



# East Bronx Waterfront Planning Committee Meeting #6

October 7, 2014

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# Agenda for Planning Committee Meeting #6

1. Committee business 6:00pm
2. Project Screening Process 6:10pm
3. Initial projects ideas 6:20pm
  - a. Emergency preparedness
  - b. Economic resiliency
  - c. Alternative power sources
4. Next steps 7:45pm

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## Committee business

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### 1. Ethics and Code of Conduct

\_\_\_ I am an employee or an elected or appointed official of unit of government that is currently receiving Community Development Block Grant (CDBG) funds (other than those funds Communities stand to receive through the NY Rising Community Reconstruction Program).

\_\_\_ I am an employee or officer of a public agency currently receiving CDBG funds (other than those funds Communities stand to receive through the NY Rising Community Reconstruction Program).

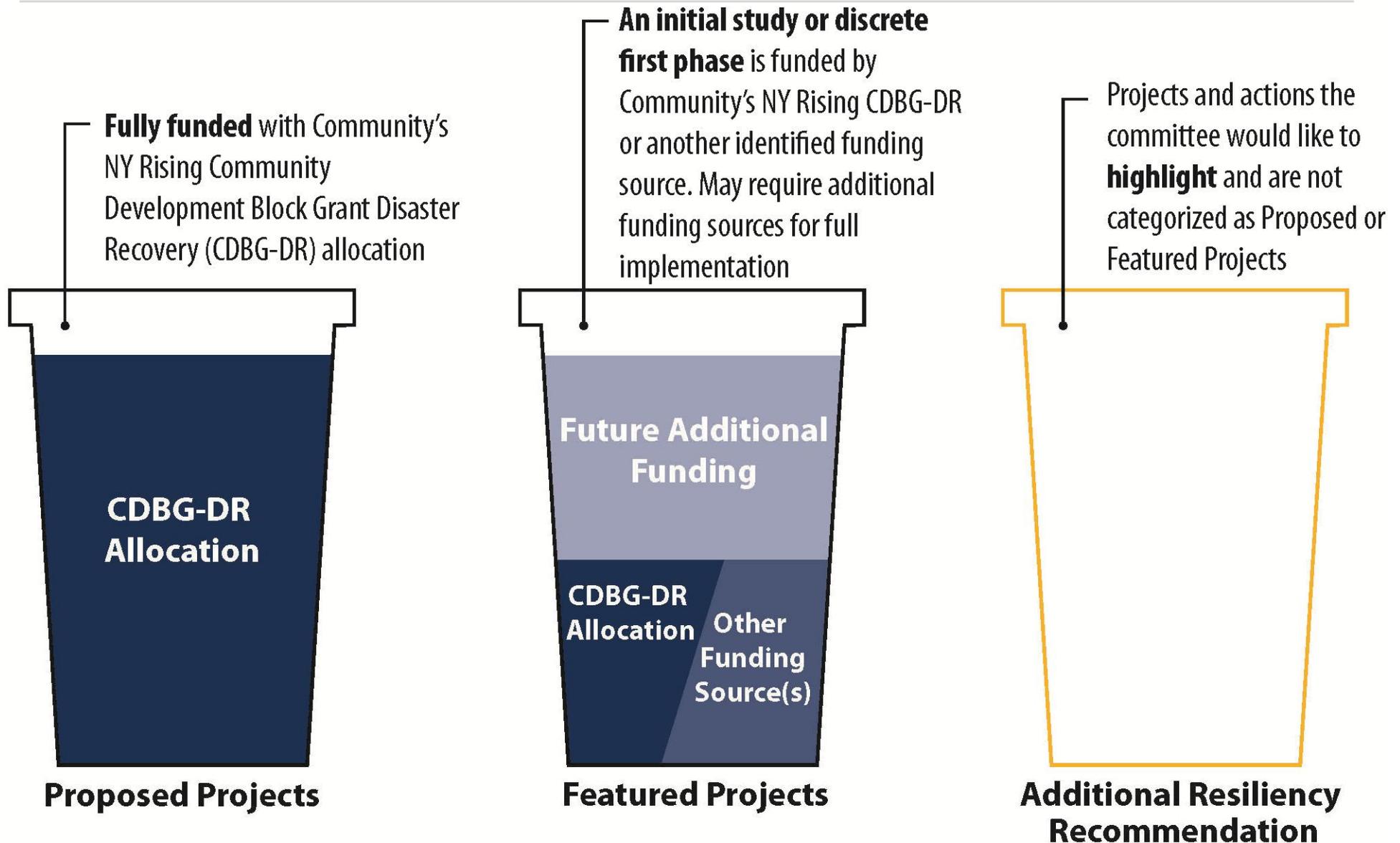
\_\_\_ I am an employee or officer of a subrecipient currently receiving CDBG funds (other than those funds Communities stand to receive through the NY Rising Community Reconstruction Program).

