

Preparing Urban Communities for Climate Change

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How Urban Communities are responding to Climate Change

- Industrial waterfronts
- Densely populated
- Vulnerable communities
- Aging infrastructure
- No where to retreat to

Hurricane Sandy Impacts on our Urban Coast

October and November 2012

Kearny Marsh
Storm surge caused severe damage, relocating many park features

Ironbound Flooding, Newark, NJ
Flooding on east of Chapel Street along Esther, Joseph, Wayfield and Foundry Streets, on the eastern end of Ferry Street and Raymond Boulevard

PVSC - Newark, NJ
Lost power 8:39 PM Oct. 29. Seven billion gallons of raw and partially treated sewage discharged as of Nov. 28. Facility still not at full treatment capacity

Port of Newark
16,000 cars, mostly Toyotas and Nissans, destroyed.

Philips (aka Bayway)
Linden NJ - 5,040 gallons of refined oil released, 882 gallons recovered as of November 12. An open waste pool was also disturbed by the storm.

Kinder Morgan
Carteret, NJ - 10,000 gallons of Biohiesel released, 400,000 gallons of contaminated water recovered.

Motiva Diesel Spill
Woodbridge, NJ - 378,000 gallons of diesel released, 227,000 gallons escaped secondary confinement and 100,000 gallons were recovered as of November 12th

MCUA - Sayreville, NJ
Low pump stations on Oct. 29, as of Nov. 28 over 750 million gallons of raw sewage discharged. Four temporary bypasses installed on Nov. 16.

Waterways: Elizabeth River, Morses Creek, Piles Creek, Rahway River, Smith Creek, Woodbridge River, Raritan River

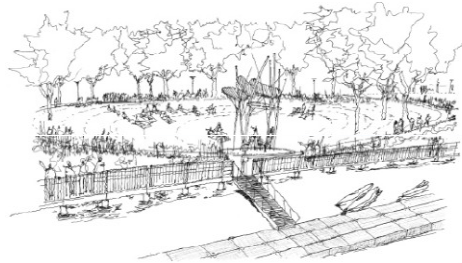
Logos: Hackensack RIVERKEEPER, NJ/NY BAYKEEPER, Protect. Preserve. Restore.

How Urban Communities are responding to Climate Change

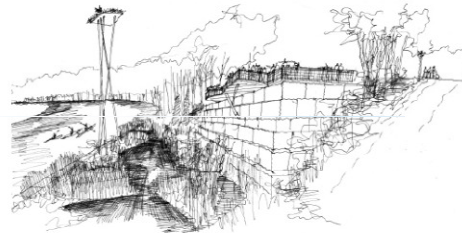
- Green Infrastructure
- Land use planning and rezoning
- Community Based Climate Planning & Resiliency



NEWARK RIVERFRONT PARK (FULL DESIGN)



