



Toward a cost-effective restoration of a vital community in a safe delta, rebuild by design of the 'New Meadowlands', New Jersey

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75B

VolkerInfra

A winning proposal in the Post Sandy Rebuild by Design competition



project by:
MIT CAU + ZUS + URBANISTEN
Deltaires + Volker Infradeign + 75B

commissioned by:
Rebuild by Design
An Institute of the President's
Hurricane Sandy Rebuilding Taskforce

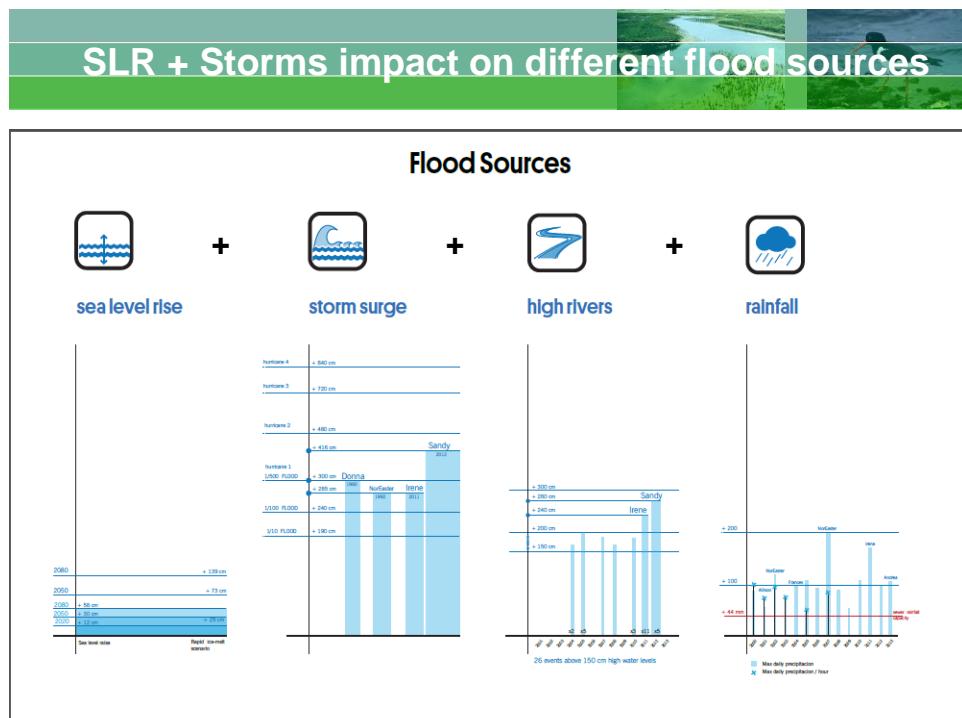
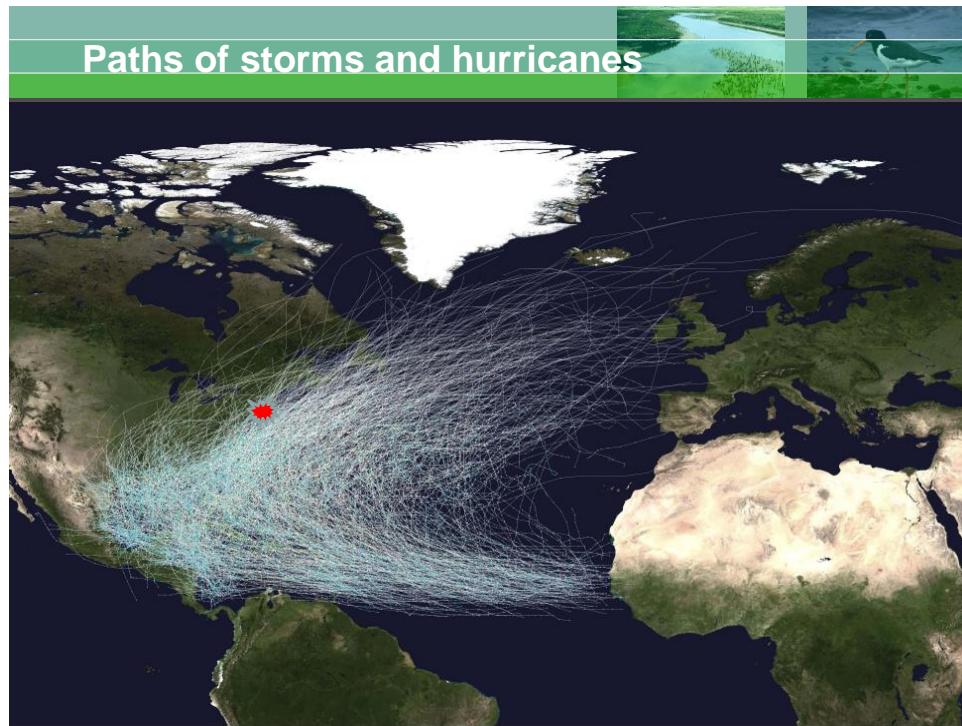


