



**Rockaway East
Planning Committee Meeting #7**

January 28, 2014

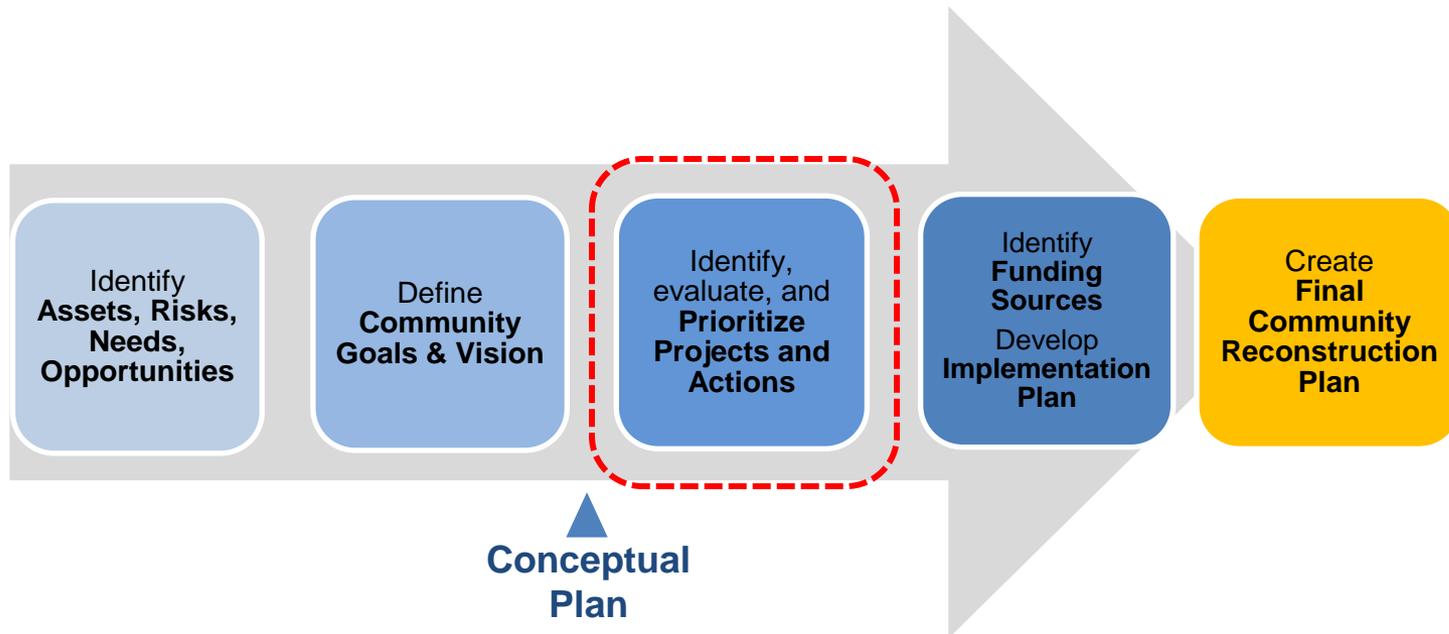
Agenda

- 1. Program update 7:00 – 7:45**
- 2. Key project review 7:45 – 8:45**
- 3. Next steps 8:45 – 9:00**

Committee Meeting #7: Project Refinement

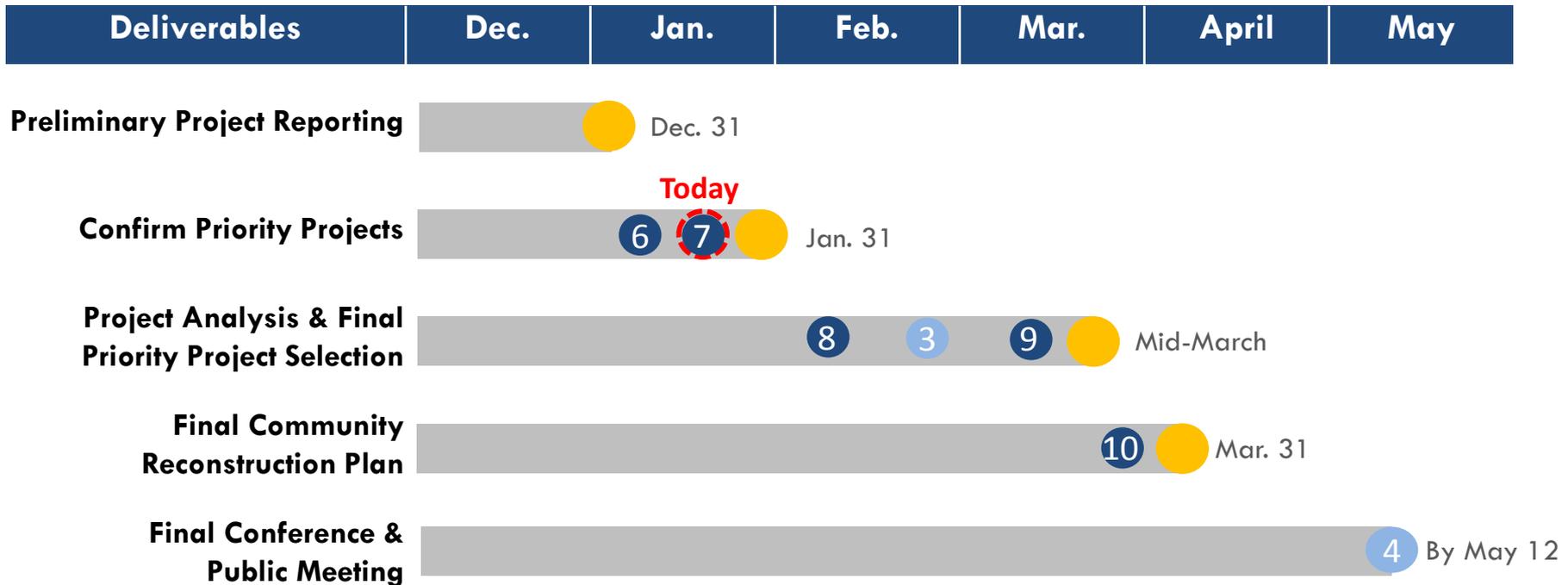
Objectives:

Review and refine scope of key projects



NY Rising Community Reconstruction Program Schedule

- Planning Committee Meeting
- Public Meeting
- Deliverable Due Date



Public Meeting #3 Update

Friday, Feb 21 - Sunday, Feb 23
Time – TBD

Potential Locations:

- Bayswater Jewish Center
- Goldfeder office
- 617 Beach 20th St
- RDRC offices
- Other possibilities?

Format and staffing:

- Open house, with no set programming
- Community and consultant staffing and sign-up



Agenda

1. Program update 7:00 – 7:45

2. Key project review 7:45 – 8:45

3. Next steps 8:45 – 9:00

Key Project Review

Last time we spoke about

- Emergency relief and communication centers
- Economic development

Tonight we will focus on reviewing all remaining projects

- Coastal Protection
- Transportation
- Other Emergency Readiness/Response
- Health and Social Services
- Housing Recommendations

