OLIVER: MassGIS's Online Mapping Tool OLIVER Updates

Search for a location

CHAPTER 91 LINE

COFFIN POINT

HALF TIDE ROCKS

Merrimac Street

Water Street

Winter Street

Summer Street

Green Street

State Street

High Street

Pond Street

Newburyport Police Department

Newburyport City Hall

Newburyport Montessori School

Immaculate Conception School

Newburyport Public Library

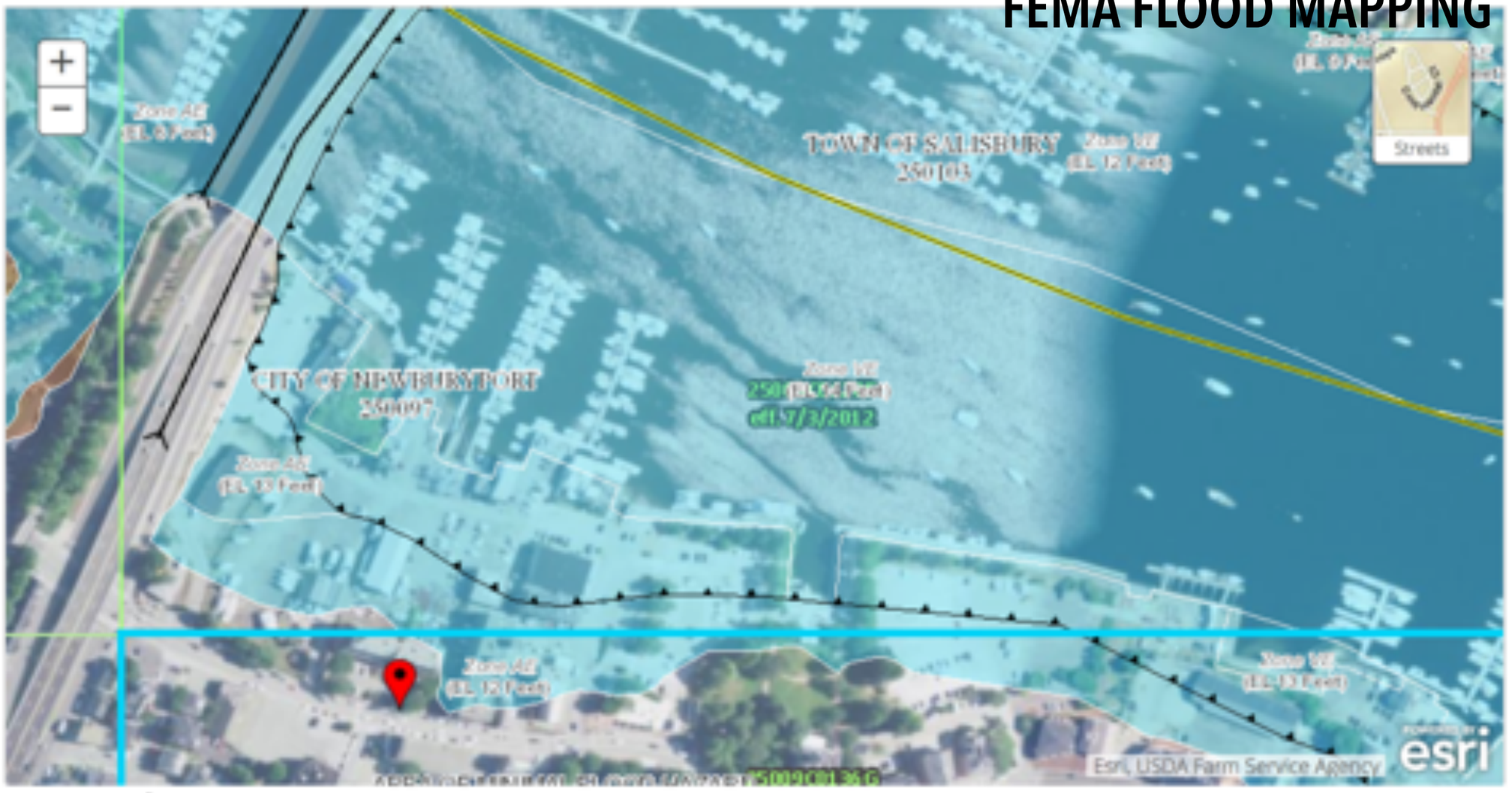
100 m
200 ft

Scale = 1:9,028

251,939.77m 951,401.29m

MassGIS Topographic Features Basemap

FEMA FLOOD MAPPING



PIN
Approximate location based on user input and does not represent an authoritative property location

MAP PANELS
Selected FloodMap Boundary
Digital Data Available
No Digital Data Available
Unmapped

OTHER AREAS
Area of Minimal Flood Hazard Zone X
Effective LOMRs
Area of Undetermined Flood Hazard Zone D

