

ARCHITECTURE
civil engineering
graphic design
INTERIOR DESIGN

URBAN **SASAKI** CAMPUS

landscape architecture
PLANNING
strategies
urban design



WHEELING, WEST VIRGINIA



MOERLEN
Lager House

MOER TO GO

JOHN G. AND PHYLLIS W. SMALE RIVERFRONT PARK

UNITED STATES ARMY CORPS OF ENGINEERS • STATE OF OHIO • JOHN G. SMALE • CITY OF CINCINNATI
WOMEN'S COMMITTEE OF SMALE RIVERFRONT PARK • JACOB G. SCHMIDLAPP TRUSTS, FIFTH THIRD BANK, TRUSTEES JOHN J. & MARY R. SCHIFF FOUNDATION
PNC FOUNDATION • PNC BANK • THE P&G FUND • MANDARE FOUNDATION • PHILIP AND BRIAN HEEKIN FAMILY
CHRIS AND TREY HEEKIN FAMILY • THE CAROL ANN AND RALPH V. HAMIL, JR. US BANK FOUNDATION • CASTELLINI FOUNDATION
THE OLIVER FAMILY • THE GREATER CINCINNATI FOUNDATION • CINCINNATI BENGALS • ANONYMOUS

CINCINNATI, OHIO

A NEW ERA OF WATERFRONTS

CEDAR RAPIDS, IOWA



BRIDGEPORT, CT



An exhibition curated by
Sasaki Associates

In partnership with the
Boston Architectural College

On view at District Hall

75 Northern Avenue
Boston, MA 02210

April 7–June 13 2014

SEA CHANGE BOSTON examines the city's vulnerabilities
to sea level rise and demonstrates design strategies
for resilience.

SEA CHANGE BOSTON

REBUILD BY DESIGN



REBUILD BY DESIGN





ECOLOGY

BEACH BADGES

In Loving Memory
Of
GERTRUDE CREMEN

Welcome to
DAILY BADGES
\$ 7.00
BADGES MUST BE WORN BY PERSONS
16 YEARS OF AGE OR OLDER
SEASON BADGES
\$ 60.00
AVAILABLE AT TAYLOR PAVILION
5th AND OCEAN AVENUES

ECONOMY

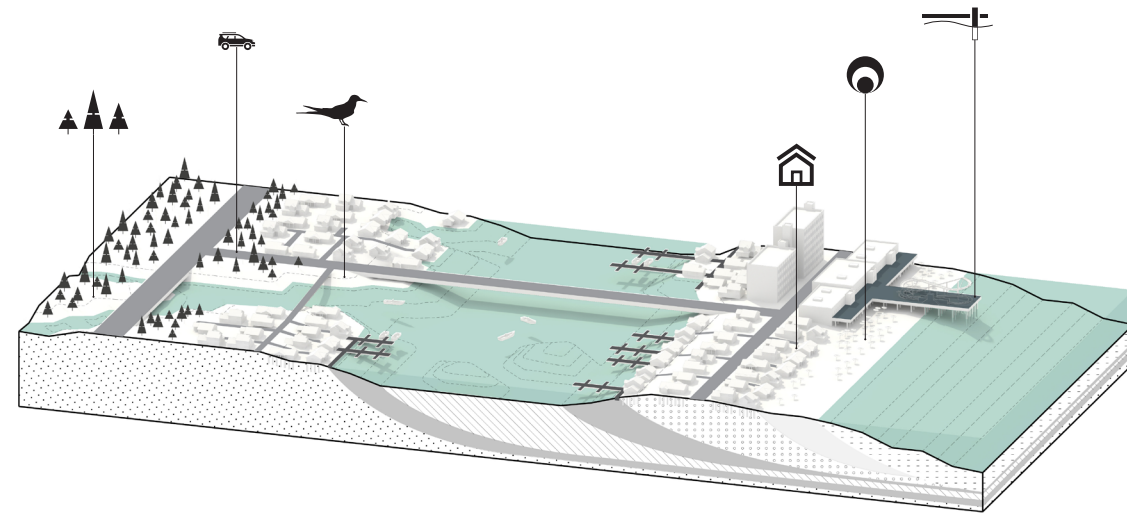




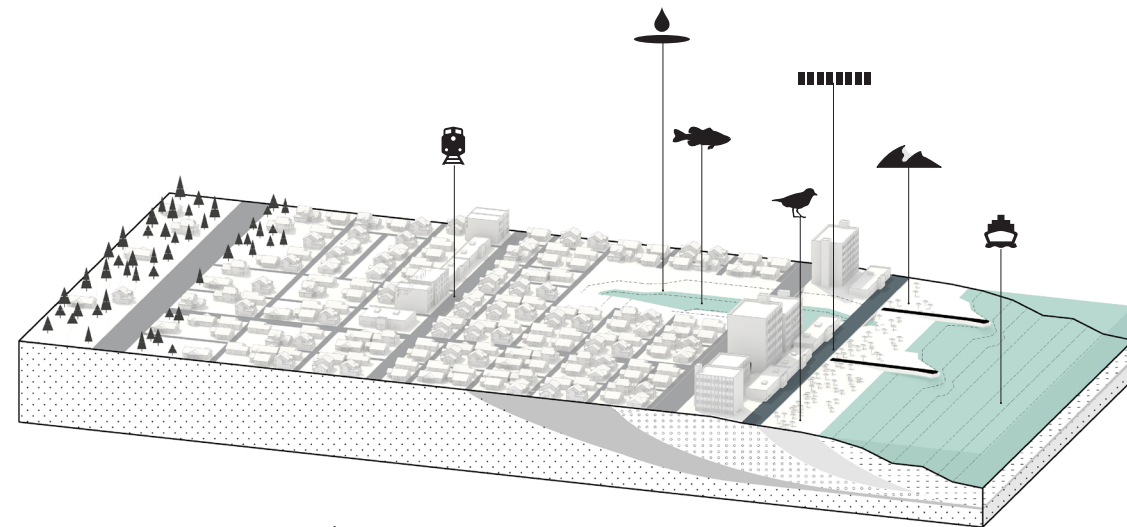
CULTURE

THREE COASTAL TYPOLOGIES

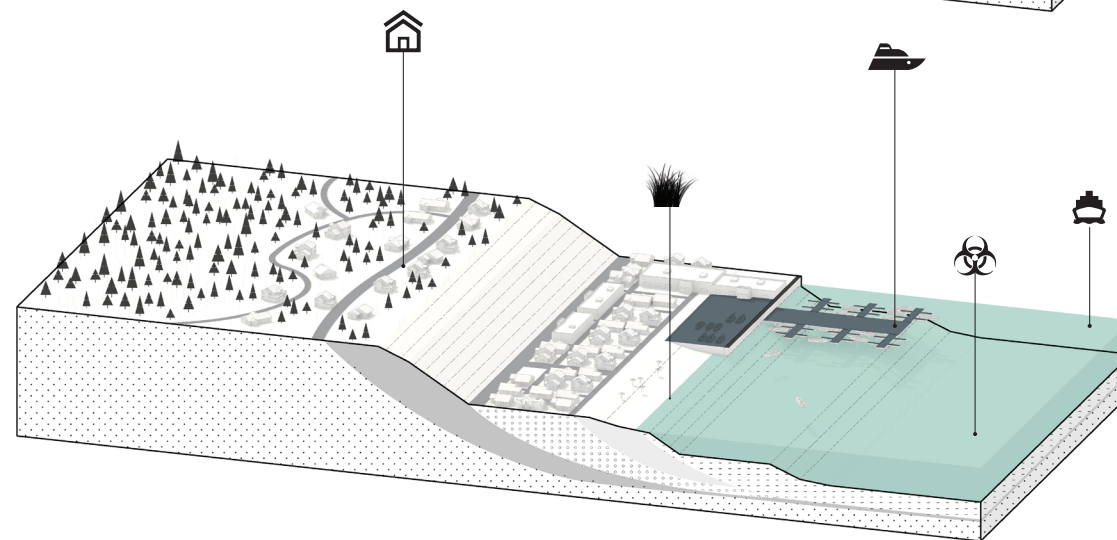
BARRIER ISLAND



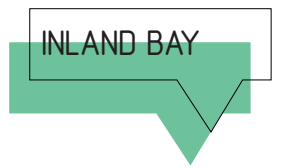
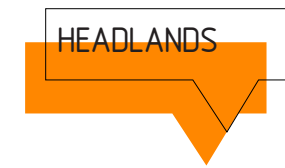
HEADLANDS



INLAND BAY



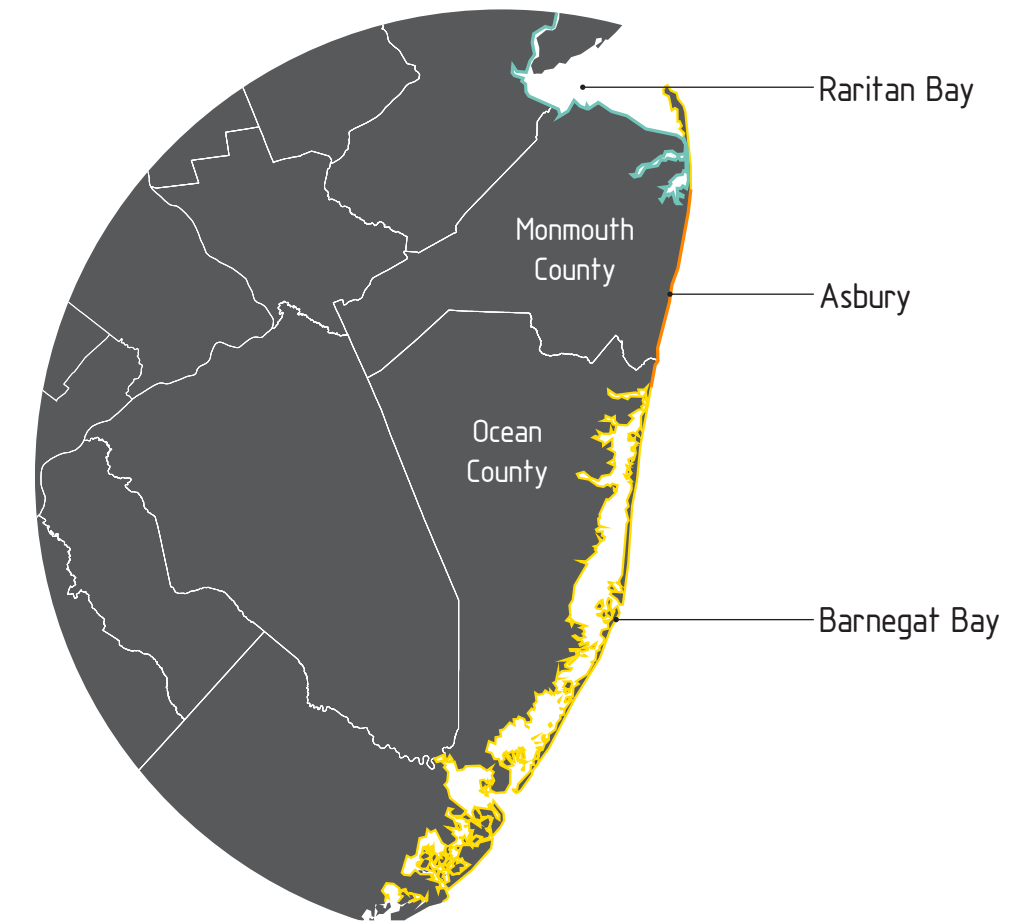
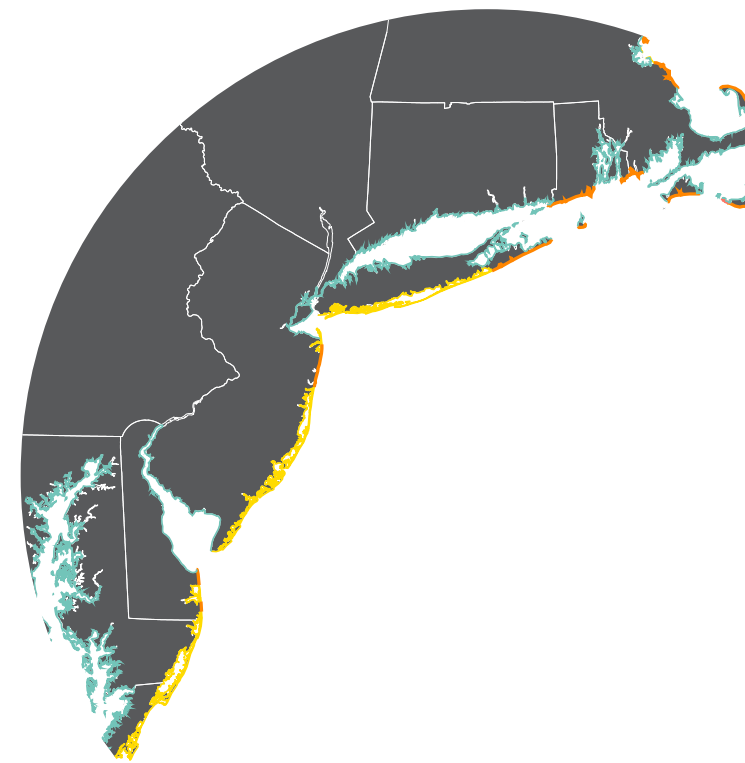
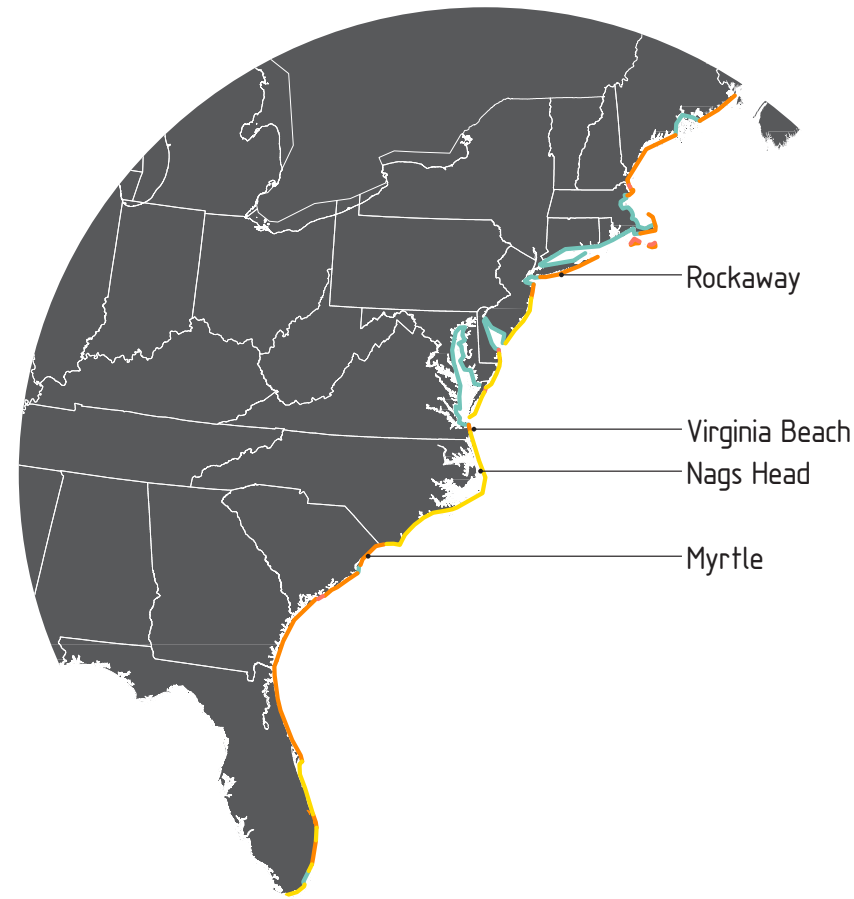
REGIONALLY RELEVANT