Coastal Protection

Priority/Featured Projects

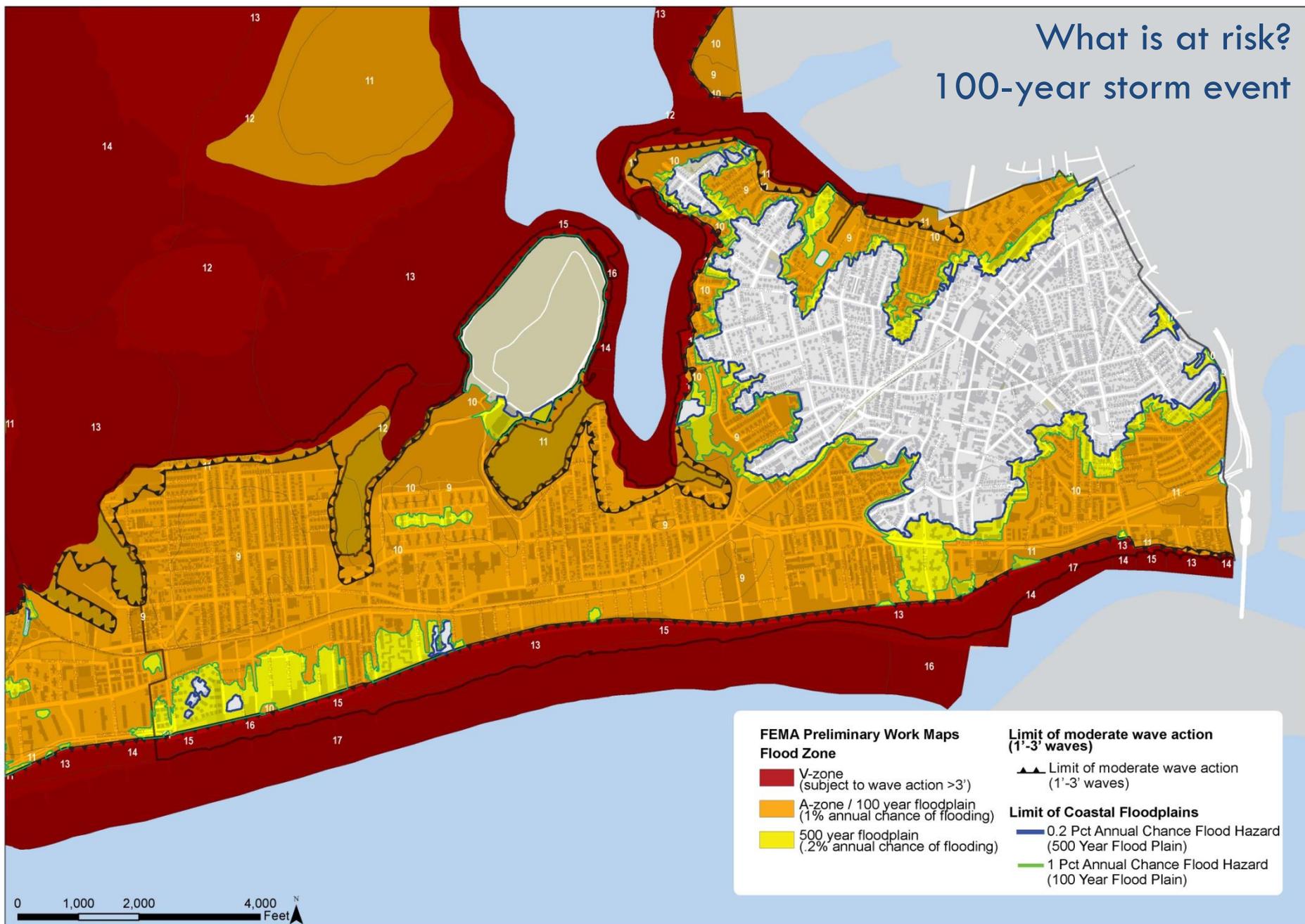
- 1) Baywall construction/bulkhead repair in: Arverne, Motts Basin, Edgemere
- 2) Elevation of park edges and other resiliency measures on NYC Dept. of Parks and Recreation land

Other Projects and Recommendations

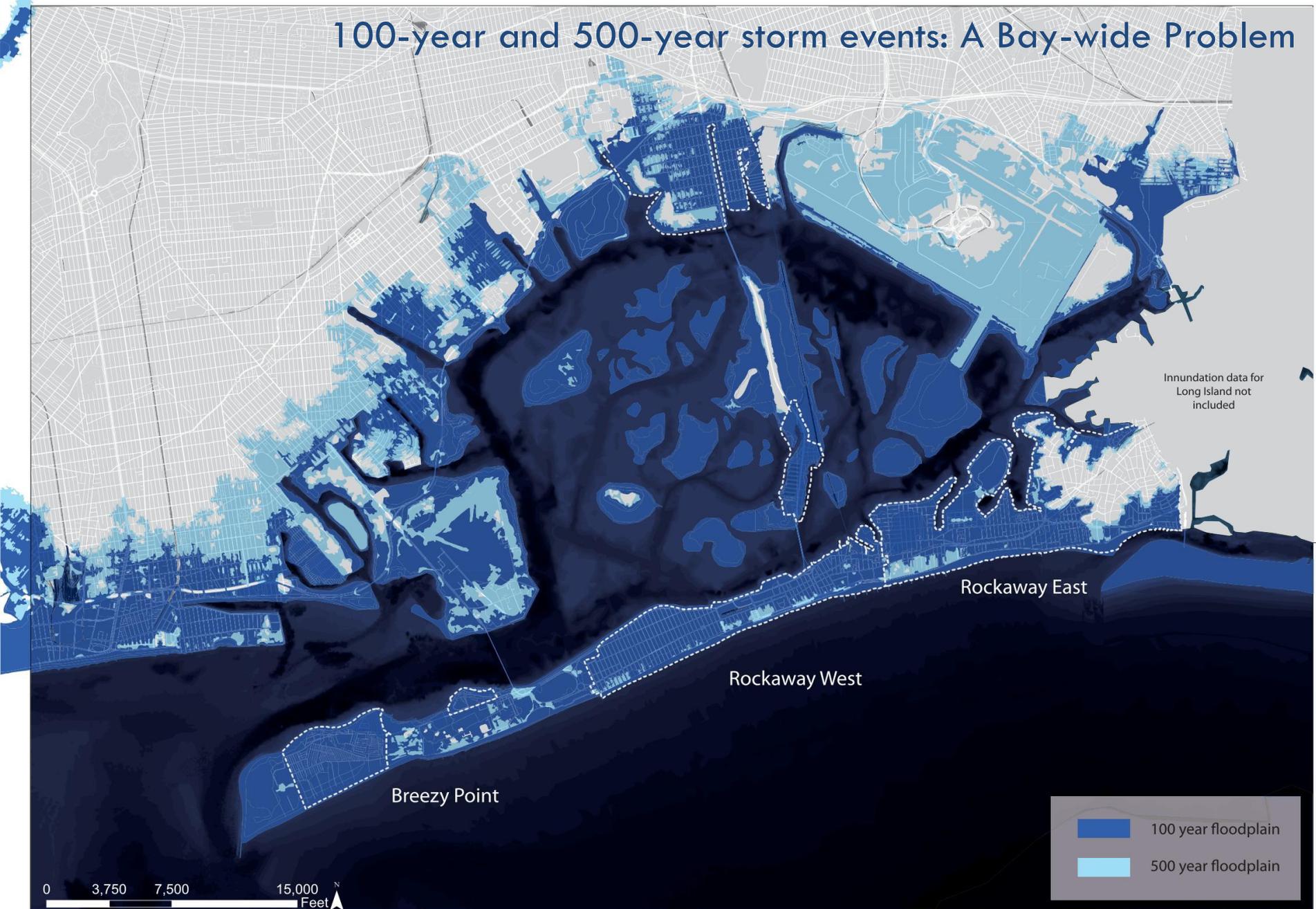
- 1) Expedited implementation of USACE bayside projects
- 2) Design and construction of regional surge barrier in Jamaica Bay



What is at risk? 100-year storm event



100-year and 500-year storm events: A Bay-wide Problem



Challenges to Developing Baywide, Peninsula-wide 100-year Coastal Protection Strategies

Scale / extent of project is VERY LARGE: Interventions must address entire planning area or peninsula to provide comprehensive protection

- Requires extensive coordination
- Extremely expensive
- Requires a long time to study and permit
- Many other issues (environmental impacts, location-specific limitations, etc.)



Regional, Baywide surge barrier
(hypothetical)

Approx. cost: \$600,000,000*
(*from SIRR Report)

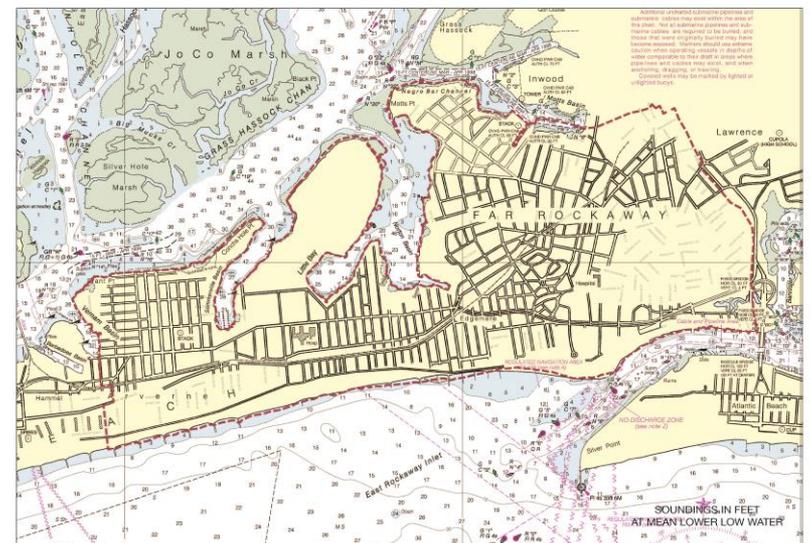
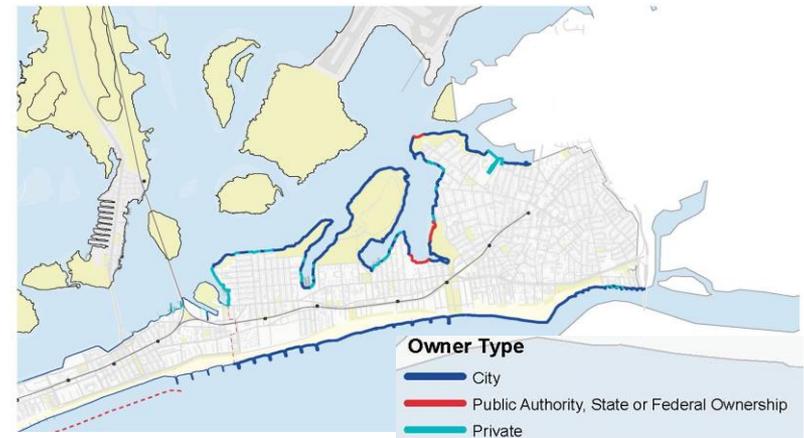