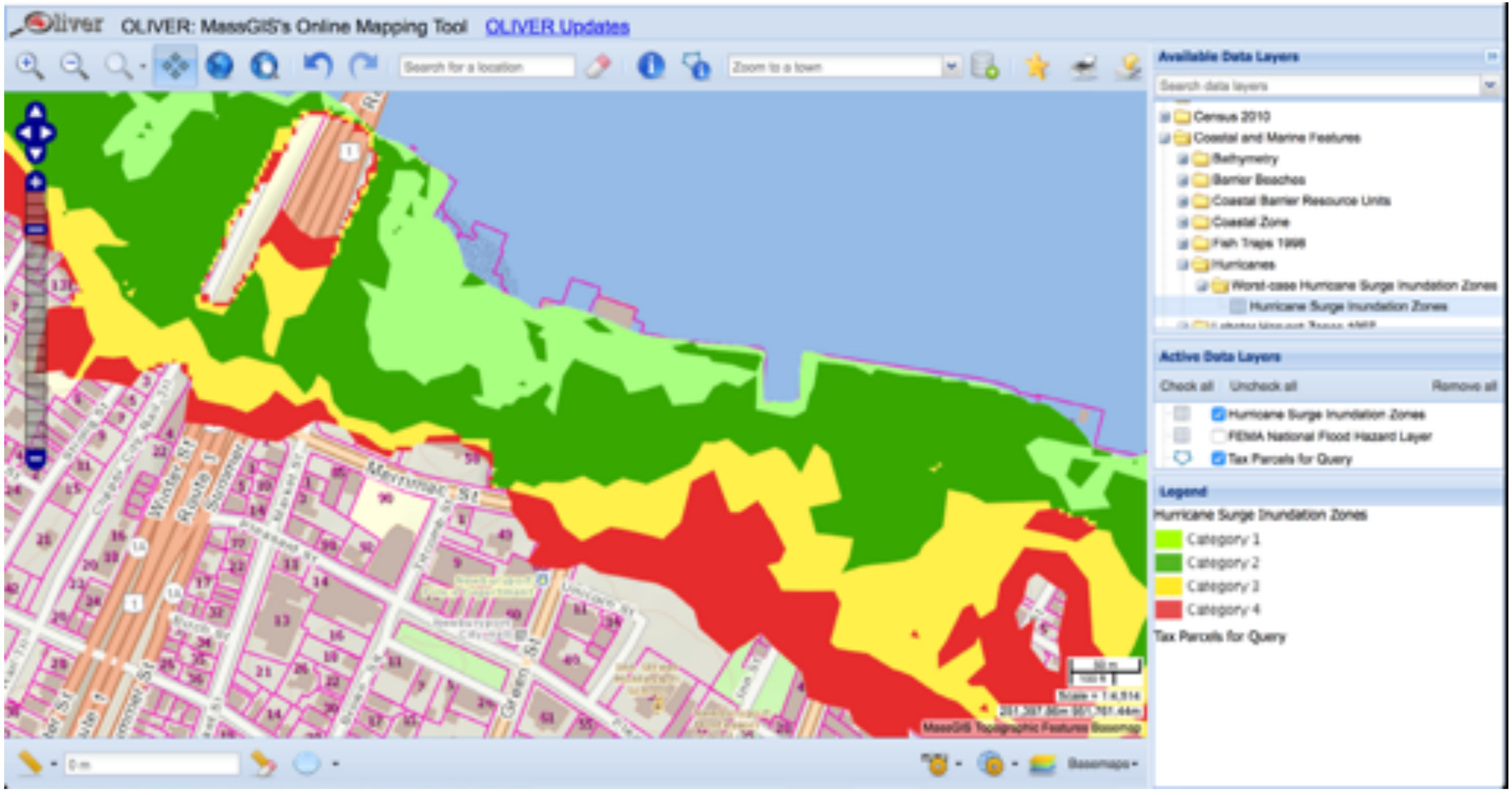
SPECIAL FLOOD HAZARD AREAS
Without Base Flood Elevation (BFE) Zone A, V, A99
With BFE or Depth
Regulatory Floodway Zone AE, AO, AH, VE, AR

OTHER AREAS OF FLOOD HAZARD
0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
Future Conditions 1% Annual Chance Flood Hazard Zone X
Area with Reduced Flood Risk due to Levee. See Notes. Zone X
Area with Flood Risk due to Levee Zone D

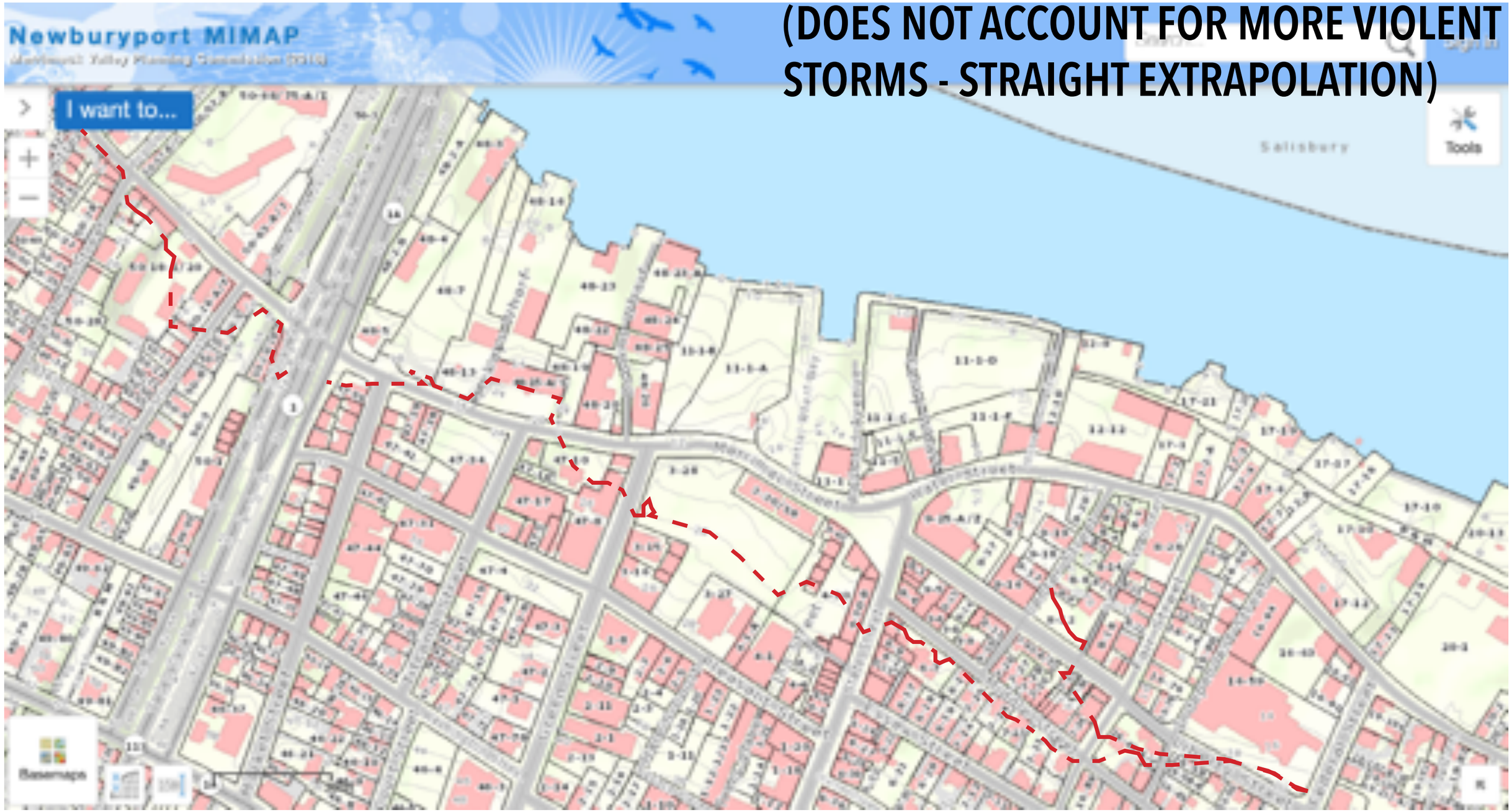
OTHER FEATURES
Cross Sections with 1% Annual Chance
Water Surface Elevation
Coastal Transect
Base Flood Elevation Line (BFE)
Limit of Study
Jurisdiction Boundary
Coastal Transect Baseline
Profile Baseline
Hydrographic Feature

