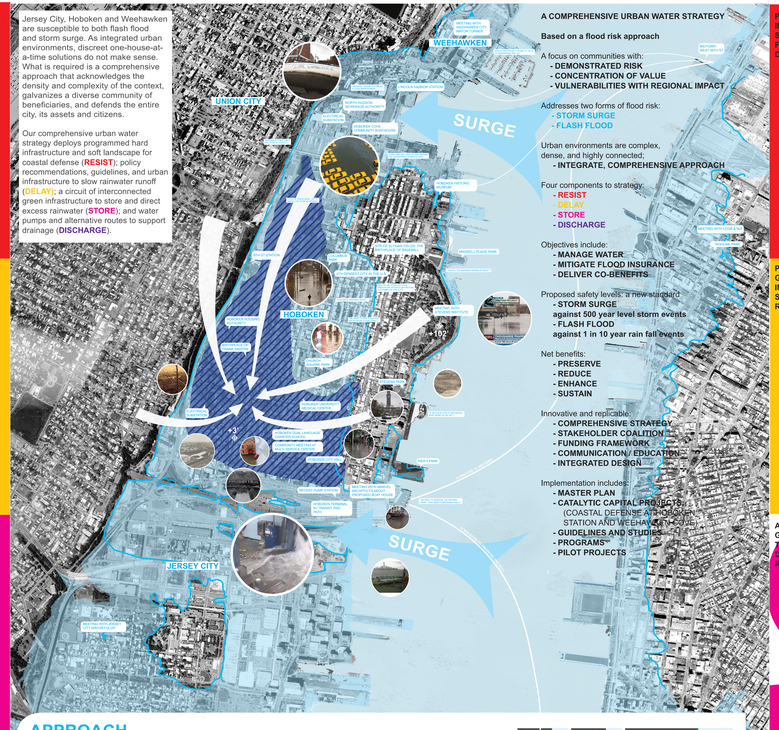
REBUILD BY DESIGN

Jersey City, Hoboken and Weehawken are susceptible to both flash flood and storm surge. As integrated urban environments, discreet one-house-at-a-time solutions do not make sense. What is required is a comprehensive approach that acknowledges the density and complexity of the context, galvanizes a diverse community of beneficiaries, and defends the entire city, its assets and citizens.

Our comprehensive urban water strategy deploys programmed hard infrastructure and soft landscape for coastal defense (**RESIST**); policy recommendations, guidelines, and urban infrastructure to slow rainwater runoff (**DELAY**); a circuit of interconnected green infrastructure to store and direct excess rainwater (**STORE**); and water pumps and alternative routes to support drainage (**DISCHARGE**).



A COMPREHENSIVE URBAN WATER STRATEGY

Based on a flood risk approach

A focus on communities with:
- **DEMONSTRATED RISK**
- **CONCENTRATION OF VALUE**
- **VULNERABILITIES WITH REGIONAL IMPACT**

Addresses two forms of flood risk:
- **STORM SURGE**
- **FLASH FLOOD**

Urban environments are complex, dense, and highly connected;
- **INTEGRATE, COMPREHENSIVE APPROACH**

Four components to strategy:
- **RESIST**
- **DELAY**
- **STORE**
- **DISCHARGE**

Objectives include:
- **MANAGE WATER**
- **MITIGATE FLOOD INSURANCE**
- **DELIVER CO-BENEFITS**

Proposed safety levels: a new standard
- **STORM SURGE**
  against 500 year level storm events
- **FLASH FLOOD**
  against 1 in 10 year rain fall events

Net benefits:
- **PRESERVE**
- **REDUCE**
- **ENHANCE**
- **SUSTAIN**

Innovative and replicable:
- **COMPREHENSIVE STRATEGY**
- **STAKEHOLDER COALITION**
- **FUNDING FRAMEWORK**
- **COMMUNICATION/ EDUCATION**
- **INTEGRATED DESIGN**

Implementation includes:
- **MASTER PLAN**
- **CATALYTIC CAPITAL PROJECTS**
  (COASTAL DEFENSE ATTACHED TO PATH STATION AND WEEHAWKEN CITY HALL)
- **GUIDELINES AND STUDIES**
- **PROGRAMS**
- **PILOT PROJECTS**

APPROACH

Flood Risk = **Probability** x **Consequence**

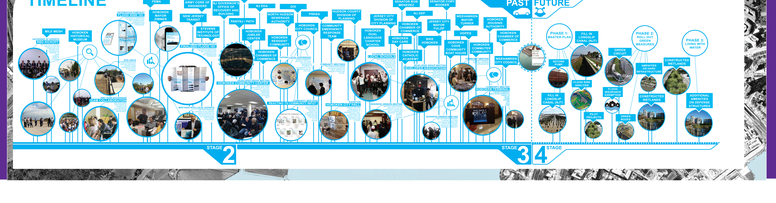
Storm surge flooding frequency | Assets

The Sandy-affected region is a long coastline with many assets, and as we now know, at risk. A fully comprehensive solution is beyond our means, so we will need to prioritize, build smart, and recognize where best to focus our resources for greatest impact.