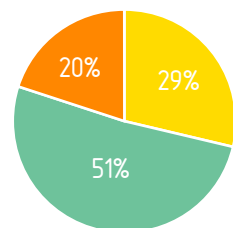
ATLANTIC SEABOARD

SANDY AFFECTED AREAS

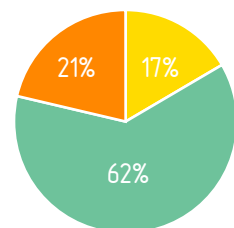
NEW JERSEY SHORE



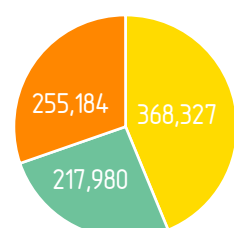
Linear Miles



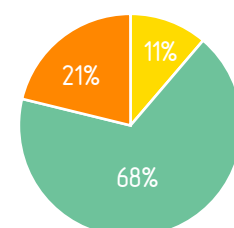
Population



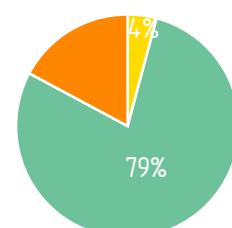
of 2nd Homes



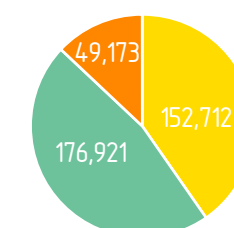
Linear Miles



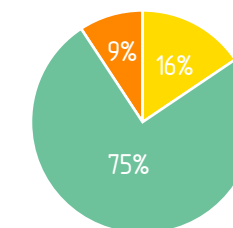
Population



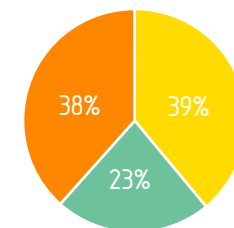
of 2nd Homes



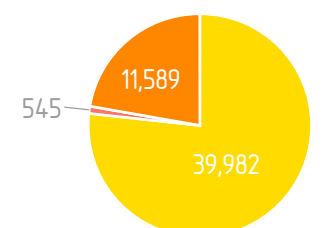
Linear Miles



Population

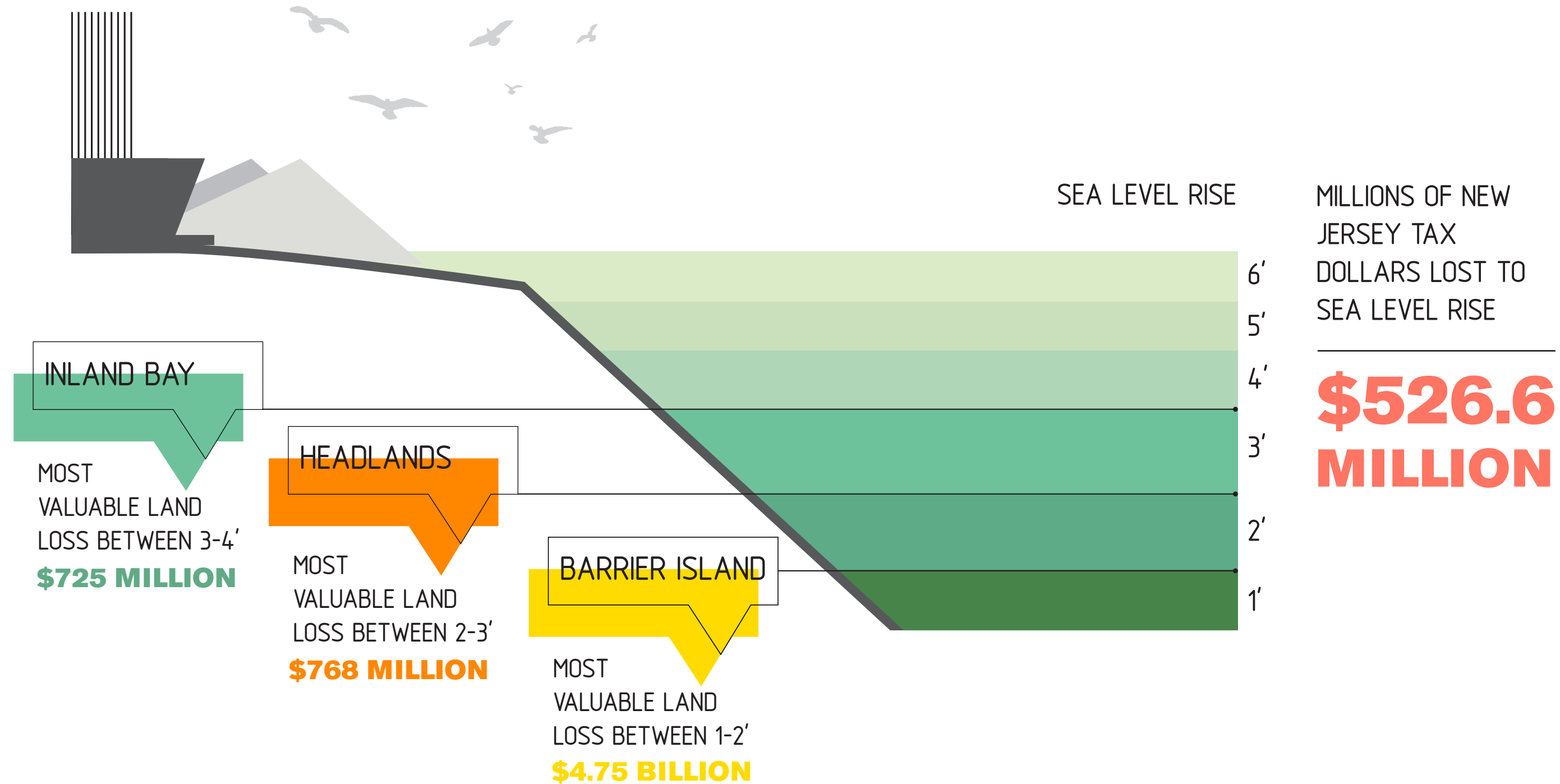


of 2nd Homes



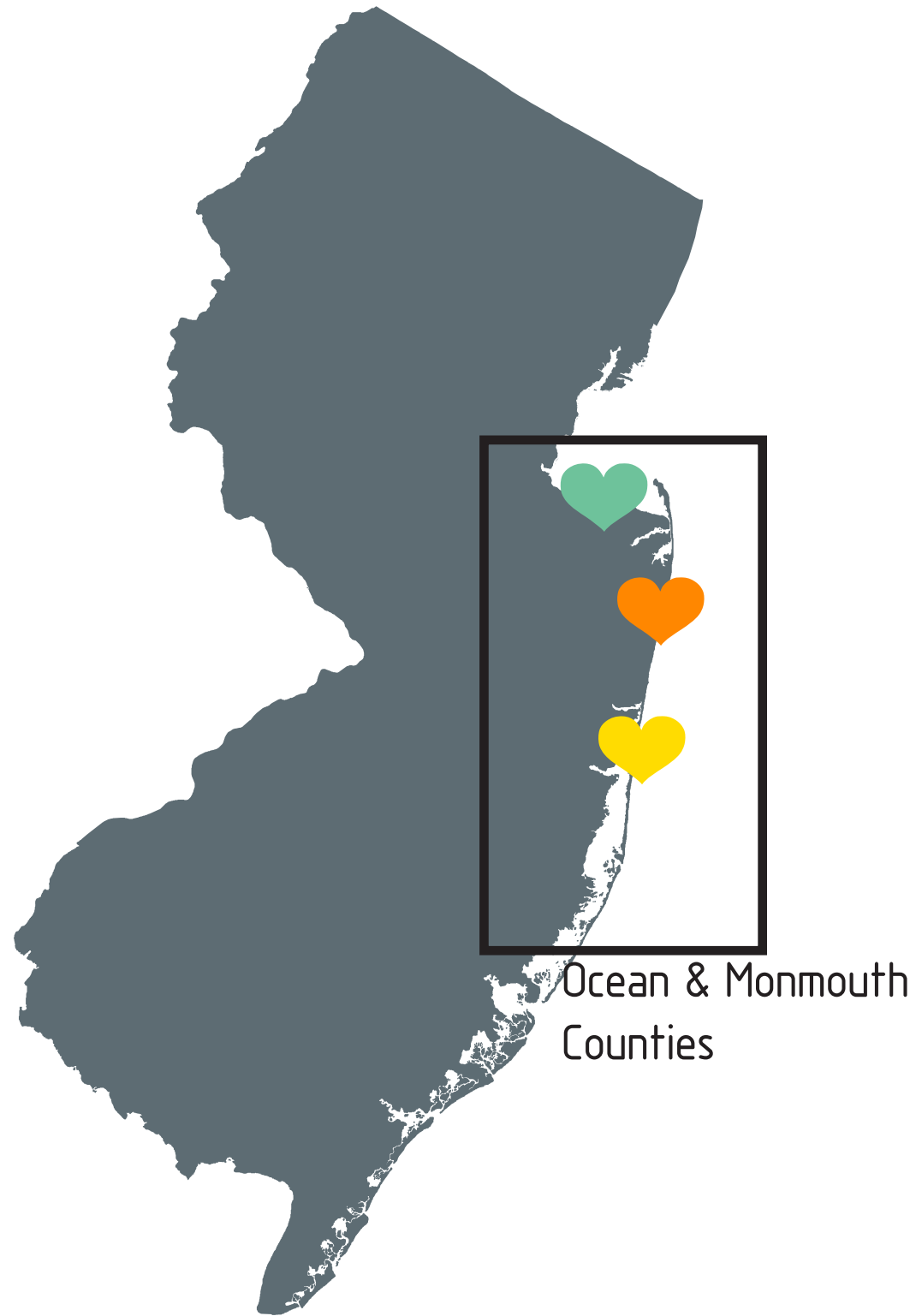
SHORE IS AT RISK

VARIED DYNAMICS OF SEA LEVEL RISE AND LAND



A RESILIENT JERSEY SHORE

THREE CATALYSTS TO DRIVE INNOVATION IN RESILIENCY



INLAND BAY



HEADLANDS



BARRIER ISLAND



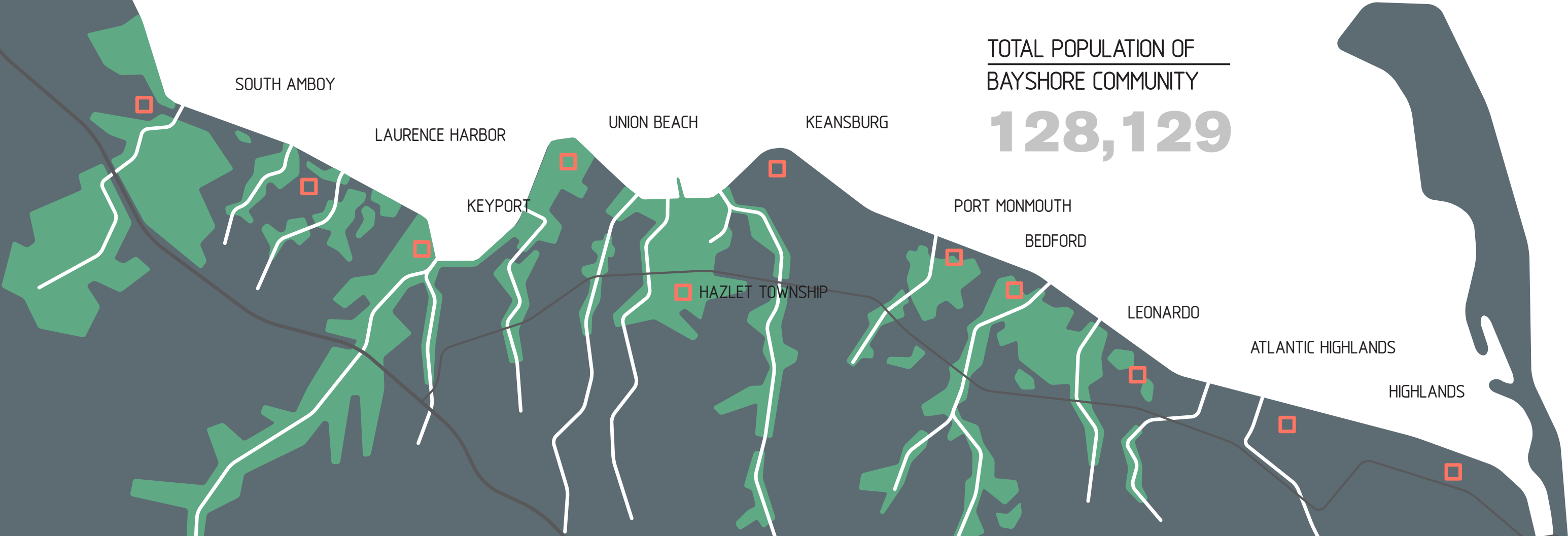
INLAND BAY REGION EXISTING CONDITIONS

11 SMALL COMMUNITIES

LIMITED OPEN SPACE

5.5 ACRES/1,000 PEOPLE
RECOMMENDED: 10 ACRES/1000 PEOPLE

TOTAL POPULATION OF
BAYSHORE COMMUNITY
128,129



RISK

SURGE & UPLAND FLOODING

53% LOW INCOME POP.
IMPACTED

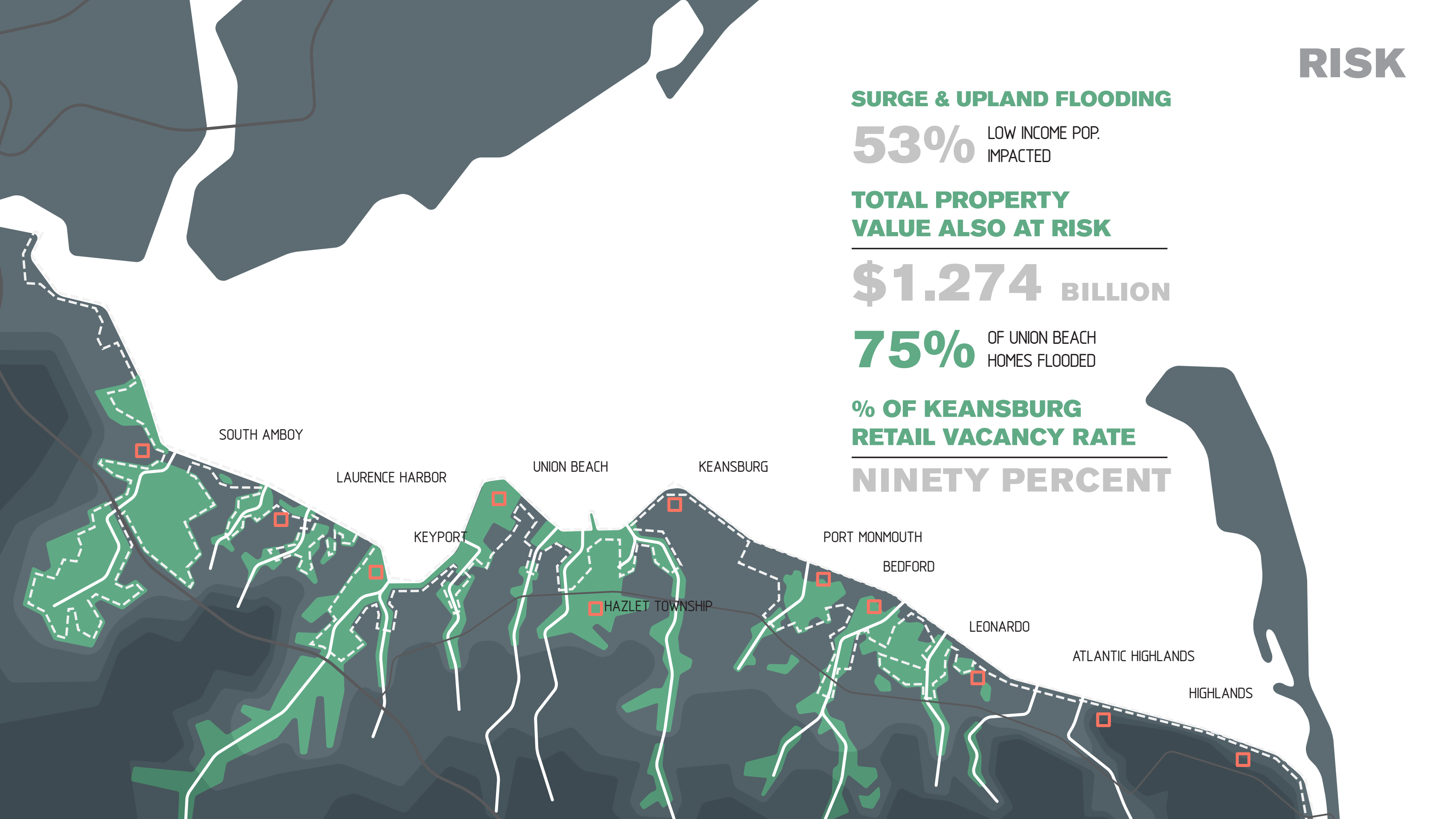
TOTAL PROPERTY VALUE ALSO AT RISK

\$1.274 BILLION

75% OF UNION BEACH
HOMES FLOODED

% OF KEANSBURG RETAIL VACANCY RATE

NINETY PERCENT



HEADLANDS REGION EXISTING CONDITIONS