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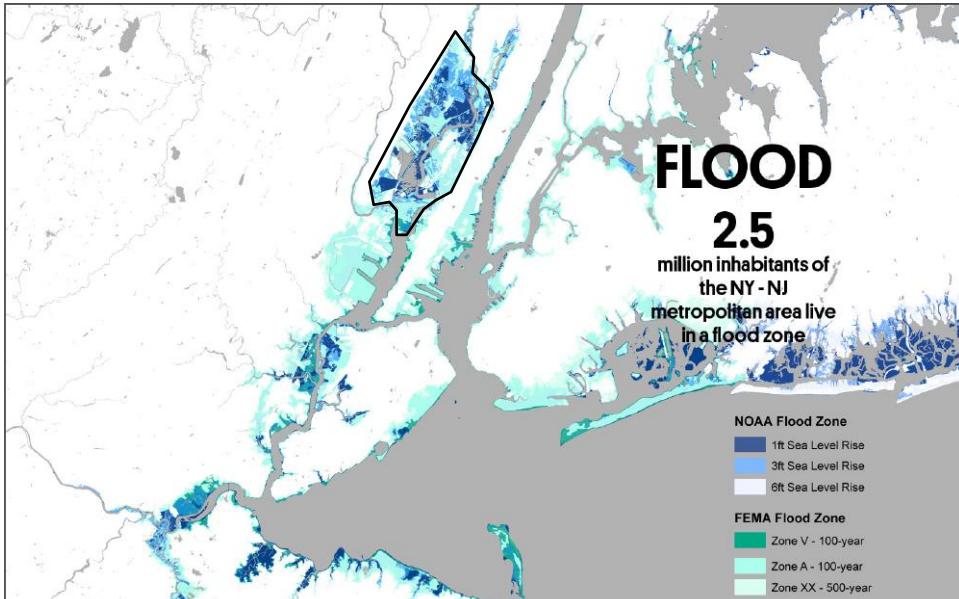
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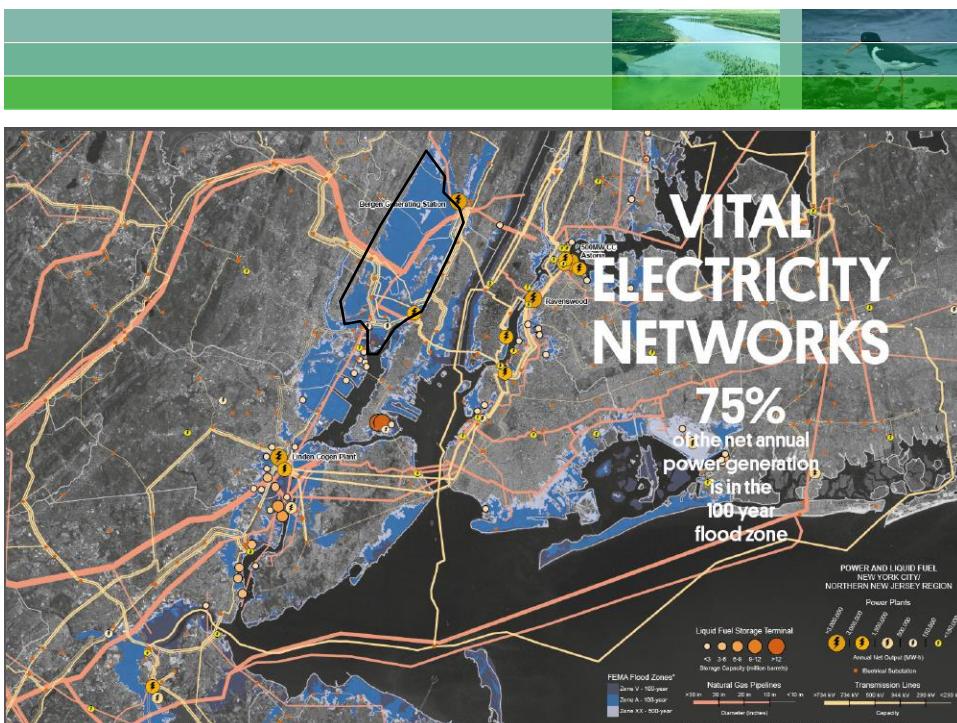
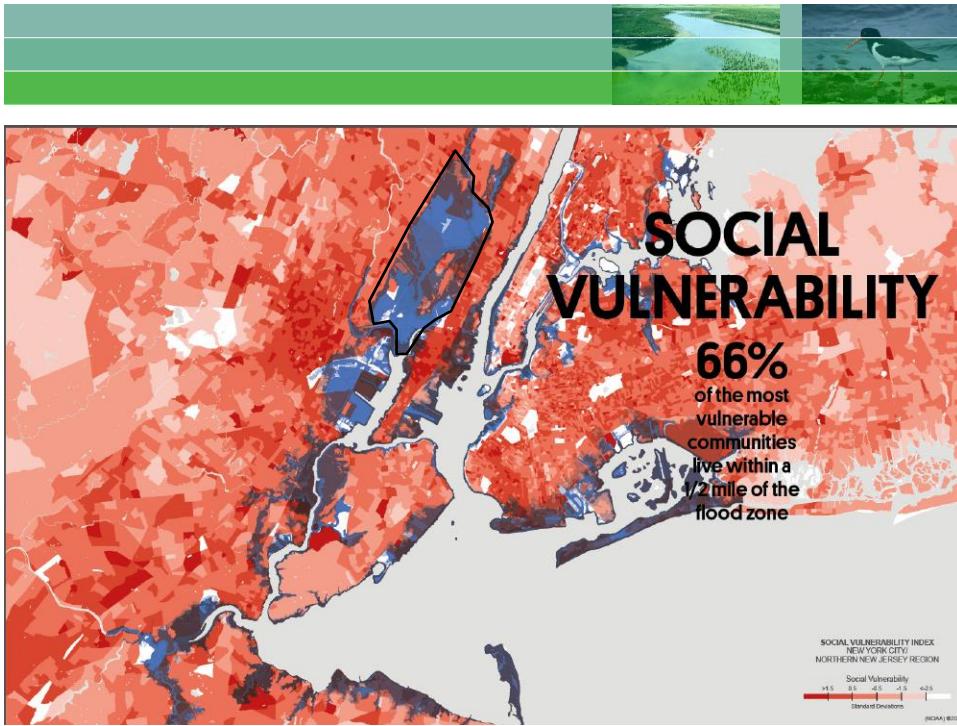