Peninsula-wide wall along bayside
(11 miles) (hypothetical)

Approx. cost: \$550,000,000*
(*based on SIRR estimates)

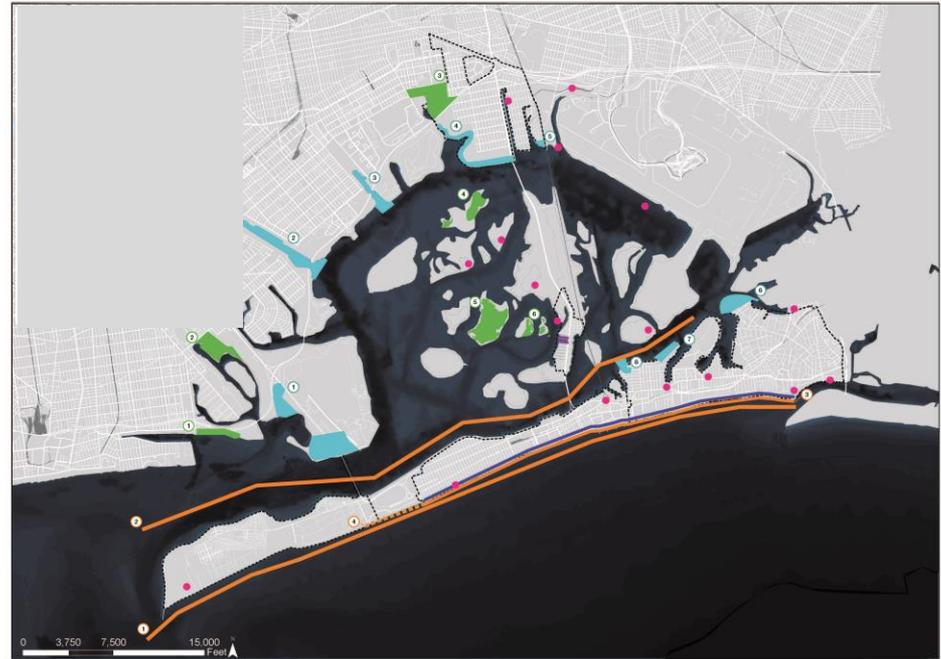
Challenges to Developing 100-year Coastal Protection Strategies in Rockaway East

- Limited space along bayside shoreline limits how much you can build on land
 - Homes along shore
 - Can't build wide levees, dunes, etc.
 - Property ownership along shoreline means a cooperative approach is needed
- Deep bay channel limits what you can build in the water
- Height of seawall would dramatically impact access to water and views



So what can we do for 100-year Coastal Protection?

- Efforts are ongoing by the City, State and USACE
- NY Rising
 - Support ongoing restoration, rebuilding and resiliency plans and studies
 - State goals and recommendations for level of protection and type of protection / flood risk reduction you would like to see considered in long-term, comprehensive solutions



- USACE East Rockaway to Rockaway Inlet Reformulation Study** examines beach renourishment & erosion control on the ocean (Phase 1) and bay side (Phase 2)
 - ① Phase 1, oceanside, study available November 2014
 - ② Phase 2, bayside, study available November 2015
 - ③ Dune Construction (NYCDEC)
 - ④ Beach Berm & Sand Dune (Summer 2014, NYCDEC)

- USACE Continuing Authorities Program (CAP)** allows the USACE to plan, design, and implement projects without specific congressional authorization.
 - ① Plumb Beach (Storm Damage Reduction)
 - ② Gerritsen Creek (Ecosystem Restoration)
 - ③ Spring Creek (Ecosystem Restoration)
 - ④ Elders Point (Beneficial Uses of Dredged Material)
 - ⑤ Yellow Bar (Beneficial Uses of Dredged Material)
 - ⑥ Blackwall & Rulers Bar (Beneficial Uses of Dredged Material)

- USACE Jamaica Bay Feasibility Study** reevaluates ecological restoration projects for potential coastal protection benefits
 - ① Dead Horse Bay
 - ② Paedegat Basin
 - ③ Fish Creek
 - ④ Spring Creek
 - ⑤ Hawtree
 - ⑥ Bayswater Park
 - ⑦ Brant Point
 - ⑧ Dubos Point

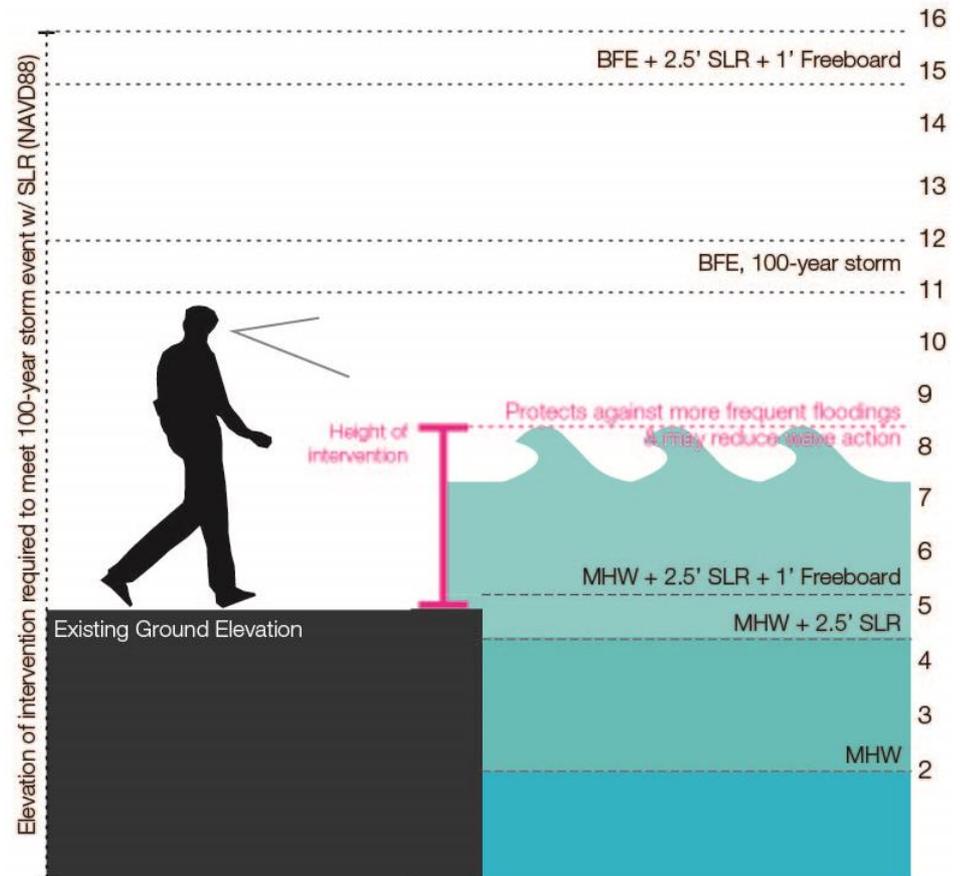
- CRP Restoration Opportunities**
- City & State Projects**
 - Bulkhead Construction
 - Boardwalk Rebuild, NYSDEC

What can we protect against now?

While the City, State, and USACE continue to develop long-term strategies for addressing flood risk in the Rockaways, we are likely to experience many other, less severe storms before a 100-year event

■ What might we be able to fund as part of this project?