GENERAL STRUCTURES
Channel, Culvert, or Storm Sewer
Levee, Dike, or Floodwall

STORM SURGE WITH CURRENT SLR



STORM SURGE WITH CURRENT 6’ SLR (DOES NOT ACCOUNT FOR MORE VIOLENT STORMS - STRAIGHT EXTRAPOLATION)



Invest in Adaptation Projects

WHAT Leverage 100RC platform partners to develop innovative finance approaches to fund resilience-building efforts. We will collaborate on key initiatives around zoning changes and design guidelines to reflect adaptation measures and create co-benefits.

WHY While investing in resilience provides cost savings, yields multiple benefits, and improves existing systems, resilience-focused projects are particularly difficult to finance with traditional capital budgets or payback models. Current approaches for financing City government efforts, which rely on quantitative risk analyses, tend to focus on infrastructure and economic impacts at the expense of social impacts.[1] The City will make investments to protect Boston for future generations, supported by the infusion of forward-facing climate data into zoning and design processes.

RESILIENCE QUALITIES

RESILIENCE VALUE

CITYWIDE
COMMUNITY
ORGANIZATION
INTERPERSONAL
INDIVIDUAL

RESILIENCE | RACIAL EQUITY

TIMEFRAME Long-Term

IMPLEMENTATION PARTNERS

City: Environment, Energy, and Open Space Cabinet, Boston Planning & Development Agency

Community/Private Sector: 100RC

PRIORITIZING INFRASTRUCTURE MAINTENANCE THROUGH AN EQUITY LENS

Our efforts to improve data transparency and collection can also be used as a means of addressing aging infrastructure. Strengthening our 311 data can help the City prioritize investments where they're most needed.

RESILIENT BOSTON RECOMMENDATIONS

ACTION

Cost of Inaction Analysis

Develop a study that quantifies the "cost of inaction" on key assets and neighborhoods at risk from the impacts of climate change to emphasize the need for greater investment in proactive climate resilience measures.

ACTION

Zoning and Designing for Resilience

Update zoning and building regulations to support climate-readiness investment in the built environment. We will advance strategies proposed in Climate Ready Boston to promote widespread climate readiness: revised zoning codes to support climate-ready buildings, design guidelines, pursuing state building code amendments, and the incorporation of climate projections into area plans.

ACTION

Resilient Infrastructure Financing

Develop financing strategies for district-scale adaptation efforts and building retrofits. Potential strategies, some of which were first identified in Climate Ready Boston, include leveraging federal and state infrastructure funds, forming special assessment districts, creating resilience business improvement districts, and building joint capital planning structures to collect funds from adaptation project beneficiaries. We will ensure that infrastructure financing is leveraged to benefit vulnerable communities by prioritizing geographies based on projected risk of shocks and stresses and by embedding a resilience and racial equity lens in the budgets for those projects.

INFRASTRUCTURE IMPACTS DUE TO SLR

Table 16.1. Impacts of sea level rise and coastal floods on critical coastal infrastructure by sector. Sources: Horton and Rosenzweig 2010,[51] Zimmerman and Faris 2010,[52] and Ch. 25: Coasts.

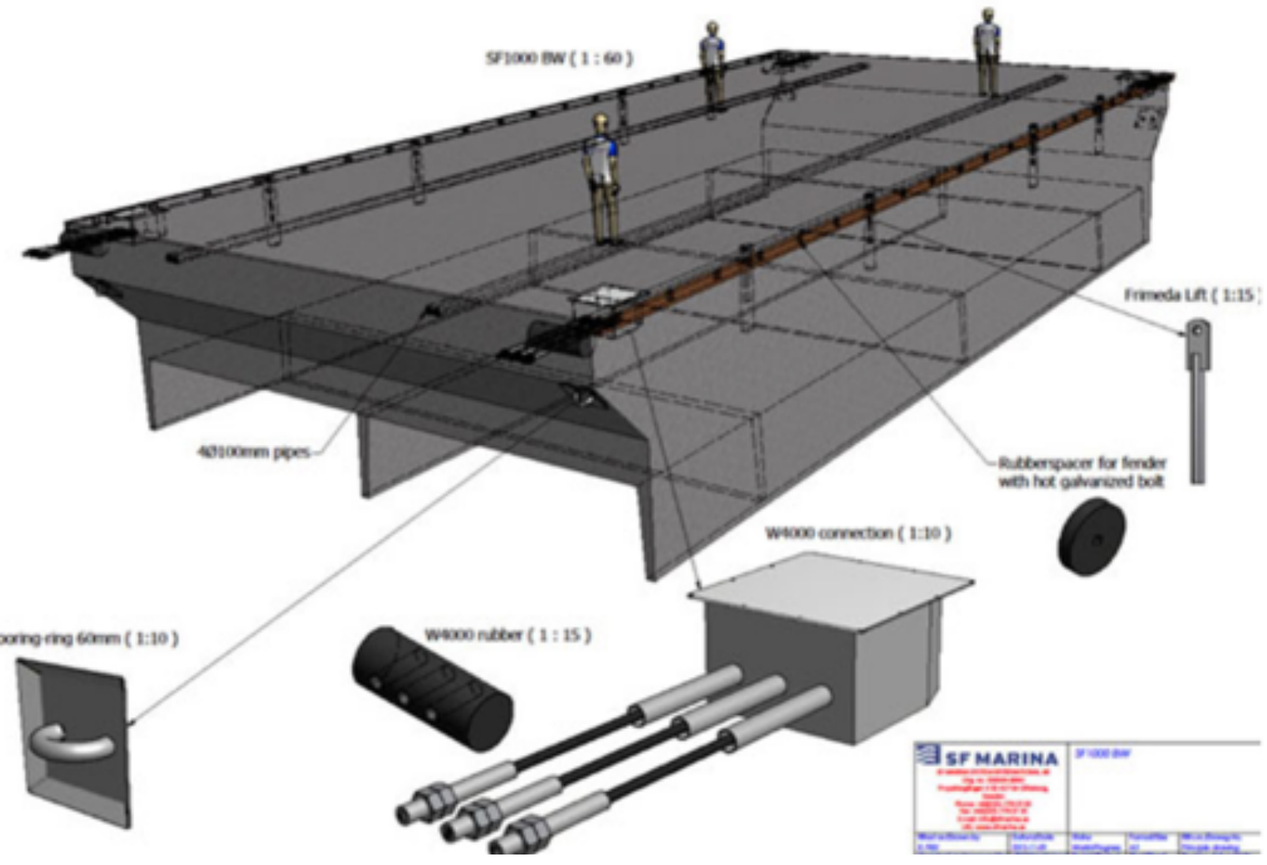
Communications	Energy	Transportation	Water and Waste
Higher average sea level			
• Increased saltwater encroachment and damage to low-lying communications infrastructure not built to withstand saltwater exposure • Increased rates of coastal erosion and/or permanent inundation of low-lying areas, causing increased maintenance costs and shortened replacement cycles • Cellular tower destruction or loss of function	• Increased coastal erosion rates and/or permanent inundation of low-lying areas, threatening coastal power plants • Increased equipment damage from corrosive effects of saltwater encroachment, resulting in higher maintenance costs and shorter replacement cycles	• Increased saltwater encroachment and damage to infrastructure not built to withstand saltwater exposure • Increased coastal erosion rates and/or permanent inundation of low-lying areas, resulting in increased maintenance costs and shorter replacement cycles • Decreased clearance levels under bridges	• Increased saltwater encroachment and damage to water and waste infrastructure not built to withstand saltwater exposure • Increased release of pollution and contaminant runoff from sewer systems, treatment plants, brownfields, and waste storage facilities • Permanent inundation of low-lying areas, wetlands, piers, and marine transfer stations • Increased saltwater infiltration into freshwater distribution systems
More frequent and intense coastal flooding			
• Increased need for emergency management actions with high demand on communications infrastructure • Increased damage to communications equipment and infrastructure in low-lying areas	• Increased need for emergency management actions • Exacerbated flooding of low-lying power plants and equipment, as well as structural damage to infrastructure due to wave action • Increased use of energy to control floodwaters • Increased number and duration of local outages due to flooded and corroded equipment	• Increased need for emergency management actions • Exacerbated flooding of streets, subways, tunnel and bridge entrances, as well as structural damage to infrastructure due to wave action • Decreased levels of service from flooded roadways; increased hours of delay from congestion during street flooding episodes • Increased energy use for pumping	• Increased need for emergency management actions • Exacerbated street, basement, and sewer flooding, leading to structural damage to infrastructure • Episodic inundation of low-lying areas, wetlands, piers, and marine transfer stations