\_\_\_ None of the above.

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# NY Rising Project Buckets



# Evaluation criteria for NY Rising project prioritization

Term	Feasibility	Cost	Risk Reduction	Co-Benefits	Potential CDBG-DR Eligibility	Other Criteria?
<i>Short (1-2yrs), Mid (2-5yrs), Long (5+yrs)</i>	<i>High, Medium, Low</i>	<i>High, Medium, Low</i>	<i>High, Medium, Low</i>	<i>Resiliency Co-Benefits, Non- Resiliency Co-Benefits</i>	<i>High, Medium, Low</i>	

# Criteria defined

Criteria:	Feasibility	Cost*	Risk Reduction	Co-Benefits
High	Little to no physical, regulatory, or political impediments to implementation. Could initiate program/construction, given the funding, within a year	\$1-3M	Eliminates threat or thoroughly protects	Co-Benefits include both resiliency and non-resiliency related benefits.
Medium	Some physical, regulatory, or political hurdles to implementation but could still be implemented (given funding) within 5 years	\$500K - \$1M	Significantly enhances resiliency or provides some protection from flooding	Resiliency Co-Benefit example: Lays groundwork for future risk reduction  Non-resiliency Co-Benefit examples: Job growth, social services, preservation of neighborhood character
Low	Many and difficult physical and regulatory hurdles to implementation. Once approved / funded would likely take more than 5 years to implement	<\$500K	Provides little to no protection from flooding and does little to enhance resiliency	

\* Very High Cost = >\$3M

Future criteria: Public Support, Funding Availability

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## Strategies (in no particular order)

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1. Maintain community's close relationship to the water by developing diverse coastal edge protection measures
2. Provide alternative power sources in housing and key community facilities
3. Develop local community plan to improve emergency preparedness
4. Ensure economic resiliency for property owners in flood prone areas
5. Improve and increase the capacity of storm water management infrastructure

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# EMERGENCY PREPAREDNESS



Strategy: Increase local preparedness and capacity for emergency response

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## Needs identified at PE#1 and PE#2

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### Coordination, communication, and planning

- Better physical access between communities
- Technology that can facilitate emergency information exchange across communities and help to make all residents better informed
- Education on emergency readiness and storm recovery

### Relief and services

- More assistance for seniors during evacuations
- Community spaces to serve in recovery efforts at central location in different areas across the planning area
- Volunteers that will participate in local relief efforts

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# Who is involved in emergency preparedness and response in New York City?

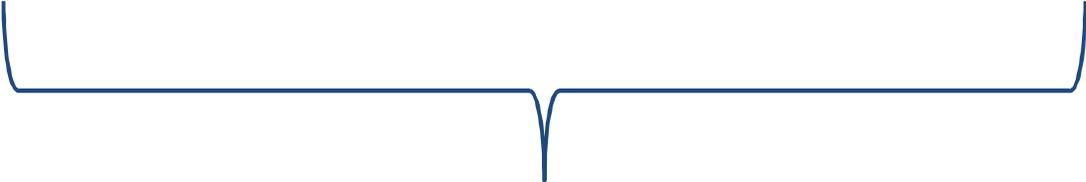
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Federal Agencies  
(e.g., FEMA, US SBA,  
HUD)

