REBUILD BY DESIGN

RESIST · DELAY · STORE · DISCHARGE

HUDSON RIVER

COMMUNITY MEETING - PROJECT ALTERNATIVES UPDATE
AGENDA

- Project Status
- Purpose & Need/Background
- Alternatives Development
- Next Steps
- Q & A
- Open House
PUBLIC FEEDBACK
Since Dec. 10th’s public meeting, which introduced the 5 concepts, we received multiple comments from approximately 255 residents through emails and letters.

200+ Community members  
Comments  
Emails and Letters
FREQUENTLY ASKED QUESTIONS

Many comments were addressed in a FAQ packet, which can be found on the project website:

www.nj.gov/dep/floodhazard/rbd-hudsonriver.htm
PROJECT TIMELINE - FEASIBILITY & NEPA

The Feasibility Study allows us to design a soundly engineered project. The NEPA* Process looks at environmental and community impacts.

*NEPA: National Environmental Policy Act

we are here

RBD
Feasibility Study & NEPA Process

1yr
June 2014

Approx. 2 yrs
June 2015

Final Design of Preferred Alternative
2 years
April 2017

Construction
3.5 years
Dec 2018

Project Closeout and Completion
3 months
June 2022
Sept 2022
PROJECT SCHEDULE

Notice of Intent: June 2015
Purpose & Need: Aug 2015
Scoping: Sept 2015
Screening Criteria/Metrics: Oct 2015
Concept Screening: Dec. 2015
Alternative Analysis: Spring 2016
Draft EIS: Fall 2016
Final EIS: Winter 2016
ROD: Spring 2017

NEPA PROCESS
- NOI
- Technical Environmental Studies
- ROD

FEASIBILITY STUDY

PUBLIC INVOLVEMENT

NOI - Notice of Intent
ROD - Record of Decision
EIS - Environmental Impact Statement
PROJECT SCHEDULE

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NEPA PROCESS:
Technical Environmental Studies

FEASIBILITY STUDY

PUBLIC INVOLVEMENT

NOI - Notice of Intent
ROD - Record of Decision
EIS - Environmental Impact Statement
In the Alternatives Analysis phase, we are simultaneously exploring design, conducting analysis, and soliciting engagement.
OPPORTUNITIES TO PARTICIPATE

How are we soliciting community input in this project phase?

CAG Meetings

Public Meetings

Workshops

PUBLIC INVOLVEMENT
Purpose & Need/Background
WHY DO WE NEED THE PROJECT?

The project area is at risk from storm surge events and heavy rainfall that results in flooding.
WHAT WILL HAPPEN IF WE DO NOTHING?
The frequency and intensity of flooding in Hoboken will get worse.

"The city sits right on the Hudson River and is particularly vulnerable to flooding. According to the Environmental Defense Fund (EDF), 70 percent of Hoboken's population lives in flood zones."

"It's no secret that northwestern Hoboken is particularly flood-prone. Stormwater causes the sewage system to overflow and flood back into the city's lowest lying streets."
WHAT HAPPENS WHEN IT FLOODS?

Coastal flood model demonstrating a propagation of coastal storm surge during Hurricane Sandy.
WHAT DRIVES THE NEED FOR THE PROJECT?

The greater the storm, the greater the effect.

<table>
<thead>
<tr>
<th>Storm</th>
<th>Approximate Area Flooded</th>
<th>Approximate Affected Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acres</td>
<td>% of Total</td>
</tr>
<tr>
<td>10 yr</td>
<td>179</td>
<td>18%</td>
</tr>
<tr>
<td>50 yr</td>
<td>679</td>
<td>69%</td>
</tr>
<tr>
<td>100 yr</td>
<td>738</td>
<td>75%</td>
</tr>
<tr>
<td>100 yr + 2.2' SLR*</td>
<td>801</td>
<td>82%</td>
</tr>
</tbody>
</table>

These storms do not include wave action and represent only stillwater

*SLR = Sea Level Rise
Alternatives Development
FURTHER ANALYSIS

The Five concepts were revised to reflect community input, minimize impacts, and represent a full range of alternatives that reduce flood risk for the project area.

