

# Helping Hudson Riverfront communities adapt to climate change

Creating a state agency-academic partnership that uses design to inspire

Canal

Rise

Industry

L&B



Gabrielle Weiss  
November 2, 2016



# Roadmap

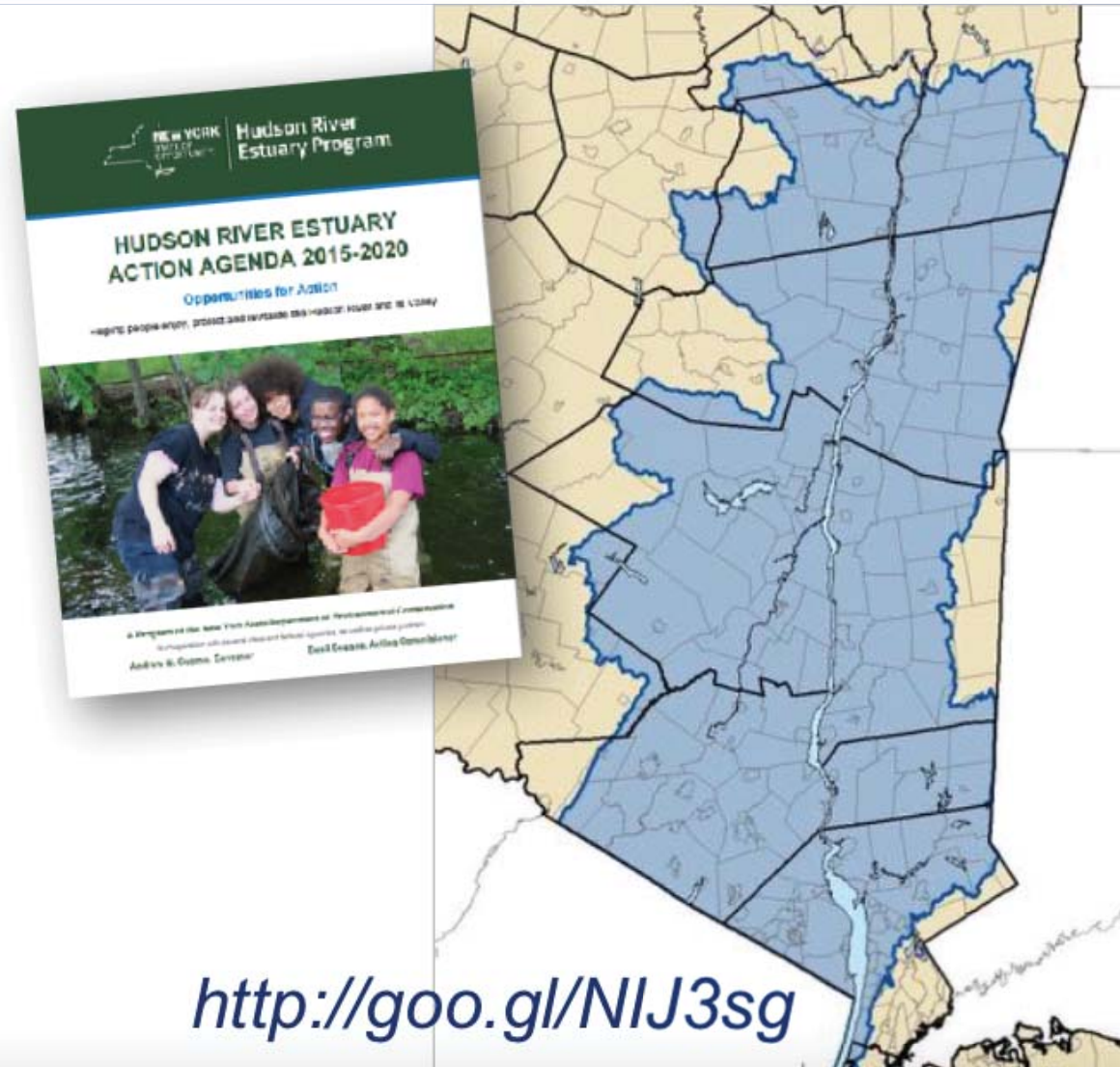
- Hudson River Estuary Program
- Climate risk context
- Climate-Adaptive Design process
- Strengths, weaknesses, next steps
- Wrap up



# The Hudson River Estuary Program

Working to achieve  
6 key benefits:

