



Ministry of Foreign Affairs

Rising Water: Not an emergency, definitely a problem

Jan Peelen

Attaché for Infrastructure & Water Management
Netherlands Embassy

25-02-2020





Flood-prone area

Within dyke rings

Below NAP: 26%

Above NAP: 29%

Areas outside
dyke rings: 3%

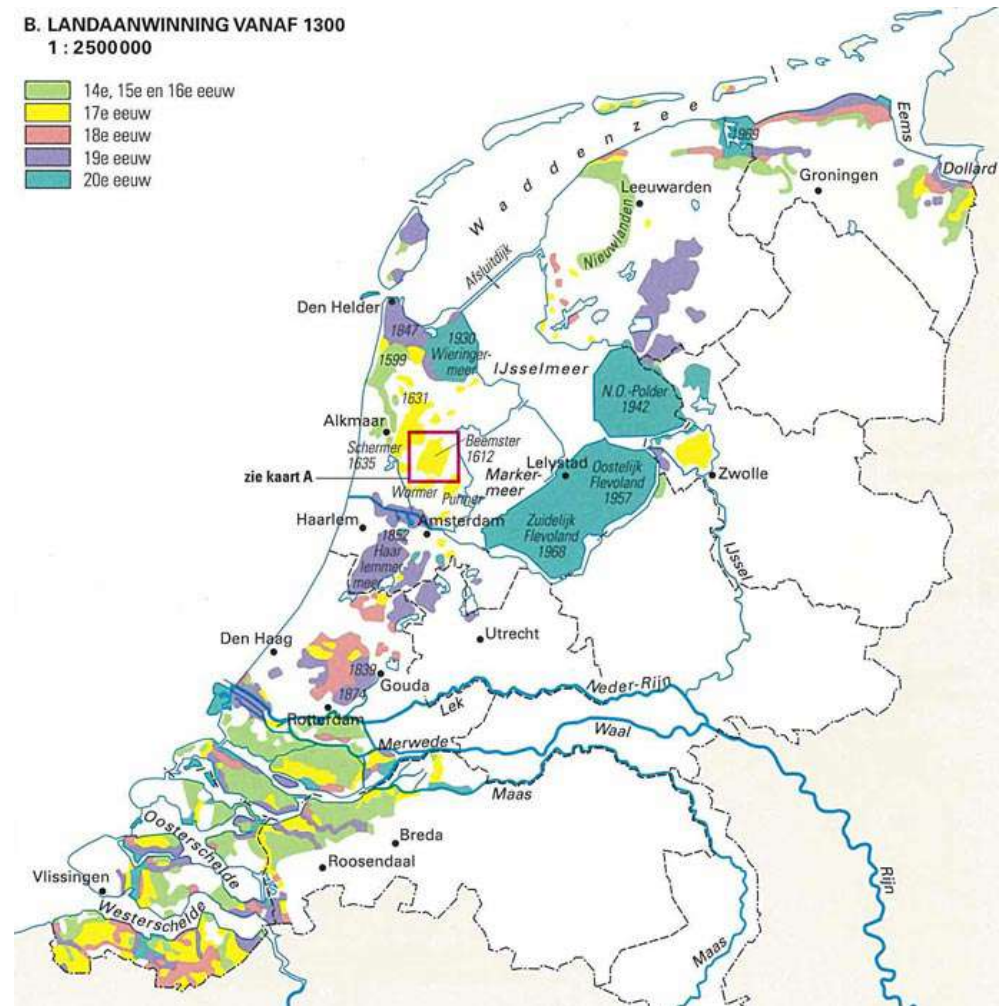
Areas threatened by
flooding along the
river Meuse: 1% *)

*) Flood prone area along the river Meuse,
within the 1/250 contour.