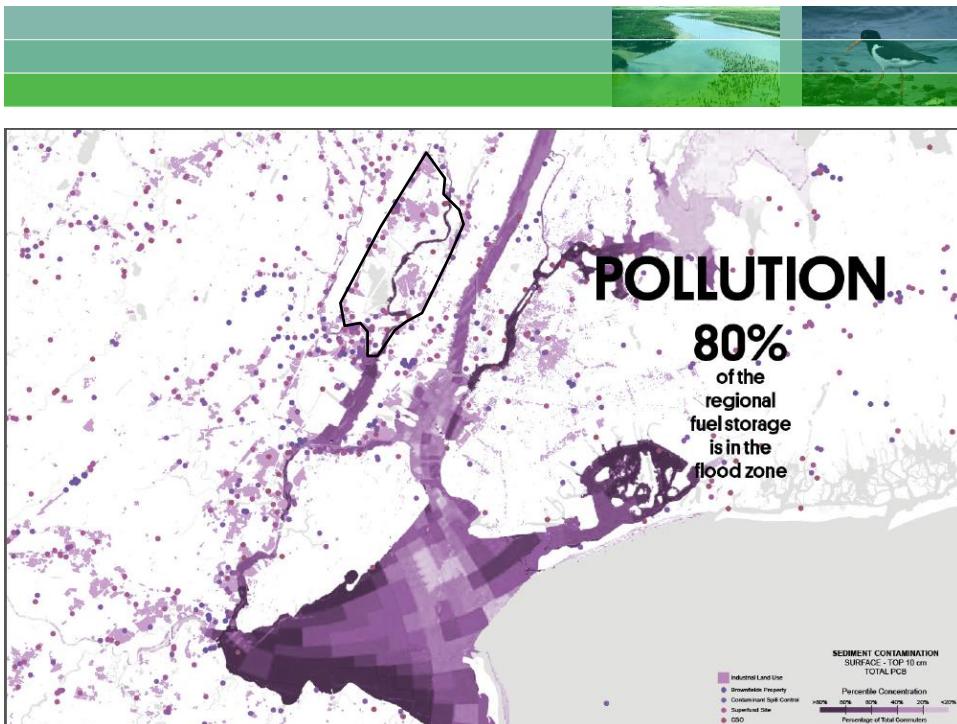
Meadowlands area was hit hard by Sandy



Sandy exposed many vulnerabilities



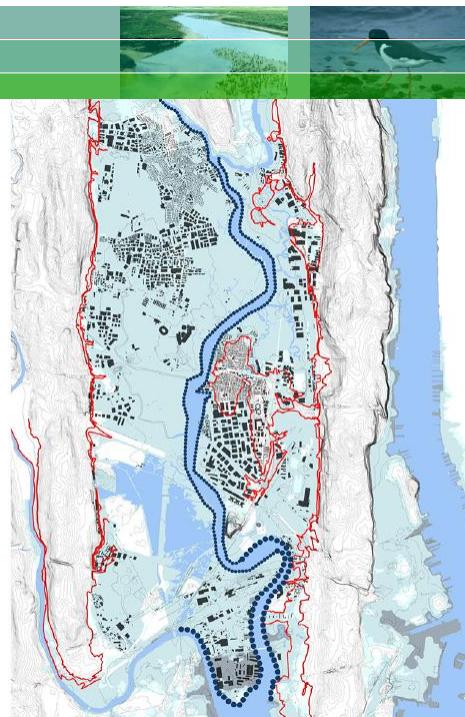




In the Meadowlands

What is at Risk

154,000 persons who work here
9,322 businesses
47,916 persons who live here
11,294 households with a mortgage
3 power plants and
21 substations
2,261 acres of rail yards
2 sewage plants
5 metro nodes
2 airports
7 superfund sites national priority list

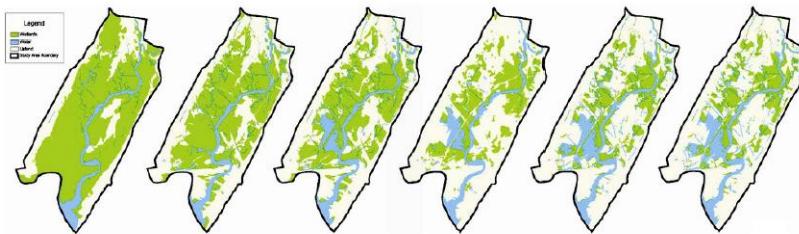


The Meadowlands have reached a state of high vulnerability with big hazards

Urban and industrial sprawl have destroyed much of the original wetland

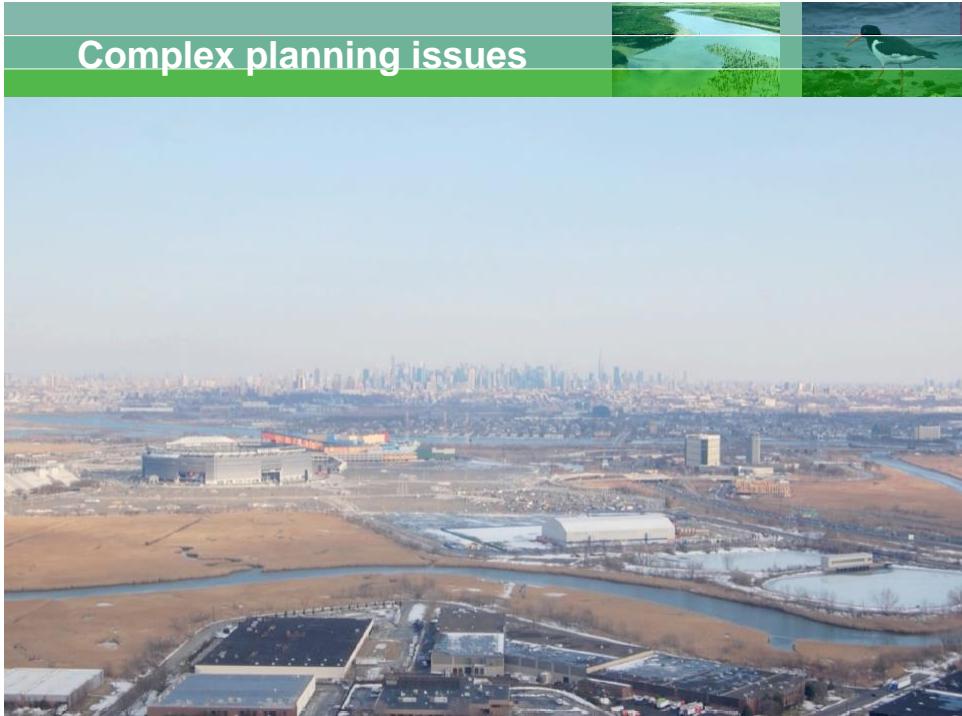
1900

now

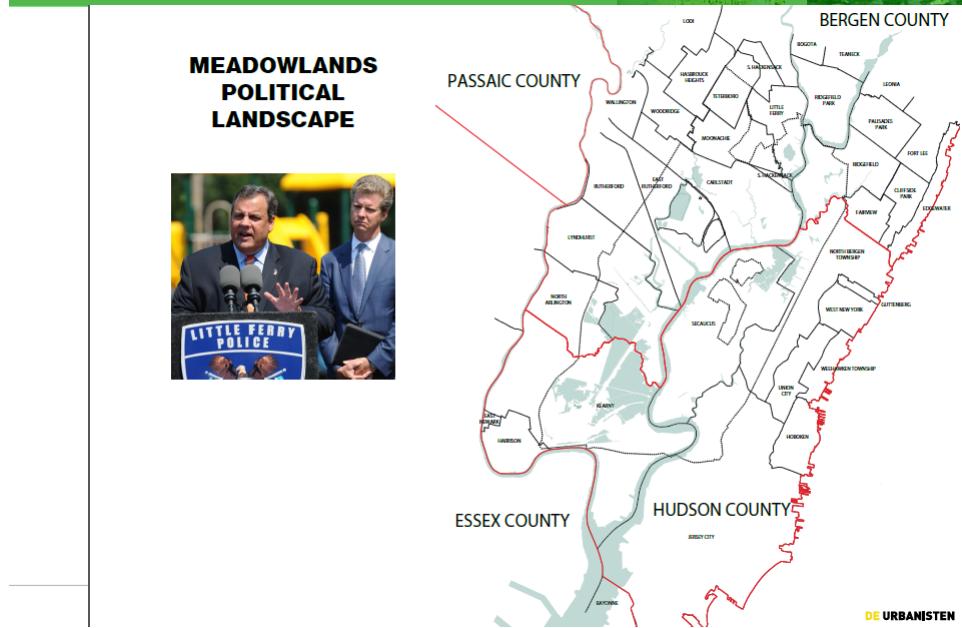


Lack of integral regional plan. Need for a trend break in land use

Complex planning issues



Complex governance issues

