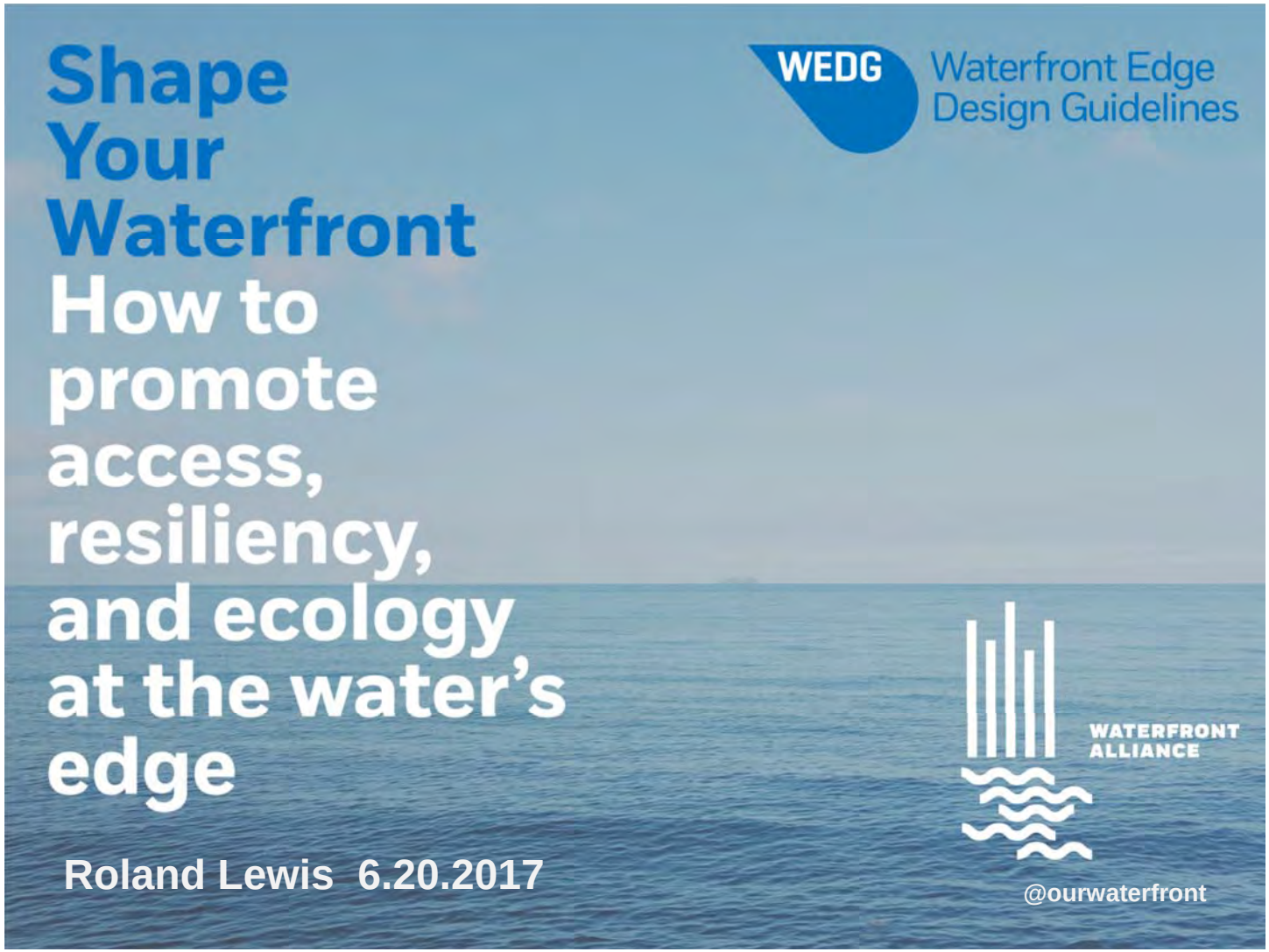

Shape
Your
Waterfront
How to
promote
access,
resiliency,
and ecology
at the water's
edge
WEDG
Waterfront Edge
Design Guidelines
WATERFRONT
ALLIANCE
Roland Lewis 6.20.2017
@ourwaterfront

Mission

The Waterfront Alliance works to protect, transform, and revitalize our harbor and waterfront.

