rescind an Executive Order established under President

Obama that addresses resiliency. Rescinding the Order will not affect the NYSDEC initiative and guidance.

Ceponis asked if transportation facilities are covered by the guidance. Lowery replied that they are, to the extent a project meets the requirements for major projects and other guidelines. In addition, a transportation project may trigger another requirement addressed in the guidance.

3. Automated Vehicle Fact sheet

Ceponis opened a discussion on development of a NYSAMPO Autonomous Vehicle Fact Sheet. She presented a draft Fact sheet outline and asked for input, particularly regarding messaging. New said she believes the Fact Sheet message should be that adoption of shared electric autonomous vehicle technology will result in the greatest environmental benefit. Ruder concurred with this message.

Ceponis suggested the use of images and graphics in the Fact Sheet to convey information. Smith-Lemmon asked if this document is separate from the TSMO Working Group C/AV white paper. Ceponis said this Fact sheet will be a stand-alone resource, but could have the same look and feel and the TSMO product.

Ceponis asked Working Group members to send her any comments they have on the draft outline.

4. Partner Agency Updates

NYS DOT: Lemmon reported that NYSDOT is fully engaged in the 2017 flooding vulnerability assessment update, and asked if there are any related efforts underway at the local level regarding transportation. Bogacz said NYMTC is addressing this as part of the three-state vulnerability assessment. Ceponis said that CDTC has had discussions about conducting a regional vulnerability assessment. Other MPOs have discussed it as well but do not have the funds to undertake an effort.

NYSERDA: Ruder reported that the Clean Air Communities program is moving along quickly. He thanked the MPOs for working closely with their communities. The electric vehicle rebate program is also going well. The Agency has received almost 2000 applications within the past five months. They will spend about \$18 million over the next four to five years on public transportation demonstration projects, and are working with the industry to assess technology demonstrations and operational improvements. Some of the focus will be on electrified rail and electric buses, as well as route optimization and fare collection.

NYSDEC: New provided an update on the Multi-state Climate Initiative, which is exploring a market-based approach to reducing transportation emissions. She also reported on low carbon efforts and initiatives.

NYSDEC also provided an update on the VW settlement. The Department is seeking comment on settlement provisions and has received a lot of helpful information. The challenge is how to maximize NOx emission reductions and improve Environmental Justice

outcomes and overall air quality benefits. The Department is waiting for additional details about how the settlement trust will be run; those details will effect how their program will operate, and their deadlines are dependent on the effective date of the trust.

5. Other Items/MPO Updates

No other items were reported.

6. Adjourn

The next meeting will take place in December 2017. The meeting was adjourned.

Community Risk and Resiliency Act

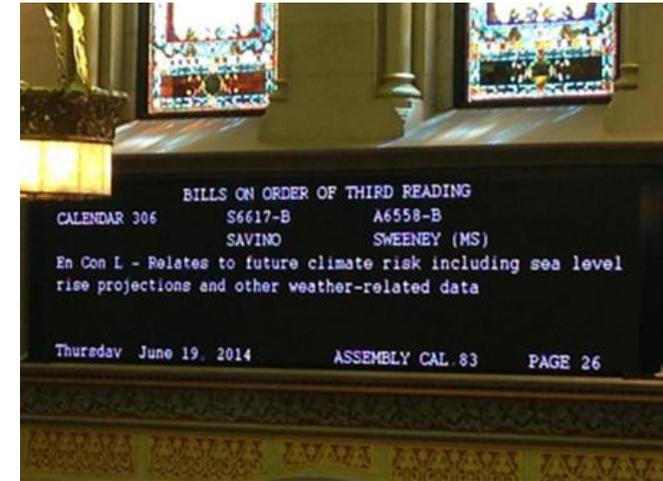
*Mainstreaming consideration
of climate change*