In co-creation with stakeholders



Toward an integrated regional plan



New Meadowlands consists of



The Meadowband

+

The Meadowpark

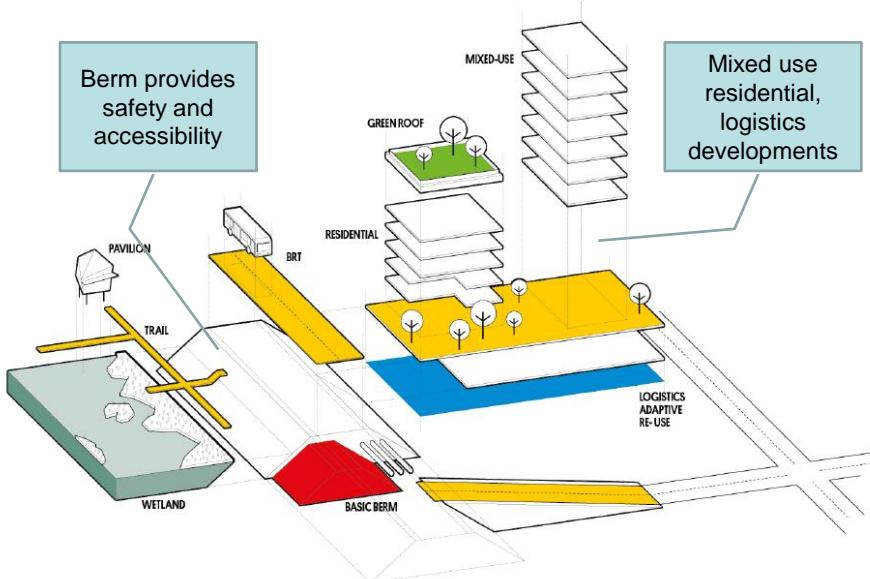
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Meadowband encircles the area and connects

MEADOWBAND

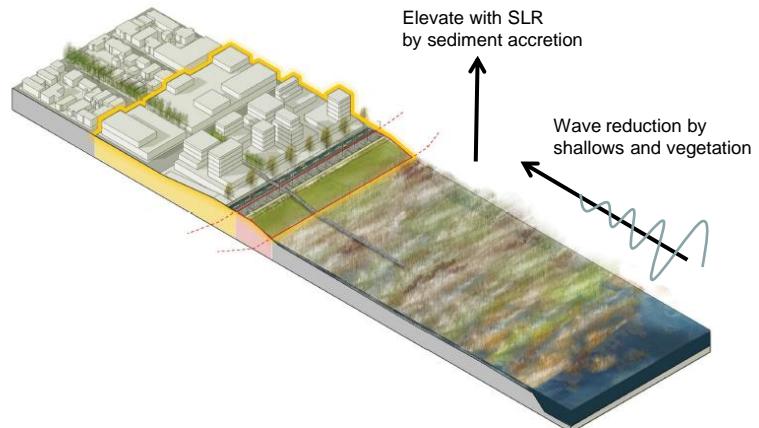
A CONNECTION FOR THE REGION AND
A CONDITION FOR GROWTH.

**Our concept of the Meadowband, promote
redevelopment of urban functions**



**Wetland will be a working part of flood safe design =
Dutch Nature Based Flood Defense concepts**

EXAMPLE : BERM + NEW DEVELOPMENTS + WETLAND



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Local environment leads to adapted designs

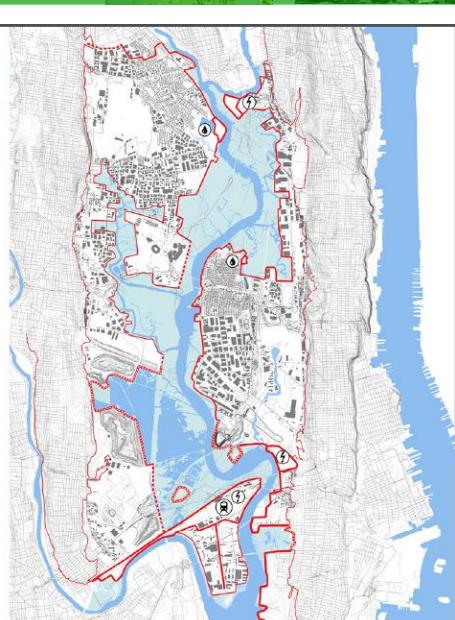
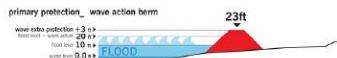
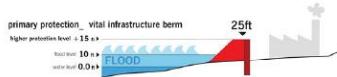
DIFFERENTIATION OF THE MULTIFUNCTIONAL BERM

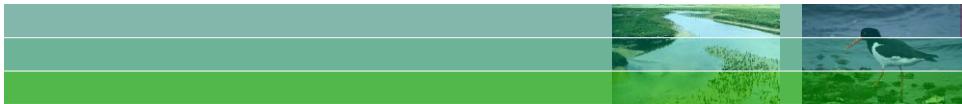


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Meadowband Berms will be integrated in nature and in build environment

A Series of Berms



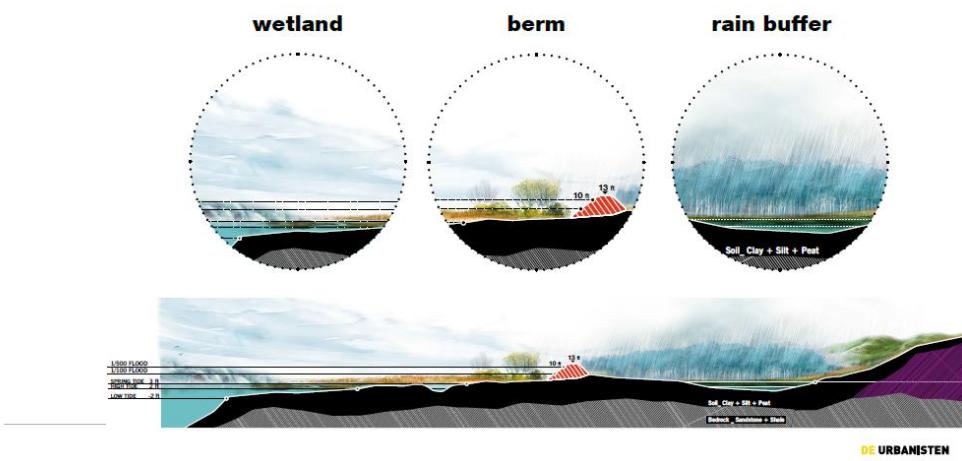


Within the Band there is the Meadowpark

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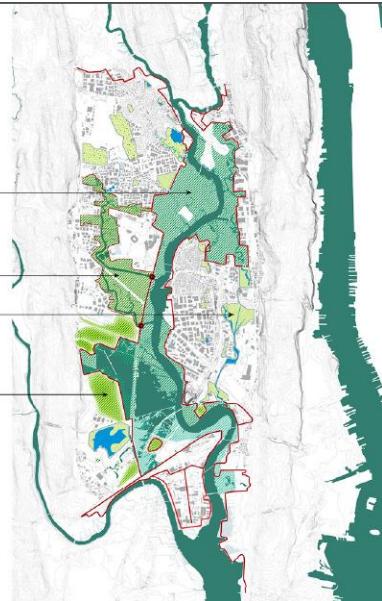
PROTECTION & PARK ARE COMBINED IN ONE



Nature: Restore, connect, enhance...