Constituency building

©Etienne Frossard

Camden Waterfront

But there is also…

And this…

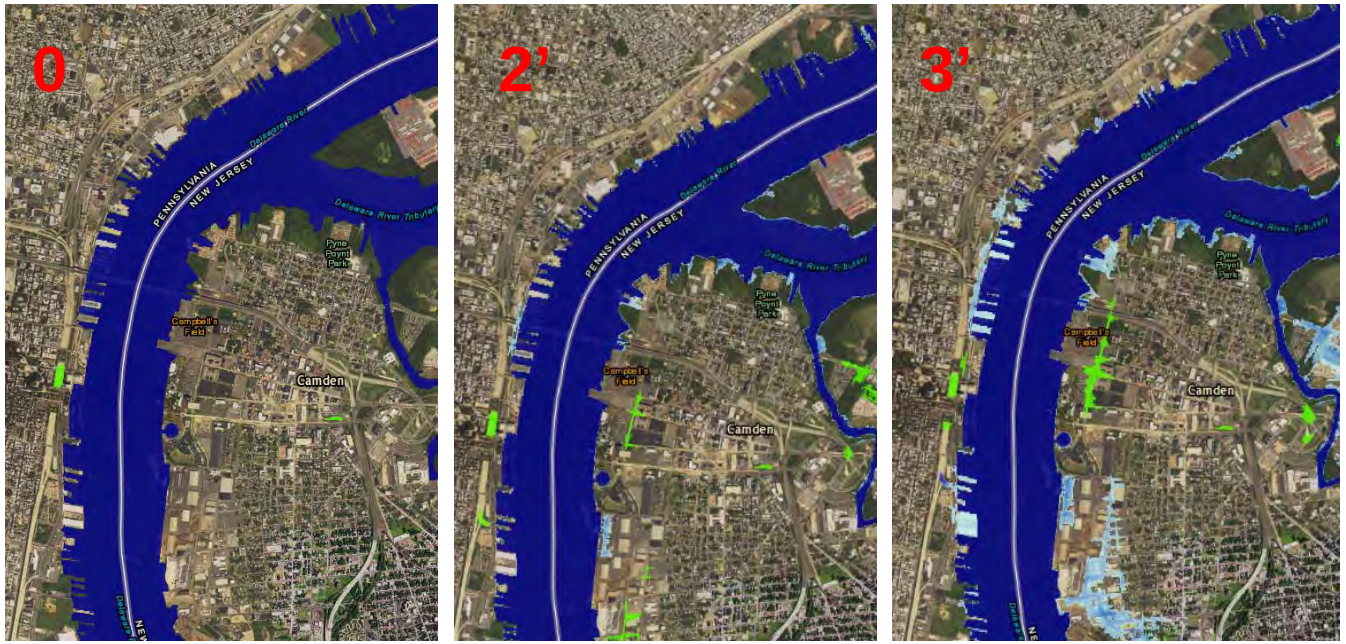
And this…

And this…

And this…

And this…

And this…



NOAA sea level rise viewer

How can we do better?

WEDG
Waterfront Edge
Design Guidelines

Evidence-based

Waterfront Edge Design Guidelines

Physical (**beaches**) and biological (**algae,** rooted **vegetation, oyster reefs**) structures of the shore zone help to **dissipate energy** from waves and currents…(Coops et al. 1996, Strayer and Findlay 2010, Scyphers et al. 2011).

…**narrowing** and **tidying** of the shore zone, shortening and simplification of the shoreline…**decrease local biodiversity** and rates of many biogeochemical processes.