City Agencies  
(e.g., NYC OEM,  
HPD, NYPD)

Citywide/National  
Organizations  
(e.g., Red Cross)

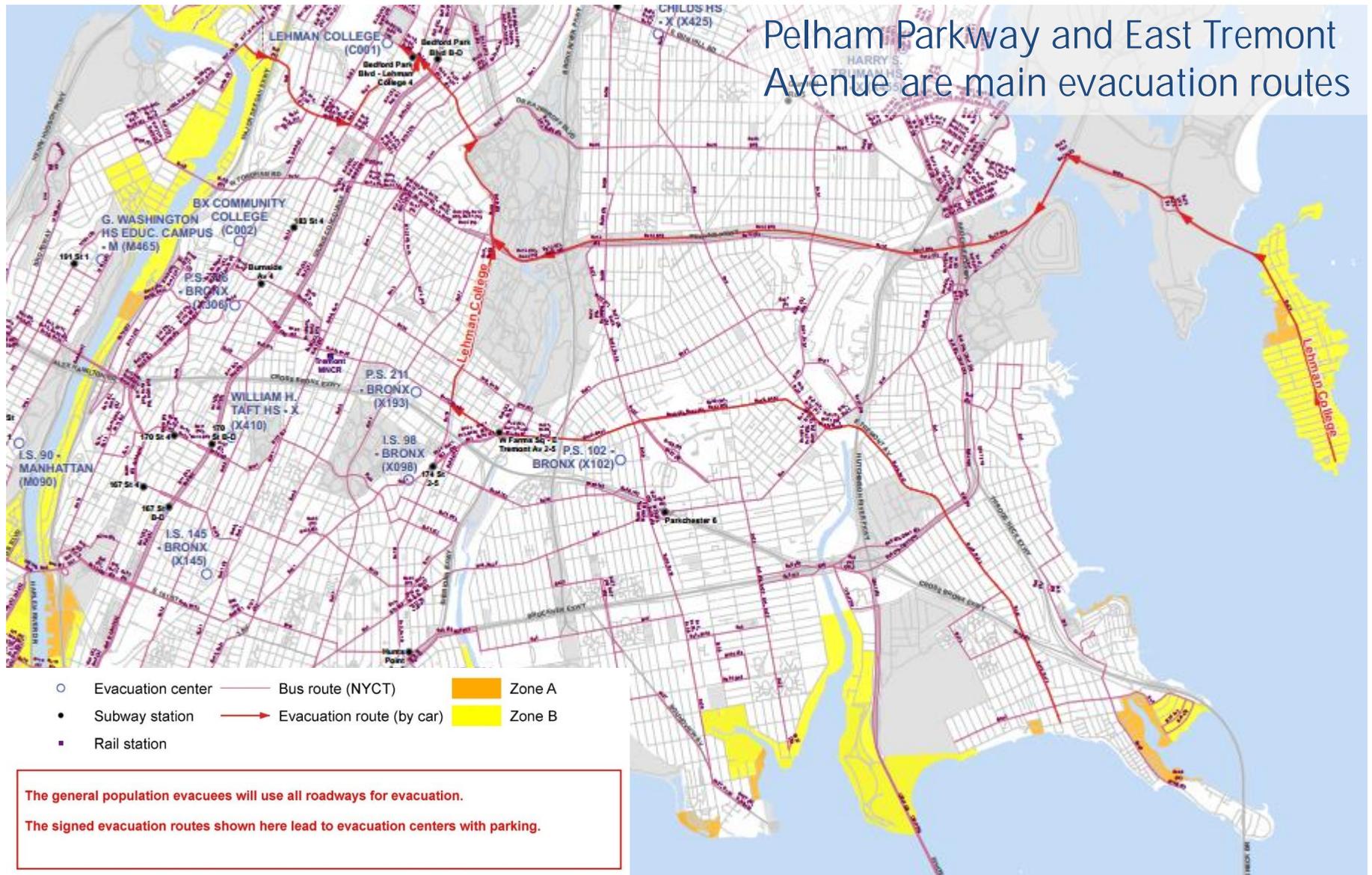
Community-Based  
Organizations  
(e.g., local schools,  
churches, non-profits and  
volunteer groups)