- clean water
- ***resilient communities***
- vital estuary ecosystem
- fish, wildlife, and habitat
- natural scenery
- education, access, recreation, and inspiration



# Context



Piermont pier during  
Hurricane Sandy, 2012

# New York faces 3 primary climate hazards leading to 3 major climate risks

## *Hazards*

Trends in our climate



- Increasing temperatures



- Changing precipitation patterns



- Rising sea level



## *Risks*

Impacts to humans



- Heat waves



- Short-term drought



- Flooding

# Focusing events: Hurricanes Irene and Sandy devastated Hudson Riverfront communities

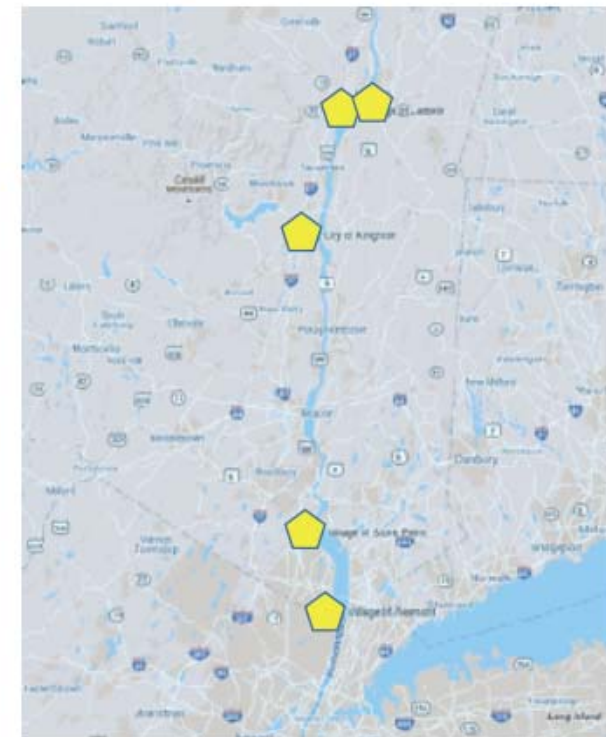


Department of  
Environmental  
Conservation

# The Estuary Program is helping communities adapt to climate risks



**Hudson  
Catskill  
Kingston  
Stony Point  
Piermont**



A painting of a landscape with a bay, trees, and mountains. The scene is a wide, open landscape with a large body of water in the foreground. In the middle ground, there are rolling hills with sparse trees, some of which are in autumn colors. In the background, there are blue mountains under a clear sky. The overall tone is peaceful and naturalistic.