Dec 2015

5 Concepts

→

Receive Feedback

Apply Screening Criteria

Minimize Impacts

Represent Full Range of Alternatives

Feb 2016

= 3

Alternatives
DELAY, STORE, & DISCHARGE

Using “green” and “grey” stormwater management strategies to achieve community benefits while reducing flooding from rainfall.

Retrofitted Parks

Bio-retention Basin

Storage & Pump Station
*For more information on Delay Store & Discharge, please see the project boards*
ONGOING INITIATIVES

Independent work on several stormwater projects in conjunction with the overall masterplan to alleviate flooding.

Southwest Park

7th & Jackson Park

BASF Property

City Hall Demonstration

H5 Wet Weather Pump Station
ALTERNATIVE 1

Resist - Alternative 1
Existing Structures
Delay, Store, Discharge

*For more information on Alternative 1, please see the project boards
**ALTERNATIVE 1 CHARACTERISTICS**

- Provides highest coastal flood risk reduction.
- Provides highest level of coastal flood risk reduction.
- Potentially least amount of transportation network disruption.
- Most impact to existing waterfront views/access.
- Highest cost and complexity to construct.
ALTERNATIVE 2

Option 1
Option 2

Resist - Alternative 2
Existing Structures
Delay, Store, Discharge

*For more information on Alternative 2, please see the project boards
ALTERNATIVE 2 CHARACTERISTICS

Provides storm surge risk reduction benefits by using right-of-way.

No impact to existing waterfront access.

No impact to waterfront views.

Less costly to construct compared to ALT 1.

May have impact on roadway/traffic flow on 15th St.

May require reduction in space along Washington St. for structural footprint.

Waterfront communities do not receive flood risk reduction benefits.
ALTERNATIVE 3

Resist - Alternative 3
Existing Structures
Delay, Store, Discharge

*For more information on Alternative 3, please see the project boards

REBUILD BY DESIGN HUDSON RIVER: RESIST • DELAY • STORE • DISCHARGE

Dewberry
ALTERNATIVE 3

19th Street Tie-in

Alley to Washington Street

Observer Highway - Option 1 & 2

Jersey Avenue Underpass

- Flood Barrier
- Deployable
- Landscape
- Gate (Swinging, Sliding)

REBUILD BY DESIGN HUDSON RIVER: RESIST • DELAY • STORE • DISCHARGE

Dewberry
ALTERNATIVE 3 CHARACTERISTICS

Provides storm surge risk reduction benefits by using alley easement.

- **No impact to existing waterfront views/access.**
- **Least expensive alternative (cost, maintenance).**
- May enhance the urban design and existing use of public space within the alleyway.
- **Reduced traffic and circulation impacts compared to ALT 2.**
- **May require reduction in space along Washington St. for structural footprint.**
- **Waterfront communities do not receive flood risk reduction benefits.**
FURTHER ANALYSIS TO BE PERFORMED

Flood Modeling
Cost-Benefit Analysis
Feasibility-Constructability

Emergency Access
Natural Habitats
Urban Design

Environmental Impacts
URBAN DESIGN

Each of the RDSD sites will be designed to optimize flood risk reduction, while providing benefits to the community.

- Barriers can be programmed
- Parks can delay and store water
- New amenities can be provided within the study area
GATHERING SPACE

A terraced flood barrier can be carved into a gathering or play space.
PLAY

Playspaces can be built on any of the Resist, Delay or Store sites.
MULTIPURPOSE SPACE

A transformable multipurpose space can be built.
FRAMING VIEWS

The Resist barriers could frame views of the city and the Waterfront.
GREENERY

Greenery can be embedded into newly constructed elements.
Art can be integrated into the design proposals.
MEDIA DISPLAY

Elements can have media or LED display embedded.
NEW PUBLIC SPACE

Resist, Delay, Store and Discharge sites provide opportunities for new public space for the city.
Next Steps
PUBLIC INVOLVEMENT

Next Steps:

CAG Meetings  Public Meetings  Workshops
Q & A
Open House