Community Emergency  
Response Teams (CERT)  
(e.g., CB 12 CERT)

# Current Evacuation Plan

Pelham Parkway and East Tremont Avenue are main evacuation routes



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# Communication and Education

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## Sharing City information

- City already produces preparedness and response resources, including the Ready NY guide, Know Your Zone site, and Notify NYC alert system
- Ways to increase registration, distribution of City materials through Community networks



Source: NYC.OEM

## Additional Community-specific information

- Alarm system
  - Flood siren may disturb neighboring communities
  - Other methods of warning: sensors, cell phone alert, website information
- Local preparedness manual and programming



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# Precedent: Los Angeles Neighborhood Disaster Planning

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The LA Emergency Management Department has developed a five step toolkit to encourage neighborhoods to create emergency plans:

1. Flyer materials: to initiate neighborhood meeting
2. Facilitator guide: resource for person leading the meeting
3. Neighbor survey: way to find out which neighbors might need extra help in a disaster and which neighbors have special skills or training that might be helpful in response
4. Plan Template: structure to create a neighborhood disaster plan
5. Emergency Door Hanger: to put on door after a disaster when 9-1-1 assistance is not available. Meant to help neighbors identify who to aid first.



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# Local Emergency Preparedness and Response Program

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Possible elements:

1. Community-wide coordinator

2. Coordination plan:

- Protocol for coordination among agencies in area, with CBOs
- Capacity and needs assessment of CBOs, other providers
- Roles and responsibilities of CBOs, resource/recovery center network
- Assessment of current information delivery systems, potential technologies
- Strategies for assisting vulnerable populations

3. Community-wide educational materials and programming

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# Discussion

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## Communication and Coordination

- What is the most effective way of sharing information within your neighborhood?
- Are there existing organizations or networks that share information between neighborhoods?

## Local Emergency Plan

- What would your Community's plan and educational materials cover?
- Is a staff person important? If so, what should they be responsible for?

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# Assistance to Vulnerable Populations

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## Who is vulnerable in the Community?

- Residents unable to help themselves
- Those who are disproportionately impacted in a storm event

## Vulnerable populations may include:

- Children
- Seniors
- Special needs
- Very low income

Registry or database of vulnerable community members would have to be voluntary opt-in

- Privacy – concern among public around providing personal information
- Accuracy – ensuring the registry is up-to-date



*City Island Presbyterian Senior Services*

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# Use of Community Spaces

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## Recovery Efforts

- City already operates a system of overnight evacuation shelters
- Formalizing community relief efforts to supplement City emergency operations, not replace them
- Identifying centralized places where residents may access supplies, information, and power, and park cars before storm hits



*Red Hook Initiative volunteers serve meals after Sandy*

## Emergency Resource Centers

- Year round programming on emergency preparedness
- Coordinate community volunteer organizations to facilitate disaster training and/or resiliency efforts

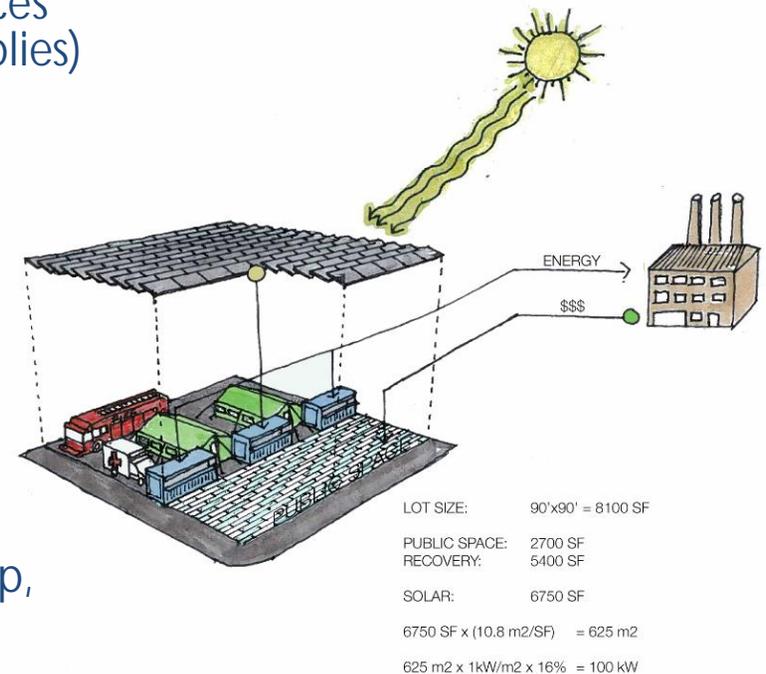
# Potential framework for a resource/recovery center network