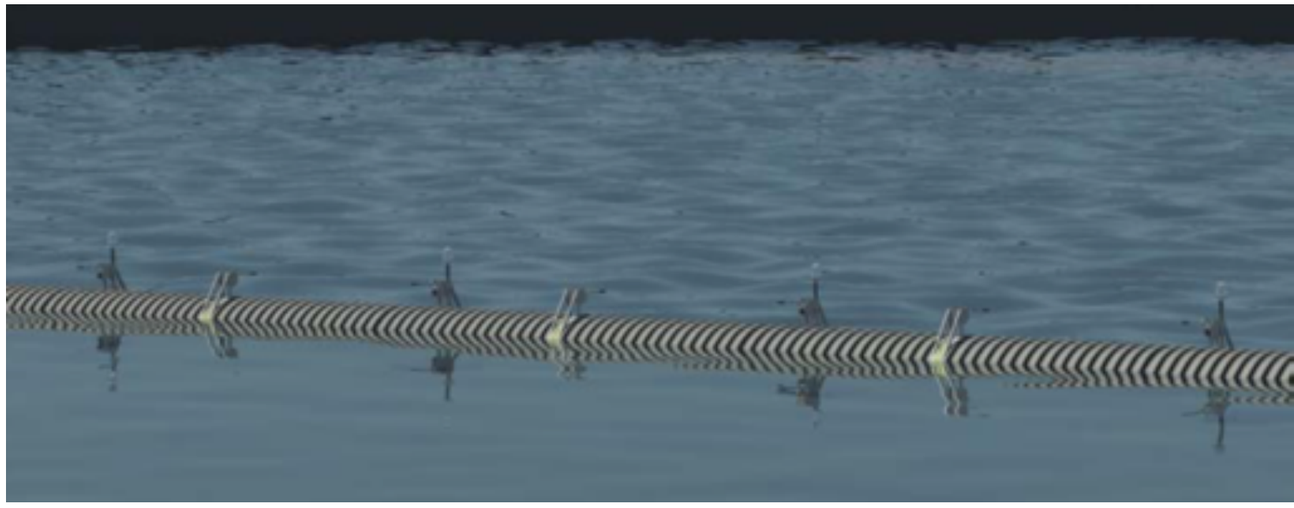

FLOODPROOF BUILDING
VERTICAL SEAWALL
RAISED HARBORWALK
CONSTRUCTED GROUND
LIVING SHORELINE
BEACH AND DUNES

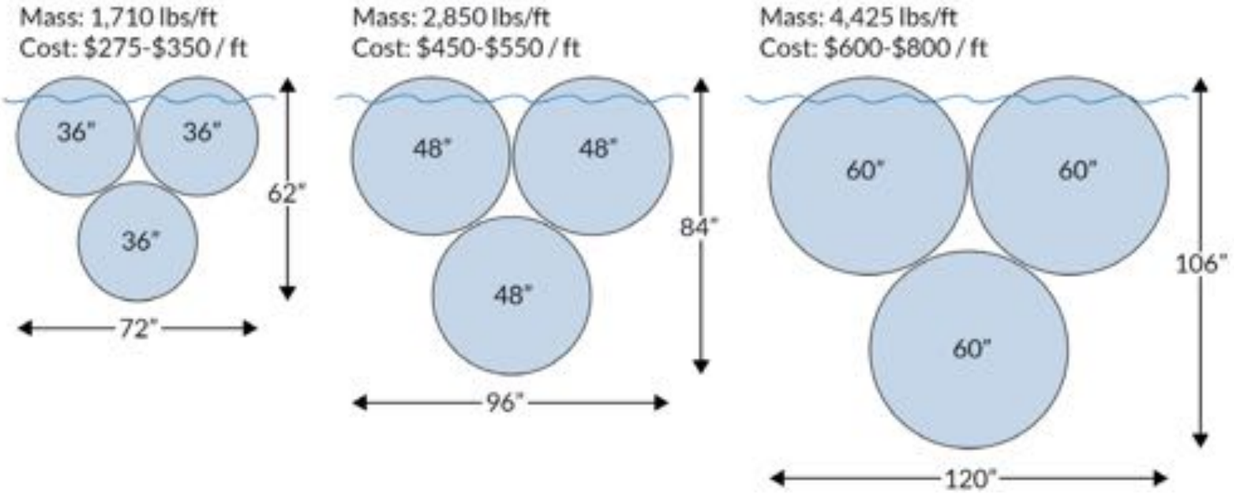
WAVE ATTENUATION

WAVE ATTENUATION

WAVE ATTENUATION



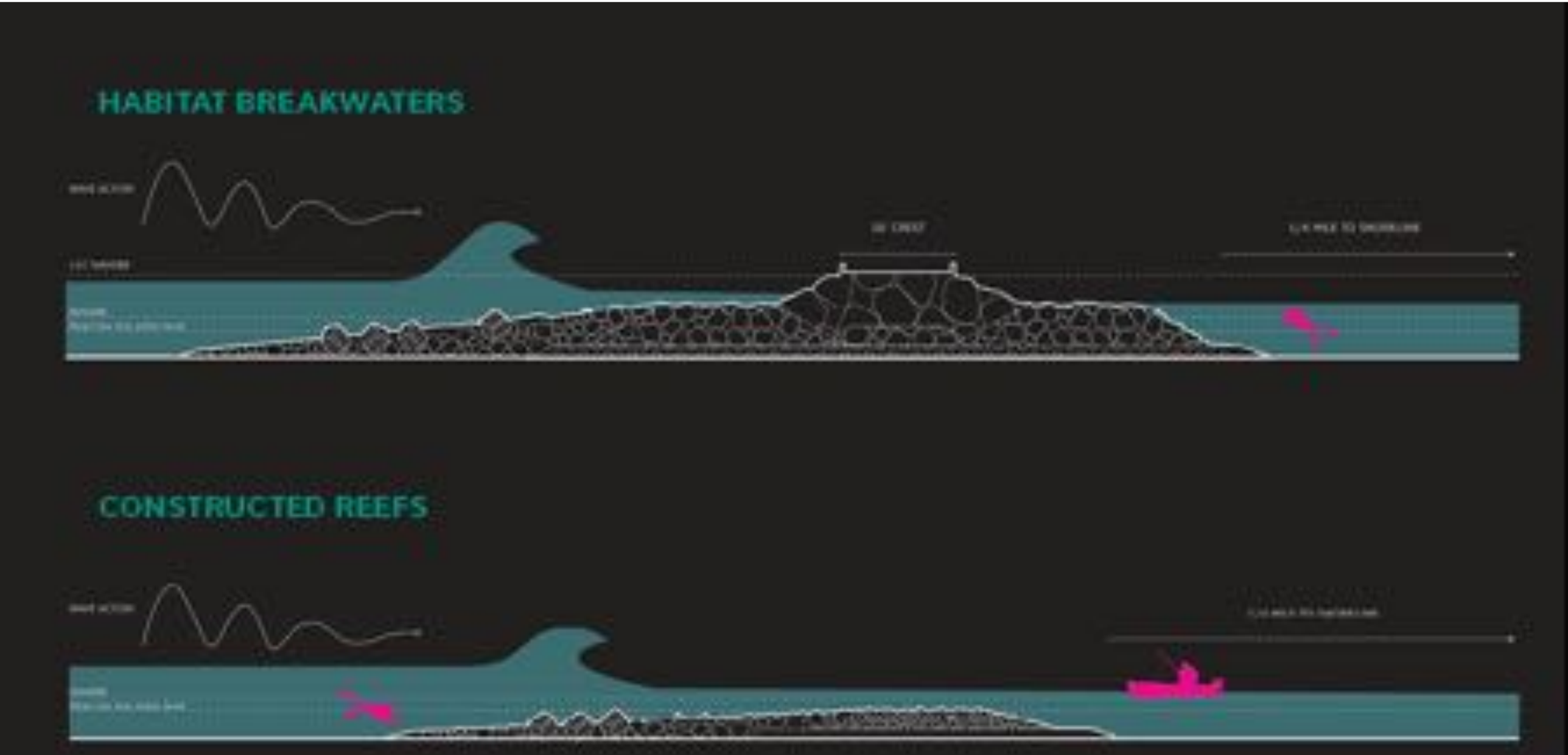