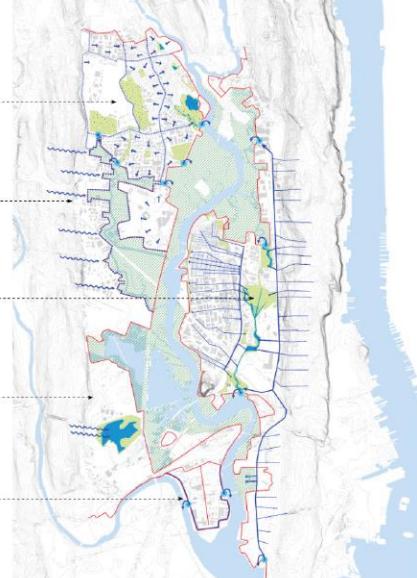
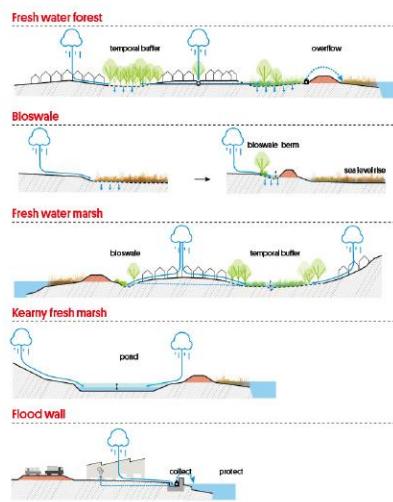
Creating a Comprehensive Plan

tidal wetland •
 wildlife sanctuary •
 fresh water forest •
 meadowhills •

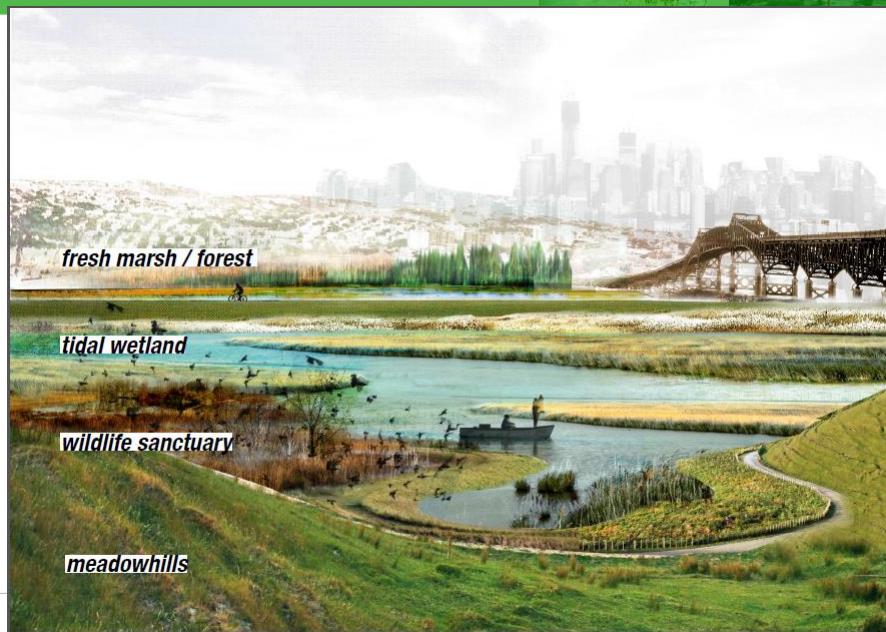


Solving the pluvial problems with storm water storage

Fresh Water System



Enhanced nature values in attractive landscapes..



that attract people...

STORM WATER LANDSCAPE



that want to live there...