## Possible elements:

- A hub that provides information and emergency services (access to health and social services, food, water, supplies)
- Gathering place for evacuation and temporary relief
- Not an overnight evacuation shelter
- Spokes that provide supplies and services on a more localized level

## Considerations:

- How the center functions 365 days a year (stewardship, maintenance, programming)
- Location within community
- Ownership and governance (day-to-day and in an emergency)
- ADA compliance



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# Discussion

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## Community Recovery/Relief Centers

- What criteria in terms of services and location are important?
- How many resource/recovery centers should there be in the Planning Area?
- What other programming would you like to see at these locations?
  
- Who are the groups and organizations that:
  - Have a community space that may be appropriate?
  - Were active in recovery after Superstorm Sandy or may have an interest?

# Homes and Businesses



Strategy: Ensure economic resiliency for businesses and property owners in flood-prone areas

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## Needs identified at PE#1 and PE#2

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### Knowledge

- Education for homeowners and business owners
- Technical assistance for homeowners

### Infrastructure

- More resilient electrical systems and independent power back-up sources (micro grids, solar power, etc.)
- Drainage improvements

# Existing Technical and Financial Resources

## Repairing and Rebuilding

- DOB Guide to Rebuilding after Sandy
- Build it Back
- SBA loans
- Private funding

## Resiliency Improvements

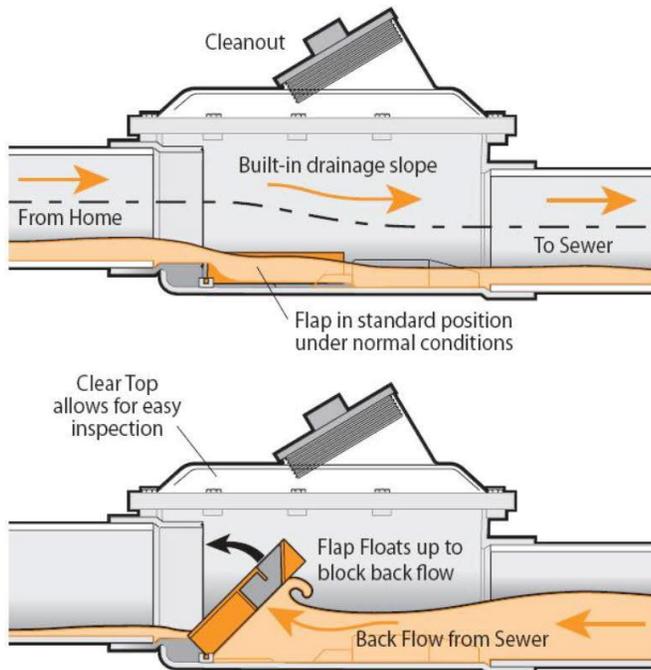
- *A Stronger, More Resilient New York* proposed to launch a \$1.2 billion program to provide incentives to owners of existing buildings in the 100-year floodplain.

## Homeowner Assistance

- Center for New York City Neighborhoods (CNYCN) is a non profit launched in 2008 to support homeowners and preserve affordable home ownership. Funding programs include:
  1. Foreclosure prevention
  2. Capacity building
  3. Sandy relief
  4. Possible flood insurance program forthcoming



# Resiliency Knowledge



Install check valves on stormwater and wastewater pipes. Depends on structure!