- nearer term projects
 - less expensive solutions
 - low-lying areas at risk from regular flooding
- These projects do not preclude opportunities to increase the level of protection in the future



Degree of Risk, 100yr Storm: Waves & Depth of Flooding

Rockaway East

- Limit of 100 year floodplain
- Limit of 500 year floodplain
- Limit of Moderate Wave Action (1'-3' waves)

Depth of flooding during 100-year storm

- 9+ feet
- 6-9 feet
- 3-6 feet
- 1-3 feet
- <1 foot



Existing Elevations Extremely Low-lying Areas

Elevation (ft)

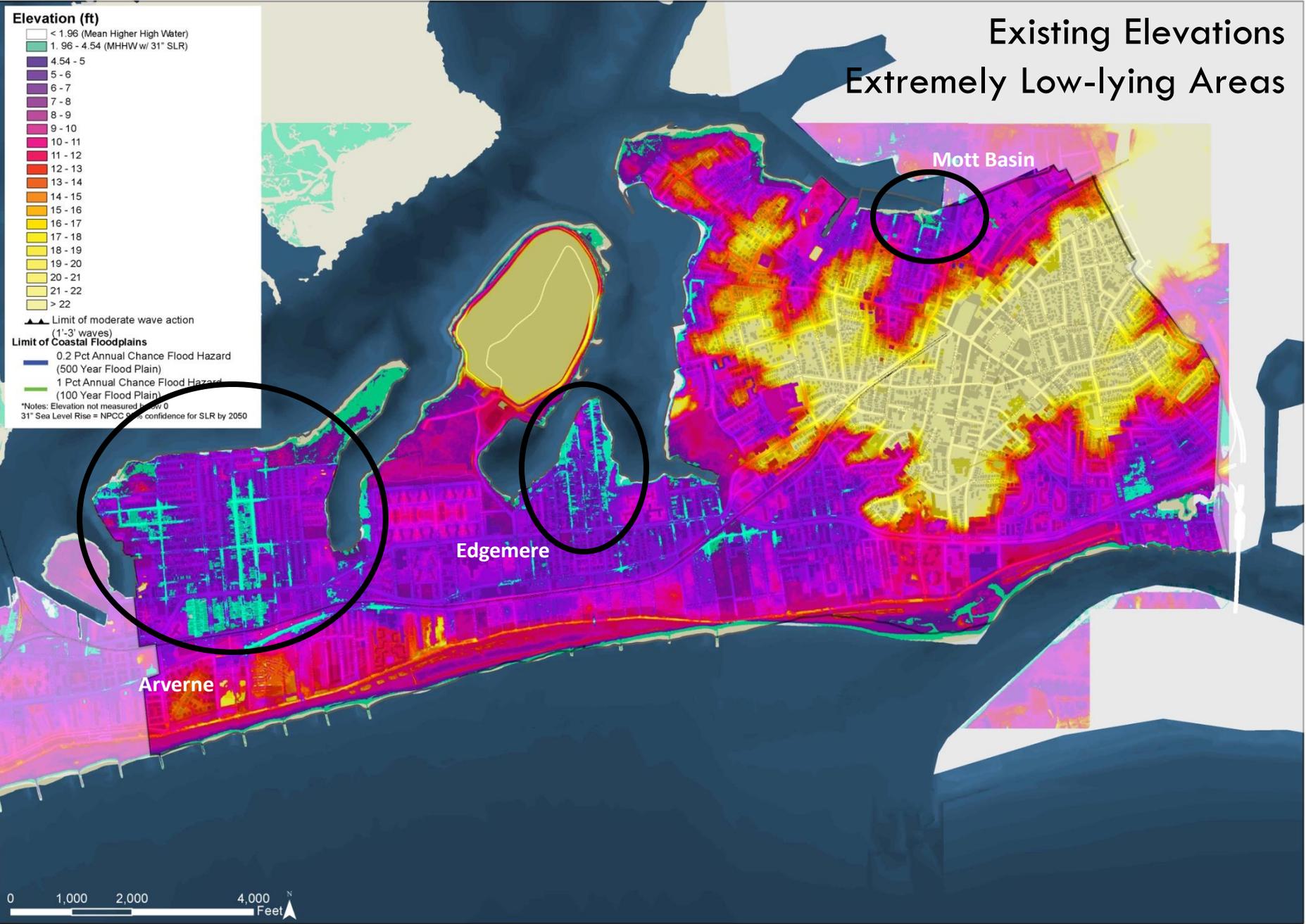
- < 1.96 (Mean Higher High Water)
- 1.96 - 4.54 (MHHW w/ 31" SLR)
- 4.54 - 5
- 5 - 6
- 6 - 7
- 7 - 8
- 8 - 9
- 9 - 10
- 10 - 11
- 11 - 12
- 12 - 13
- 13 - 14
- 14 - 15
- 15 - 16
- 16 - 17
- 17 - 18
- 18 - 19
- 19 - 20
- 20 - 21
- 21 - 22
- > 22

▲ Limit of moderate wave action (1'-3' waves)

Limit of Coastal Floodplains

- 0.2 Pct Annual Chance Flood Hazard (500 Year Flood Plain)
- 1 Pct Annual Chance Flood Hazard (100 Year Flood Plain)

*Notes: Elevation not measured below 0
31" Sea Level Rise = NPCC 95% confidence for SLR by 2050



Arverne

What can we do?



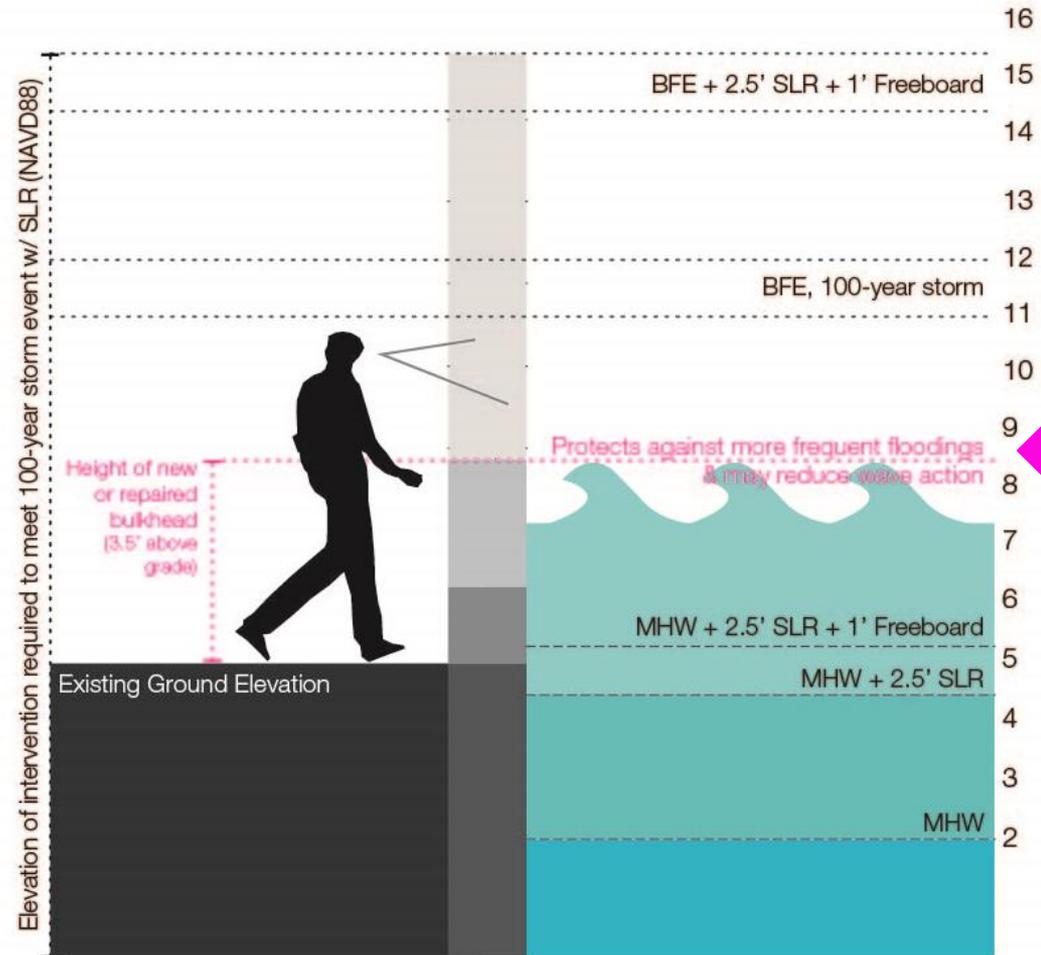
- Repair existing or construct new bulkheads
 - Also potential restoration/resiliency interventions
- Approx. Cost: \$15.5M-\$38.5M*
- NY Rising and other funding opportunities?