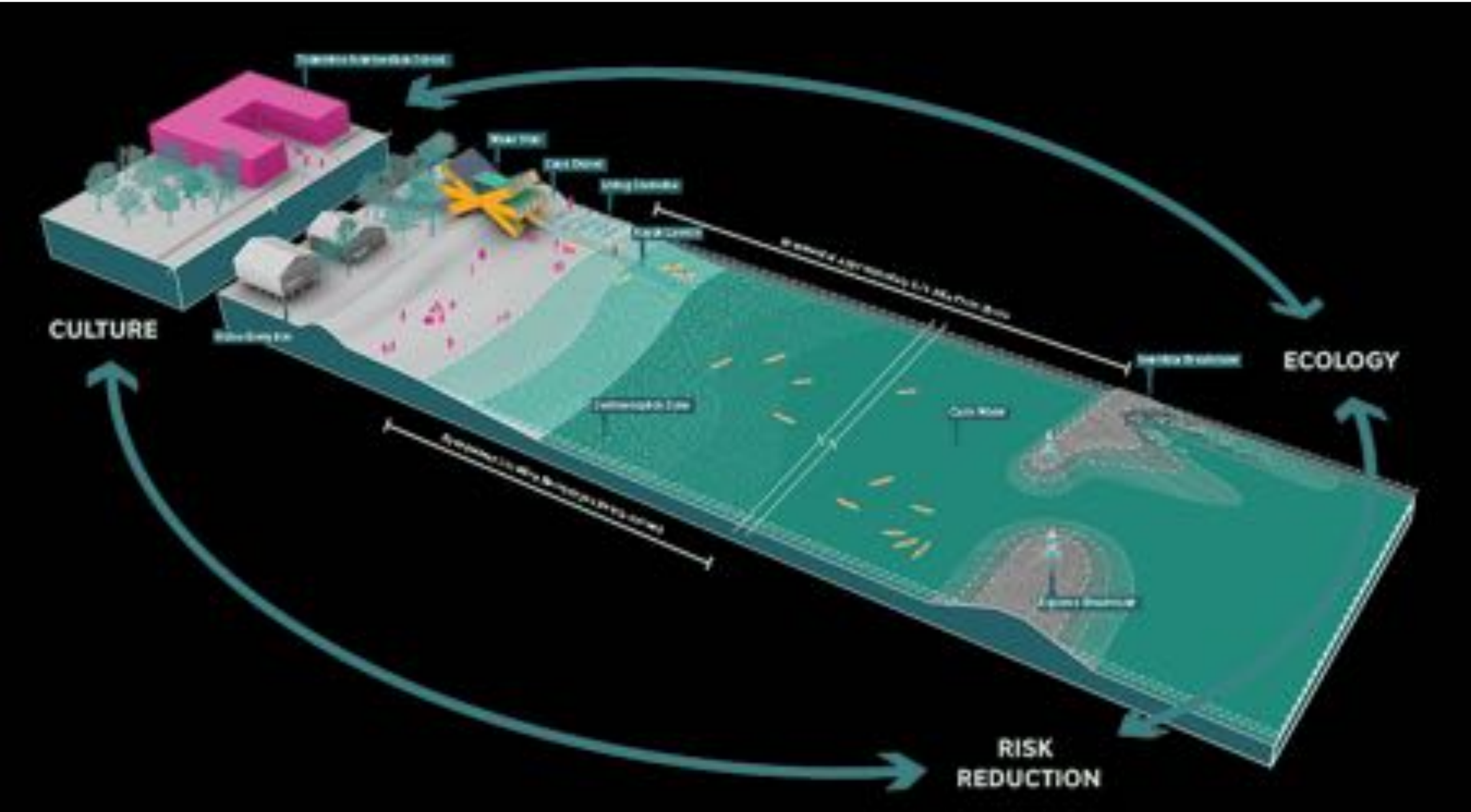
CONCRETE WAVE ATTENUATION

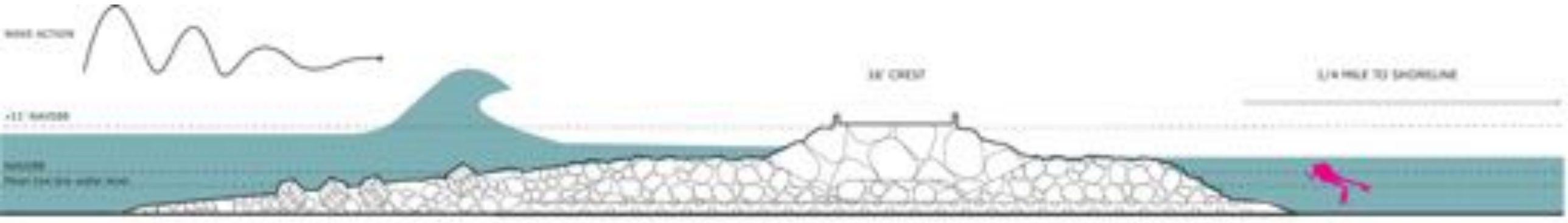
SCAPE LANDSCAPE ARCHITECTURE


LIVING BREAKWATERS
SOUTH SHORE STATEN ISLAND
GREAT KILLS HARBOR
RARITAN BAY
PHASE 1: PILOT


HABITAT BREAKWATERS
CONSTRUCTED REEFS


BUILDING ECOLOGICAL RESILIENCY

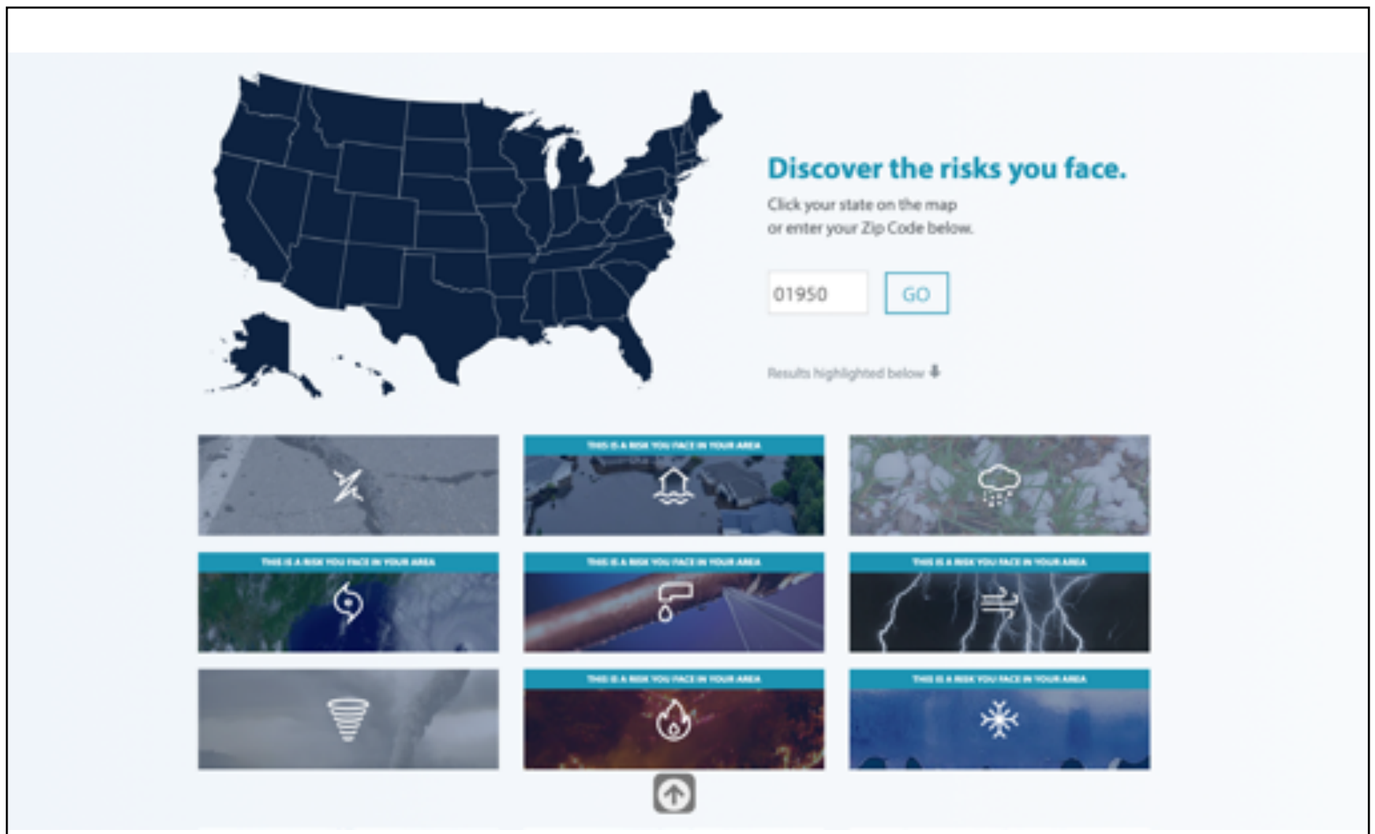