Department of
Environmental
Conservation

Community Risk & Resiliency Act

- Requires sea-level rise projections (DEC)
- Requires applicants demonstrate consideration of sea-level rise, storm surge & flooding in specified permits & funding programs, & guidance on implementation (DEC, DOS)
- Adds mitigation of sea-level rise, storm surge & flooding to Smart Growth Public Infrastructure Policy Act criteria (DEC, DOS)
- Requires guidance on use of natural resiliency measures to reduce risk (DEC, DOS)
- Requires model local laws to enhance resiliency (DOS, DEC)



<http://www.dec.ny.gov/energy/102559.html>

Regulatory Programs Covered by CRRA

DEC Permits

- Oil and natural gas wells
- Major projects:
 - Protection of waters
 - Freshwater wetlands
 - Tidal wetlands
 - Coastal erosion hazard areas
 - Mined land reclamation
 - Sewerage service
 - Liquefied natural gas and liquefied petroleum gas facilities

DEC Facility-siting Regulations

- Hazardous waste transportation, storage and distribution facility siting
- Petroleum bulk storage (including conformity with the uniform fire prevention and building code)
- Hazardous substance bulk storage



Funding Programs Covered by CRRA

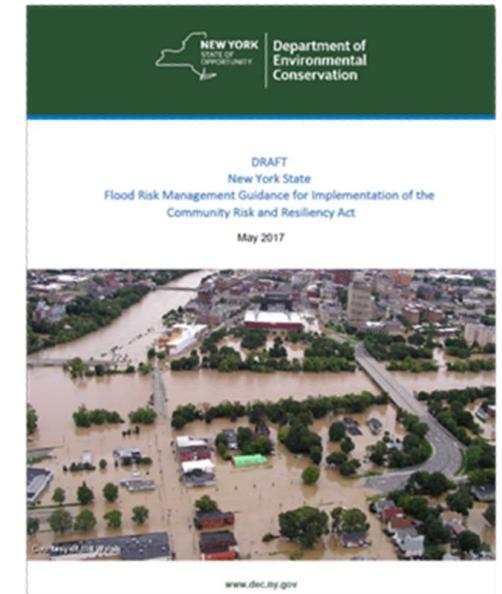
- Water Pollution Control Revolving Fund (EFC)
- Drinking Water Revolving Fund (DOH, EFC)
- Local waterfront revitalization (DOS)
- Open space acquisition (DEC, OPRHP)
- Agricultural and farmland protection (DAM)
- Landfill closure assistance (DEC)
- Coastal rehabilitation project assistance (DEC)
- Open space project operation and maintenance agreements (OPRHP)

Initialism	Agency
EFC	Environmental Facilities Corp
DOH	Department of Health
DOS	Department of State
OPRHP	Office of Parks, Recreation and Historic Preservation
DAM	Department of Agriculture and Markets



State Flood Risk Management Guidance

- Non-binding technical guidance to agencies
- Specific guidelines by structure type, tidal/nontidal
- Available for incorporation into
 - CRRA topical guidance & CRRA program-specific guidance, regulations, etc.
 - Programs not covered by CRRA
 - DEC's model local law for flood damage prevention, optional additional language



Additional CRRA Guidance

- Smart Growth Public Infrastructure Project Assessment Guidance
- Natural Resiliency Measures Guidance
- Model Local Laws

The 11th smart-growth criterion:
“To mitigate future physical climate risk due to sea-level rise, and/or storm surges and/or flooding, based on available data predicting the likelihood of future extreme weather events, including hazard risk analysis data, if applicable”



Associated Guidance

- Observed and Projected Climate Change in New York (complete)
- Coastal Consistency Review Guidance
- Calculation of Flood Risk Management Guideline Elevations
- ECL Article 15 Bridges and Culverts Guidance