Connect rain barrel to roof leader to capture runoff before enters sewer



Behavioral Changes

- Do not use water during storm
- Never pour cooking oil down drains

# Insurance Issues

## National Flood Insurance Program (NFIP)

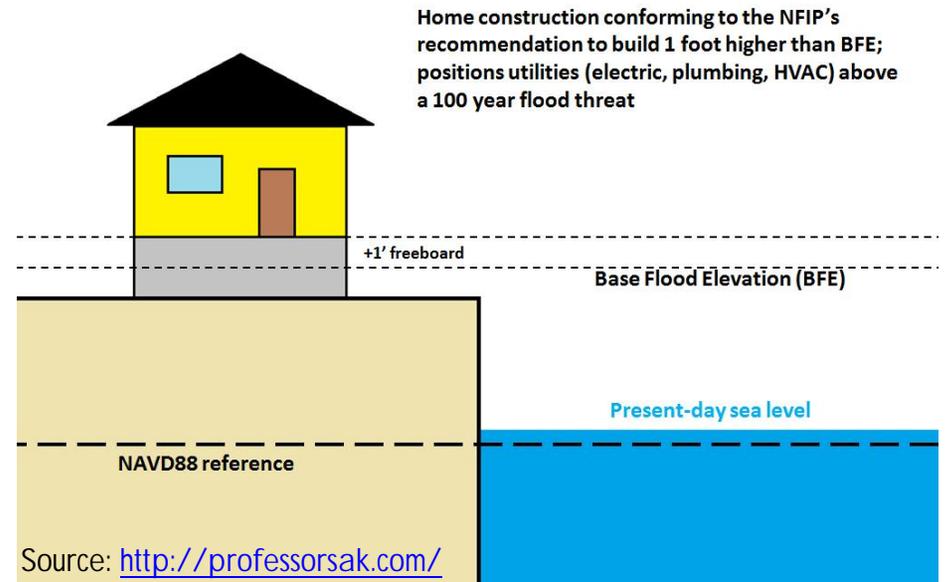
- 3 components: to provide flood insurance, floodplain management and flood hazard mapping

## Recent Rate Hikes

- 2012 NFIP reforms proposed to increase premiums – rates substantially higher for high risk, pre-FIRM structures.
- After Sandy, Homeowner Flood Insurance Affordability Act of 2014 repealed some provisions.