CULTURE
ECOLOGY
RISK
REDUCTION


WAVE ACTION
+11' NAVD88
16' CREST
1/4 MILE TO SHORELINE

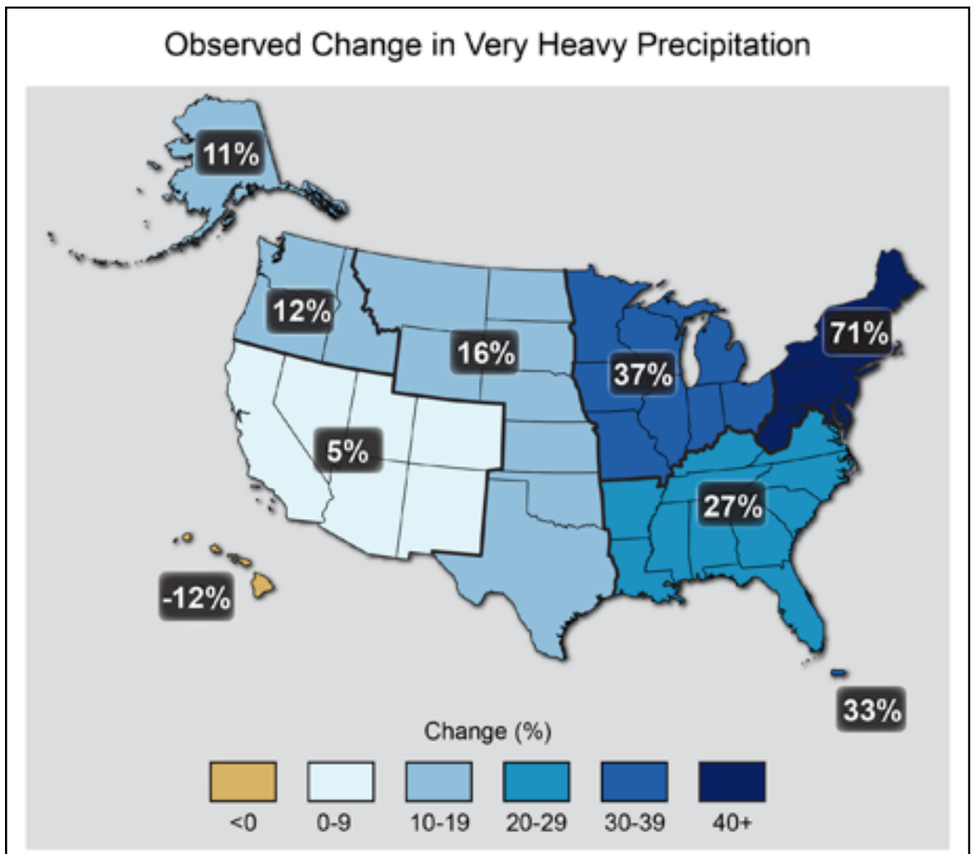

WAVE ACTION
1/4 MILE TO SHORELINE

HIGH GROUND | 100 YR FLOOD PLAIN | COASTAL EDGE | TIDAL FLATS | INTERTIDAL | NAV. CHANNEL

RISK : IBHS REGIONAL ASSESSMENT 01950