Principles

Enhance ecology,

Encourage maritime use

Use a science-based, evaluative process for restoration

Commit to equity and community input

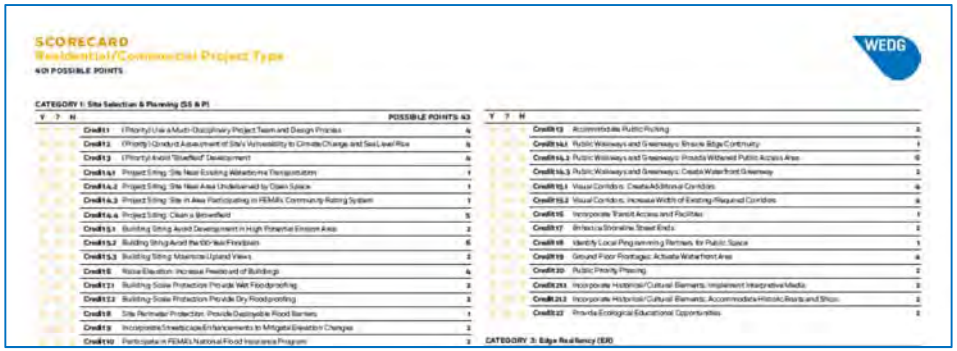
Promote resiliency

Enhance public access, especially for boats

Credit system

WEDG Waterfront Edge Design Guidelines

1. Site Selection & Planning
2. Public Access & Interaction
3. Edge Resiliency
4. Ecology & Habitat
5. Materials & Resources
6. Operations & Maintenance
7. Innovation



SCORECARD

Residential/Commercial Project Type

401 POSSIBLE POINTS

CATEGORY 1: Site Selection & Planning (SS & P)

Y	?	N		POSSIBLE POINTS: 63
			Credit 1 (Priority) Use a Multi-Disciplinary Project Team and Design Process	4
			Credit 2 (Priority) Conduct Assessment of Site's Vulnerability to Climate Change and Sea Level Rise	5
			Credit 3 (Priority) Avoid "Greenfield" Development	4
			Credit 4.1 Project Siting: Site Near Existing Alternative Transportation	1
			Credit 4.2 Project Siting: Site Near Area Undeserved by Open Space	1
			Credit 4.3 Project Siting: Site in Area Participating in FEMA's Community Rating System	1
			Credit 4.4 Project Siting: Clean a Brownfield	5
			Credit 5.1 Building Siting: Avoid Development in High Potential Erosion Area	2
			Credit 5.2 Building Siting: Avoid the 100-Year Floodplain	5
			Credit 5.3 Building Siting: Maximize Upland Views	2
			Credit 6 Noise Elevation: Increase Freeboard of Buildings	4
			Credit 7.1 Building Scale Protection: Provide Wet Floodproofing	2
			Credit 7.2 Building Scale Protection: Provide Dry Floodproofing	2
			Credit 8 Site Perimeter Protection: Provide Deployable Flood Barriers	1
			Credit 9 Incorporate Streetscape Enhancements to Mitigate Elevation Changes	2
			Credit 10 Participate in FEMA's National Flood Insurance Program	2

Y	?	N	
			Credit 13 Accommodate Public Parking
			Credit 14.1 Public Walkways and Greenways: Ensure Edge Continuity
			Credit 14.2 Public Walkways and Greenways: Provide Widened Public Access Area
			Credit 14.3 Public Walkways and Greenways: Create Waterfront Greenway
			Credit 15.1 Visual Corridors: Create Additional Corridors
			Credit 15.2 Visual Corridors: Increase Width of Existing/Required Corridors
			Credit 16 Incorporate Transit Access and Facilities
			Credit 17 Enhance Shoreline Street Ends
			Credit 18 Identify Local Programming Partners for Public Space
			Credit 19 Ground Floor Frontages: Activate Waterfront Area
			Credit 20 Public Priority Phasing
			Credit 21.1 Incorporate Historical/Cultural Elements: Implement Interpretive Media
			Credit 21.2 Incorporate Historical/Cultural Elements: Accommodate Historic Resources and Sites
			Credit 22 Provide Ecological Educational Opportunities

CATEGORY 3: Edge Resiliency (ER)