PICNIC LAWN, PERFORMANCE PAVILION, BOARDWALK, AND FLOATING BOAT DOCK

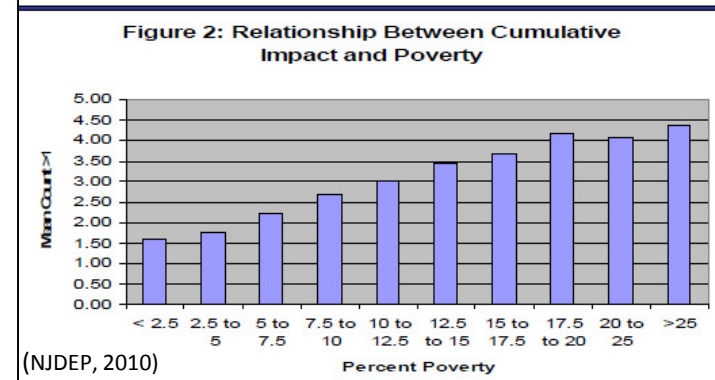
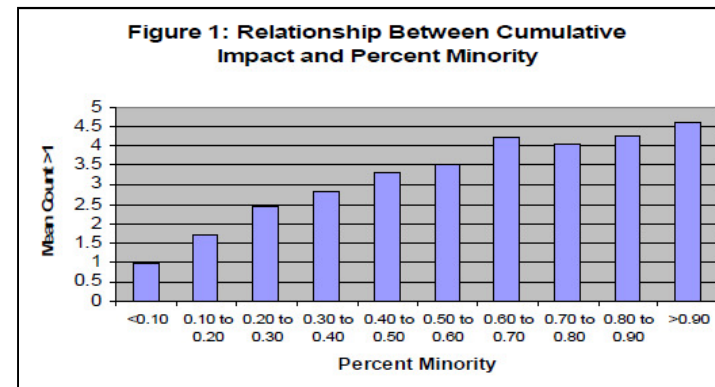
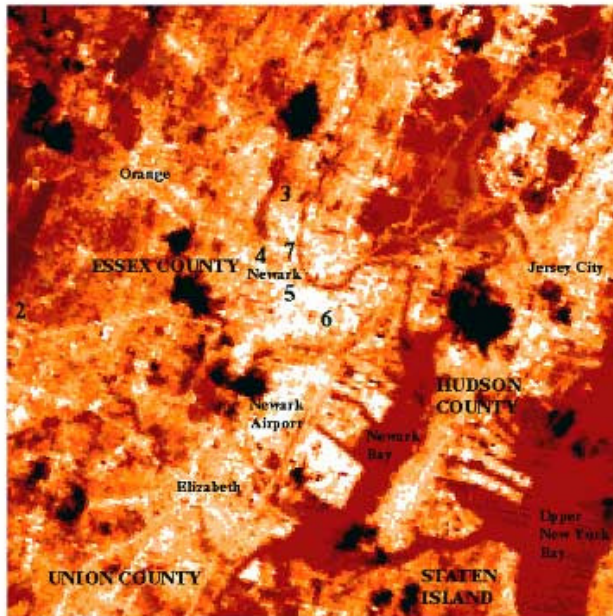


OVERLOOK AND OSPREY ROOK



What are critical gaps for Urban communities?

- Emergency Preparedness Communication Tools
- Adaptation measures related to industrial & aging infrastructure
- Potential exposure to industrial pollutants & health impacts
- Exacerbation of existing inequalities

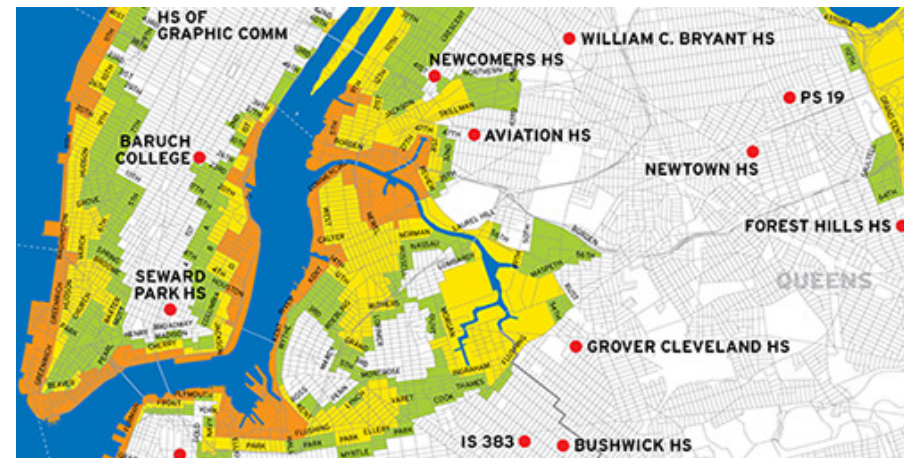
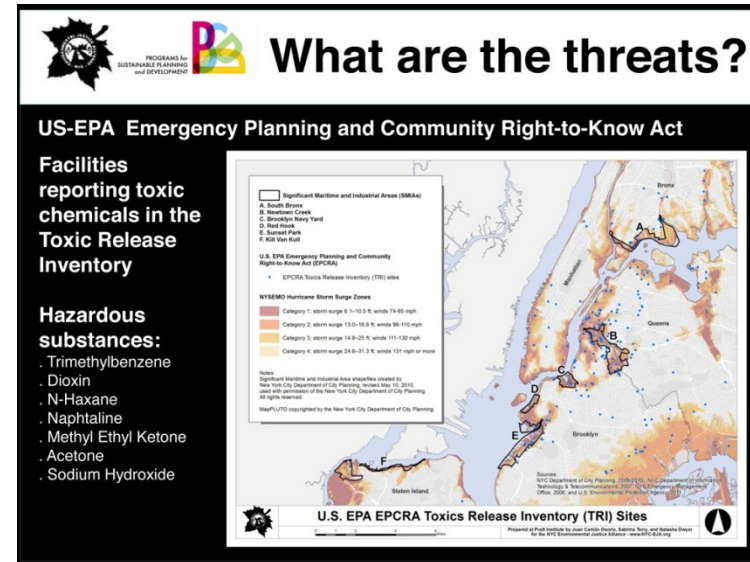
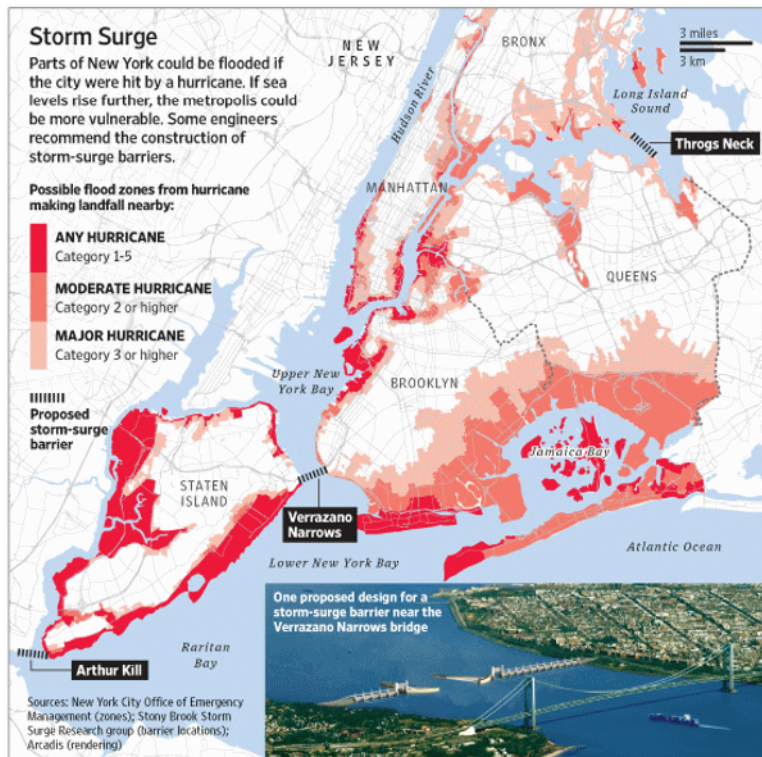


(C. Rosenzweig, 2005)

(NJDEP, 2010)

What are critical gaps for Urban communities?

- NYC SMIA area maps
- Flood evacuation zones
- Climate Risk Scenarios



What are the policy gaps

- Training & funding for ***community based 1st responders***
- Clear understanding of ***vulnerable populations & public health impacts***
- Climate adaptation for ***industrial infrastructure***
- Adjusting ***land use and zoning*** in dense urban environments
- ***Cumulative impacts and EJ*** policies that address inequalities



What are the opportunities for climate preparedness and working together?

- Bi-State, Regional approaches based on vulnerabilities
- Sharing best practices, training & communication tools
- Broadening the stakeholders in climate adaptation planning