*Conceptual estimate of probable cost - not for reliance - work in progress

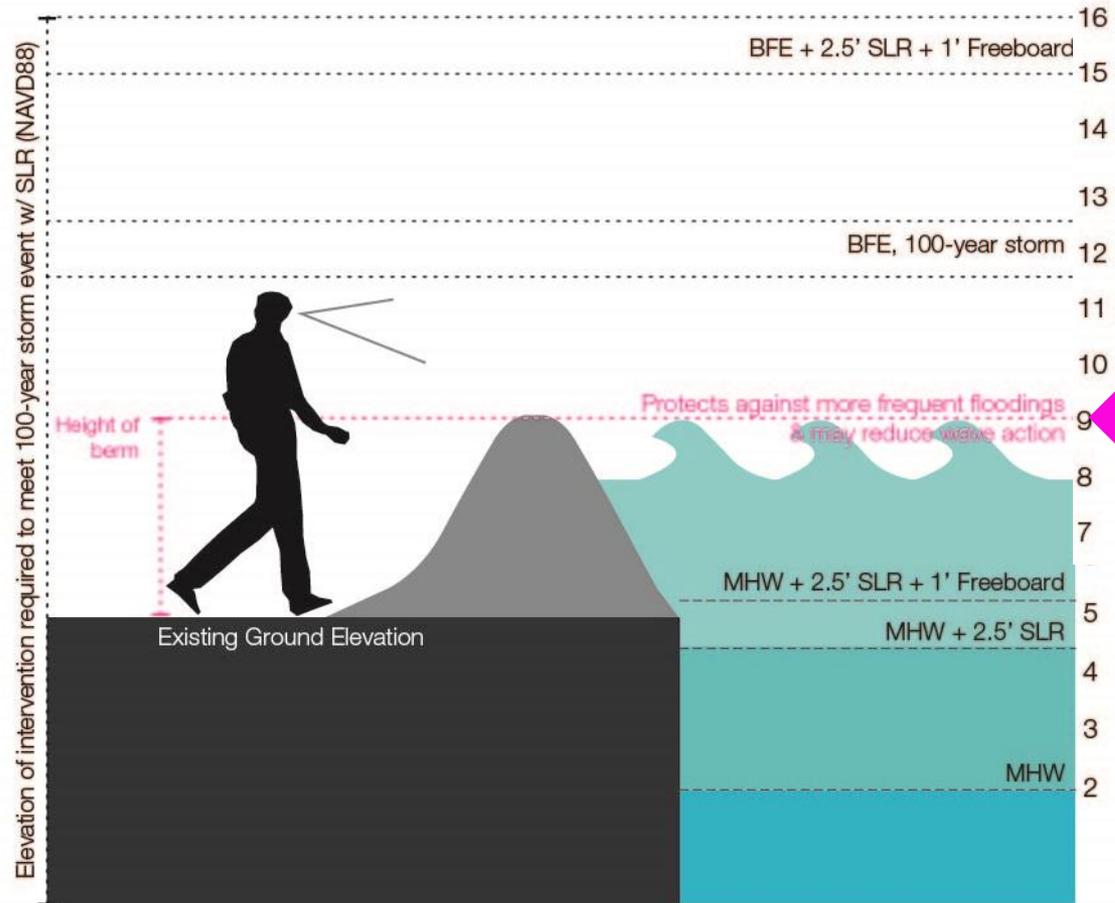
What does this protect us against in Arverne?

- Sea level rise
- Flooding from moon tides
- Frequent storm events
- Some reduction of wave action



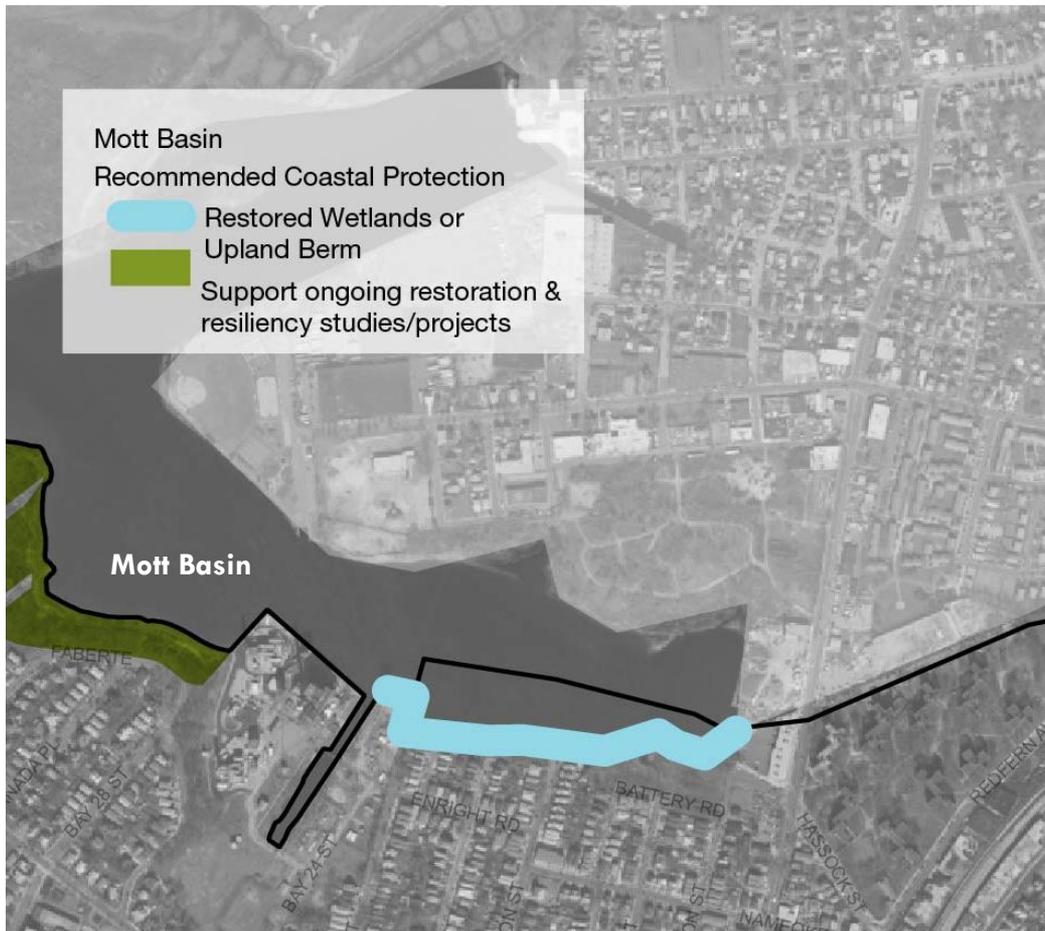
What does this protect us against in Edgemere?

- Sea level rise
- Flooding from moon tides
- Frequent storm events
- Some reduction of wave action



Mott Basin

What can we do?