## How to Mitigate Rate Hikes

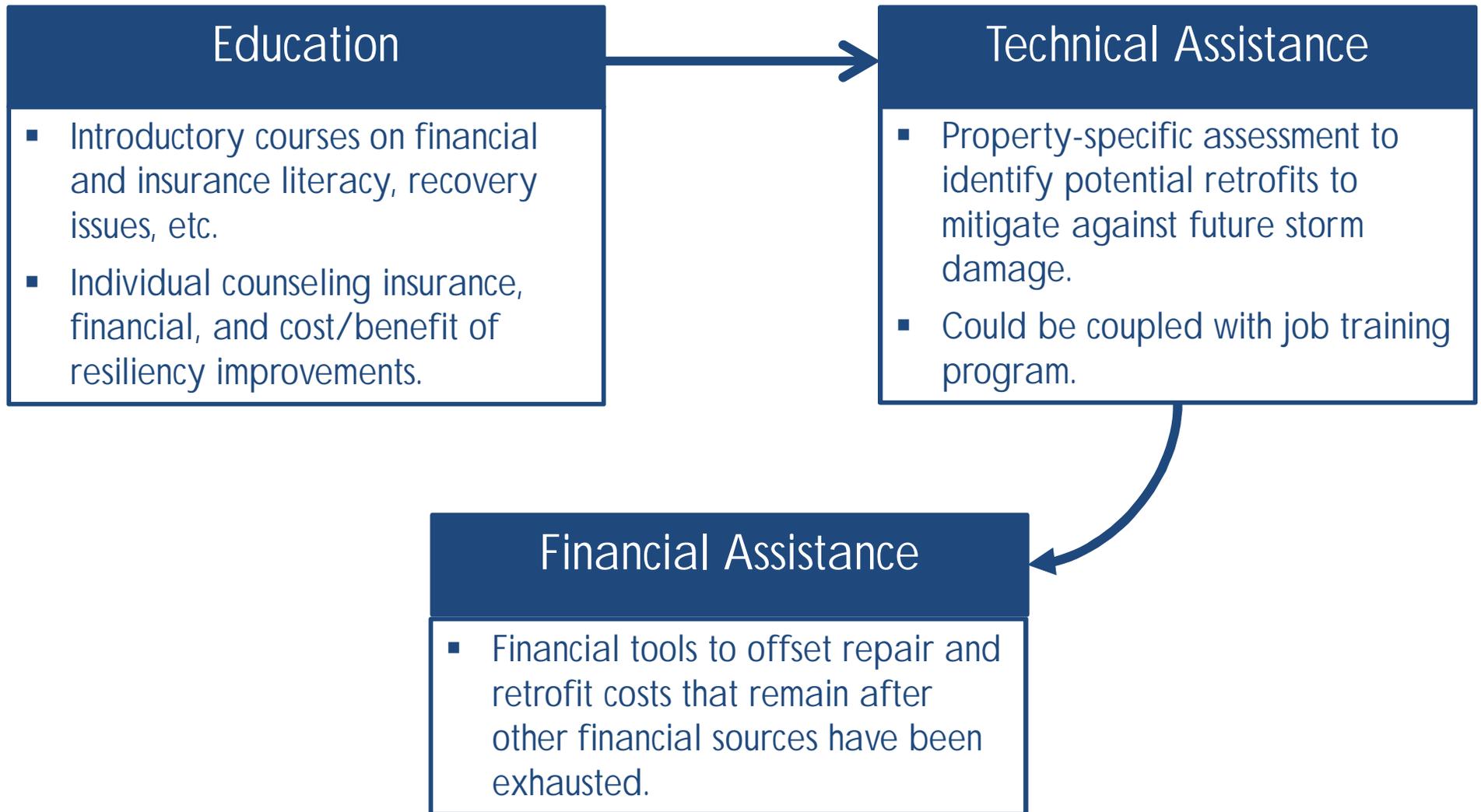
- Raise building above flood elevation
- Participate NFIP's Community Rating System (CRS)



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## Potential Framework for Projects

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# Discussion

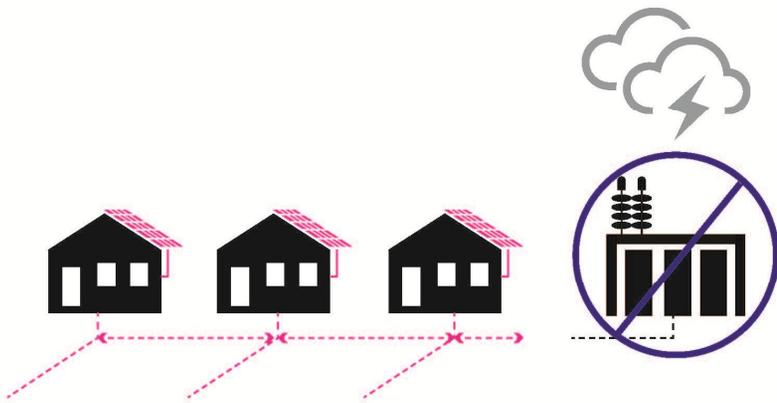
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- How did most owners finance Superstorm Sandy repairs?
- Where do residents currently obtain information about repairs and improvements?
- How much interest would there be in a resiliency loan program?