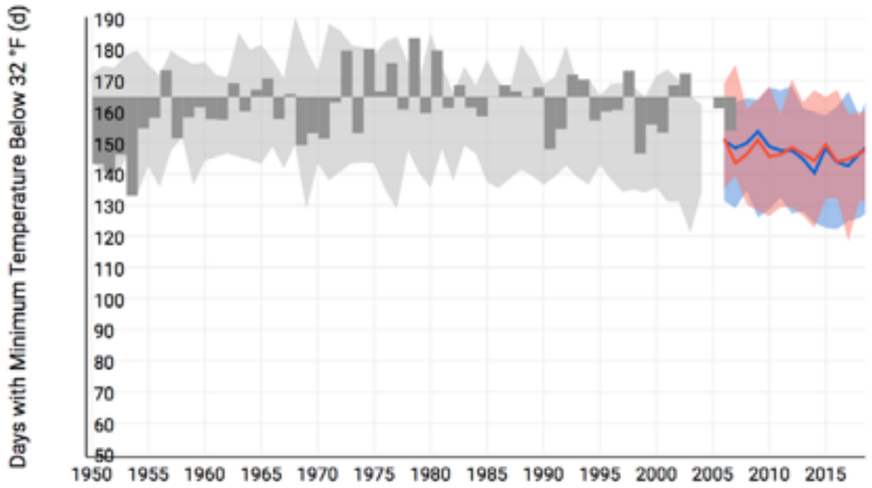
RISK : PERCIPITATION 01950

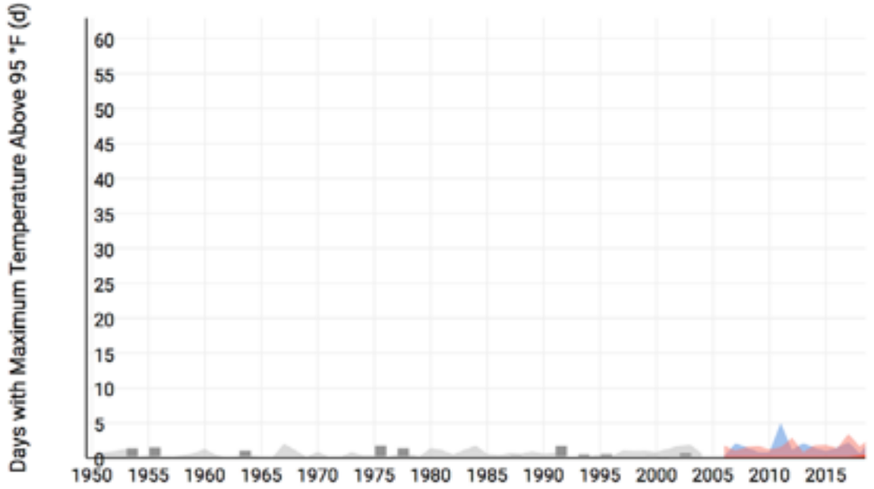


AVERAGE DEGREE DAYS

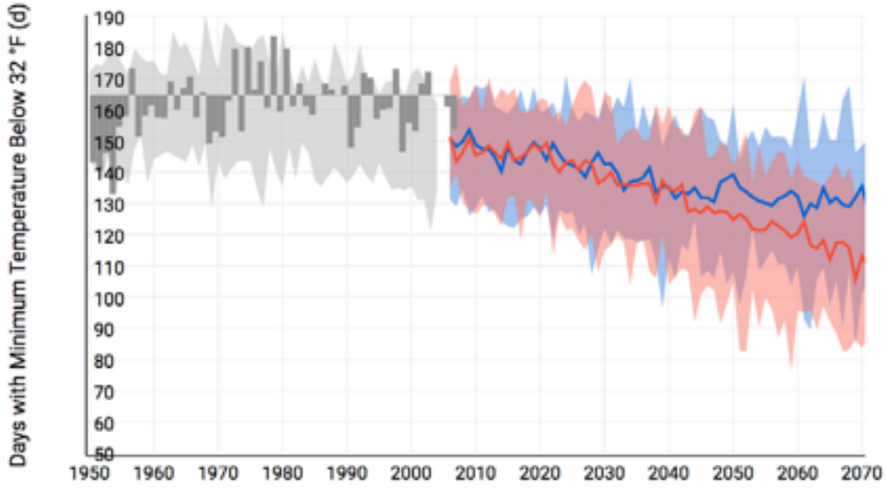
32 DEGREE DAYS

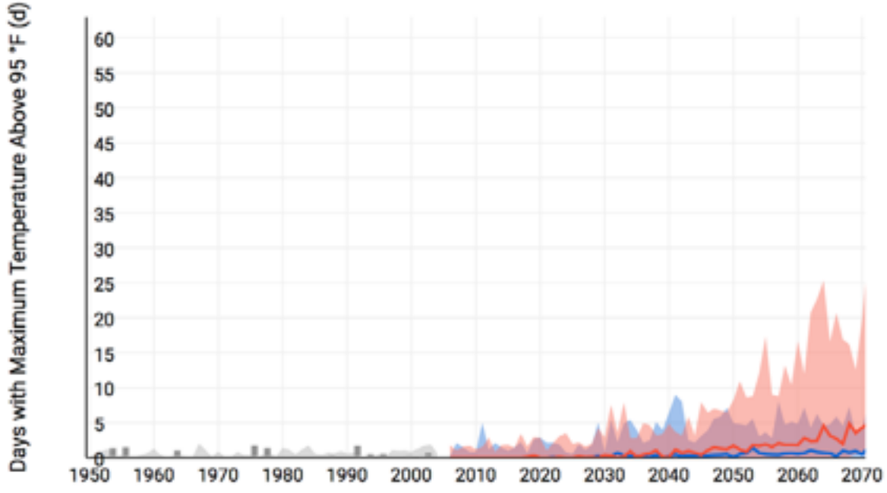
95 DEGREE DAYS



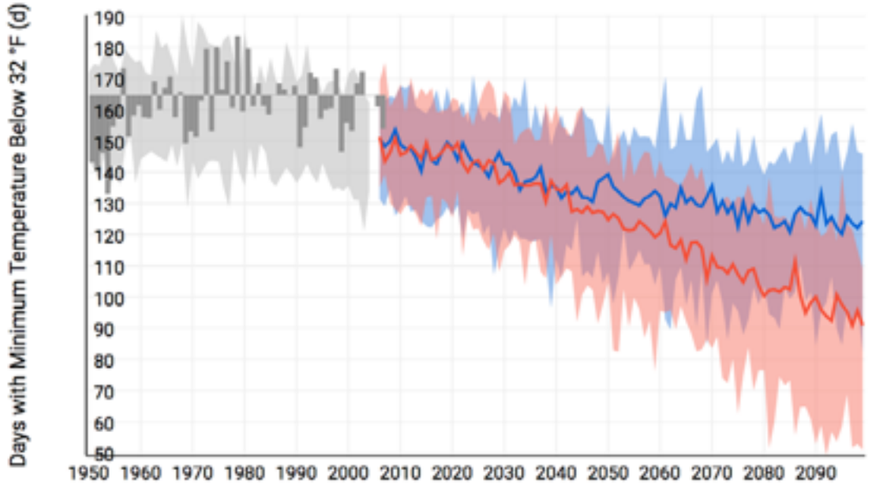