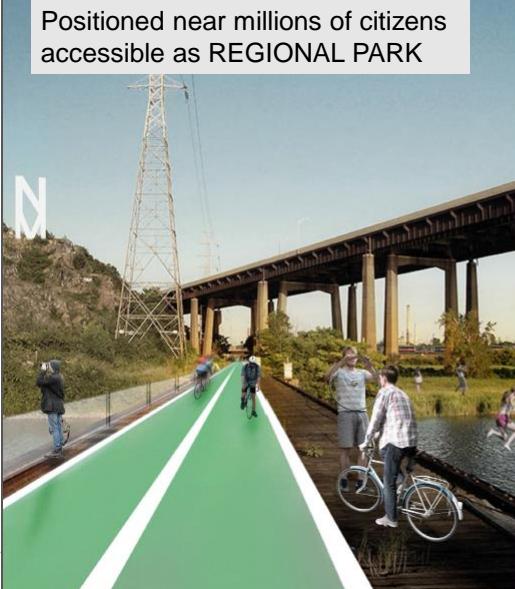


LIVING IN THE MEADOWBAND



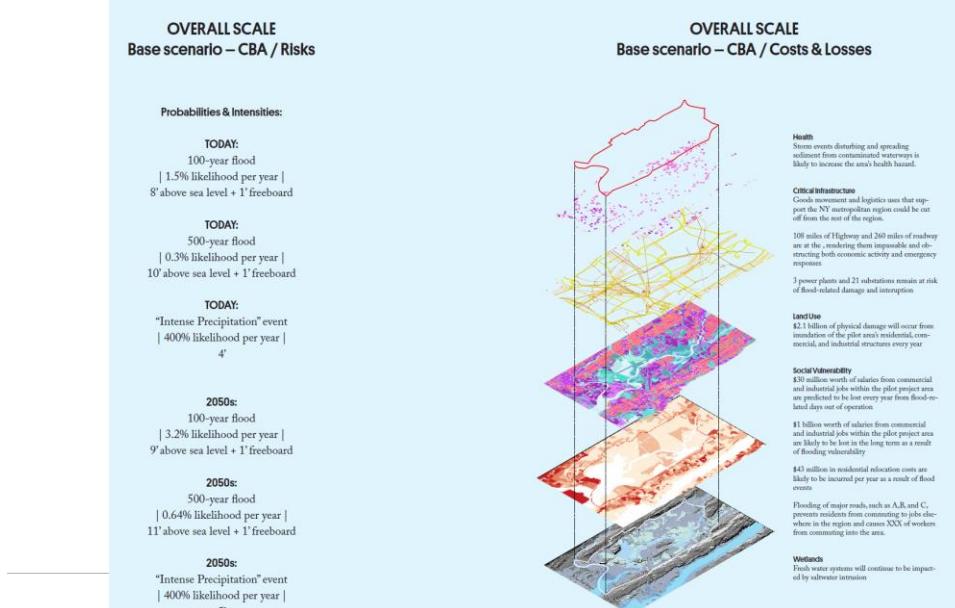
Connected to Hoboken & Manhattan

Positioned near millions of citizens
accessible as REGIONAL PARK



**Regional scale of plan delivers optimal result:
the whole is more than the sum of the parts**

Base scenario: increasing costs and losses



Northern Pilot was funded with 150 m\$ in RBD competition



NM-CBA: costs avoided, added values and tax revenue

Pilot Area Benefits

FLOOD PROTECTION

Physical damage to structures avoided per year: \$37 million

WETLANDS

Value of new wetlands: \$5,290,928 per year

HEALTH

Health value of recreation space for the current population of residents: \$3.3 million per year.

ACCESS

Value of new recreation space in proximity to current residents: \$41,75 per year

NEW RESIDENTS

Overall proposed 14,414 new residential units = 25,674 new residents

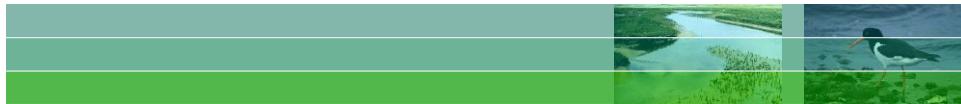
JOBs

Overall proposed 9,716,455 new commercial and industrial sqft. = 2429 new jobs

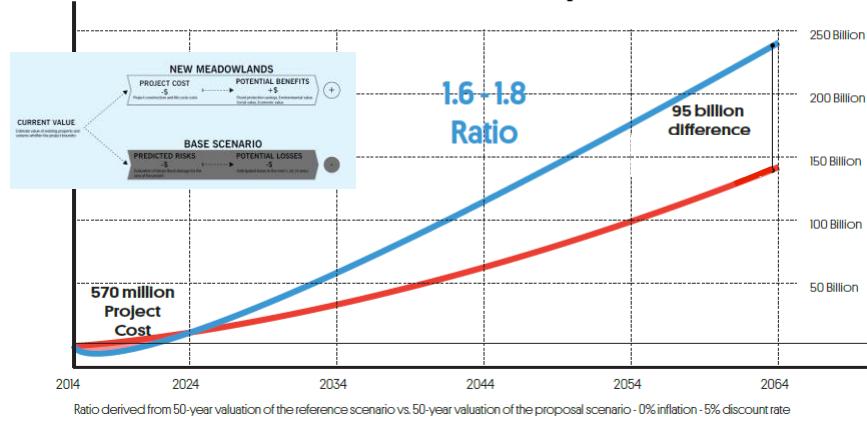
TAX REVENUE

The area could expect an increase in tax revenue totaled at \$561,760,390 Million





Cost Benefit Analysis Pilot Area Example



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The New Meadowlands, forward to implementation!

