Southeast Brooklyn Waterfront Planning Committee Meeting #4

September 17, 2014
Agenda for Planning Committee Meeting #4

1. Public Engagement Event #2 debrief 7:00-7:15pm
2. Project brainstorming 7:15-8:45pm
   a. Coastal Protection 7:15-8:00pm
   b. Power 8:00-8:45pm
3. Next steps 8:45-9:00pm
Where we are in the process

Next deliverable: list of *preliminary* projects due on Oct. 3

Next 2 weeks: brainstorming project ideas

### SEPTEMBER/OCTOBER

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Meeting goals and desired outputs

Goals:
- Review PE#2 and outreach strategy
- Update strategies list
- Gather Committee input on potential coastal protection and power projects
- Understand various feasible project options

Outputs:
- Set of preliminary project ideas for coastal protection and power
NY Rising to the Top competition

Possible additional funds:

1. Regional Approach (award amount: $1.5 million)
2. Inclusion of Vulnerable Populations (award amount: $1.0 million)
3. Use of Green Infrastructure (award amount: $1.0 million)

Intent to Apply due October 15th
Public Engagement Event #2 debrief
Public Engagement Event #2 debrief

Attendance: 30 people

How can we increase attendance?

- Civic Association meetings
- Schools: Backpack mailers
- Targeted flyering
- Posters/postcards placed in stores/restaurants
- E-mail blasts
- Untapped religious, cultural organizations?
Public Engagement Event #2 strategy voting results

What should NY Rising in Southeast Brooklyn Waterfront focus on? Vote for your 3 most important strategies.

1. Improve stormwater and wastewater management to prevent flooding and backup

2. Leverage existing assets (including wetlands, plants/vegetation) to stabilize coastal edge and reduce flooding

3. Make power supply more resilient and redundant

4. Enhance emergency preparedness and response through reliable communications, centralized spaces, transportation coordination, and strengthened capacity of existing organizations/programs

5. Improve residential resiliency through education, technical assistance, and funding

6. Discourage development at at-risk undeveloped locations

7. Avoid, minimize, and mitigate any potential negative impacts from new projects

8. Improve resiliency of commercial corridors

9. Ensure access to food and critical supplies
# Public Engagement Event #2 strategy voting*

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<td>Stormwater and wastewater management</td>
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<td>Coastal edge protection</td>
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<td>Emergency preparedness and response</td>
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<td>Power supply resiliency</td>
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<td>Residential resiliency</td>
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<td>Discouraging development at at-risk locations</td>
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<td>Food and critical supplies</td>
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<td>Commercial corridor resiliency</td>
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*Note: this reflects informal Community feedback and is intended as a tool for the Committee. It is not a formal vote.
In this phase, we’ll identify preliminary initiatives for evaluation and funding.

**Proposed Project**
- Appropriate scale and cost
- Short- to medium-term
- Can be fully funded with CDBG-DR allocation

**Featured Project**
- Appropriate scale and cost
- Short- to medium-term
- An initial study or discrete phase can be funded with CDBG-DR allocation / another identified funding source
- May require other funding for full implementation

**Recommendation**
- City/state/federal entities already working to address
- Policy recommendation
- Short-, medium- or long-term
In this phase, we’ll identify preliminary initiatives for evaluation and funding.

- **Fully funded** with Community’s NY Rising Community Development Block Grant Disaster Recovery (CDBG-DR) allocation

- An initial study or discrete first phase is funded by Community’s NY Rising CDBG-DR or another identified funding source. May require additional funding sources for full implementation

- Projects and actions the committee would like to **highlight** and are not categorized as Proposed or Featured Projects

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**Proposed Projects**

**CDBG-DR Allocation**

**Featured Projects**

- **Future Additional Funding**
- **CDBG-DR Allocation**
- **Other Funding Source(s)**

**Additional Resiliency Recommendation**
For example:

**STRATEGY:** Enhance coastal protection / Mitigate negative impacts from new projects

**Project**
- Comprehensive flood protection study
- Targeted flood protection intervention

**Recommendation**
- Recommend that agencies incorporate flood protection strategies for SEBW into existing plans (e.g., USACE reformulation study)
- Review and mitigate any negative impacts from existing projects
List of strategies

Which are the biggest priorities, and which should be consolidated or removed?