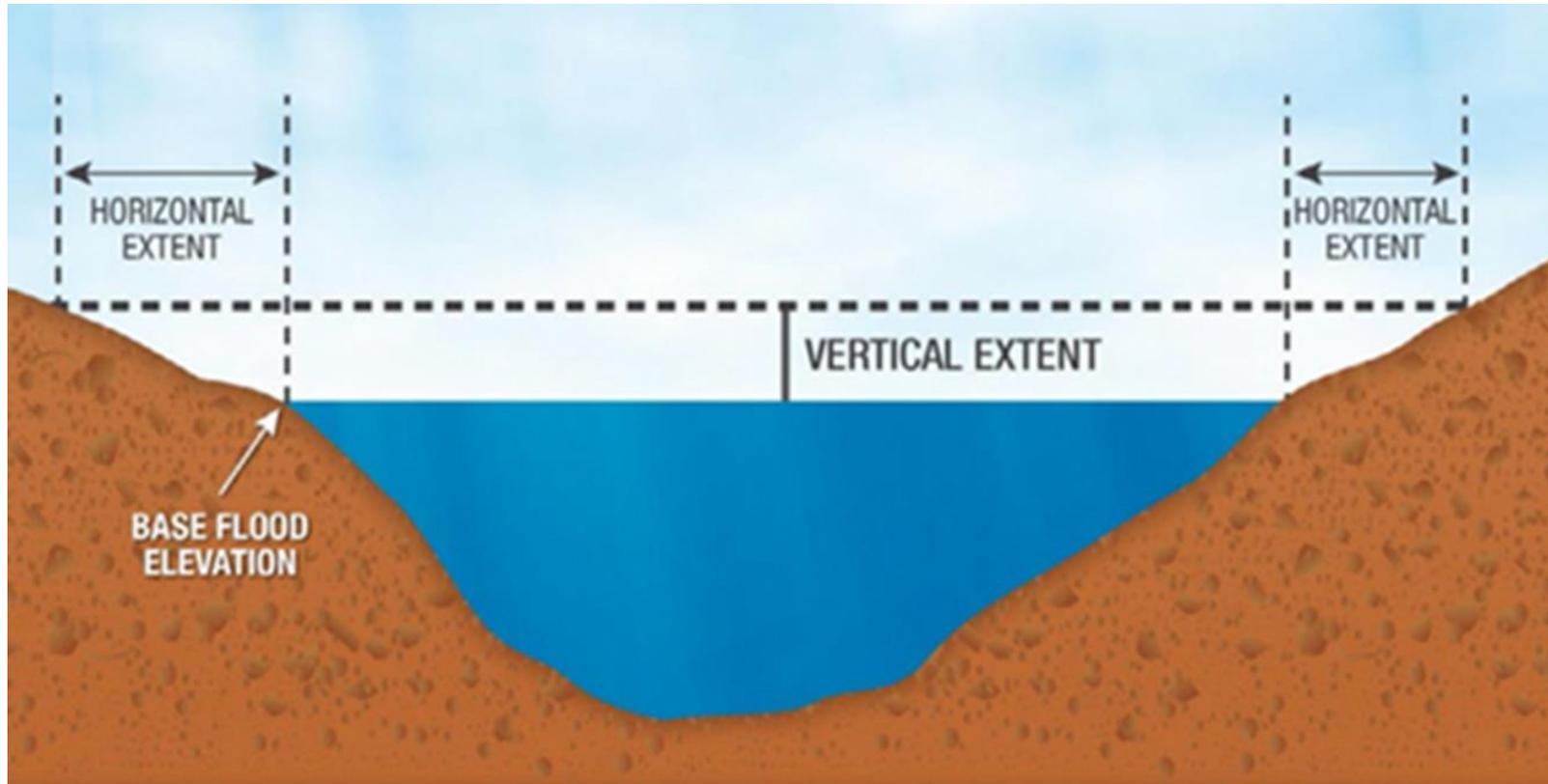


General Flood-risk Management Guidelines (highest of)

- The vertical flood elevation and corresponding horizontal floodplain that result from adding two feet (three feet for critical facilities) of freeboard to the base flood elevation and extending this level to its intersection with the ground.
- The vertical flood elevation and corresponding horizontal floodplain associated with the 0.2-percent annual chance flood.
- The vertical flood elevation and corresponding horizontal floodplain determined by a climate-informed science approach in which adequate, actionable science is available.



BFE + Freeboard, Horizontally Extended



The elevation & horizontal flood hazard area resulting from adding an additional 2 ft. to the base flood elevation (BFE + 3 ft. for critical facilities), and extending this elevation to its intersection with the ground

0.2% Annual Chance Flood



The vertical flood elevation and corresponding horizontal floodplain associated with the 0.2-percent annual chance flood (shown in pink here).

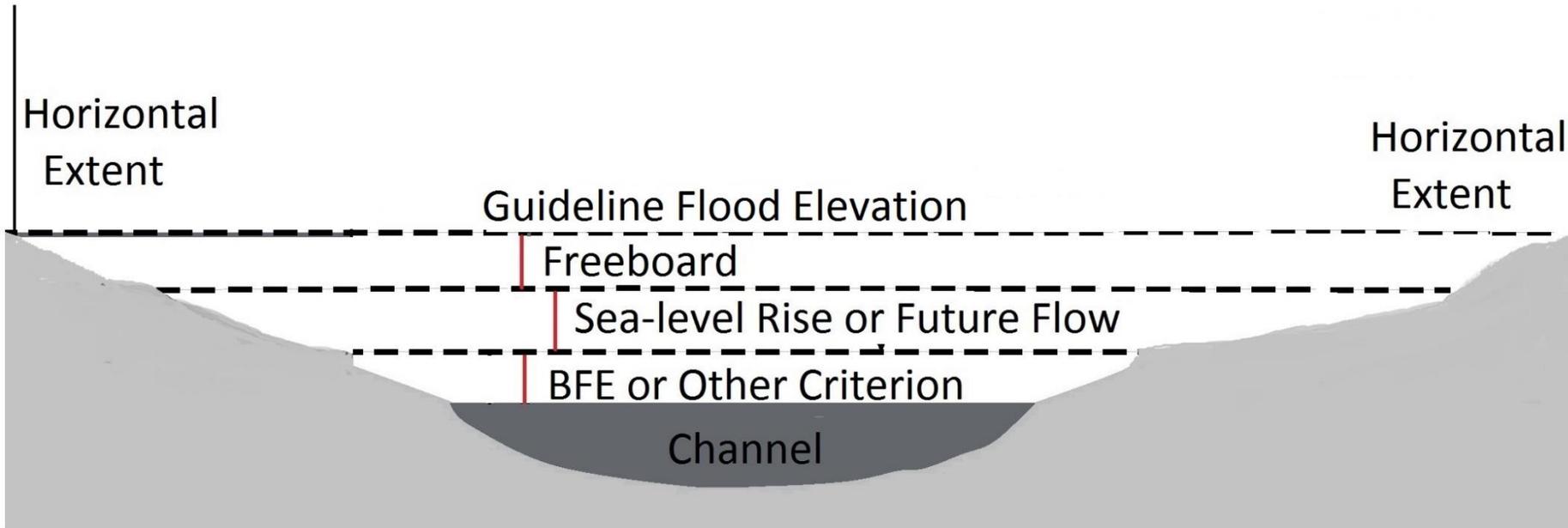
Climate-informed Science Flood-risk Management Guideline

Tidal Areas

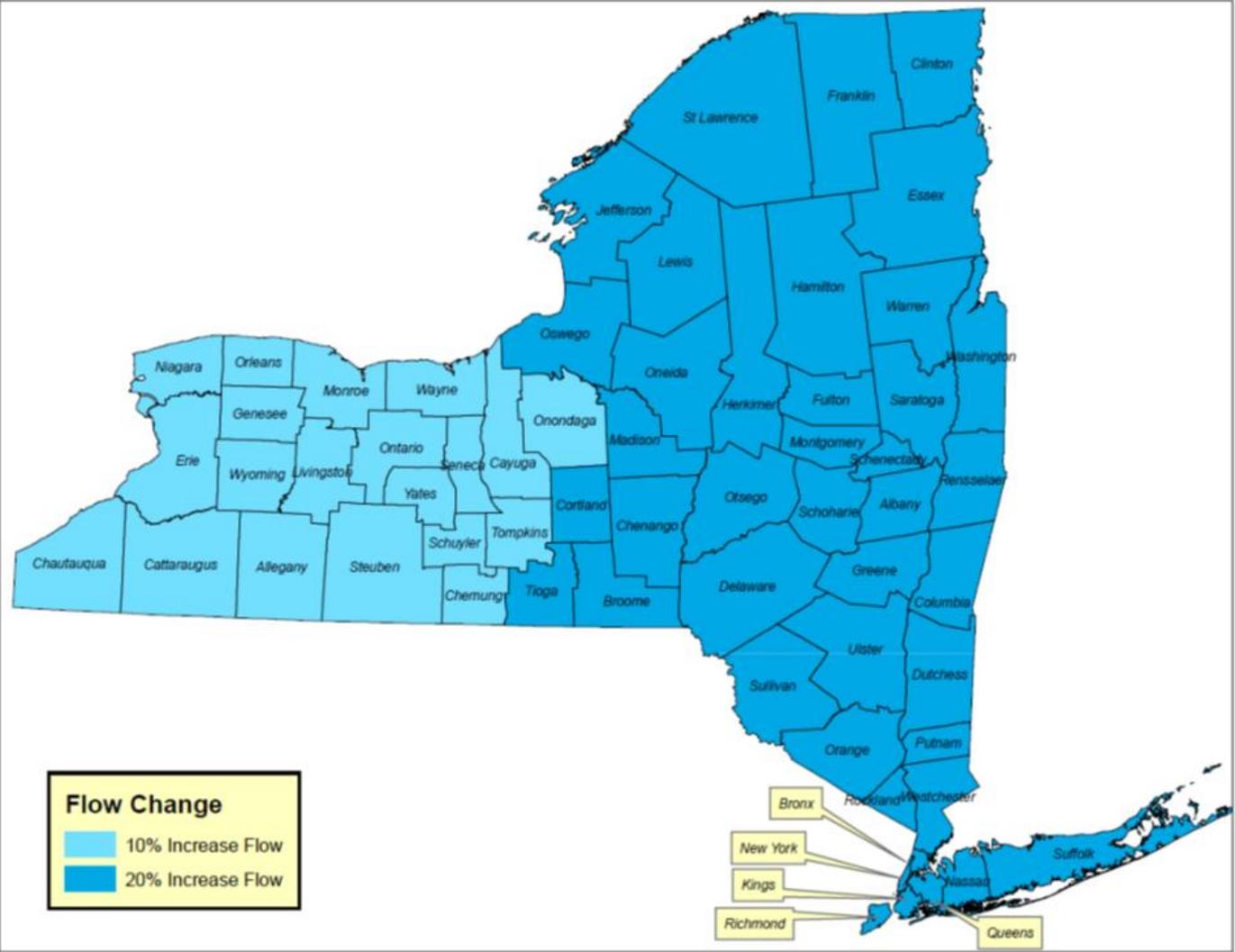
- Apply specified Part 490 projection

Nontidal areas

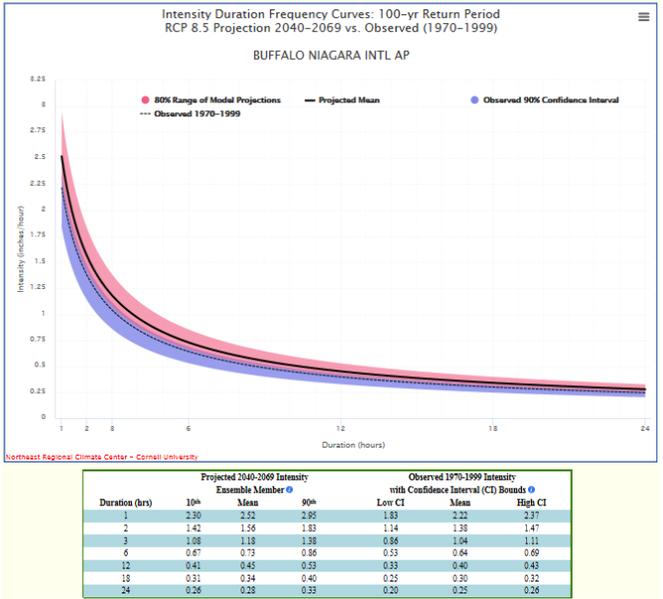
- Apply regional design-flow multipliers