Integrated into our built environments, over time our investments in defense should also empower our communities and our economy, allowing us to grow into resiliency.

Our approach is framed by a desire to understand and quantify flood risk. In doing so, we are better placed to identify those opportunities that present the greatest impact, the best value, and the highest potential—our areas of focus.

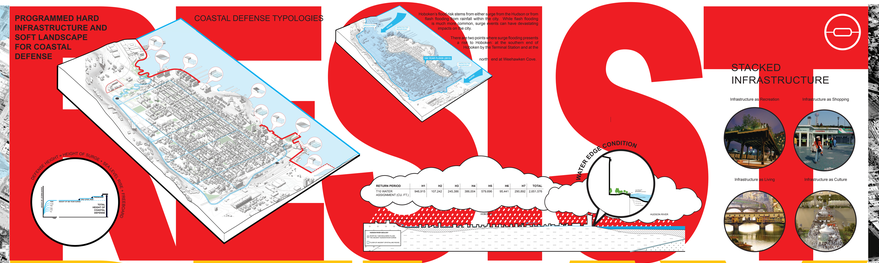
TIMELINE



RESIST

PROGRAMMED HARD INFRASTRUCTURE AND SOFT LANDSCAPE FOR COASTAL DEFENSE

COASTAL DEFENSE TYPOLOGIES

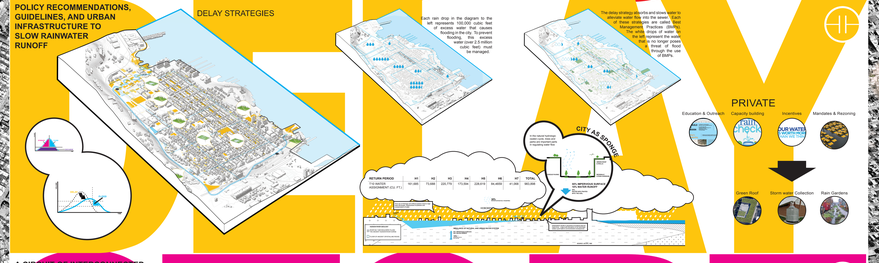


STACKED INFRASTRUCTURE

DELAY

POLICY RECOMMENDATIONS, GUIDELINES, AND URBAN INFRASTRUCTURE TO SLOW RAINWATER RUNOFF

DELAY STRATEGIES

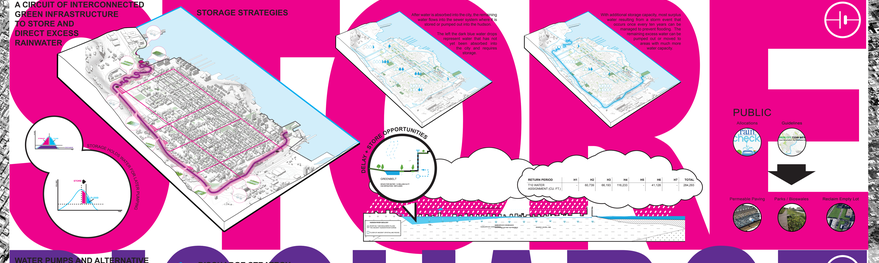


PRIVATE

STORE

A CIRCUIT OF INTERCONNECTED GREEN INFRASTRUCTURE TO STORE AND DIRECT EXCESS RAINWATER

STORAGE STRATEGIES

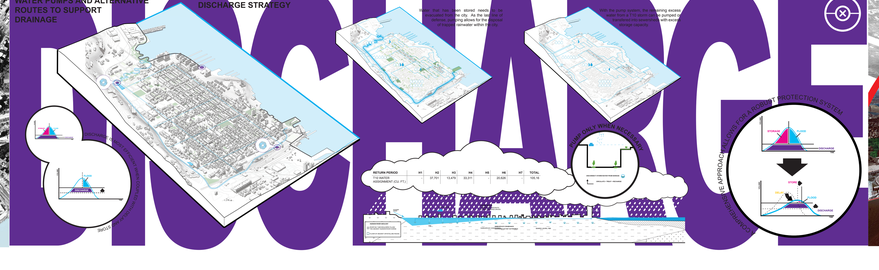


PUBLIC

DISCHARGE

WATER PUMPS AND ALTERNATIVE ROUTES TO SUPPORT DRAINAGE

DISCHARGE STRATEGY



A COMPREHENSIVE URBAN WATER STRATEGY

OMA AMO | Royal HaskoningDHV Enhancing Society Together | BALMORI | HR&A