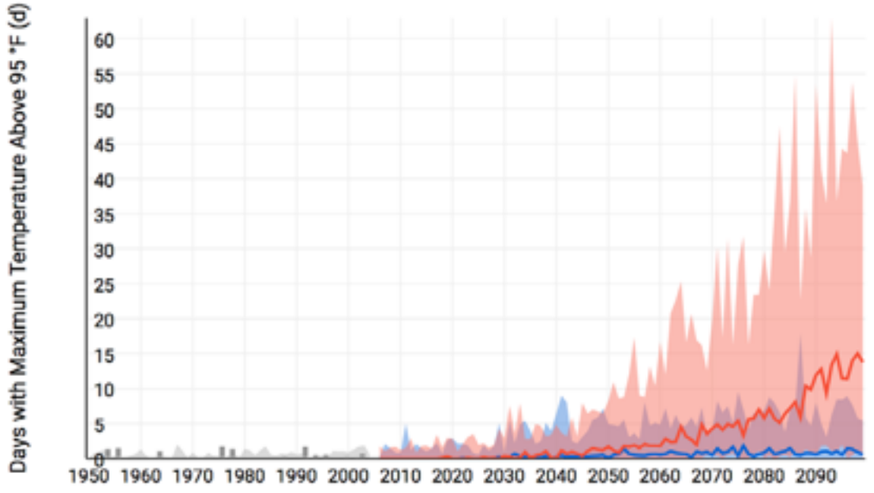
NO C02 INCREASE





CARBON RESTRICTED TO
400 PPM





CARBON RESTRICTED PER
CURRENT POLICY

REFERENCE WEBSITES

https://toolkit.climate.gov

https://www.usace.army.mil/corpsclimate/

http://coastalresilience.org

http://www.nauticexpo.com/boat-manufacturer/breakwater-19232.html