and guidelines

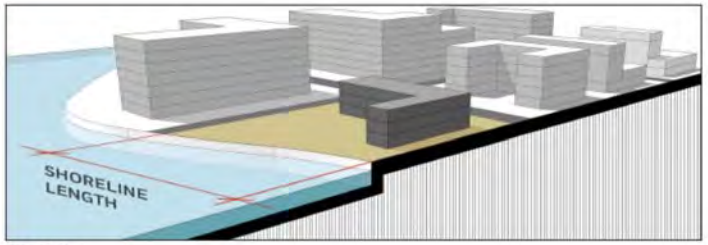
WEDG Waterfront Edge Design Guidelines

ER-CREDIT 3.2
Shoreline Configuration: Reduce Slope
POSSIBLE 6 PTS

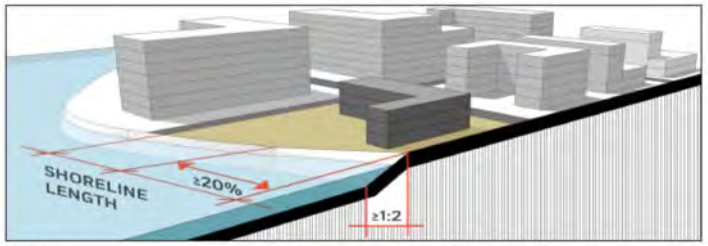
YES ? NO

Gradually sloped shorelines – rather than a hardened or more vertical shoreline – can progressively dissipate wave energy, reducing reflection and amplification while also improving the aquatic habitat within the intertidal zone. Reconfigure at least 20% of the shoreline but not less than 50 feet to a maximum slope of 1:2. (Note: Changes to the shoreline configuration should be analyzed by the project team for hydrological impacts regarding, storm surge/flooding, wave regime, and stream velocity/currents.) Provide a grading plan to demonstrate compliance with this credit.

a) Reconfigure the shoreline length to a maximum slope of 1:2 2 PTS
b) Reconfigure the shoreline length to a maximum slope of 1:3 4 PTS
c) Reconfigure the shoreline length to a maximum slope of 1:4 6 PTS



BEFORE



AFTER

for better engagement

WEDG Waterfront Edge Design Guidelines

and improved practice

WEDG Waterfront Edge Design Guidelines

Hunters Point South, Queens, NY

Most importantly…a communication tool

WEDG Waterfront Edge Design Guidelines

WEDG Task Force (partial list)

Government
- US ACOE
- USCG
- US HUD
- NYS DOS
- NYS DEC
- NYC DCP
- NYC DEP
- NYC DPR
- NYC SBS
- NYC EDC
- NYC Mayor's Office
- (OLTPS/ORR)
- NJ DEP
- PA NY/NJ
- NYC DOT
- NYC DDC

Experts/Consultants
- AECOM
- AKRF
- Arcadis
- ARUP
- Biohabitats
- dlandstudio
- Ed Weinstein Architecture
- FXFOWLE
- Great Ecology
- HDR
- Langan Engineering
- Louis Berger Group
- OCC
- Parsons Brinkerhoff
- Ray Fusco Inc.
- SeArc
- SCAPE
- Starr Whitehouse
- Studio V