**13 SMALL
COMMUNITIES**

7 TRANSIT STOPS

**22 DAMAGED
COASTAL LAKES**

TOTAL POPULATION OF
HEADLANDS COMMUNITY

104,457

LINEAR FEET OF
HEADLANDS

50,803^{ft}





RISK

LOWER RISK FROM SLR



UPLAND RUNOFF

% OF ASBURY'S IMPERVIOUS SURFACES

45%

% OF WATERSHED THAT DRAINS TO DEAL LAKE

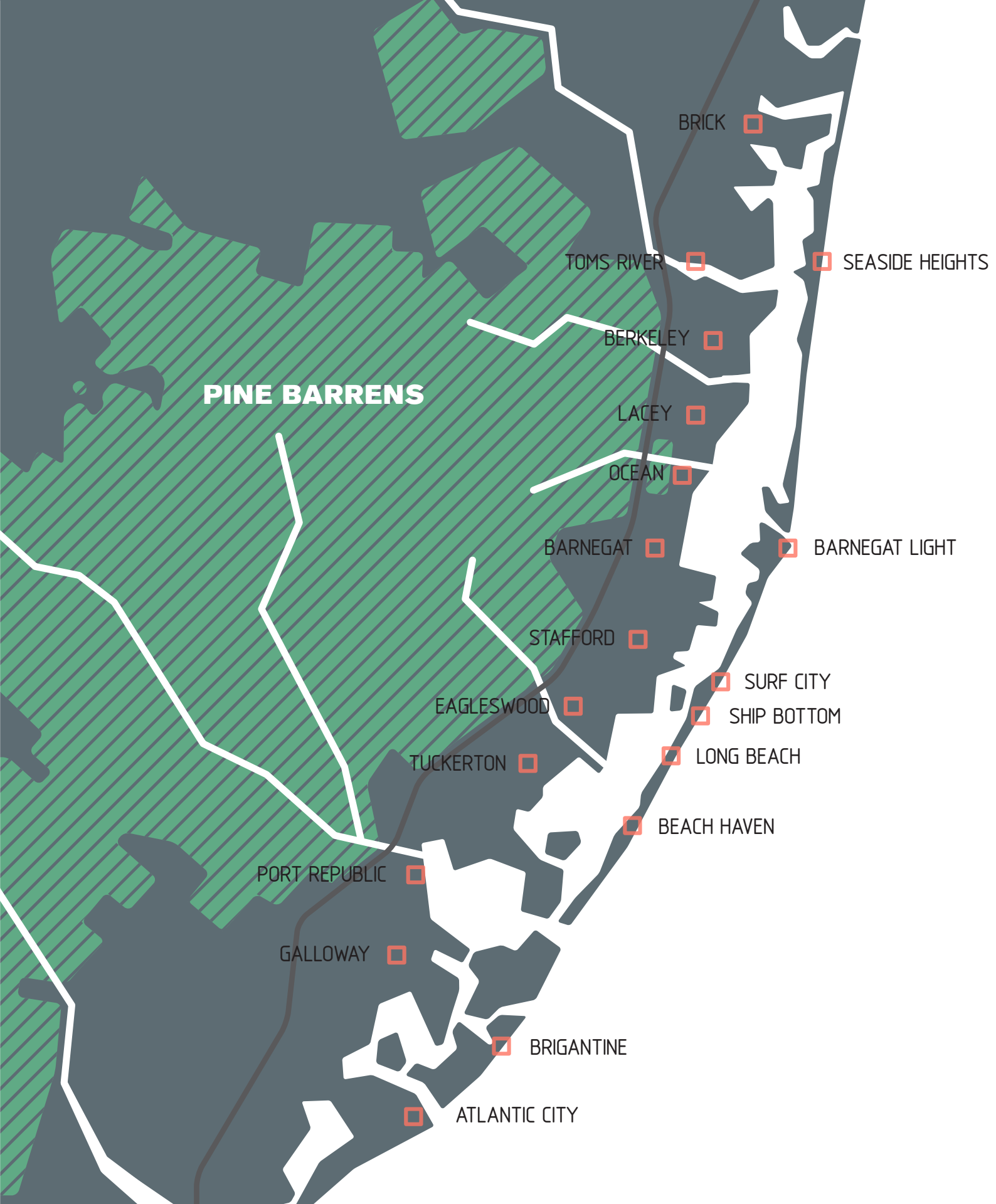
98%

DIVIDED CULTURE

ASBURY'S RACE RIOTS

1970

BARRIER ISLANDS REGION EXISTING CONDITIONS



11 INLAND
COMMUNITIES

EIGHT BI COMMUNITIES

NUMBER OF PASSENGER
RAIL STOPS

ZERO

TOTAL POPULATION OF
THE BARRIER ISLANDS

310,800

SUMMER SWELL

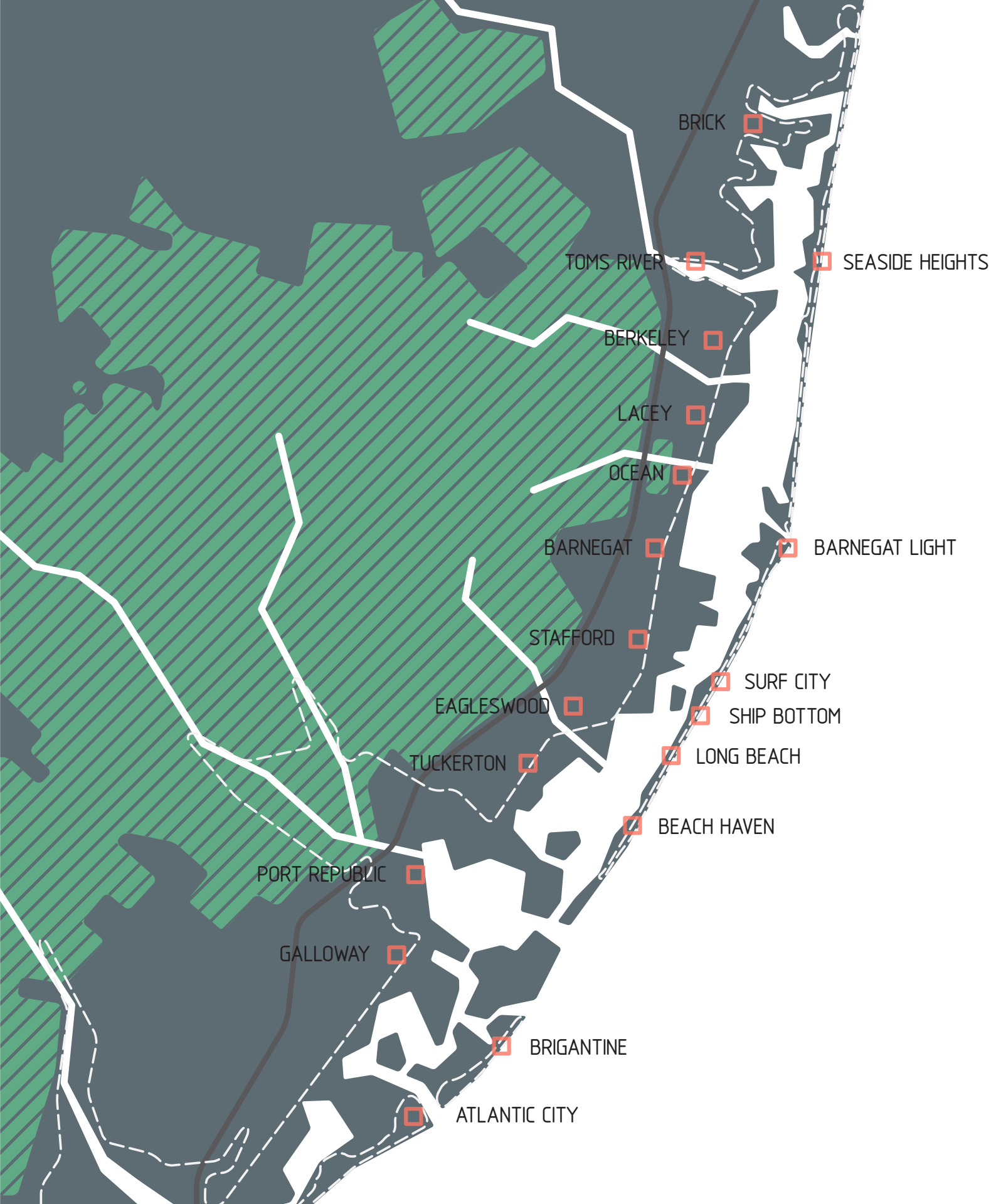
% OF VISITORS THAT
TRAVEL TO THE SHORE
VIA A PRIVATE CAR

89%

% OF ALL MAJOR
INTERSECTIONS THAT
ARE CONGESTED

60%

RISK



HIGH VULNERABILITY



97% OF SECOND HOMES ARE AT RISK

VOLUME OF SECOND HOMES AT RISK

32,501

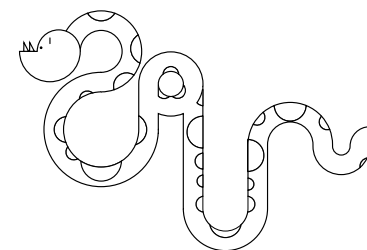
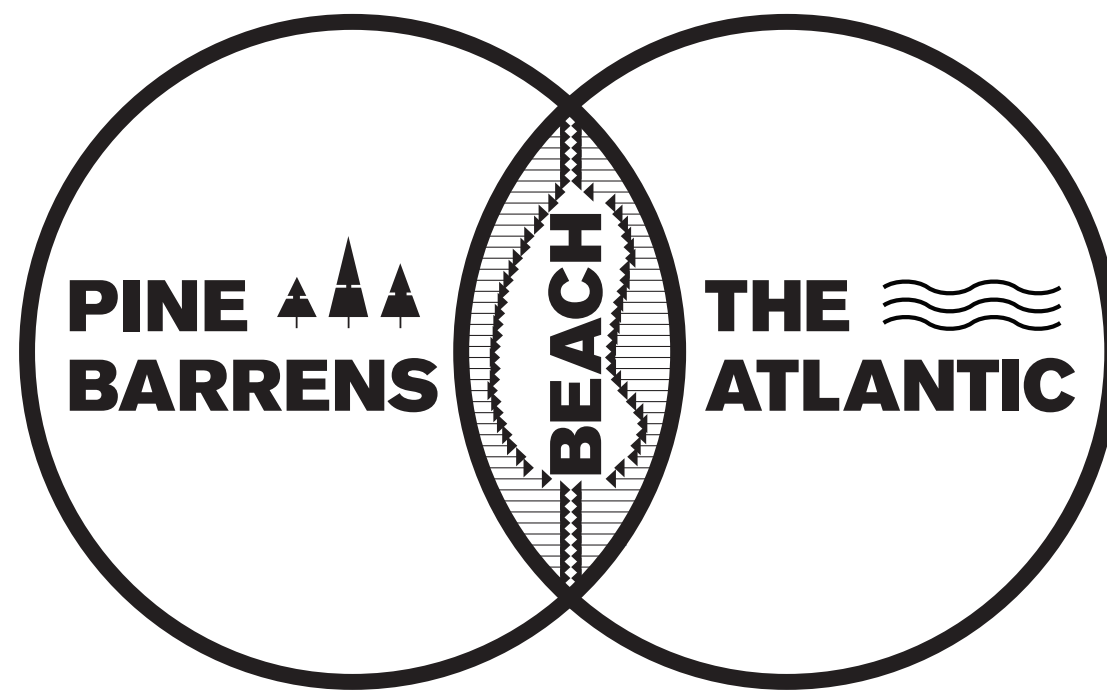
ACRES LOST UNDER JUST 1 FOOT OF SLR

43,823

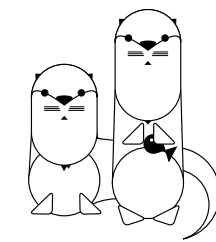
DIVERSE ECOLOGIES

THE ECOLOGY OF THE SHORE EXTENDS BEYOND THE SLIVER OF SAND KNOWN AS THE BEACH

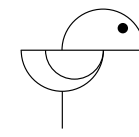
Deeper Than The Beach



 Northern Pine Snake
Pituophis melanoleucus



 River Otter
Lontra canadensis



 Piping Plover
Charadrius melodus

New Jersey's "National Park"

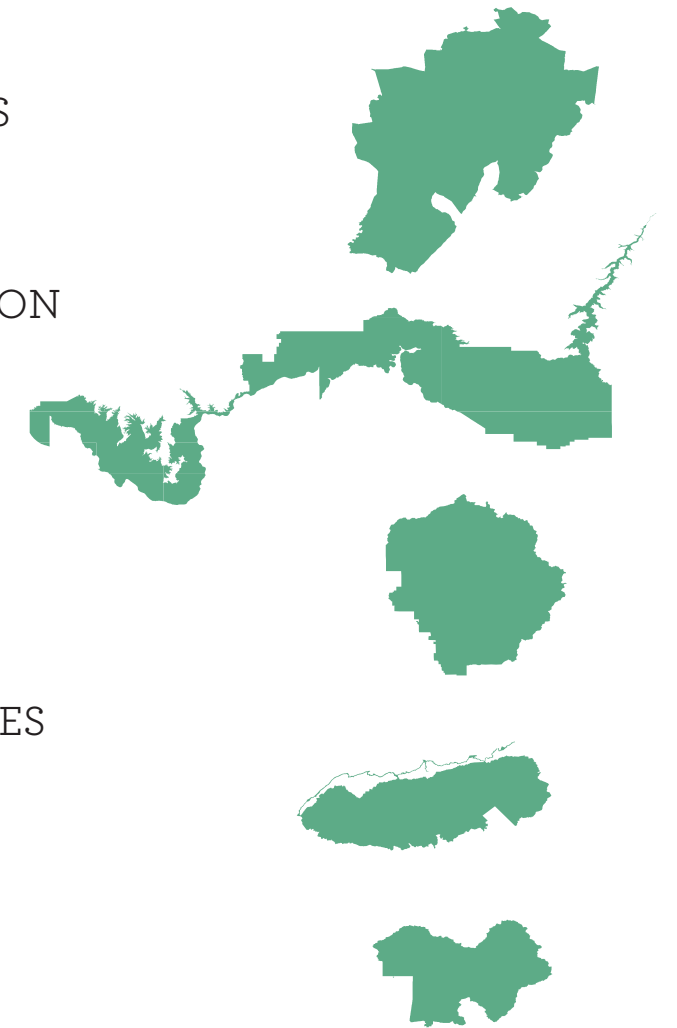
PINE BARRENS
1,894 SQ MILES

GRAND CANYON
1,902 SQ MILES

YOSEMITE
1,169 SQ MILES

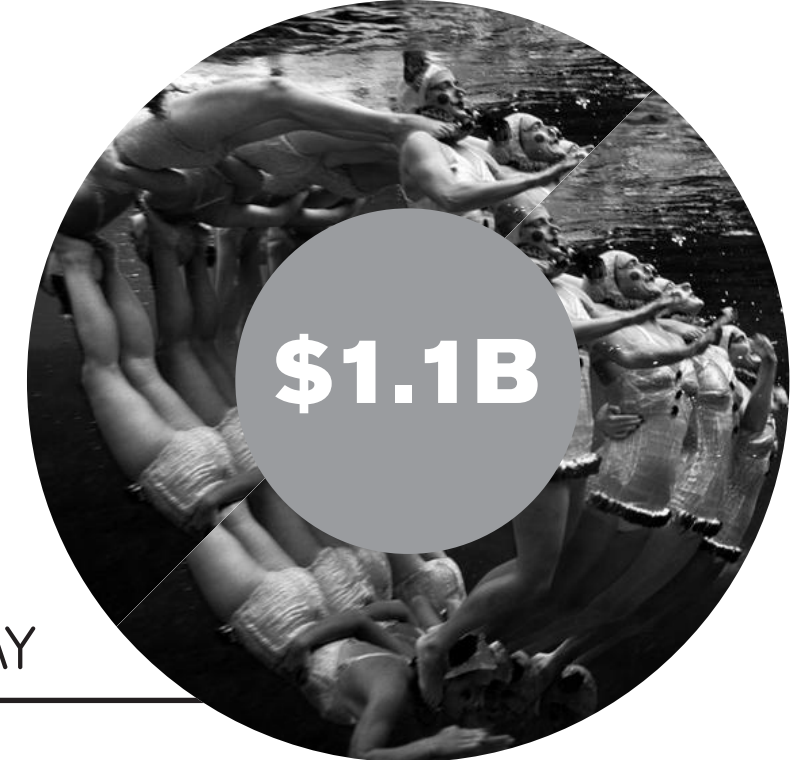
GREAT SMOKIES
815 SQ MILES

SEQUOIA
632 SQ MILES



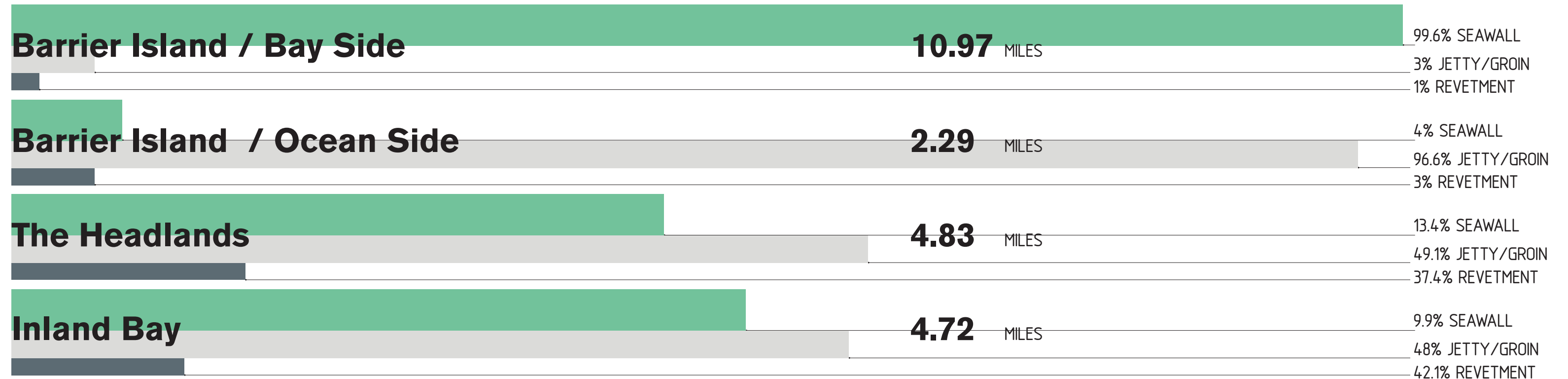
EDGE PROTECTION

NJ & THE FEDERAL GOVERNMENT INVEST HEAVILY IN PRESERVING BEACHES

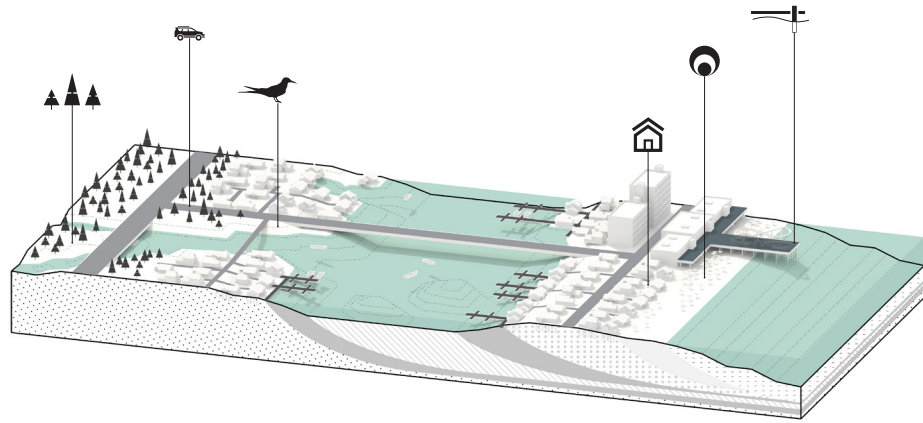


NEW JERSEY SHORE BEACH
NOURISHMENT COST, 1930S-TODAY

HARD COASTAL INFRASTRUCTURE STRATEGIES BY TYPOLOGY



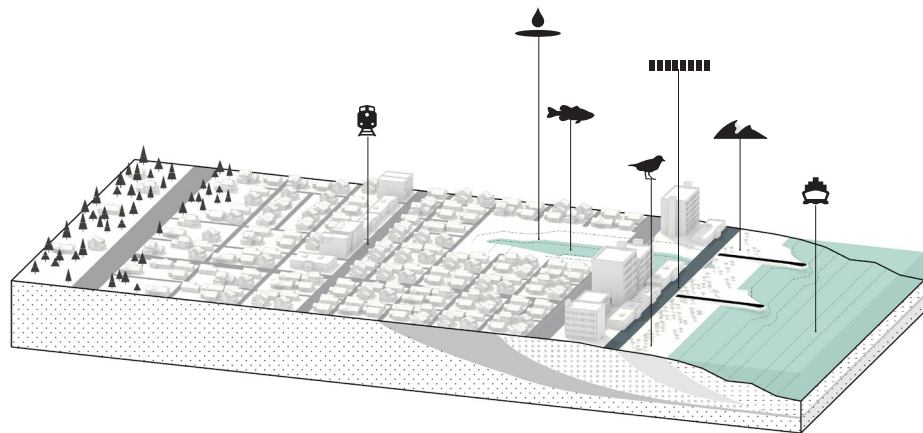
REINVENT THE COAST'S CULTURAL ICONS



BARRIER ISLAND



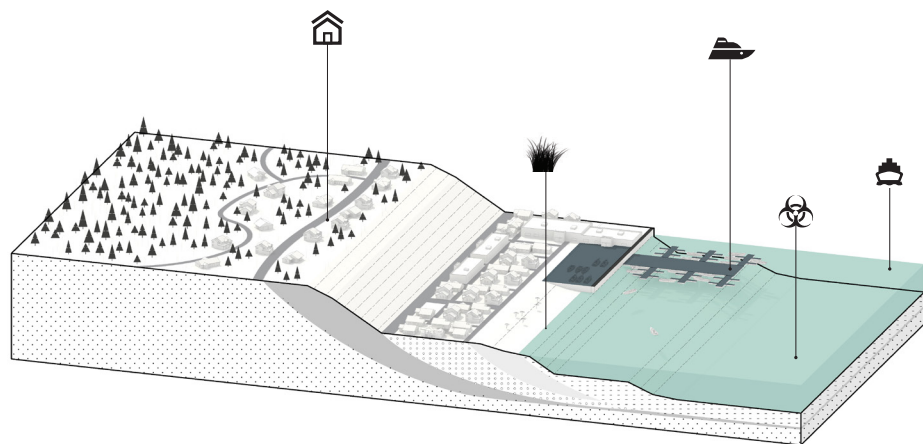
PIER



HEADLANDS



BOARDWALK

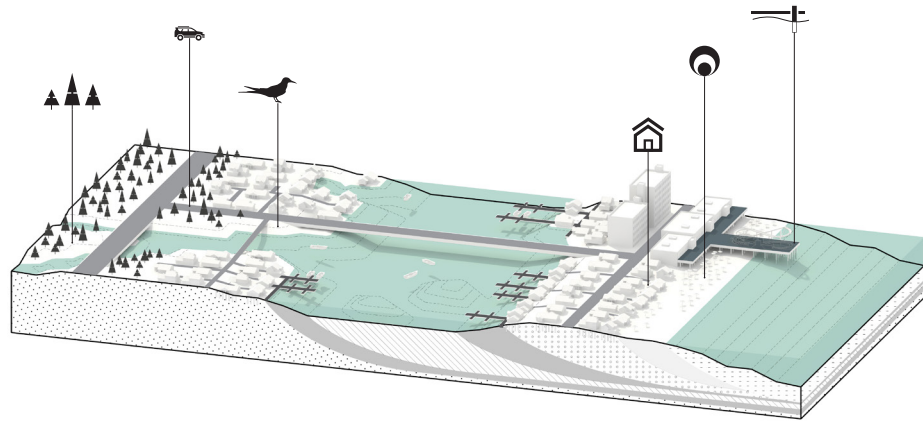


INLAND BAY



MARINA

RESILIENCY = CULTURE + ECOLOGY

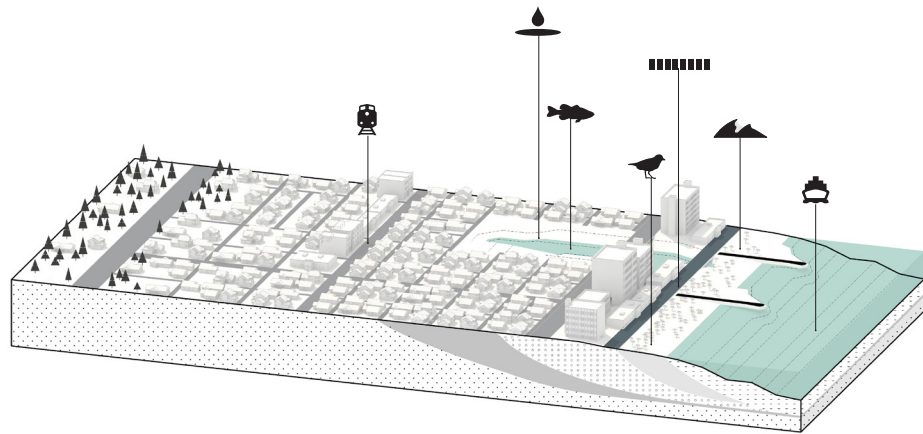


BARRIER ISLAND

PIER



PINE BARRENS

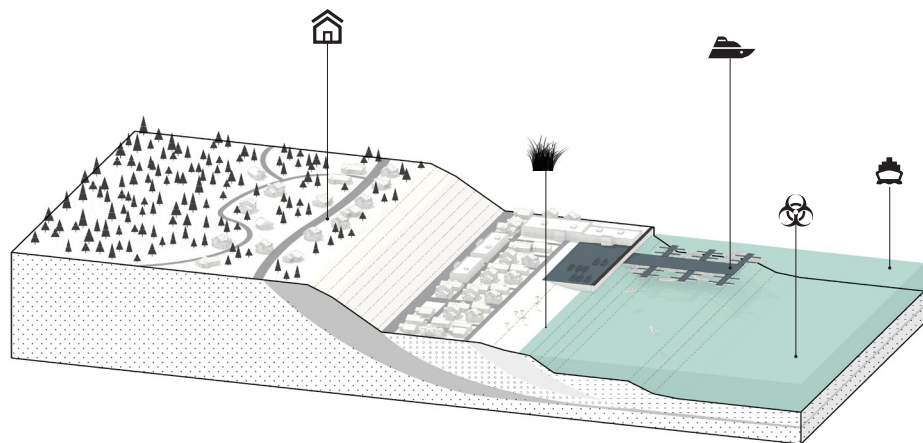


HEADLANDS

BOARDWALK



SAND DUNE



INLAND BAY

MARINA



MARSH

INLAND BAY STRATEGY

MAKING ROOM FOR WATER



MARINA



MARSH

PROPOSED NEW OPEN SPACE
VIA NATCO LAKE ACCESS

432 ACRES
(331 PUBLICLY OWNED)

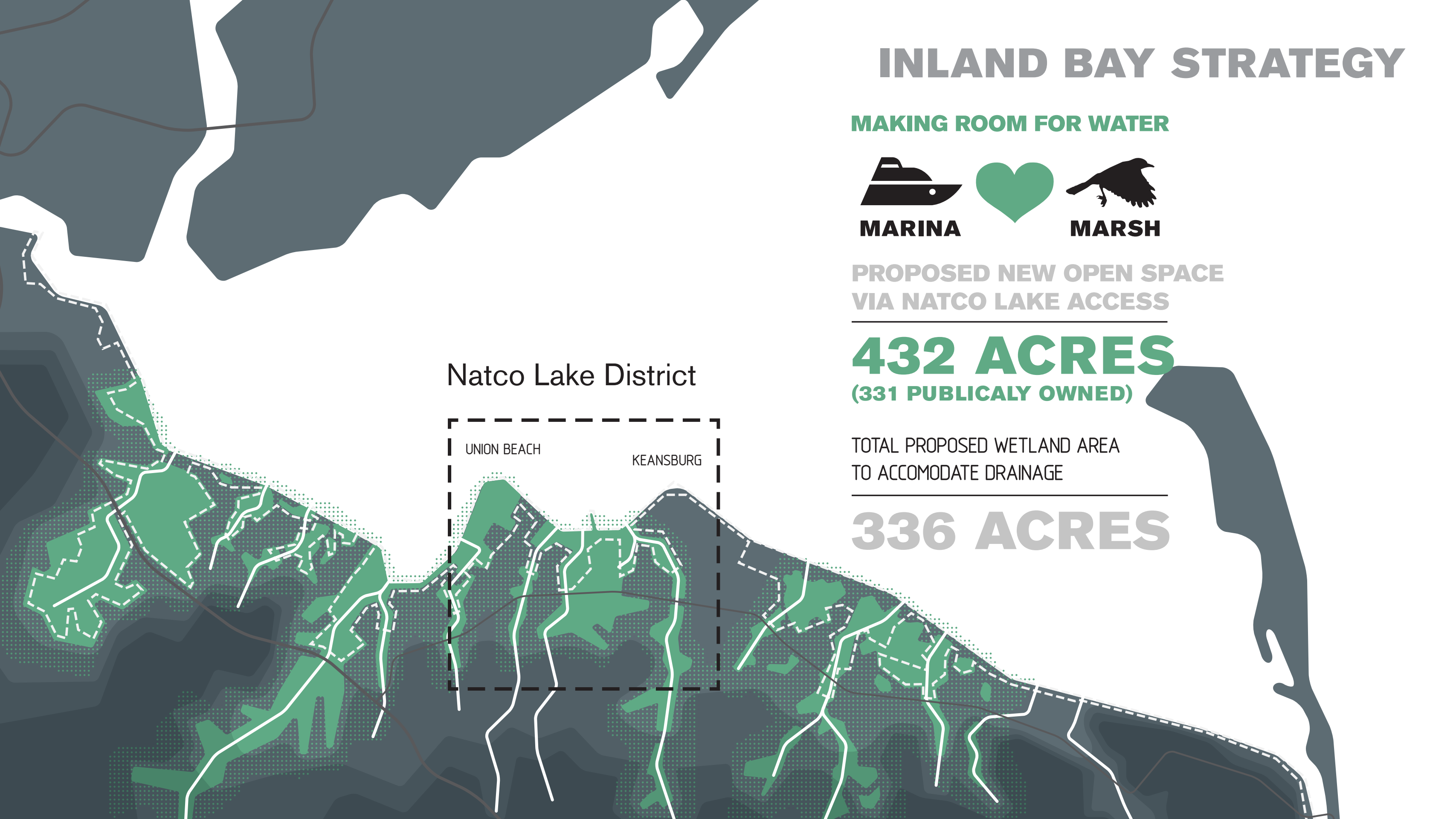
TOTAL PROPOSED WETLAND AREA
TO ACCOMODATE DRAINAGE

336 ACRES

Natco Lake District

UNION BEACH

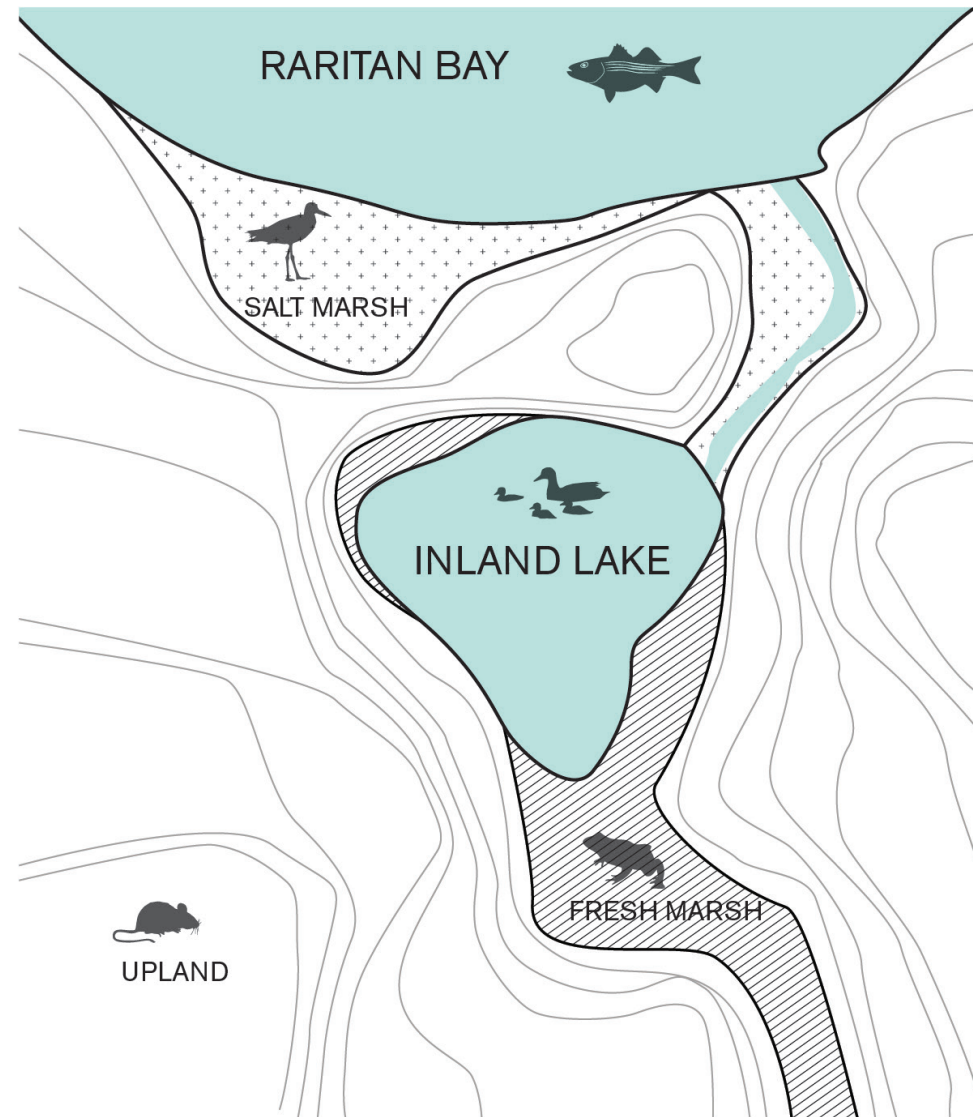
KEANSBURG



EVOLUTION: HABITAT ENGINE

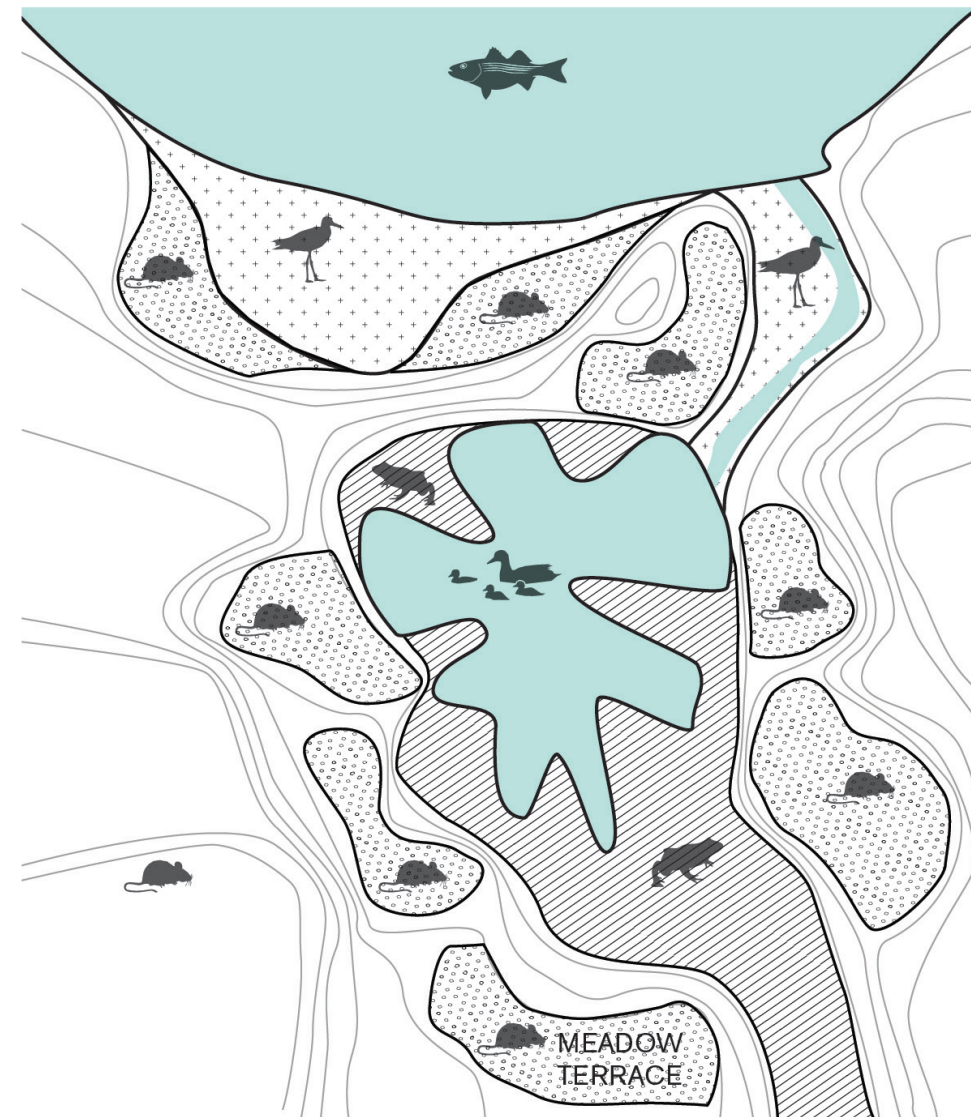
EXISTING CONDITIONS - LIMITED HABITAT

Limited palette of habitats, no space for habitat migration in the case of sea level rise.



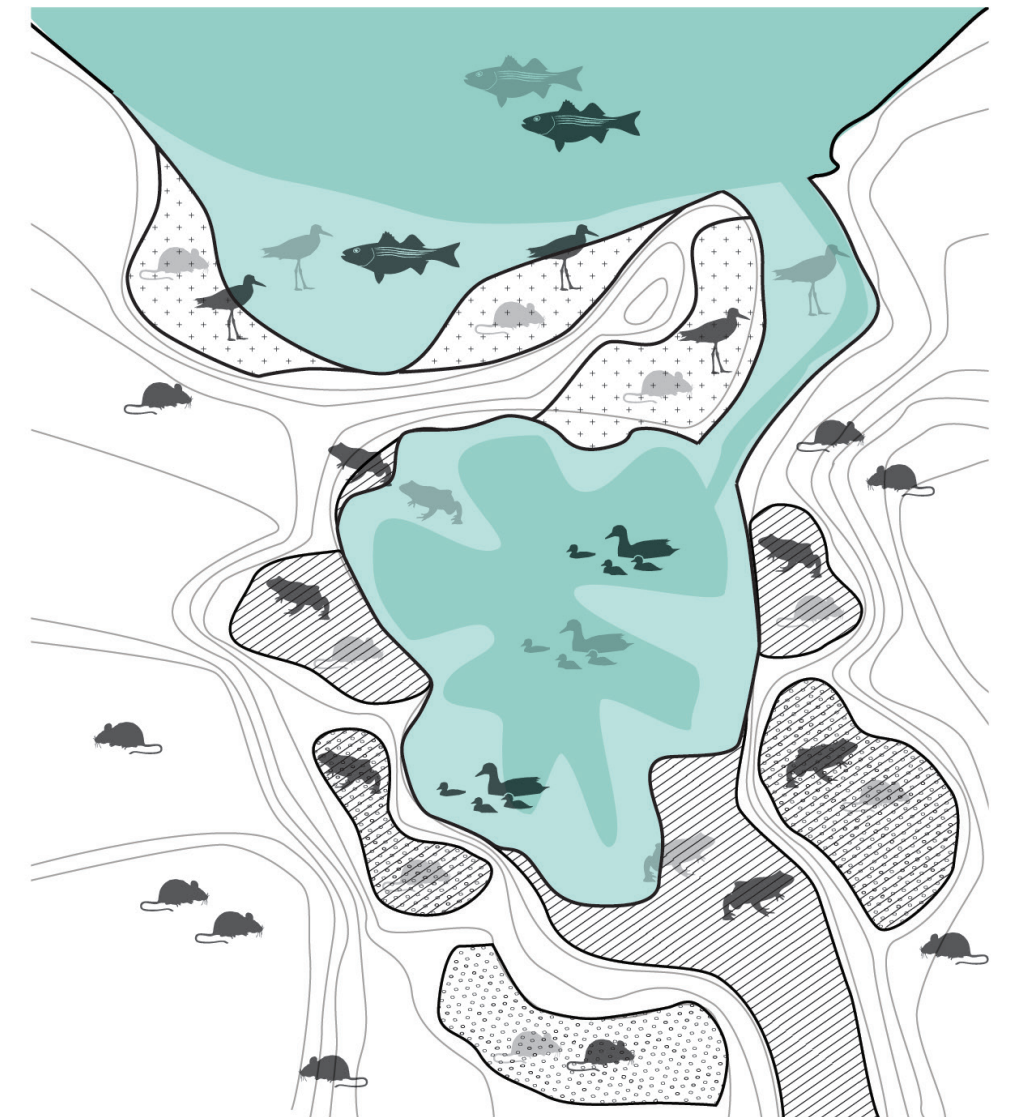
20 YEARS - CREATE ADDITIONAL HABITAT

Carve habitat terraces adjacent to existing habitat, creating space for water to take over salt marsh/wetland & salt marsh/wetland to take over meadows as sea level rises.



50 YEARS - SEA LEVEL RISES, HABITATS MIGRATE

Sea level rises, flooding salt marshes and some freshwater wetland. Terraces provide new salt marsh and wetland habitat for species to move into.





NATCO LAKE COASTAL PARK

HEADLANDS STRATEGY

INCREASE SLR PROTECTION

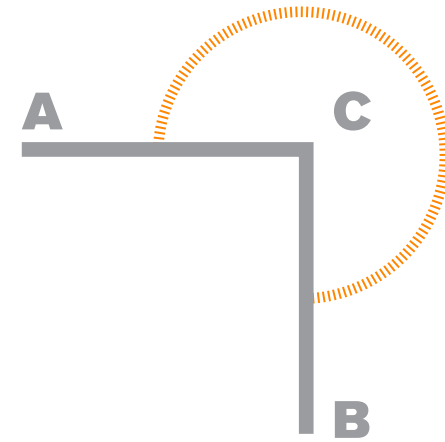


BOARDWALK



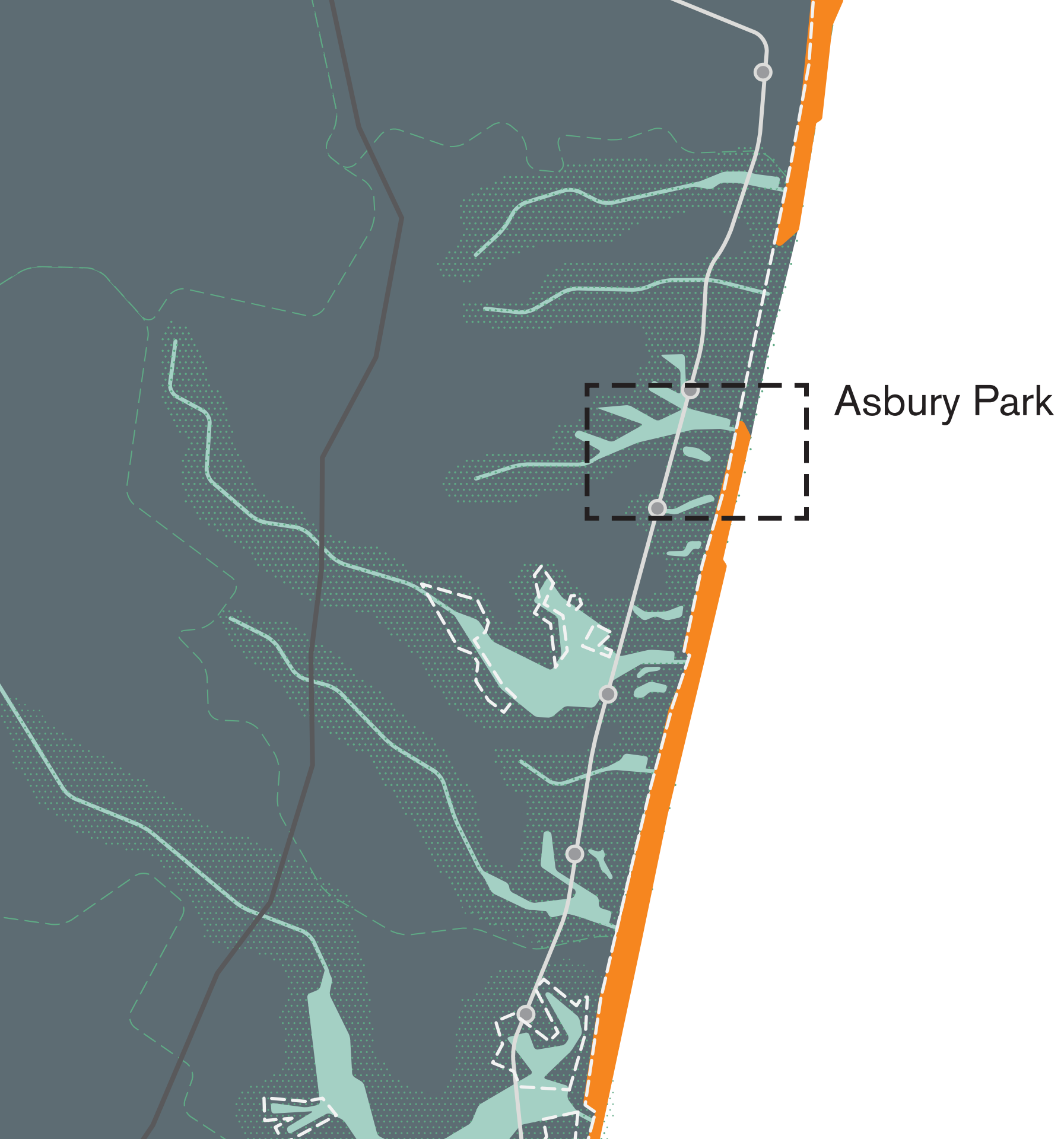
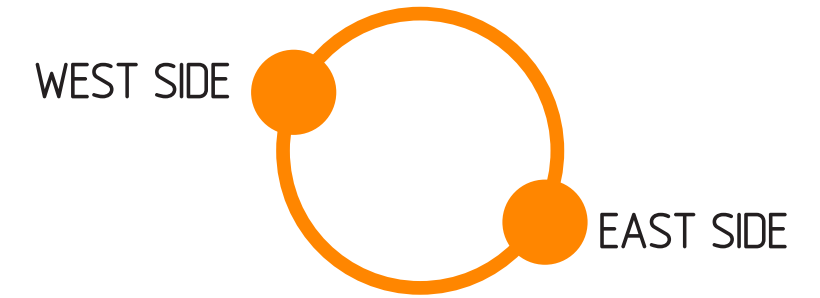
SAND DUNE

RETHINK INFRASTRUCTURE



A+B=C

CONNECT A DIVIDED COMMUNITY



Greetings from Asbury Park!