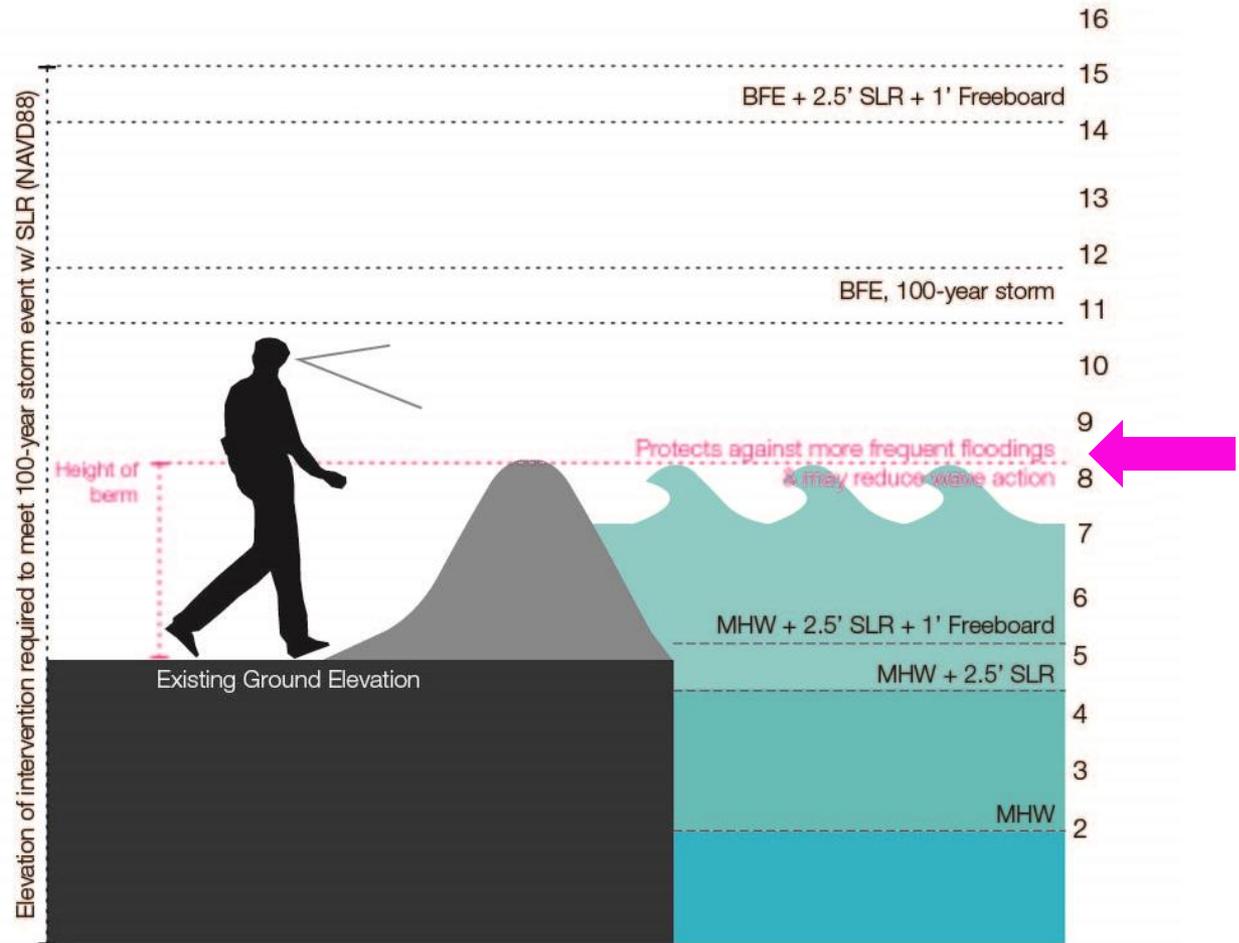
- Restore wetlands and/or build berm upland
- Approx. cost: \$900k*
- NY Rising and other funding opportunities?

*Conceptual estimate of probable cost - not for reliance - work in progress

Based off of other USACE wetland restoration project costs

What does this protect us against in Mott Basin?

- Sea level rise
- Flooding from moon tides
- Frequent storm events
- Some reduction of wave action



Questions

- Have we identified areas that already experience regular flooding?
- Would you want to consider NY Rising funding for these types of projects?
- What actions and solutions do you want the City, State, and USACE to consider and prioritize?
 - Example: Recommend NYCDPR to add and prioritize protective measures to their plans for the bayside parks in Rockaway East



Coastal Protection

Priority/Featured Projects

- 1) Baywall construction/bulkhead repair in: Arverne, Motts Basin, Edgemere
- 2) Elevation of park edges and other resiliency measures on NYC Dept. of Parks and Recreation land

Other Projects and Recommendations

- 1) Expedited implementation of USACE bayside projects
- 2) Design and construction of regional surge barrier in Jamaica Bay



Transportation

Priority/Featured Projects

- 1) Fund study for short- and long-term transportation needs for Rockaway East
- 2) Create better connection to beach and ferry stop in Rockaway West

Other Projects and Recommendations

- 1) Improve Far Rockaway multi-modal transit hub
- 2) Make A-line stations on Peninsula ADA compliant



Current Ferry Service to the Rockaways

Temporary Weekday Service: Nov 2012-Jan 2014

Frequency

- 5 morning
- 5 evening

Route

- Beach 108th St.
- Brooklyn Army Terminal
- Pier 11 (55 min)
- E. 34th St

Total Cost

- \$2 ticket fare one-way
- \$25-30 subsidy per ticket one-way
- Free parking

Infrastructure

- 2 Seastreak vessels
- Temporary landing at 108th
- National Grid parking lot



Rockaway Ferry Model

There are a number of variables that impact ferry feasibility. We created a model to test different scenarios and options.

Inputs

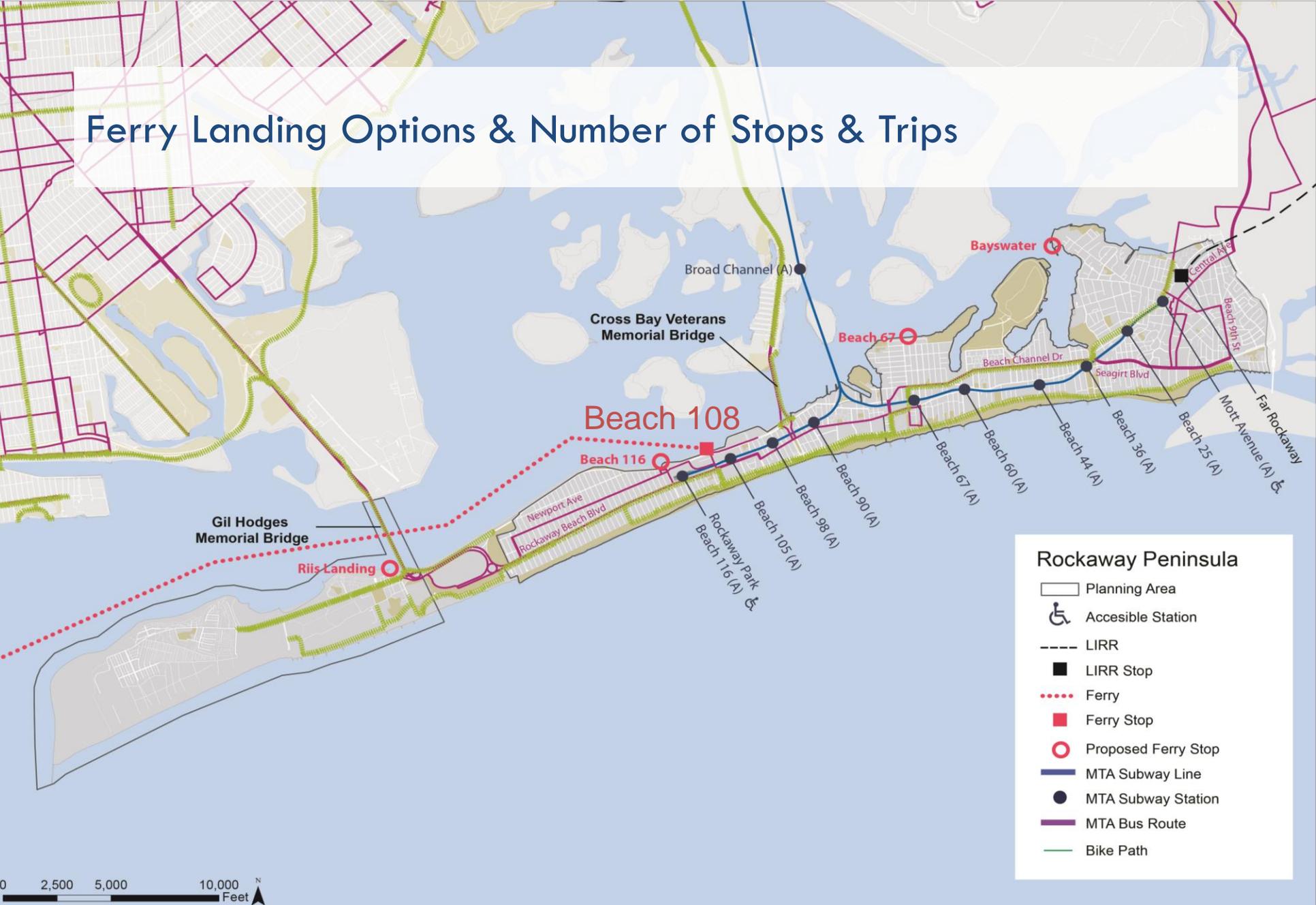
- Number/Combination of Stops
- Headway (# Trips in Peak Period)
- Fares (Ferry, Parking)
- Vessel Type
- Capital Costs (Terminals & Vessels)
- Development Opportunities

Outputs

- Number Vessels Needed
- Travel Time
- Ridership
- Revenue
- Profit/Loss

Input Factors	
Vessel Type <i>(select from pull-down menus)</i>	
Vessel Class	Seastreak Medium Cat
Planning Capacity as Share of Max Capacity	80%
Ferry Stops <i>(select from pull-down menus)</i>	
E. 34th	Yes
Pier 11	Yes
Ris Landing	No
Beach 116	No
Beach 108	Yes
Beach 74	No
Bayswater	No
Manhattan Origin	E. 34th
Queens Termination	Beach 108
Minutes at Terminating Stops	5.0
Minutes at Intermediate Stops	5.0
Minutes Extra Arriving / Departing	3.0
Peak Period Headways (minutes)	60.0