Design Flow Multipliers



Resources: Future Extreme Precipitation



Station-specific IDF Graphs

Statewide Projected Change Maps

SELECT MAP OPTIONS

Return Period

- 2-yr
- 5-yr
- 10-yr
- 25-yr
- 50-yr
- 100-yr

Emission Scenario

- High RCP 8.5
- Low RCP 4.5

Time Period

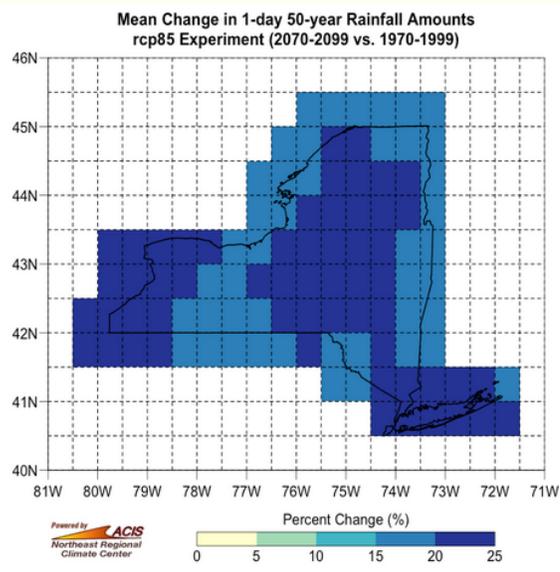
- 2010-2039
- 2040-2069
- 2070-2099

Ensemble Member

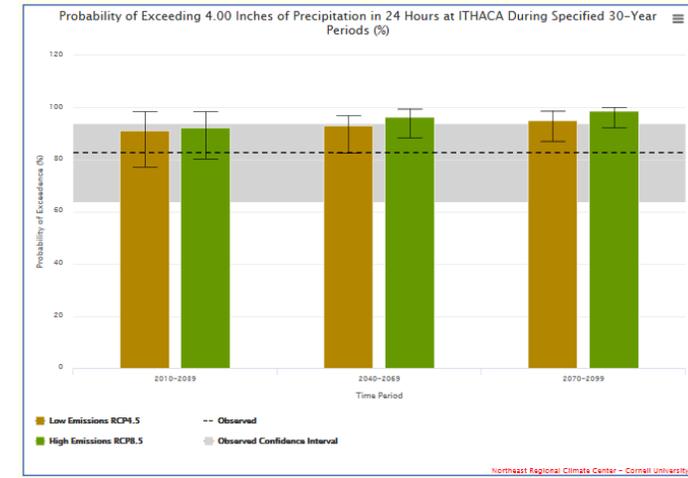
- 10th
- Mean
- 90th

Map Type

- Percent change
- Relative return period



Exceedance Probabilities



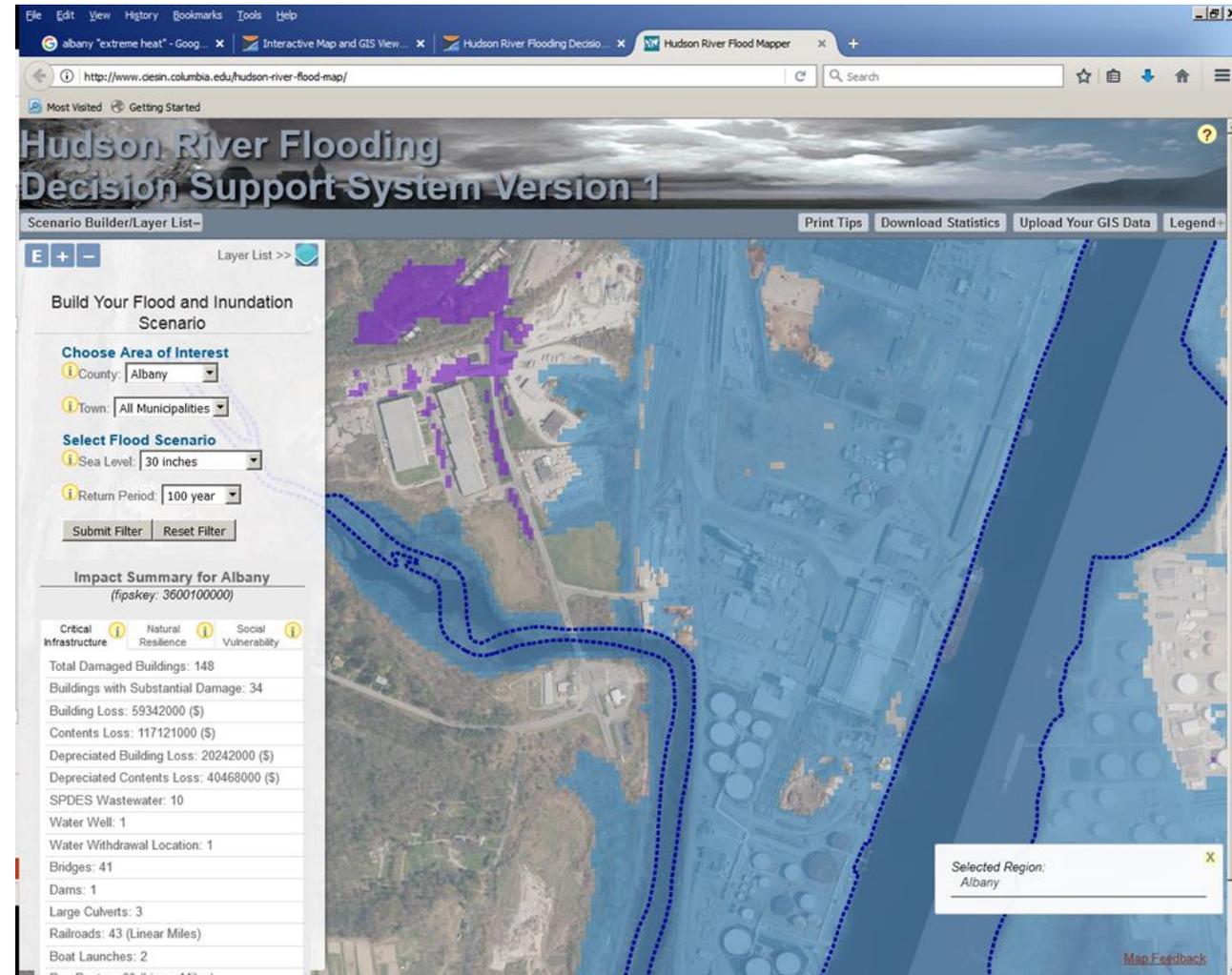
	Observed (1970-1999)	Projected (2010-2039)		Projected (2040-2069)		Projected (2070-2099)	
	Observed (1970-1999)	RCP 4.5	RCP 8.5	RCP 4.5	RCP 8.5	RCP 4.5	RCP 8.5
Mean	83	91	92	93	96	95	99
Lower Bound	64	77	80	83	88	87	92
Upper Bound	94	98	98	97	99	99	100

<http://ny-idf-projections.nrcc.cornell.edu/>

Resources: Hudson River Flooding Decision Support System

- Available for ten Hudson Valley counties
- Statewide system in progress
- Accessible directly or through NYCCSC

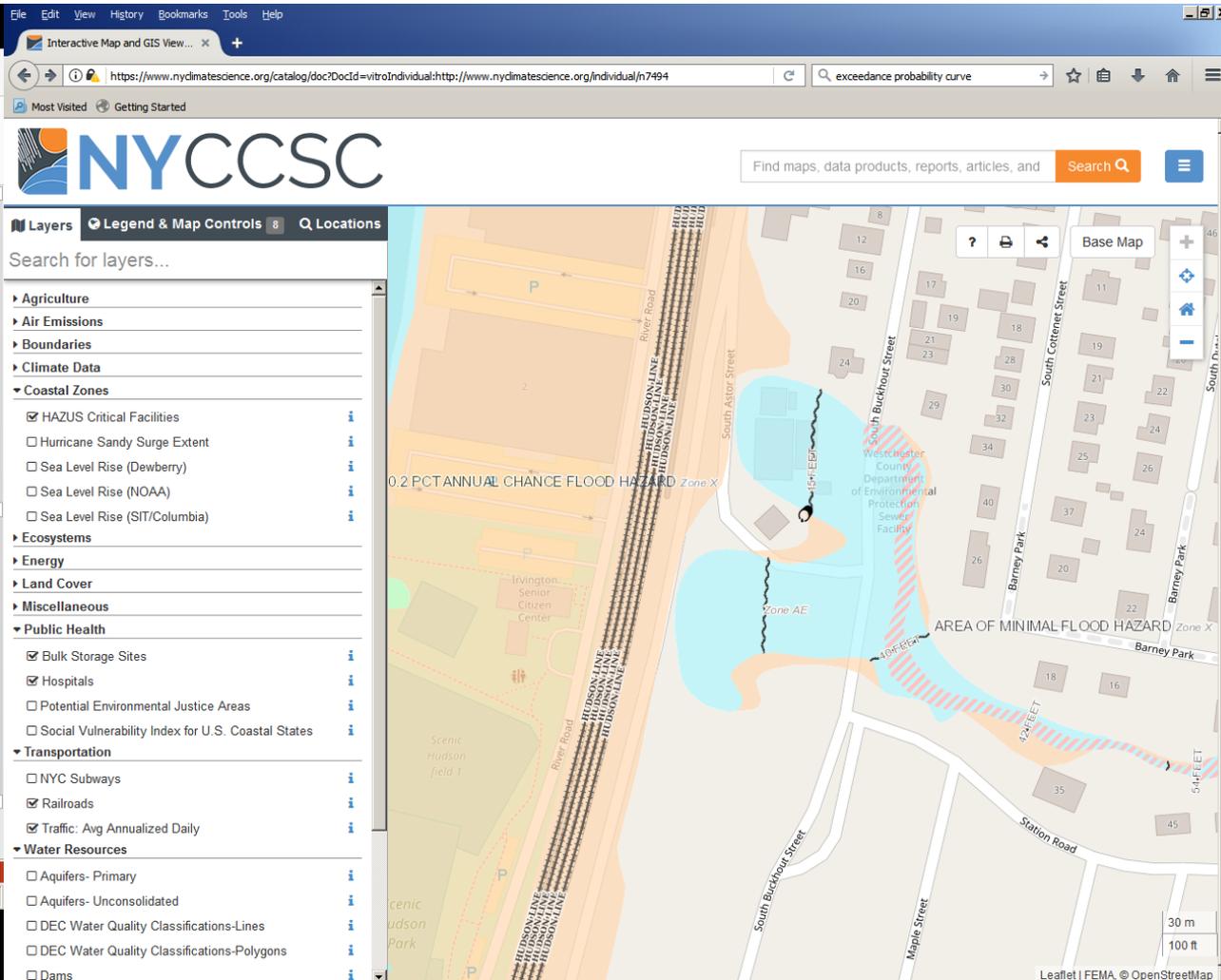
<http://www.ciesin.columbia.edu/hudson-river-flood-map/>



Resources: NY Climate Change Science Clearinghouse

Maps, data and documents to support decision making

<https://www.nyclimatescience.org/>



Thank You

Mark Lowery

Climate Policy Analyst

625 Broadway

Albany NY 12233-1030

Mark.Lowery@dec.ny.gov

Connect with us:

- DEC: www.dec.ny.gov
- Community Risk and Resiliency Act: www.dec.ny.gov/energy/102559.html
- Climate Smart Communities: www.dec.ny.gov/energy/76483.html
- Facebook: www.facebook.com/NYSDEC
- Twitter: twitter.com/NYSDEC
- Flickr: www.flickr.com/photos/nysdec