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# Microgrids

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## Pros

- Can disconnect from the larger grid if there is a widespread problem
- Excess power can be sold back to utilities

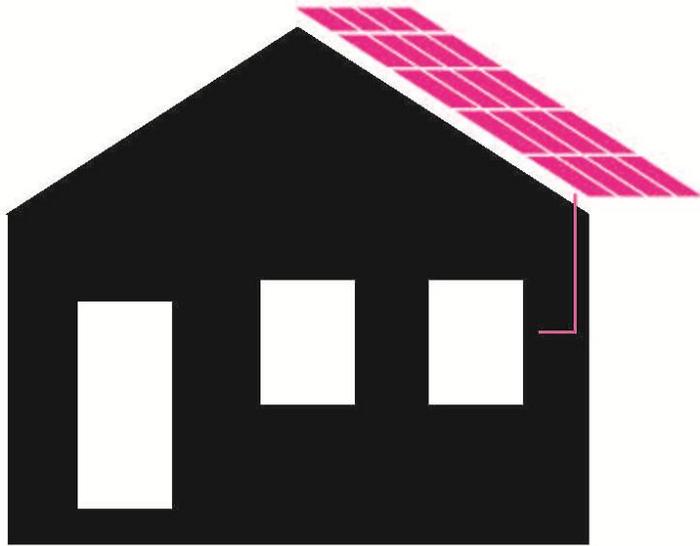
## Cons

- Long term only
- Still in pilot phase around the country and the world
- Legal and regulatory hurdles

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# Solar

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## Components

- Panel for generation
- Battery for storage and smoothing fluctuation
- Connection to grid
- Smart inverters
- Meter
- Fossil generator for hybrid systems

## Alternatives

- Arrays for large roofs, parking areas, etc
- Storage mechanisms
- Hybrid systems
- Deployable / mobile charging stations

## Pros

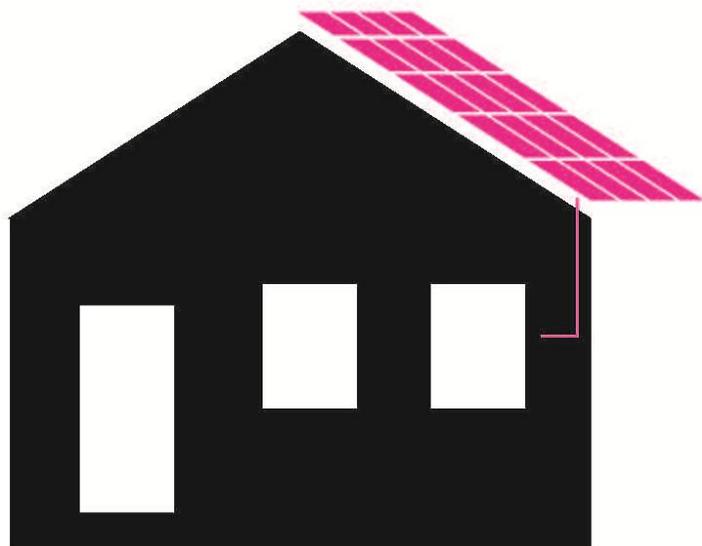
- Resilient: can function when grid goes out
- Retains benefit of using grid power during normal operations
- Can reduce electricity costs
- Low maintenance
- Both benefits and negatives to the grid

## Cons

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

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# Solar: In an Emergency



Solar panel on public building, NYC

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## 4 Options

- Single outlet: Daylight emergency power
- Full output: Daylight emergency power
- Backup battery: fully off-grid emergency power
- Hybrid solar and fossil fueled generator with a battery system: fully off-grid emergency power

## Emergency Hub

- Designated emergency center that can be supported by solar

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# Wind

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*There are three types of wind energy: small wind, on-shore, and off-shore. Wind feeds into the grid during normal operations but can continue to function when the grid goes out.*

## 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

# Wind



Rickenbacker Air Base (UGE case study)



Two wind turbines supplying US border station



Barcelona, Spain (UGE case study)

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## Potential Techniques: Back-up Power: Generators

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- 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 & costs of potential retrofits
- Ongoing maintenance
- Environmental impact



### *Considerations for generator sizing*

- *Building size*
- *Building Use & Activity*
- *Building Age*
- *Percentage of facility in use during emergency*
- *Number of People to accommodate during an emergency*



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