Ferry Landing Options & Number of Stops & Trips

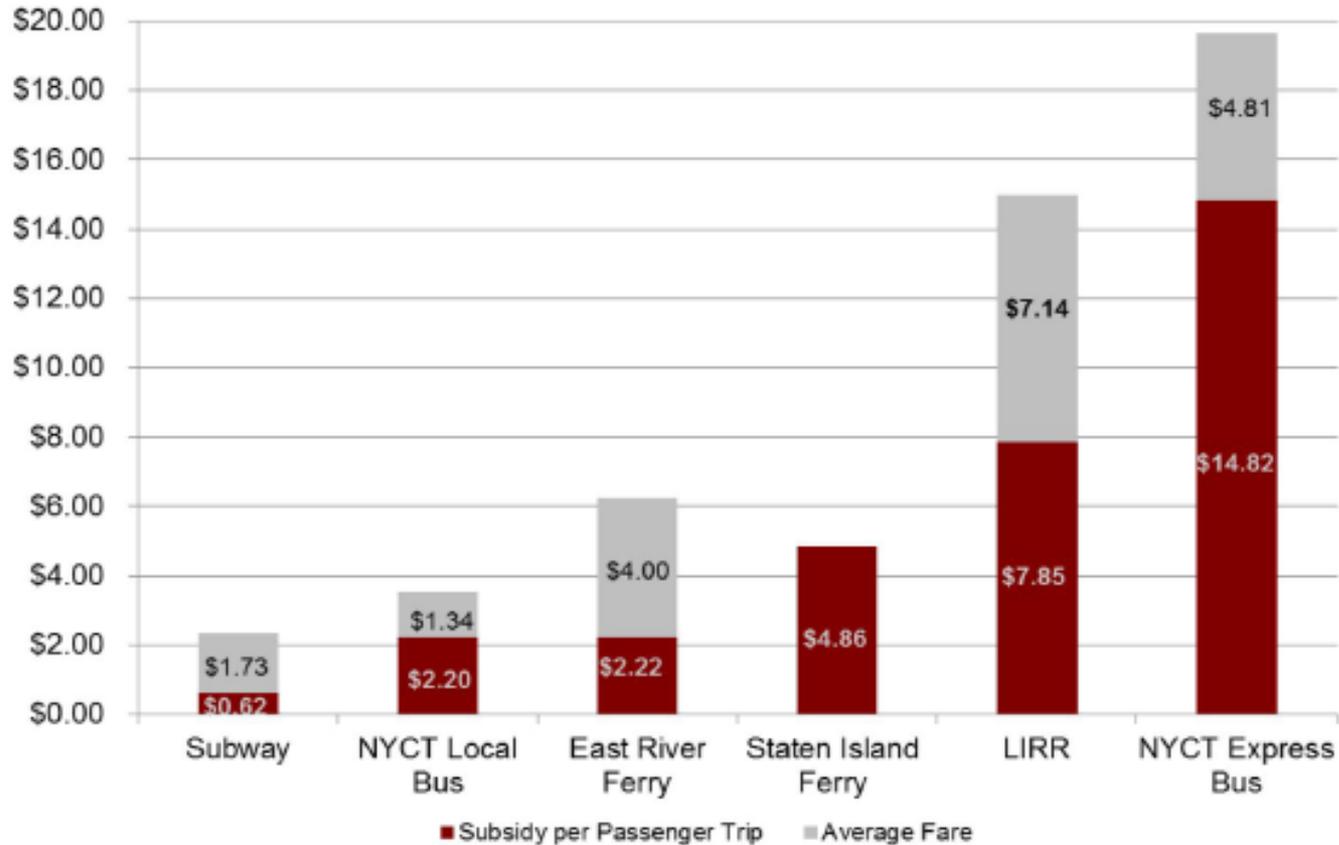


Rockaway Peninsula

- Planning Area
- Accessible Station
- LIRR
- LIRR Stop
- Ferry
- Ferry Stop
- Proposed Ferry Stop
- MTA Subway Line
- MTA Subway Station
- MTA Bus Route
- Bike Path

Comparative Transit Costs, Fares, and Subsidies

Figure 3.1: Transit Fares and Subsidy per Passenger Trip*



Note: The 2011 Citywide ferry study included the previous Rockaway Ferry (that ended in June 2010) from Lower Manhattan to Riis Landing (and stopped at the Brooklyn Army Terminal) - it had a \$6 fare and a \$21.12 subsidy level

Rockaway Ferry Scenarios

We ran 5 scenarios in our model to start the discussion – we can change the variables and run additional scenarios over the next 4-6 weeks to refine the scope of a project or recommendation.

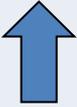
#	Name	Description
1	Current	Current Service+\$2 Fare+2 Seastreak Vessels
2	Additional Stop	Bayswater+\$2 Fare+3 Seastreak Vessels
3	Higher Fare	Bayswater+ \$6 Fare +3 Seastreak Vessels
4	Better Vessel	Bayswater+\$6 Fare+ 3 Otter Class Vessels
5	New Development	Bayswater+\$6 Fare+3 Otter Class Vessels+ 100 added riders from new development

Scenario Analysis – Daily Riders

#	Name	Daily Riders	Change from Previous Scenario
1	Current	347	
2	Additional Stop	378	 +31 (+9%)
3	Higher Fare	236	 -142 (-38%)
4	Better Vessel	263	 +27 (+11%)
5	New Development	363	 +100 (+38%)

Note: DRAFT model results are representative figures

Scenario Analysis – Annual Subsidy

#	Name	Subsidy (\$million)	Change from Previous Scenario (\$million)
1	Current	\$4.0	
2	Additional Stop	\$6.3	 +\$2.3 (+58%)
3	Higher Fare	\$6.0	 -\$0.3 (-5%)
4	Better Vessel	\$2.4	 -\$3.6 (-60%)
5	New Development	\$2.0	 -\$0.4 (-20%)

Note: DRAFT model results are representative figures

Ferry Service Funding Sources

Existing Funding Sources	Potential Uses
<p>\$15M Rockaway Federal Allocation</p> <ul style="list-style-type: none"> Set aside 2005 	<p>Capital Investments</p> <ul style="list-style-type: none"> Originally intended to purchase ferries
<p>\$3.6M NYC Match</p> <ul style="list-style-type: none"> Set aside last year 	<p>Capital Investments</p> <ul style="list-style-type: none"> Geared toward ferry landings and upland improvements
POTENTIAL Funding Sources	Potential Uses
<p>\$?? NY Rising Allocation</p>	<p>Capital Investments; Operating Costs if bundled with sustainability plan</p>
<p>\$3 Billion Federal Transportation NOFA</p> <ul style="list-style-type: none"> For Sandy-impacted areas Due this quarter 	<p>To be confirmed</p>
<p>\$600 Million TIGER Grant</p> <ul style="list-style-type: none"> NOFA expected late April 	<p>To be confirmed</p>

NY Rising Funding Ideas

Potential Uses	Potential Benefits
1. Operating Costs	Could go directly as subsidy to offload the cost and overall rider fare
2. Other Capital Costs, such as new, more efficient ferries	Could help reduce the overall operating cost, therefore reducing total cost, subsidy need, and ideally fare
3. Other Capital Costs, such as a new parking garage	Could explore building parking garage and using revenues to offset ferry costs
4. Other?	Could explore development opportunities where developer could offset ferry costs (e.g. Red Hook Ikea model) Other?

Create better connection to beach and ferry stop

■ Jitney/Circulator Bus

- Far Rockaway to Beach
- Far Rockaway to Arverne and Rockaway Park (ferry connection?)

■ Rockaway Bikeshare



Transportation

Priority/Featured Projects

- 1) Fund study for short- and long-term transportation needs for Rockaway East
- 2) Fund ferry infrastructure for stop in Rockaway East
- 3) Create connection to beach and ferry stop in Rockaway West

Other Projects and Recommendations

- 1) Improve Far Rockaway multi-modal transit hub
- 2) Make A-line stations on Peninsula ADA compliant



Emergency Preparedness

Priority/Featured Project

- 1) Identify/strengthen emergency relief center
- 2) Build overall CBO capacity and create emergency evacuation project for seniors and vulnerable populations



Create Emergency Evacuation Project for Vulnerable Populations

- Utilize organizations to assist with canvassing, evacuation, and emergency medical services and treatment, including training for residents to learn about emergency preparedness and readiness
- Database of vulnerable residents who may need help in evacuation



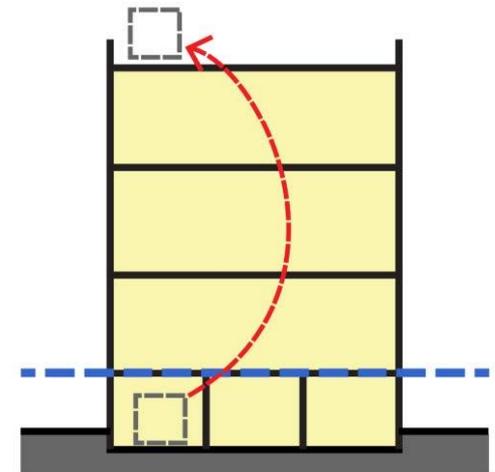
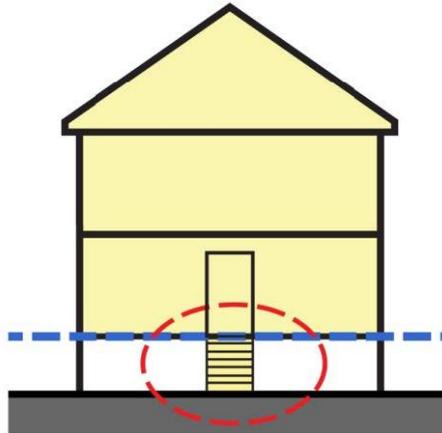
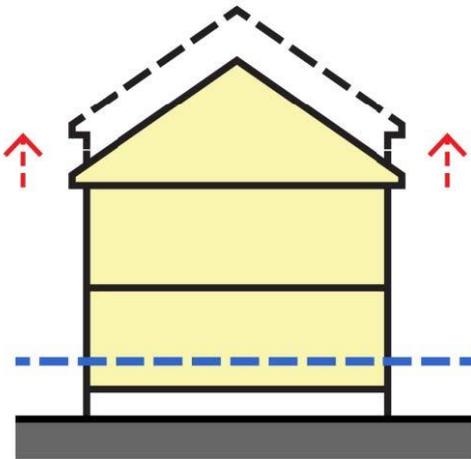
Housing

Priority/Featured Projects

- 1) Program for technical assistance and counseling for homeowners
- 2) Education program for resiliency and recovery

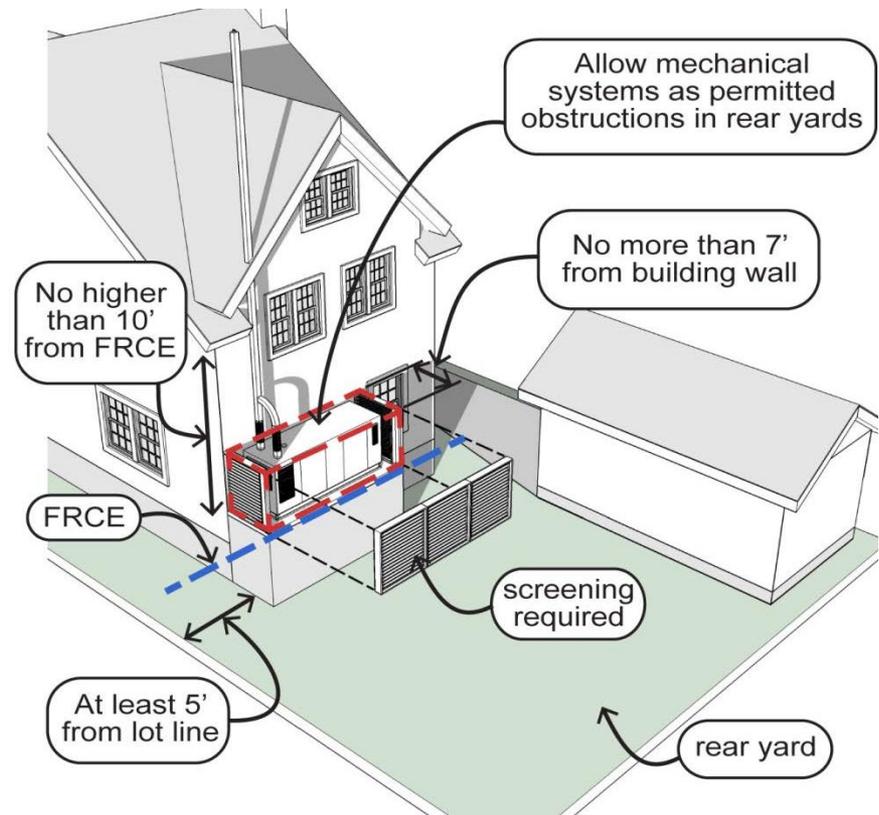
Other Projects and Recommendations

- 1) Low/no cost loan or grants for resiliency improvements
- 2) Establish requirements for multi-family building owners to create and communicate emergency plans and ensure safety of residents



Technical Assistance and Counseling for Homeowners

- Fund program that provides technical assistance for homes not eligible for Build It Back to:
 - Identify potential retrofits to mitigate against future storm damage
 - Provide elevation certificates
 - Possibly fund some capital interventions (e.g. backflow preventer valves)
- Expand existing counseling program to offer homeowners:
 - Individually-tailored counseling on insurance, financial and rebuilding issues
 - Assistance in determining financing strategies to pay for resiliency retrofits



Education Program for Resiliency and Recovery

- Provide education assistance to single and multi-family homeowners, as well as renters to eliminate confusion around rebuilding and retrofitting for resiliency, flood insurance and other financial questions

- Education could be offered in the form of:
 - Community-wide introductory courses on financial and insurance literacy, recovery issues, etc.
 - Ongoing education coordinated by local CBOs on financial literacy and other homeowner issues
 - Computer-based training available to individuals

- Establish a housing/resiliency information clearinghouse
 - A tool, website, manual or information center should be developed to serve as a one-stop-shop for all resiliency information
 - Information on permitting process, FEMA claims, insurance claims, and other resources collected from physical technical assistance and individual counseling would be available in an easily accessible format

Health and Human Services



Other Projects and Recommendations

- 1) Ensure expedited return to normal school operations following storms
- 2) Make Joseph P. Addabo Health Center more resilient through measures such as leaving first floor vacant, and elevating mechanicals from basement
- 3) Make recommendations for St. John's to improve and possibly expand services, and connect with the workforce training program for emergency/EMT training

Agenda

1. Program update 7:00 – 7:45
2. Key project review 7:45 – 8:45
3. Next steps 8:45 – 9:00

Refined NYRCR deliverables approach

By January 31, finalize “Priority CDBG-DR Projects” and “Featured Projects” for Rockaway East

Total list of projects add up to more than \$15 million

- In February consultants will analyze and cost projects, NYRCR determines CDBG-DR eligibility of projects
- Committee will continue to coordinate mid-March which project(s) to submit for NY Rising funding

Initiatives not on the CDBG-DR Priority Project or Featured Project list *can still be included* in the Final Community Reconstruction Plan

- Additional projects, recommendations, or actions
- Suggested regulatory reforms

DOS evaluation criteria for NY Rising project prioritization

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

DOS 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	

Future criteria: Public Support, Funding Availability

* Very High Cost = >\$3M

Tonight's Exercise: Project Categorization

Project Type	Types of Projects
Priority	<ul style="list-style-type: none">• Projects that can be implemented in the near-term with funding from CDBG-DR and other identified sources• Strong preference for capital projects
Featured	<ul style="list-style-type: none">• Can include CDBG-DR funding or funding from other sources• Planning studies or design work for specific resiliency capital projects (e.g., planning and design of flood gate)
Other	<ul style="list-style-type: none">• All other projects and recommendations

CDBG-DR eligibility – preliminary interpretation

Likelihood of funding	Types of Projects
High	<ul style="list-style-type: none">• Capital resiliency-focused projects (including coastal protection measures, physical resiliency improvements to homes & businesses, community center resiliency improvements, “immovable” equipment for buildings)
Medium eligible, but may require strong case to HUD (that community would have been better prepared for Sandy with project in place)	<ul style="list-style-type: none">• Planning studies for specific resiliency capital projects (e.g., planning and design of flood gate)• CBO capacity building (emergency plans and training, operating expenses)• Technical support for residential & business
Low	<ul style="list-style-type: none">• Capital & social resiliency projects with a limited resiliency argument• Broad planning studies not focused on a specific capital project• CBO mobile equipment purchases (e.g. emergency generators)