- Improve **stormwater and wastewater management** to prevent flooding and backup
- Leverage existing assets to **stabilize coastal edge and reduce flooding**
- Make **power supply more resilient** and redundant
- Enhance emergency preparedness and response through reliable communications, centralized spaces, transportation coordination, and strengthened capacity of existing organizations/programs
- Improve **residential resiliency** through education, technical assistance, and funding
- Discourage development at at-risk locations
- Avoid, minimize, and mitigate any **potential negative impacts from new projects**
- Improve **resiliency of commercial corridors**
- Ensure **access to food and critical supplies**
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COASTAL PROTECTION

Strategy: Leverage existing assets to stabilize the coastal edge and reduce flooding
What are we protecting against?
Storm intensity and frequency is increasing.
What are we protecting against?
Coastal hazards

Event-based hazards: Coastal storms

Gradual hazards

Event-based hazards: the 100-year storm and 500-year storm
Gradual and Event Based Hazards: Sea level rise and more frequent storms
Protecting against surge
Regional: Leverage existing plans
Protecting against surge
Neighborhood approach
Protecting against surge
Local approach: targeted locations
Gradual hazard: Sea level rise
Local approach: Targeted locations
Techniques to protect against storm surge (keeping the water out)

- Permanent Floodwalls
- Seawalls
- Levees
- Deployable Floodwalls
- Tidegates
- Berms
Strategies to combat sea level rise and erosion: Raise coastal edge elevations

- Raise / repair bulkheads
- Revetments
- Wetlands
- Living Shorelines
What approaches should we consider for SEBW?

Event-based protection

- Regional approach
- Neighborhood approach
- Local approach (Avenue U and Bergen Beach)

Gradual hazard protection

- Targeted sea level rise protection
- Wetland restoration / erosion protection

Questions to consider

- What approaches have the most value (cost/benefit)?
- What approaches address your needs?
- What hazards are most critical to protect against?
POWER

Strategy: Make the power supply more resilient and redundant
How the system works

Generation, transmission, and distribution
Threats to the power system from coastal storms

Most electrical outages during Sandy were caused by damage to the electricity distribution system

- Substations not affected during Sandy
- Toppled trees and intense winds damaged overhead power lines.
- Individual household/apartment building equipment was flooded from seawater and took longer to get back on line after power was restored.
Potential techniques: Protect distribution system

Protect service lines
- Strengthen/harden power lines
- Proper tree maintenance
- Relocate some/all of system underground
- Install smart-grid technologies to rapidly identify location of problem and minimize extent of impact
Potential techniques: Protect delivery systems at the receiving end

Protect home equipment

- Get it out of harm’s way
  - Raise switches, sockets, breakers, and wiring
- Make it floodable
  - Replace with submersible equipment

Opportunities: Rapid Repairs (FEMA): made licensed electricians available to repair customer-side electrical damage
Potential techniques: Alternative power: Solar

Panels on individual buildings or covering parking areas

Pros
- Resilient: can function when grid goes out
- Retains benefit of using grid power during normal operations
- Can reduce electricity costs
- Low maintenance
- Both benefits and negatives to the grid

Cons
- High up-front costs
- Intermittent
- Expensive energy storage (batteries)
- Space requirements and FDNY restrictions
- Not market competitive

Components
- Panel for generation
- Battery for storage and smoothing fluctuation
- Connection to grid
- Smart inverters
Potential techniques: Alternative power: Wind

Pros
- Strong winds, high capacity factors
- Functions when grid goes out
- Feeds into grid during normal operations

Cons
- Should be combined with an energy storage system
- Upfront costs
- Avian & other environmental impacts
- Large space requirements
- Regulatory restrictions
- Needs proper conditions

Three types of wind power
- Small-wind
- On-shore
- Off-shore
Potential Techniques: Back-up power: Generators

Can be powered by diesel or natural gas

Pros
- Resilient: can function when grid goes out
- Reliable & tested

Cons
- Fuel requirements (on-site storage vs. risk of losing natural gas connection)
- Spatial requirements
- Location (roof, raised platform)
- Upfront costs and costs of potential retrofits
- Ongoing maintenance
- Environmental impact

Considerations for generator sizing
- Building size
- Building use and activity
- Building age
- Percentage of facility in use during emergency
- Number of people to accommodate during an emergency
Questions to Consider

Are there specific sites where you think alternative and/or backup power would be beneficial?

Are there places where you would like to see alternative power used?

What role do you see alternative power playing in the community (i.e., for resiliency or everyday use)?
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Next steps

NYC DEP meeting (scheduling in progress)
  - Drainage

Next PC meeting: Oct. 1st, 7pm
  - Emergency Preparedness, Economic Development, and Housing

Rising to the Top Competition: Intent to Apply due Oct. 15th