Netherlands Environmental Assessment Agency

B. LANDAANWINNING VANAF 1300 1 : 2500000

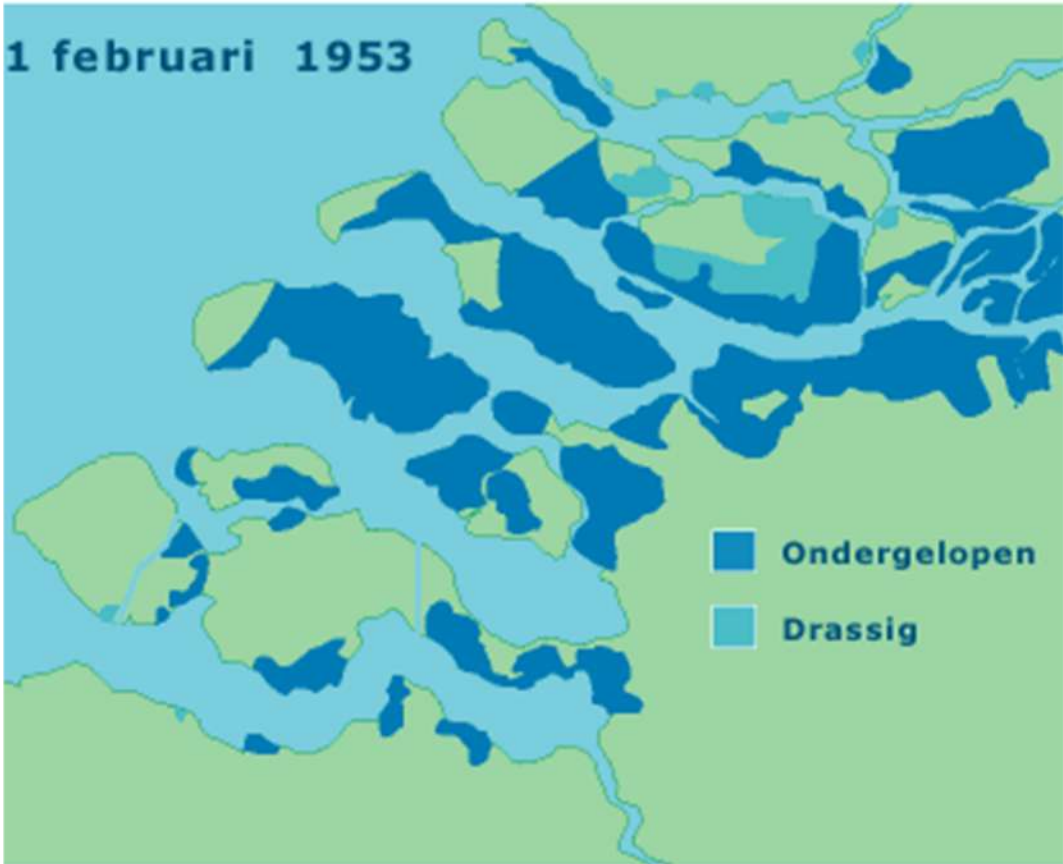
14e, 15e en 16e eeuw
17e eeuw
18e eeuw
19e eeuw
20e eeuw







The Deltaplan: creating a fortress against the sea







Vught 3
Eindhoven 30
Maastricht 122
↓ A2 ↓

Vught-Centrum
Tilburg
↓ A65 ↓









The Deltaprogram: Sustainable, Flexible and Solidarity

- Framework for climate adaptation: 2020
→ 2025 → 2100
- New political-administrative, legal and financial measures
- Incorporating uncertainty into planning process
- Long term actions
- In each
- Rad change in discourse

Instead of: What can happen? Ask: Under what conditions does the policy fail?

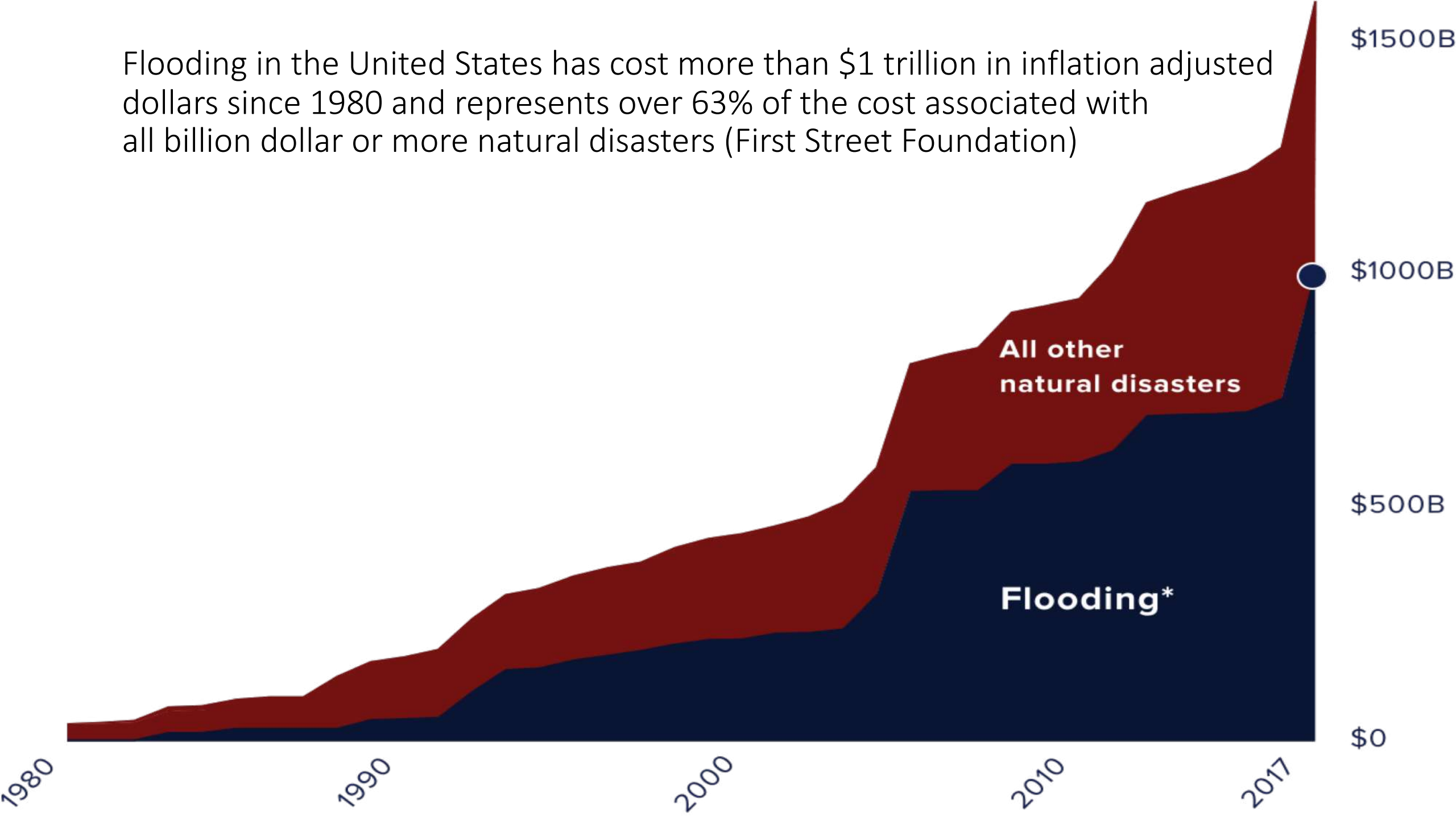


U.S. 2017 Billion-Dollar Weather and Climate Disasters



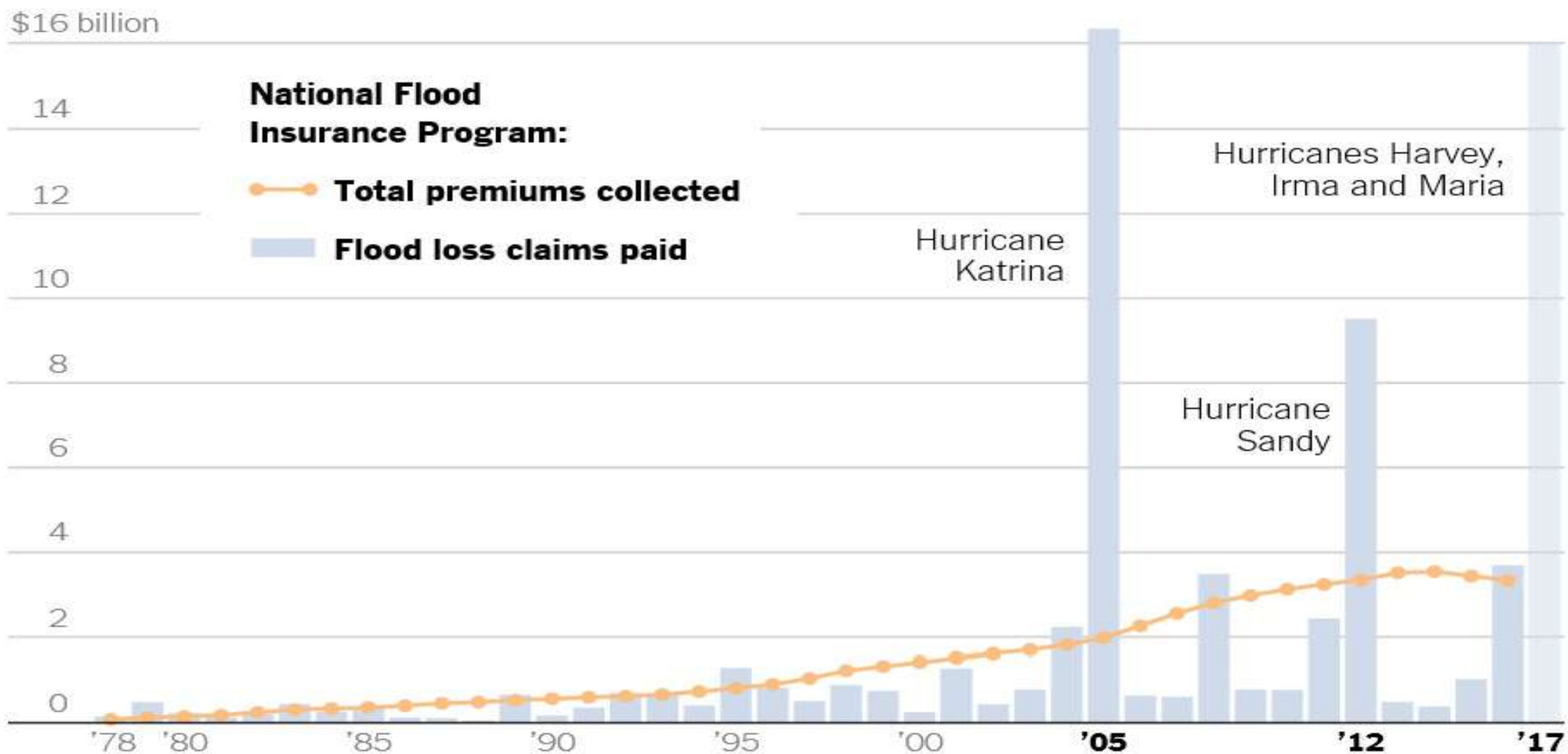
This map denotes the approximate location for each of the 16 billion-dollar weather and climate disasters that impacted the United States during 2017.

Flooding in the United States has cost more than \$1 trillion in inflation adjusted dollars since 1980 and represents over 63% of the cost associated with all billion dollar or more natural disasters (First Street Foundation)



Unable to Keep Up With the Floods

The National Flood Insurance Program has been in the red since 2005, when Hurricane Katrina flooded New Orleans and it suddenly had to pay out \$16.3 billion in claims.







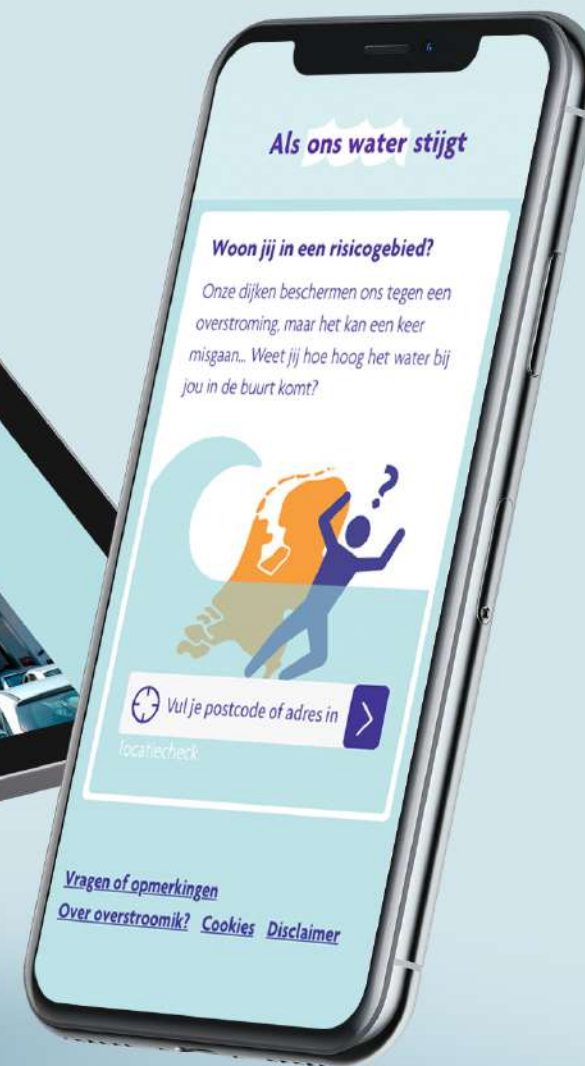








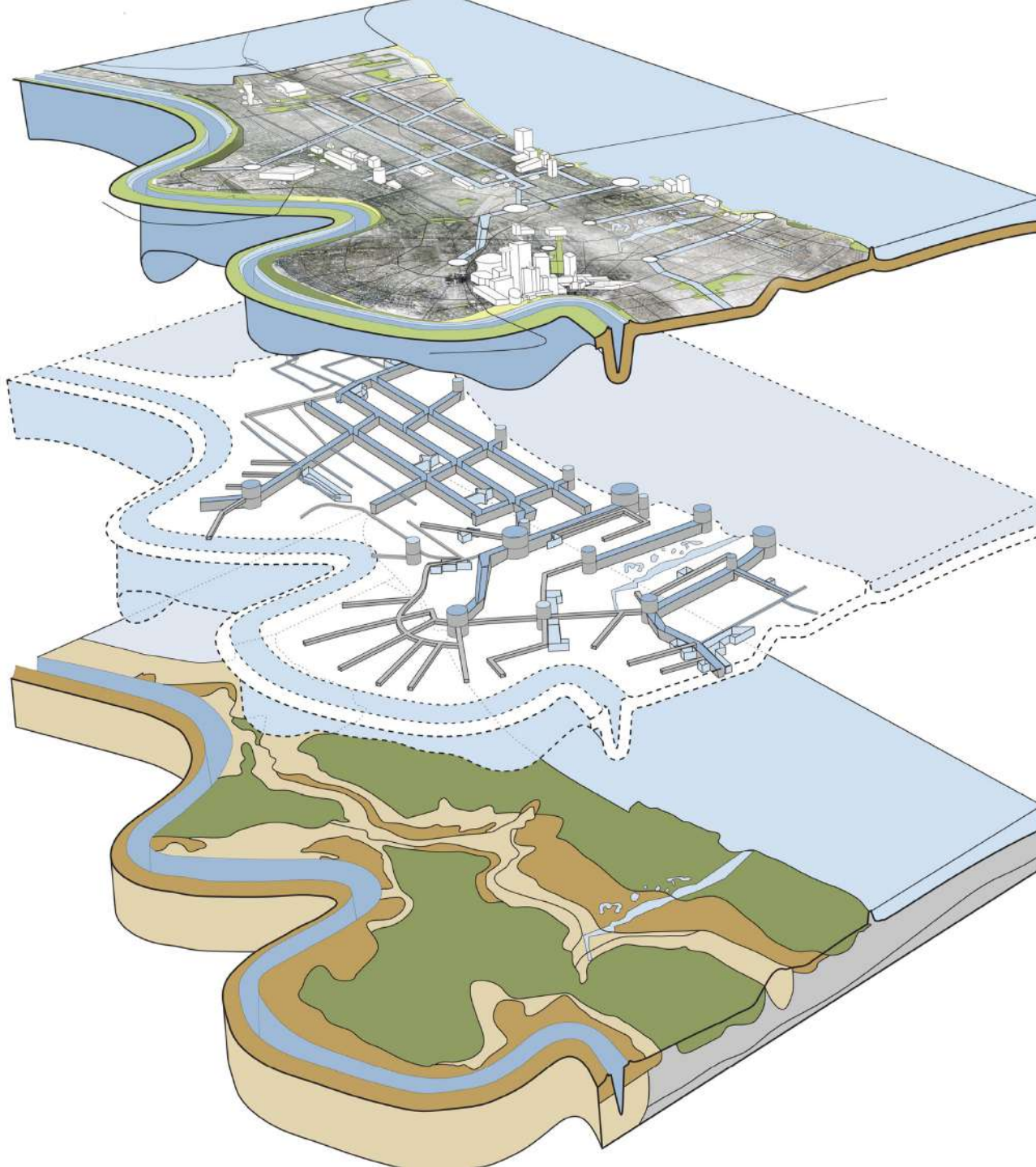












**Inhabitation
Land Cover**

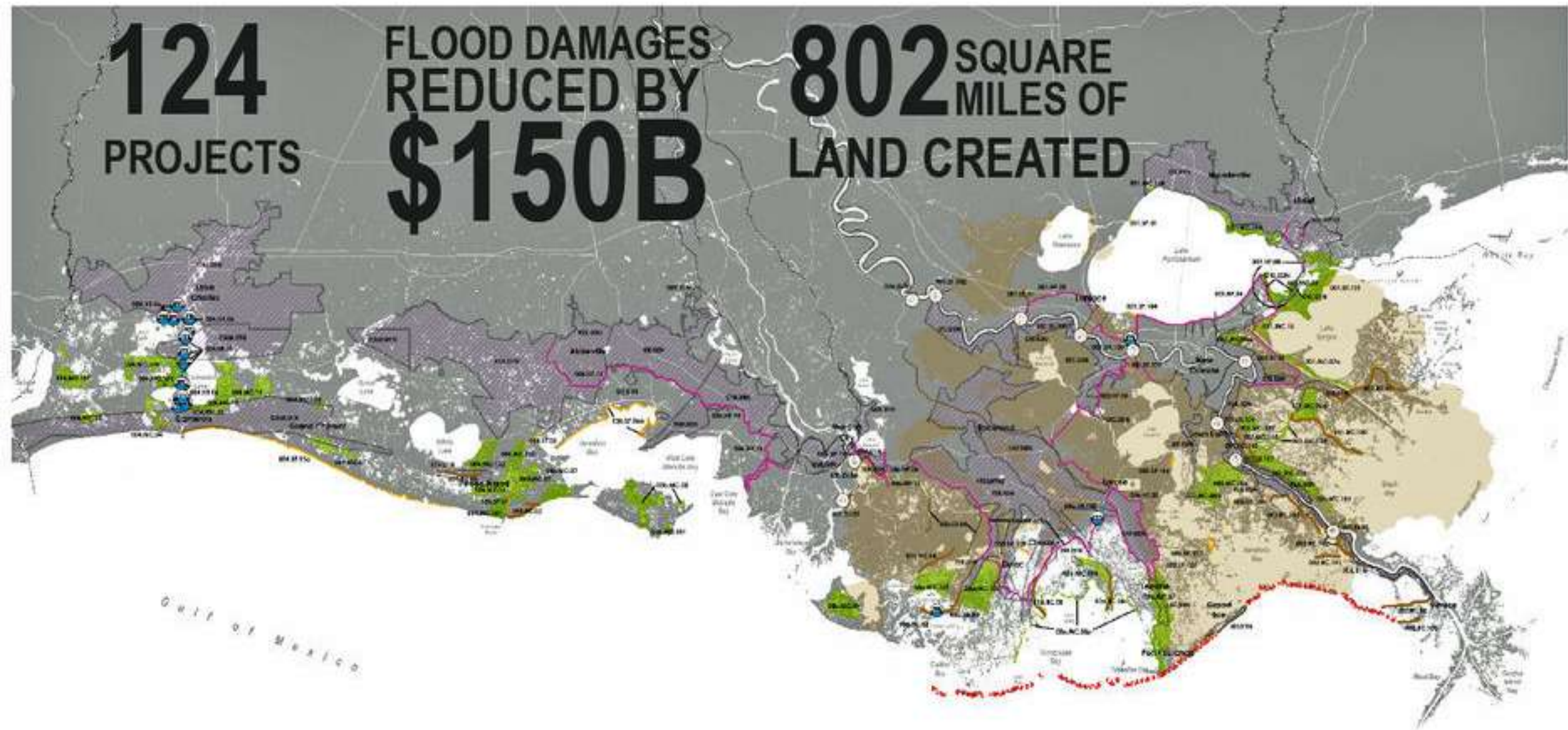
**Infrastructure
Networks**

**Soils
Water
Biodiversity**

124
PROJECTS

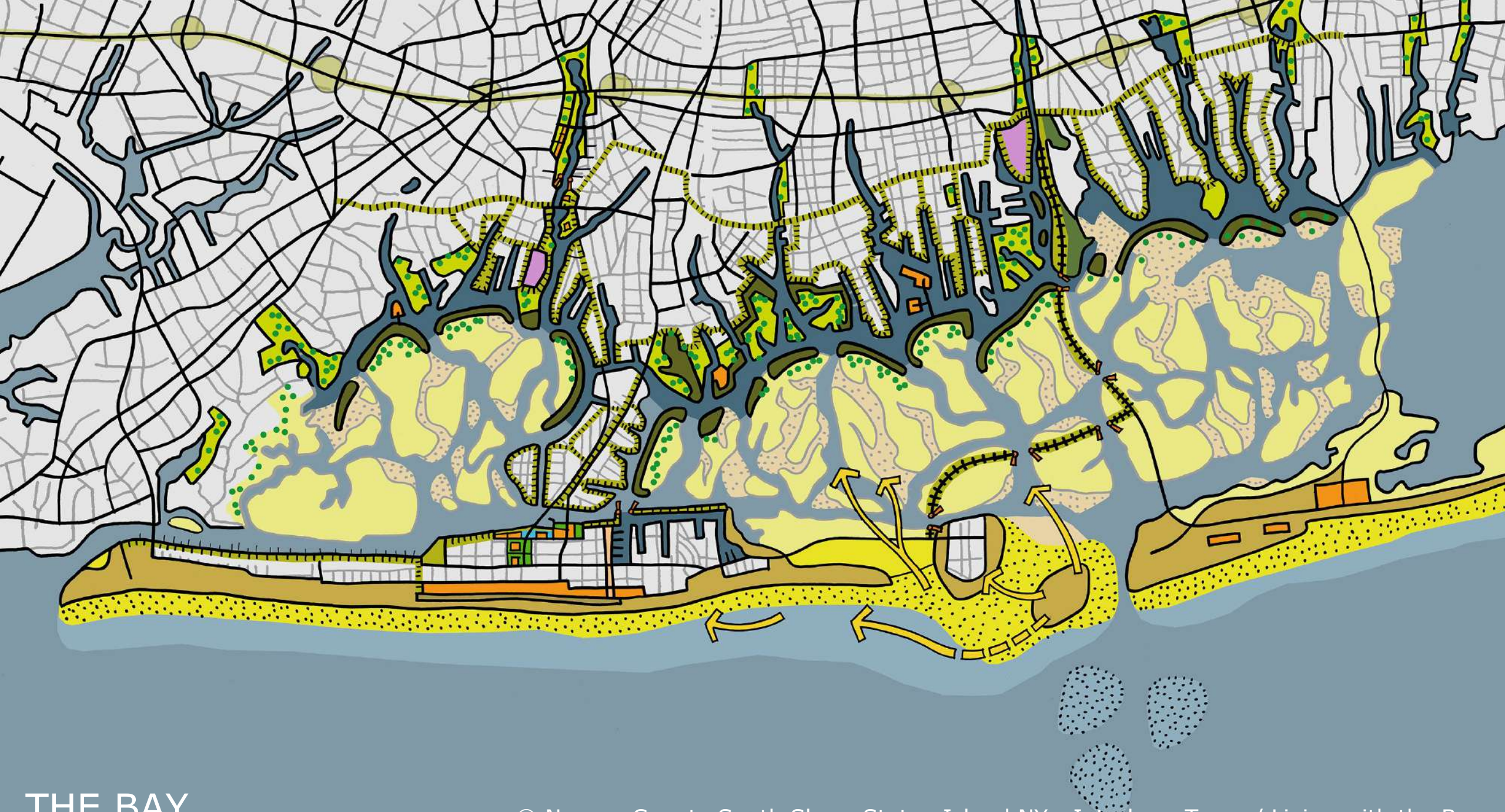
FLOOD DAMAGES
REDUCED BY
\$150B

802 SQUARE
MILES OF
LAND CREATED



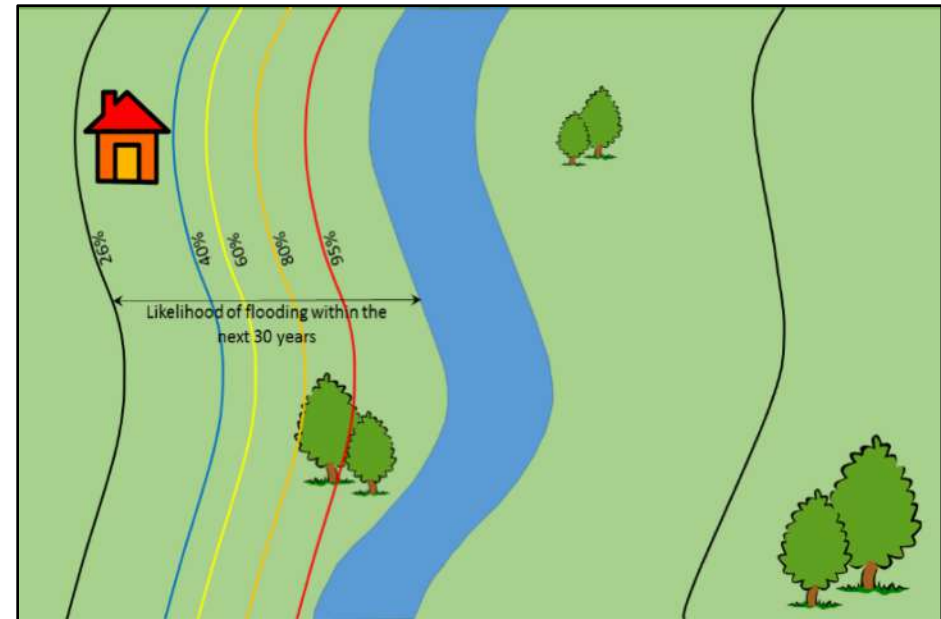
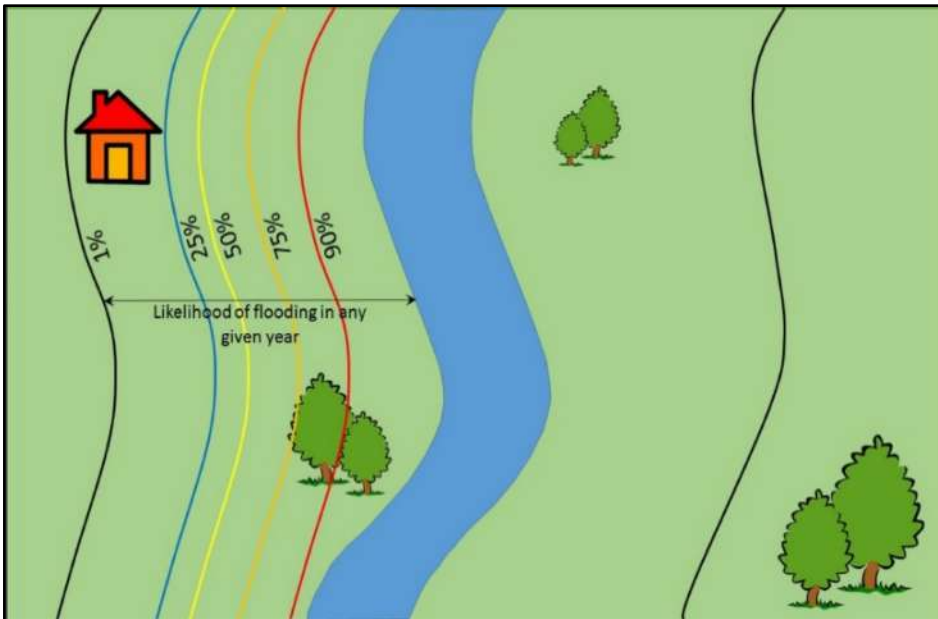
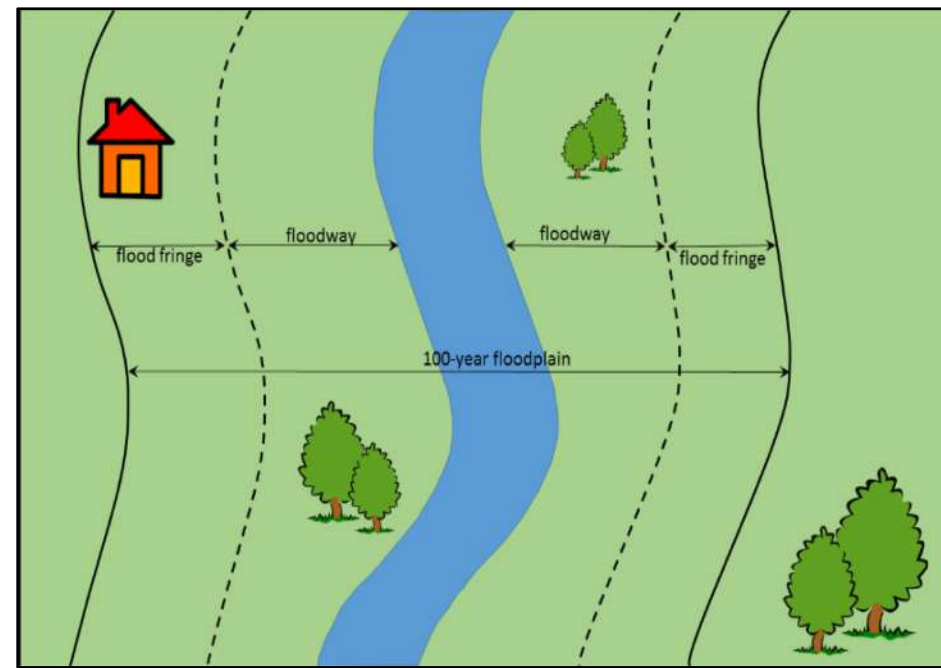
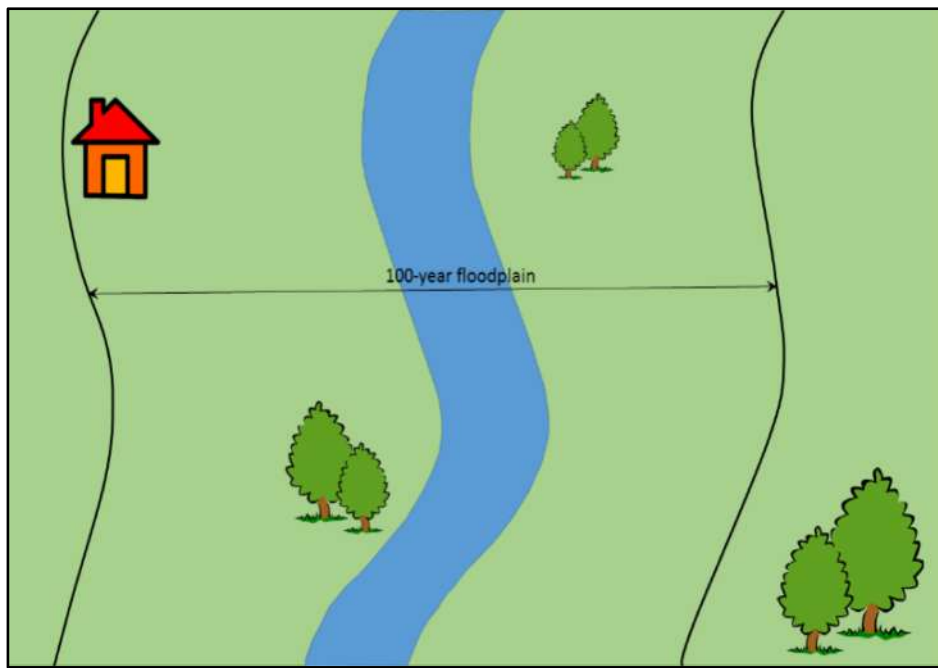






THE BAY





Special Thanks to BRIAN BLEDSOE, PH.D., P.E, University of Georgia



Development Guidelines

Dutch Dialogues™ Charleston

Zone	Approx. Land Elev. (NAVD)	Allowable Development Density	Allowable Foundation Types	Fill Allowed	Potential Stormwater BMPs
Wet Zone	0 – 6'	None	N/A	No	Living Shorelines/Buffers
Ecological Zone	6 – 10'	Limited (Single)	Elevated	Roadways Only	Promote Buffers/Open Systems/Space/ Storage Only
Transitional Ecological Zone	10 – 15'	Moderate	Elevated/ Limited Slab on Grade	Limited	Closed Systems/ Open Space/Storage and Green Infrastructure/ Infiltration
Community Zone	> 15'	Moderate to Urban	Mix	Limited to Moderate	Green Infrastructure/ Infiltration and Limited Closed Systems

Thank you for your attention