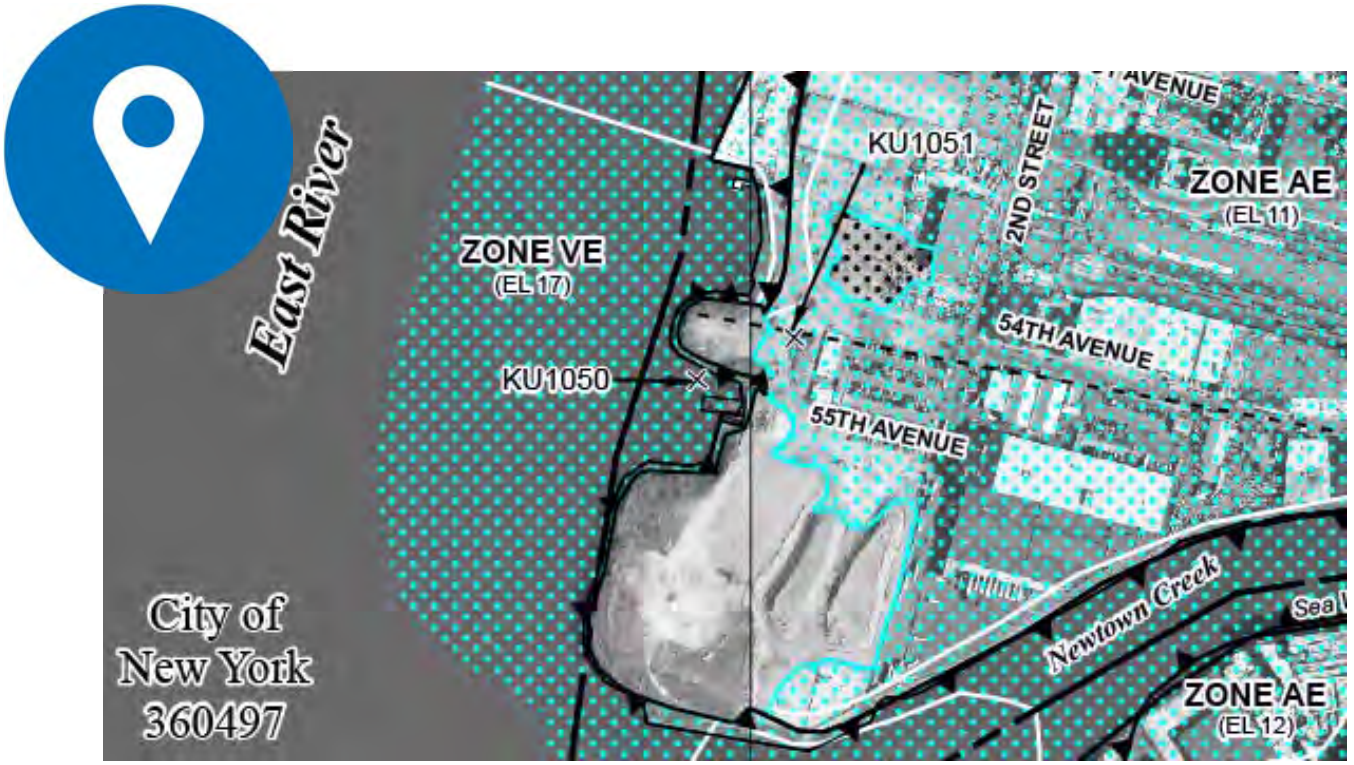
Stakeholders/Users
- NYC Water Trails Association
- Hudson River Park Trust
- New Yorkers for Parks
- Brooklyn Bridge Park
- Hudson River Foundation
- NY-NJ HEP
- NPCA
- The Nature Conservancy
- ASLA/AIA/APA
- ASCE/COPRI
- Cornell University
- Stevens Institute/CRUX
- Working Harbor Committee
- CON ED
- NYCHA
- WE ACT
- Trust for Public Land
- Align NY

Milestones to date…

- **Six certifications**
- **Three awards**
- **Over 2,000 downloads**
- **National presentations: APA, ASLA, Restore America's Estuaries**

Components

Site Selection & Planning

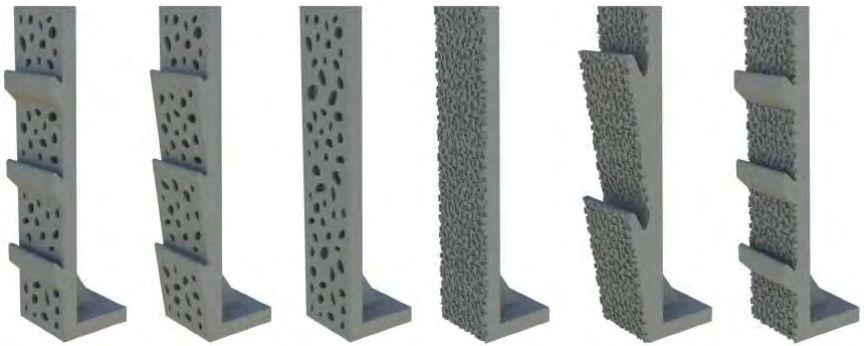


Public Access & Interaction

PA&I Credit 2

Engage local community and users

Edge Resiliency



Ecology & Habitat

Materials & Resources

Operations & Maintenance

Category 7: Innovation

?

Moving forward…

WEDG 2017

WEDG Waterfront Edge Design Guidelines

SCIENCE+ RESILIENCE INSTITUTE JAMAICA BAY · NYC

The ROCKEFELLER FOUNDATION

THE NEW YORK COMMUNITY TRUST NYCT

DORIS DUKE CHARITABLE FOUNDATION

Community focus

Growth and new partnerships

Thanks!
rlewis@waterfrontalliance.org

Connect with us

- **www.waterfrontalliance.org**
- **kboicourt@waterfrontalliance.org**
- **Follow: @OurWaterfront**
- **facebook.com/WaterfrontAlliance**

Supported by: