

Scituate Harbor Resiliency Master Plan

Community Forum

March 3, 2020



Scituate Harbor Resiliency Master Plan

Photo: Town of Scituate Harbormaster

03/03/20



MAPC Staff



Josh Fiala AICP AIA LEED AP

Principal Planner



Darci Schofield

Senior Environmental Planner



Christian Brandt

Community Engagement Coordinator



Town of Scituate Staff

- **Kyle Boyd**
Coastal Management Officer

Scituate Harbor Resiliency Master Plan

Community Forum Agenda

- **Process Overview**
- **Feedback from 1st Community Forum**
- **Defined Problem Statement**
- **Alternative Approaches and Evaluation**
- **Discussion**
- **Next Steps**

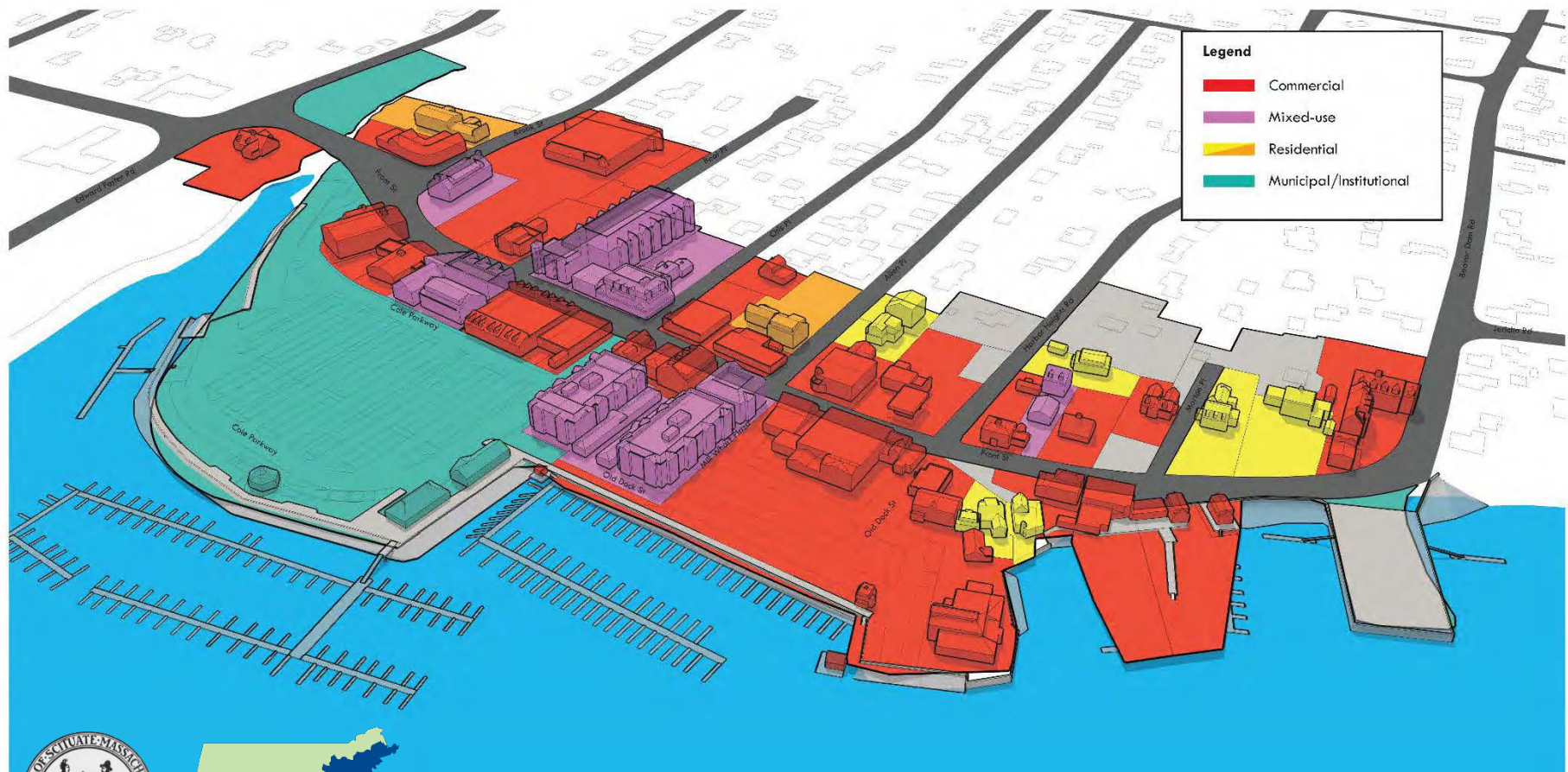


Process Overview



Existing Challenges and Opportunities

Existing Conditions Mapping – Land Use



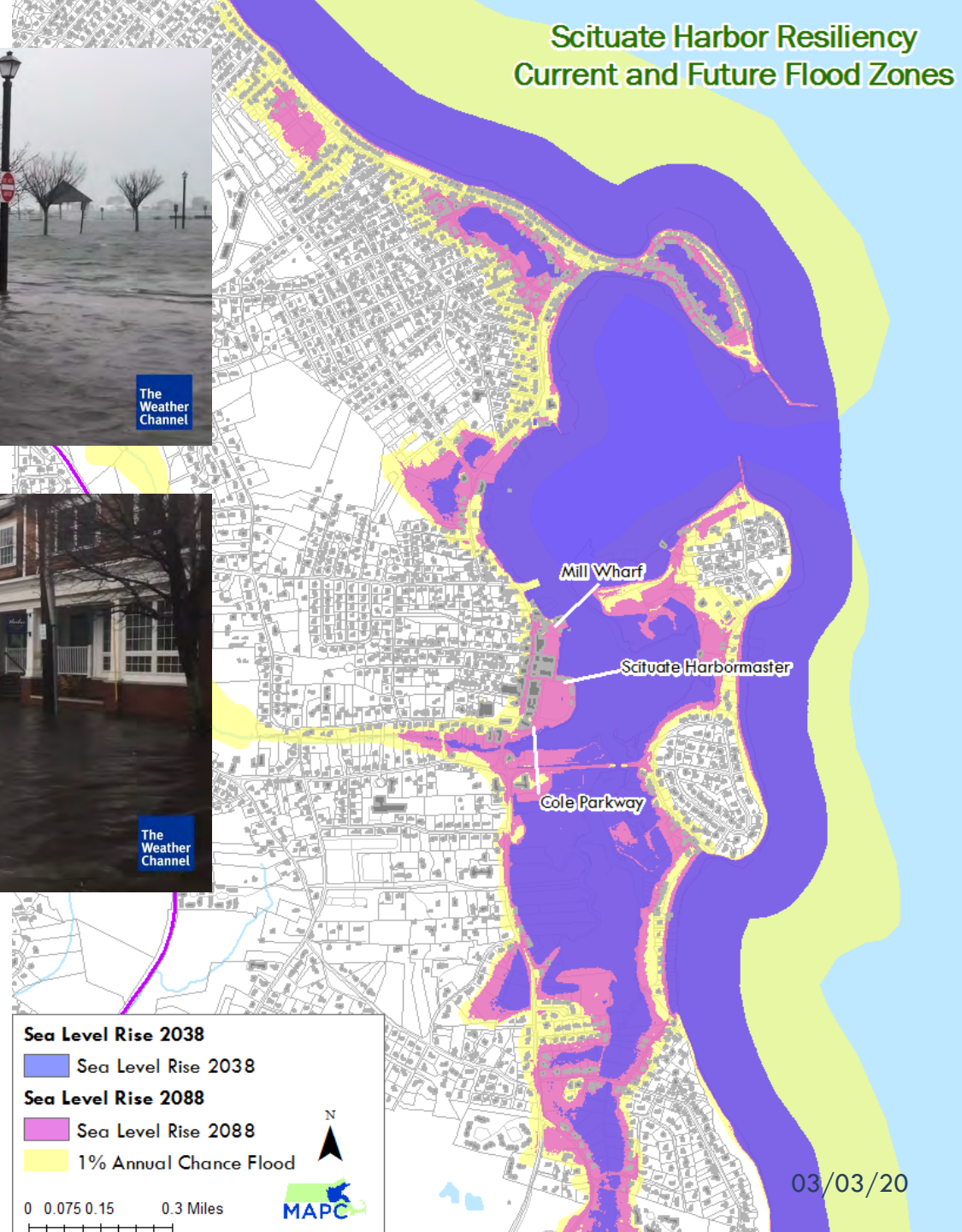
Scituate Harbor Resiliency Current and Future Flood Zones



The Weather Channel



The Weather Channel



Schedule

Task	Year/Month													
	2019								2020					
	05	06	07	08	09	10	11	12	01	02	03	04	05	06
Task 1 – Existing Conditions														
Task 2 – Review of Relevant Plans and Policies														
Task 3 – Resiliency Assessment and Action Plan														
Task 4 – Vision Plans/Zoning Amendments														
Task 5 – Implementation Plan														
Task 6 – Community Engagement	Preparation and Engagement				More Public-facing Engagement									
Task Force Meetings														
Community Engagement Meetings														



- Community Meeting and Board/Committee Presentations
- Community Open House
- Focus Group Meetings

Task Force Members

- **Charlotte Britton** *Scituate Harbor Condominium Resident*
- **John Murphy** *Fire Chief*
- **Karen Connolly** *Board of Selectmen*
- **Kevin Cafferty** *DPW Director*
- **Kyle Boyd** *Coastal Management Director*
- **Louise Pfund** *Chairperson Coastal Advisory Commission*
- **Lynda Ferguson** *Scituate Chamber of Commerce Board Member*
- **Margaret Loughlin** *Scituate Harbor Condominium Resident*
- **Michele Wood** *President of Scituate Harbor Business Association*
- **Penny Scott-Pipes** *Conservation Commission*
- **Rick Murray** *Waterways Commission*
- **Sue DiPesa** *Chairperson Economic Development Commission*
- **Tom Clark** *Scituate Harbor Cultural District Committee Member*

Feedback from 1st Community Forum



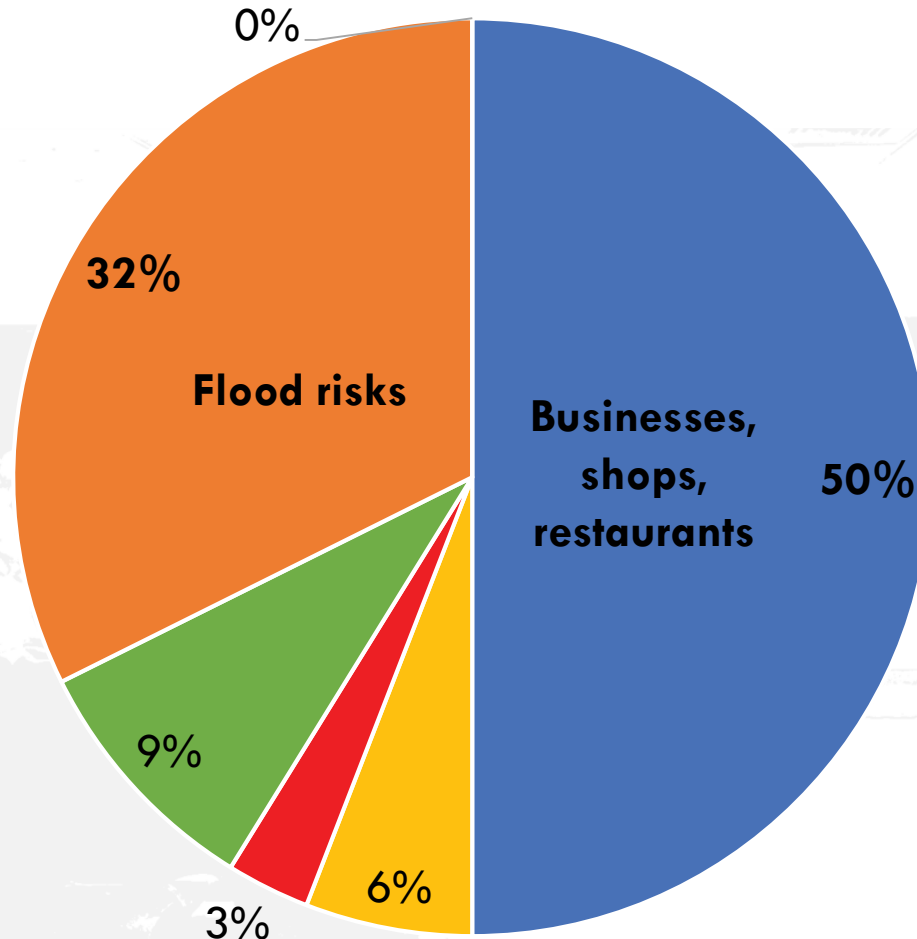
Feedback from 1st Community Forum

- About 50 attendees
- Engaged audience and insightful discussion



Feedback from 1st Community Forum

What is your main concern for Scituate Harbor?



- Businesses, shops, restaurants
- Access to the water
- Flood risks

- Things to do, events, community gathering
- Convenient parking
- Other

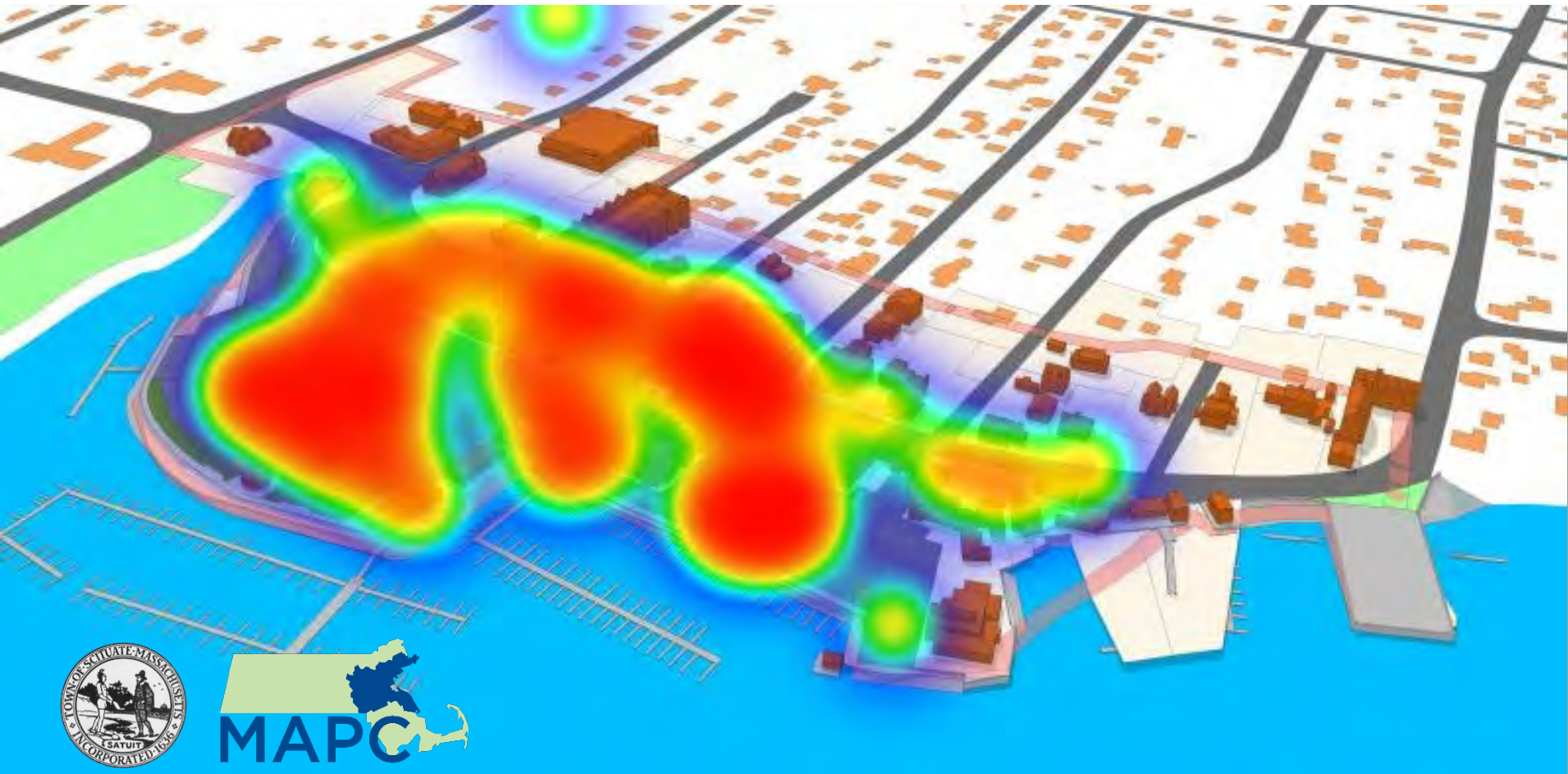
Feedback from 1st Community Forum

How urgent do you feel coastal flooding issues area?



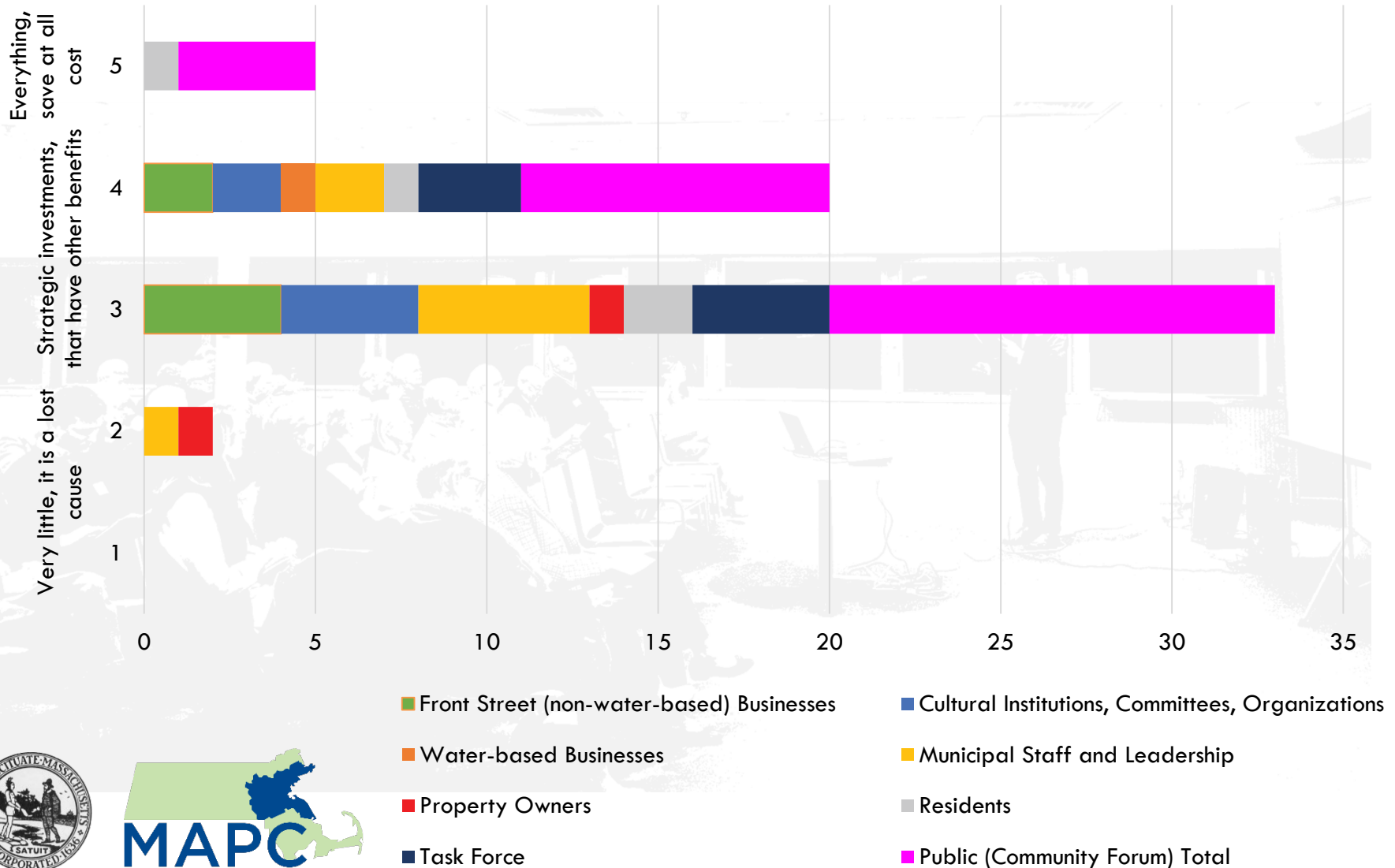
Feedback from 1st Community Forum

Where have you seen the biggest issues with frequent flooding?



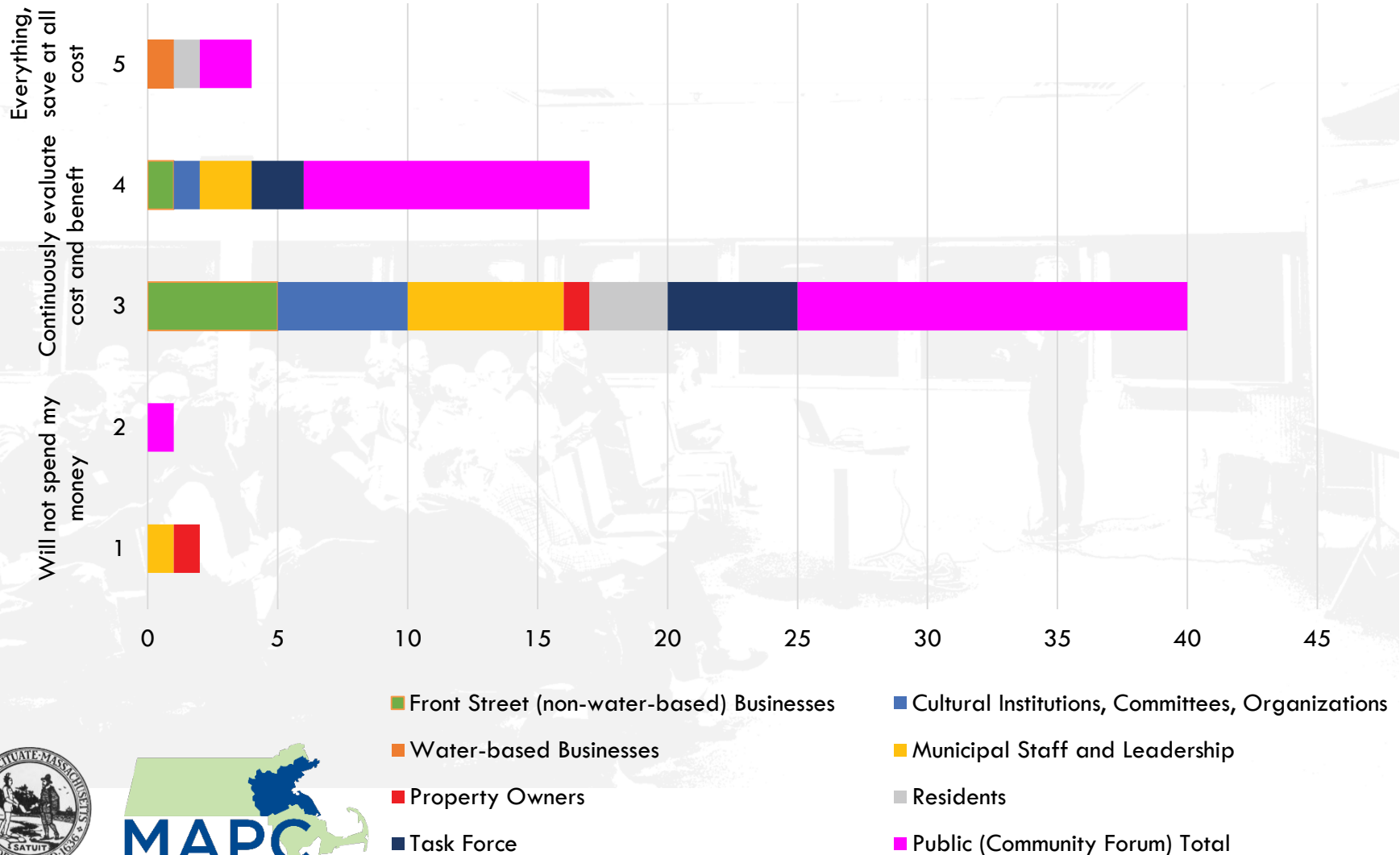
Feedback from 1st Community Forum

What should be done collectively to protect against floods?



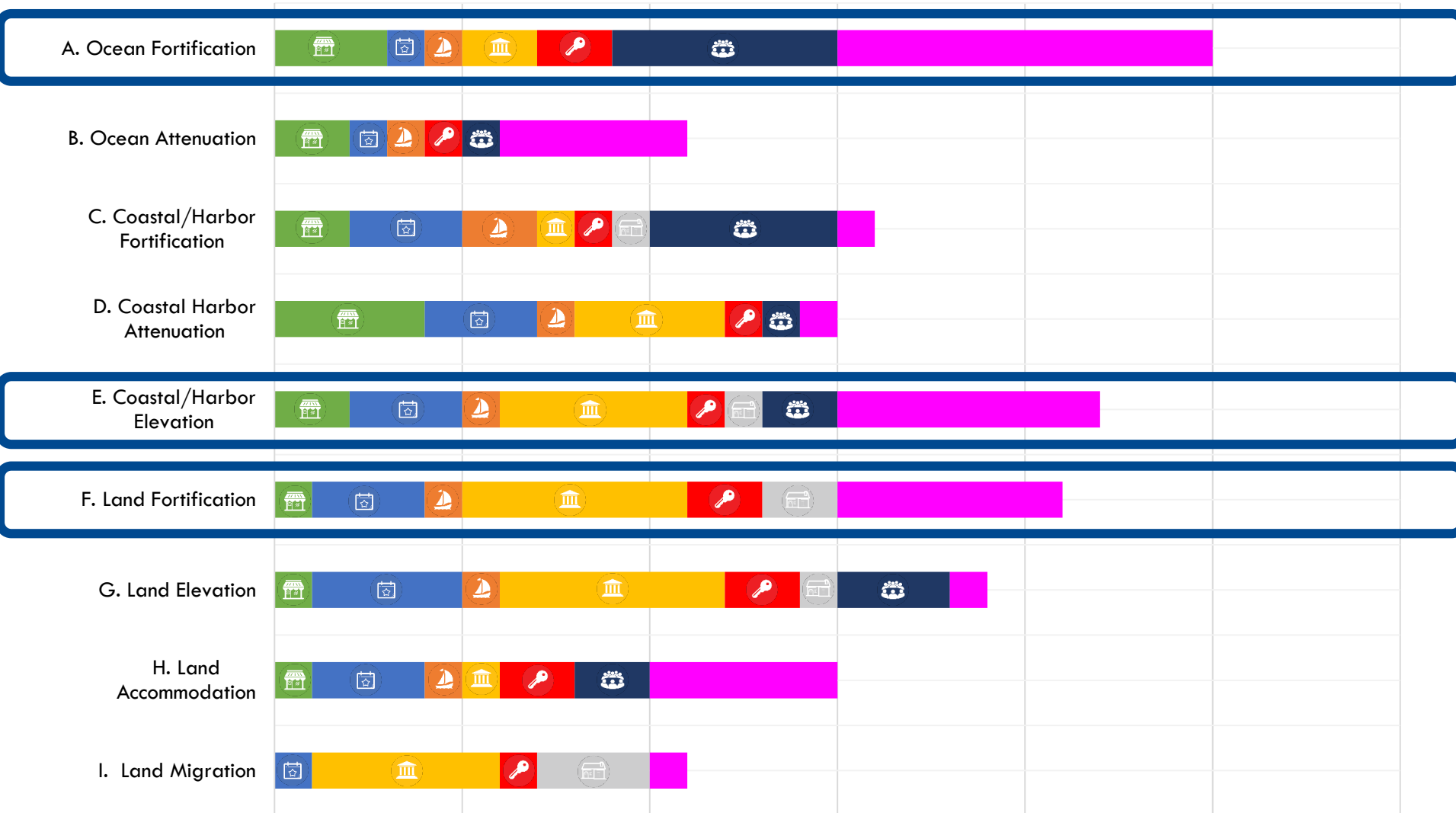
Feedback from 1st Community Forum

What would you do to protect against floods?



Feedback from 1st Community Forum

Which types of solutions do you think are most appropriate?