**A lot can change in a century**

**so it's hard to visualize the future  
in the present**

*South Bay, on the Hudson, 1864*  
Sanford Robinson Gifford





## Climate-Adaptive Design shows communities what's possible

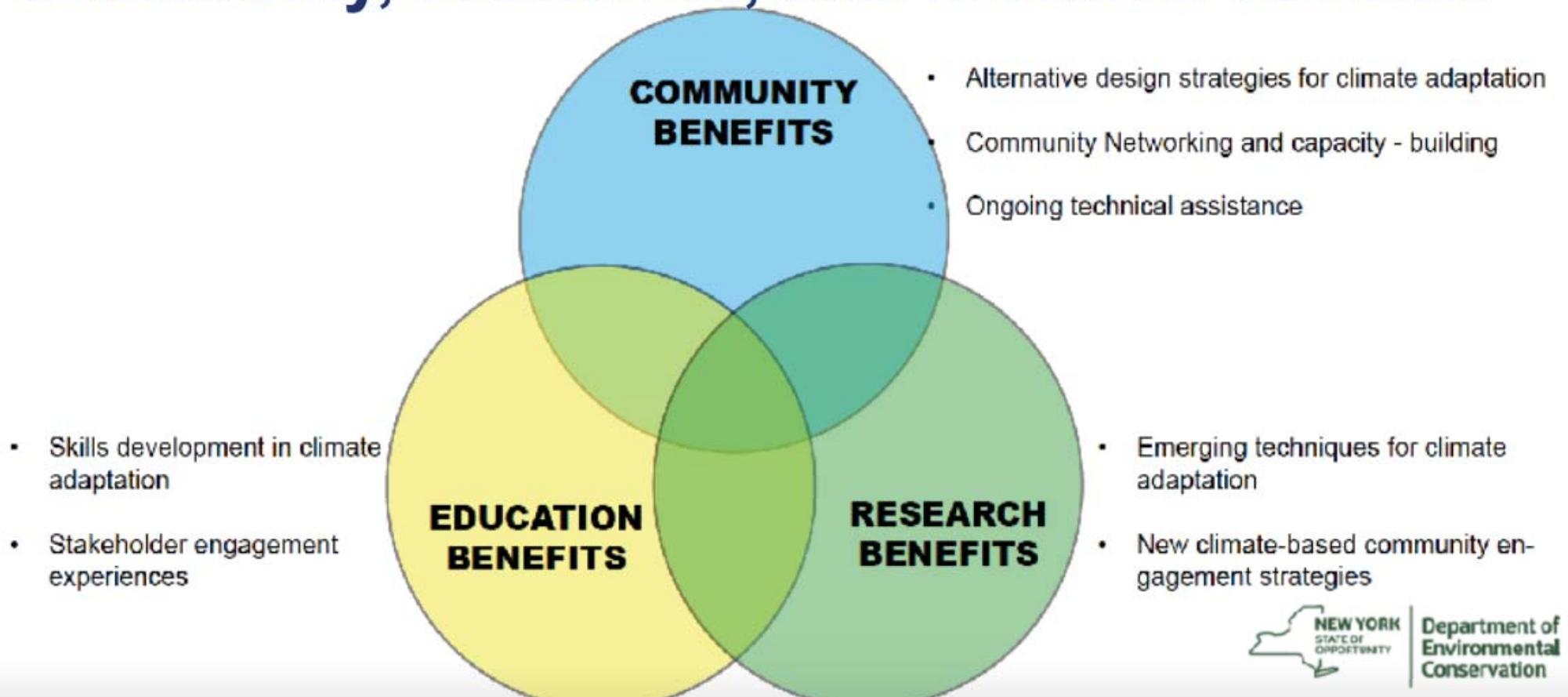


"Thank you so much for coming... the work that I saw has *completely changed* the way I think about waterfront development"

-Mayor Hamilton  
City of Hudson, NY

# Climate Adaptive Design Studio process

# The Climate Adaptive Design studio provides community, education, and research benefits



## The studio process engages community stakeholders through three phases

### Phase 1 – Site analysis

Gathering data and stakeholder interviews to understand site

### Phase 2 – Concept designs

Design and stakeholder review of initial site concept

### Phase 3 – Proposed plans

Final site design and open house



# The studio engages a comprehensive partners network

## State regulatory and funding agencies

Department of Environmental Conservation

Department of State

## Academic institutions

Cornell University Departments of

Landscape Architecture

Biological and Environmental Engineering

## Regional organizations

Cornell Cooperative Extension

Scenic Hudson



# Strengths, weaknesses and next steps

# Strengths

- Flipping the conversation around climate change, using design to inspire
- Low or no cost to community
- Comprehensive partnership with continued technical assistance
- Designed to fit within existing state funding and support structures



## Weaknesses

- Reaching a more diverse group of stakeholders
- Capacity to scale up and work with more communities



## Next steps

- Expanding CAD to incorporate engineering and architecture students to help bring designs farther along
- Testing ecological design metrics
- Measuring social resilience impact (survey)
- Sharing research outcomes with broader audience

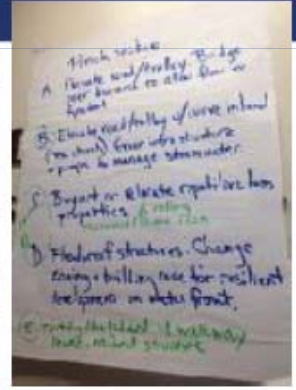


## Wrap up

- Hudson Riverfront communities face flooding and other climate risks
- The Climate-Adaptive Design studio provides no cost support
- Using design to inspire turns climate adaptation into a positive conversation
- Continuing to support communities after the studio
- Continuous improvement moving forward



# Thank You



## Libby Zemaitis

Climate Outreach Specialist, Hudson River Estuary Program

[Libby.zemaitis@dec.ny.gov](mailto:Libby.zemaitis@dec.ny.gov) | (845) 256-3153

Sign up for our **Climate Resilience Newsletter!**

<http://goo.gl/6dwphW>

Visit our website on Climate Change in the Estuary

<http://goo.gl/tM3AbZ>