CONNECTED WEST/EAST
GREEN STREETS

PROTECTIVE BOARDWALK
PRESERVES & REINVENTS
BEACH ECOLOGY

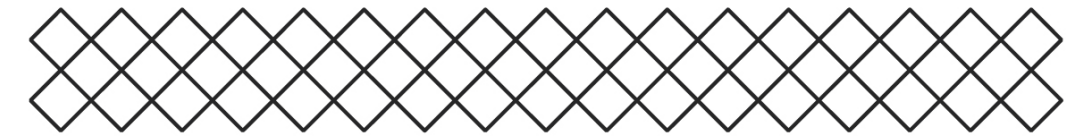
ECOLOGICALLY HEALTHY
LAKES CONNECTING
TO BOARDWALK & BEACH

RESILIENT ASBURY PARK



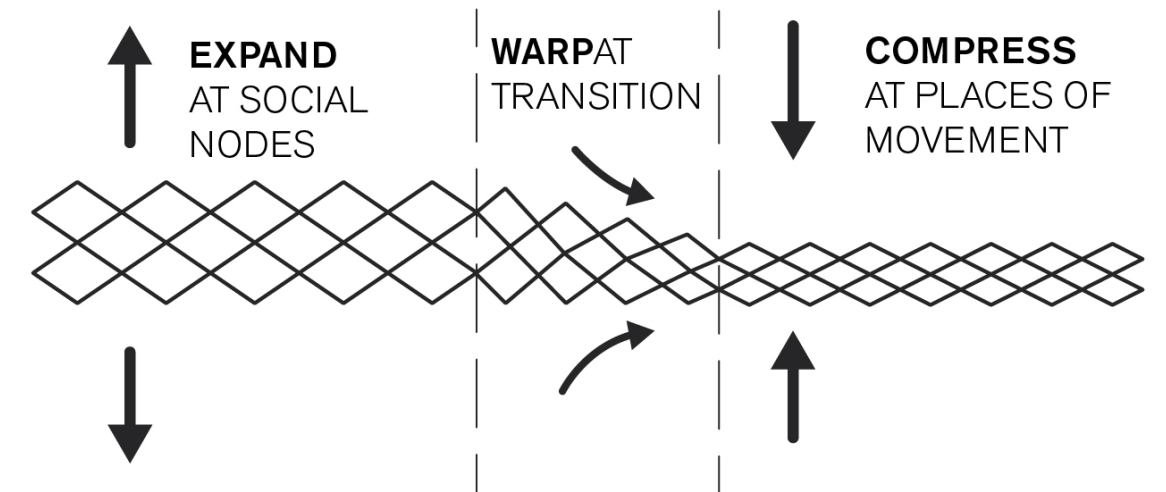
1

DUNE FENCE GRID



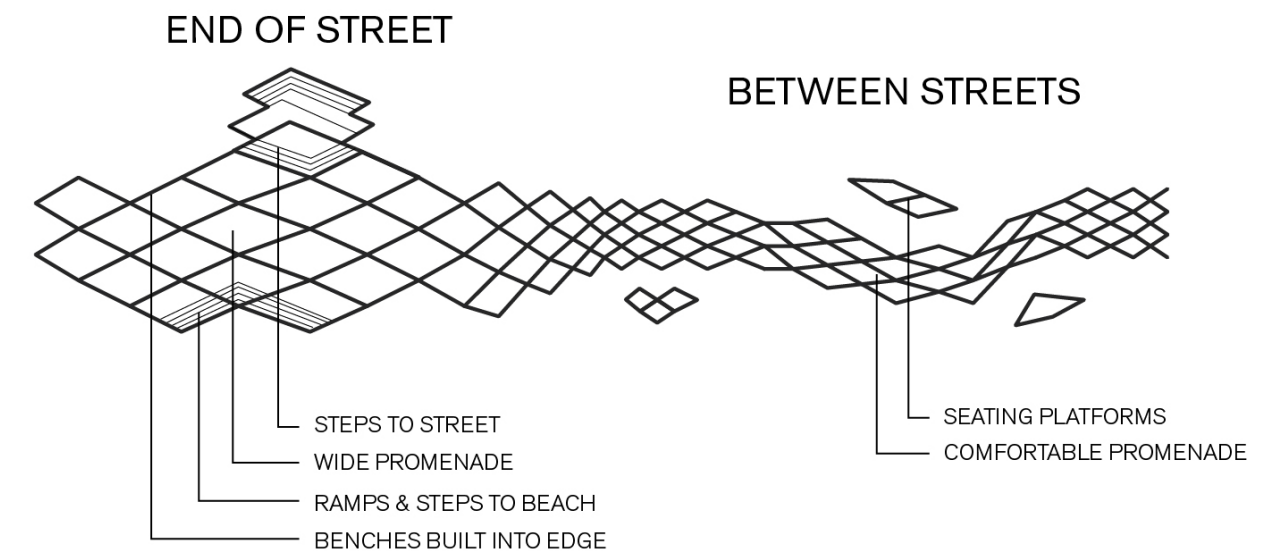
2

CUSTOMIZE THE GRID



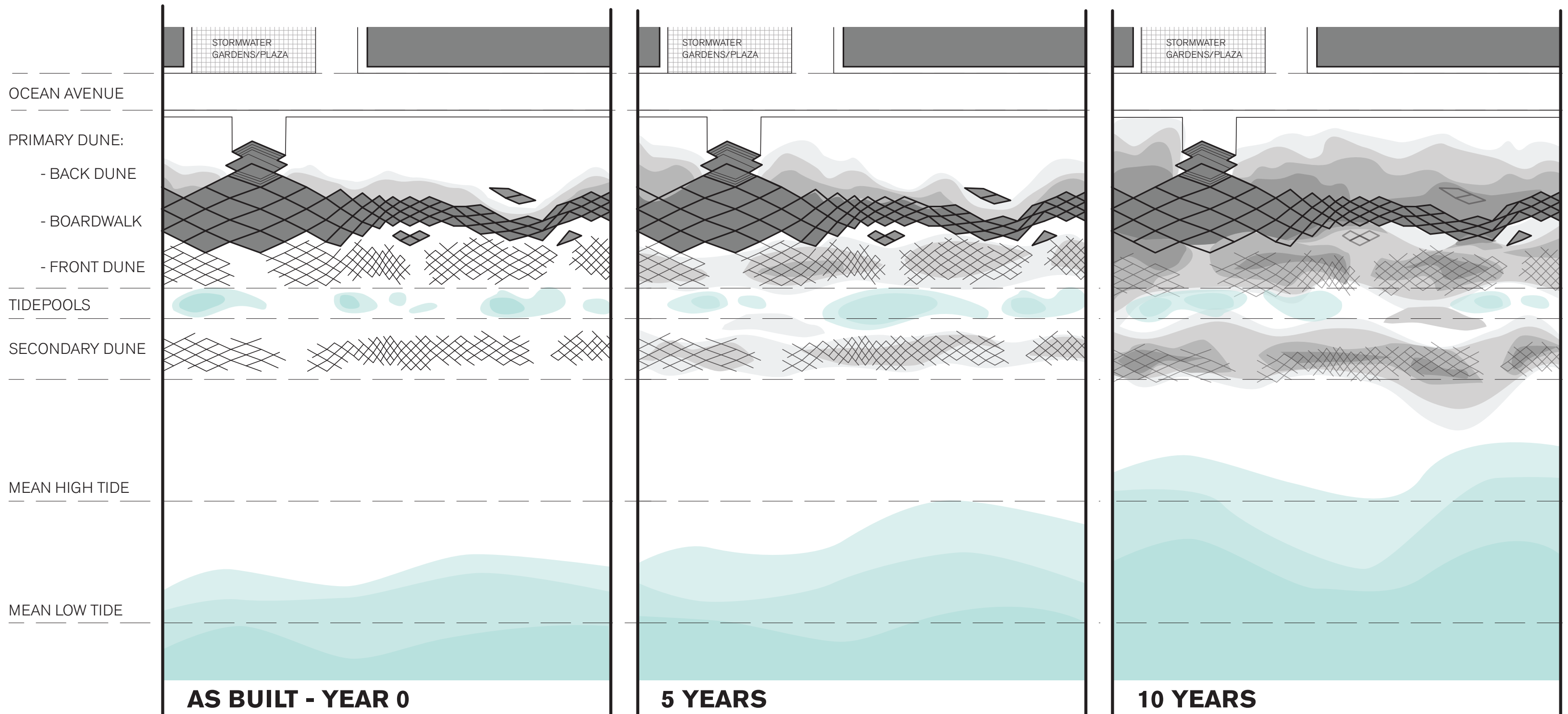
3

BUILD A BOARDWALK



INNOVATIVE

EVOLUTION: DUNE-BUILDING BOARDWALK OVER TIME

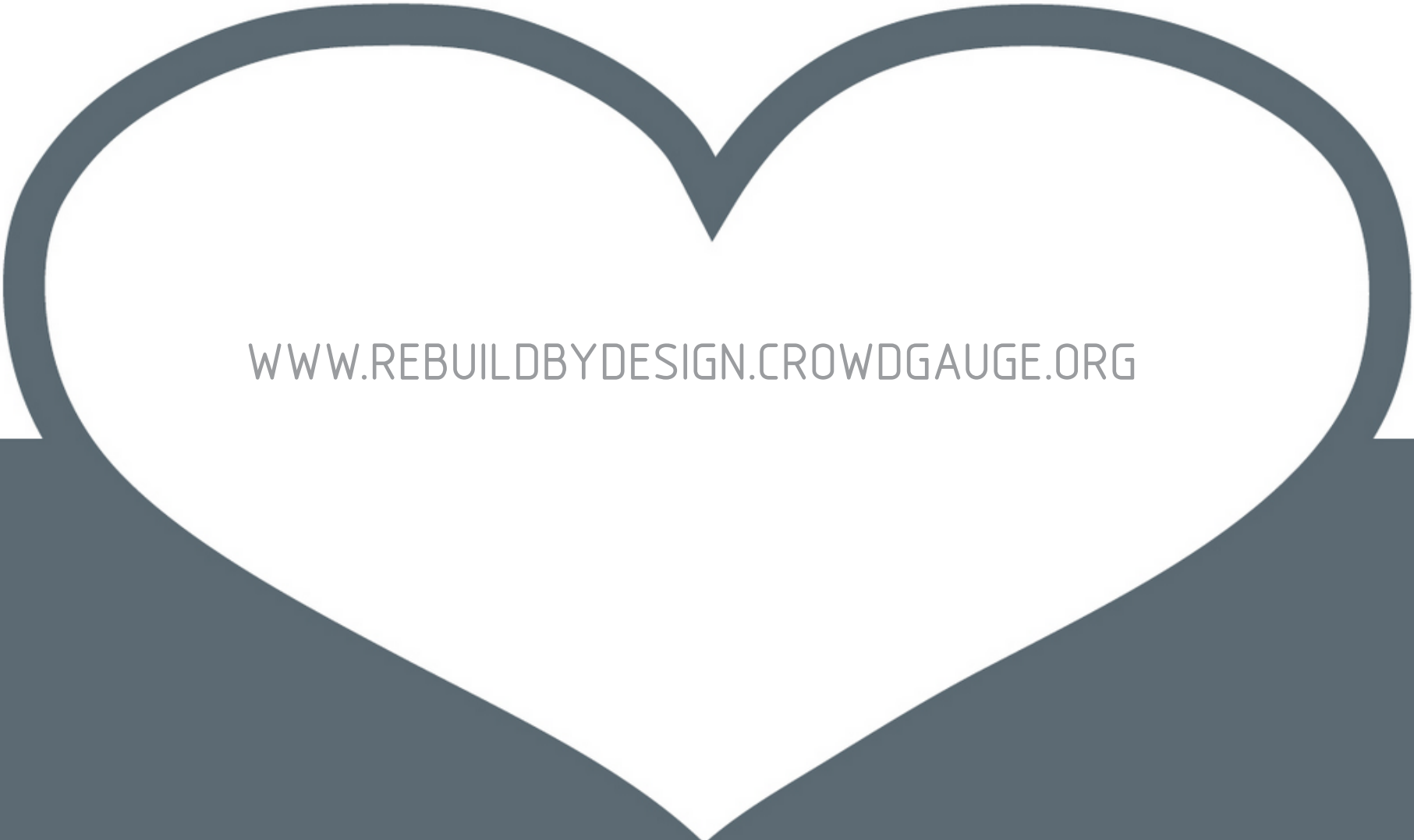






Eat at Franks!

Designs Plus
NJ SHORE
Beach



Want a more resilient Jersey Shore?










<input type="text" value="ZipCode*"/>	<input type="text" value="Income"/>	<input type="text" value="Age"/>
<input type="text" value="Gender"/>	<input type="text" value="Race"/>	
<input type="text" value="Select a relationship to the Jersey Shore"/>		

START

*Indicates Required Field
[I want to learn more about this project!](#)
[Why are we asking?](#)

I want to be part of a Jersey Shore where...


Rank your priorities using the stars below: 5 is the highest ranking and you have 25 stars total.

-  There is a vibrant, year round tourism or recreation economy
-   There is less traffic
-  We invest in conservation efforts to protect the beaches, bays, Pine Barrens, and other natural resources
-  My community's residents have a mix of incomes
-   I am safe from flooding and storm surge
-  My taxes are low
-  The community invests in new development
-   We have clean air, water, and land
-   I can afford flood insurance
-   I have views and/ or access to the water
-  I can live and work in my community
-   The Jersey Shore is a cultural, recreational amenity for future generations
-  I know my neighbors and feel like I belong to a community
-  There is well-maintained infrastructure (stormwater, wastewater, energy)



Color shows the impact of your priorities on risk of damage from future disasters

HIGH  LOW

 You have 0 star left

NEXT

TOP 10 COMMUNITY VALUES

	SCORE
1. We have clean air, water, and land	27.42
2. We invest in conservation efforts to protect the beaches, Pine Barrens, and other natural resources	25.00
3. There is well-maintained infrastructure	19.89
4. The Jersey Shore is a cultural and recreational amenity for future generations	16.28
5. I am safe from flooding and storm surge	13.41
6. I have views and/or access to the water	9.20
7. There is a vibrant, year-round tourism and recreation economy	8.73
8. I can live and work in my community	7.48
9. I know my neighbors and I feel like I belong to a community	7.09
10. There is less traffic	4.50

TOP SUPPORTED PROJECTS

	SCORE
1. Reduce congestion through pedestrian, bicycling, and transit	706
2. Upgrade infrastructure systems	663
3. Bolster Jersey Shore tourism	625
4. Increase in open space by building new parks and protecting natural resources	625
5. Invest in new development and job creation	529
6. Reduce stormwater flooding problems	499

ASBURY PARK TODAY

VULNERABLE INFRASTRUCTURE



DEAD ECOLOGIES



OVERSIZED SUMMER INFRASTRUCTURE



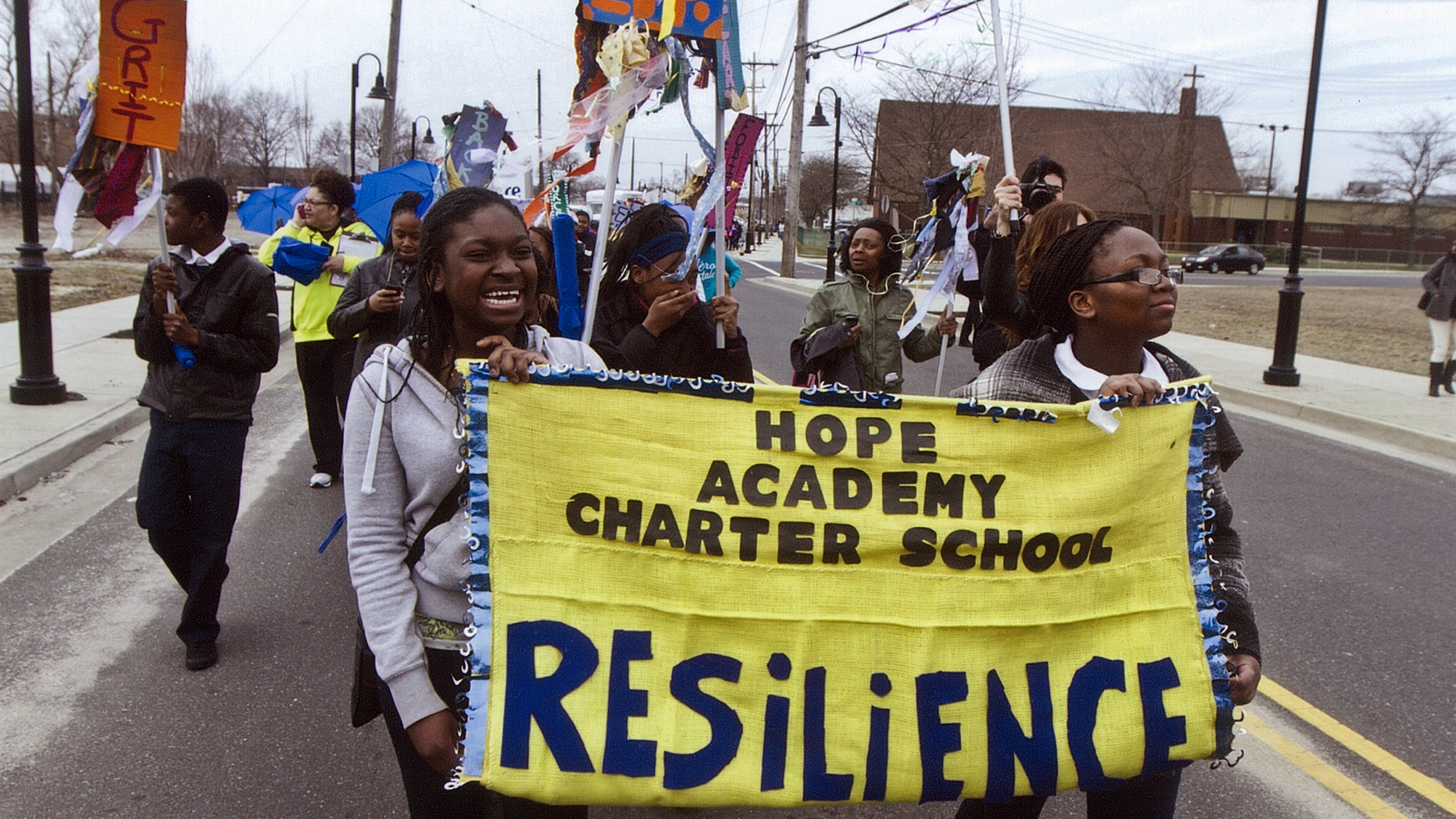
DIVIDED URBAN FABRIC, DIVIDED CULTURE





REBUILD
BY
DESIGN

Rebuild One City
Unifying a Resilient Asbury Park, March 22, 2014



**HOPE
ACADEMY
CHARTER SCHOOL**

RESILIENCE



Greetings from Asbury Park!

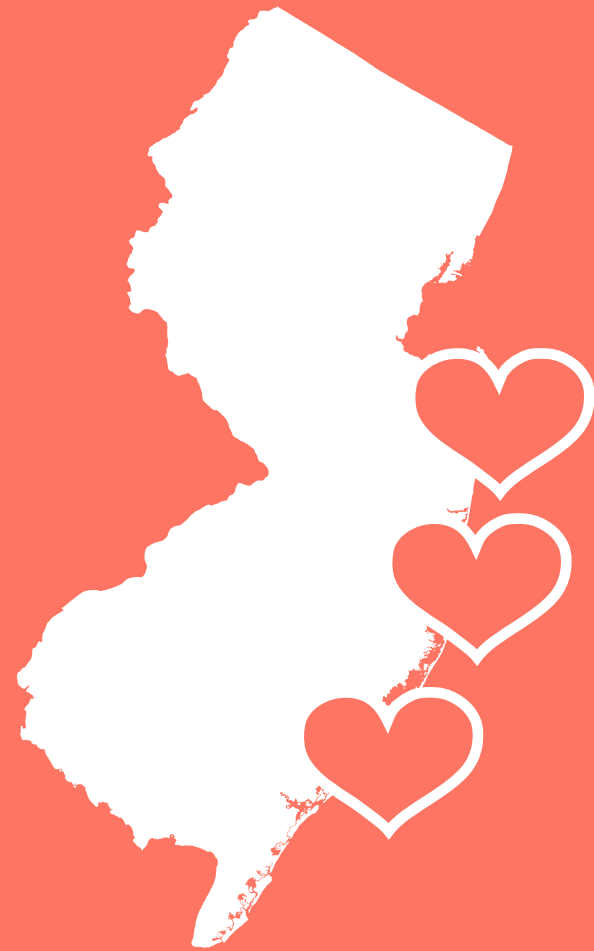


CONNECTED WEST/EAST
GREEN STREETS

PROTECTIVE BOARDWALK
PRESERVES & REINVENTS
BEACH ECOLOGY

ECOLOGICALLY HEALTHY
LAKES CONNECTING
TO BOARDWALK & BEACH

RESILIENT ASBURY PARK



RESILIENT JERSEY

SHORE

THANK YOU.