Community Forum Results

Open Ocean Adaptation

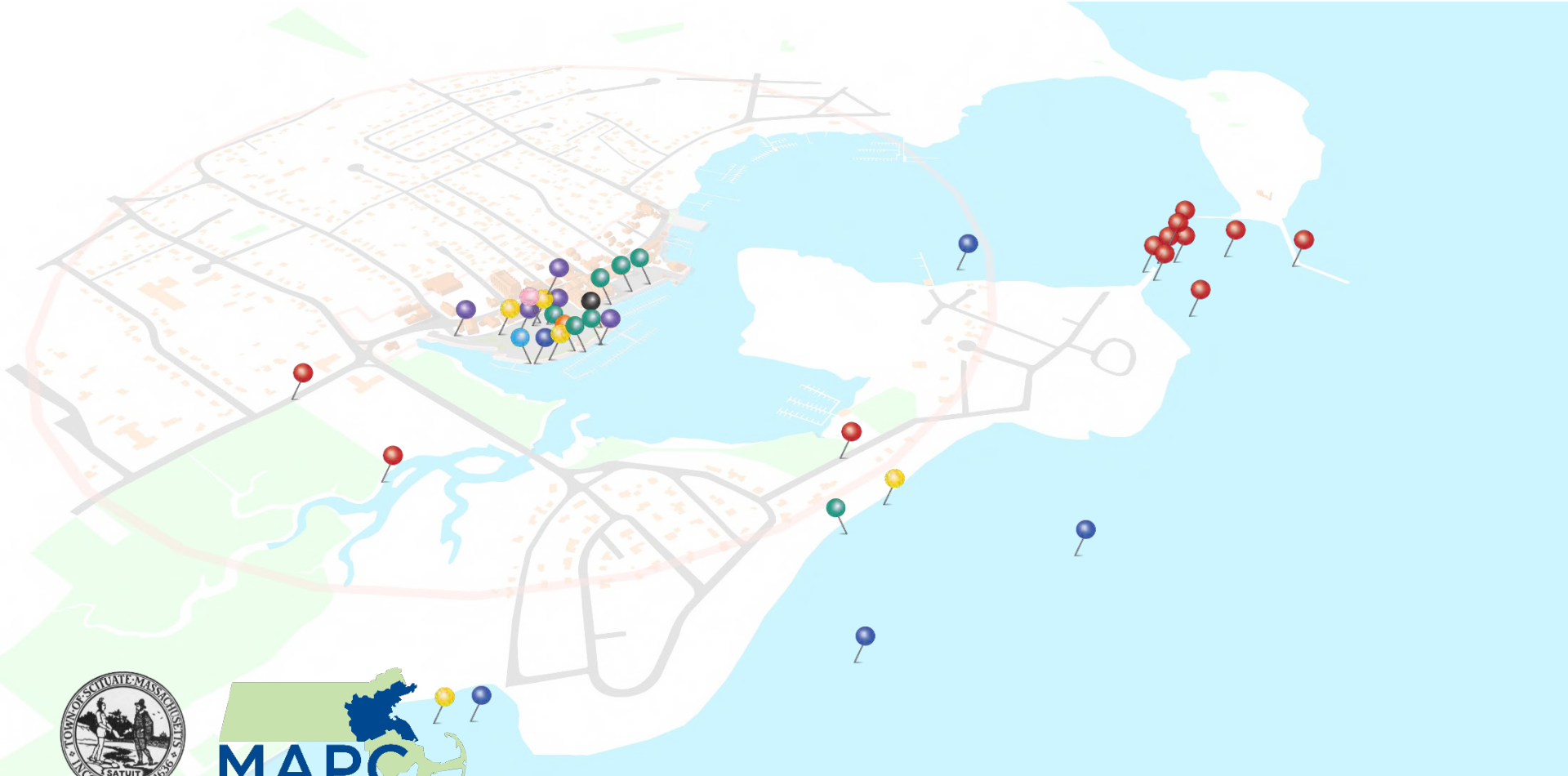
- Fortification
- Attenuation
- Something else?

Coastal/Harbor Adaptation

- Fortification
- Attenuation
- Elevated

Land Adaptation

- Fortification
- Elevated
- Accommodate
- Migrate



Defined Problem Statement



Problem Statement

Create a cohesive vision for Scituate Harbor that will build resilience incrementally, through coordinated and layered measures, to meet flood challenges projected for mid-century (2050) and beyond. Near term and long-term actions should create more flood resilience while creating additional benefits to the district that will:

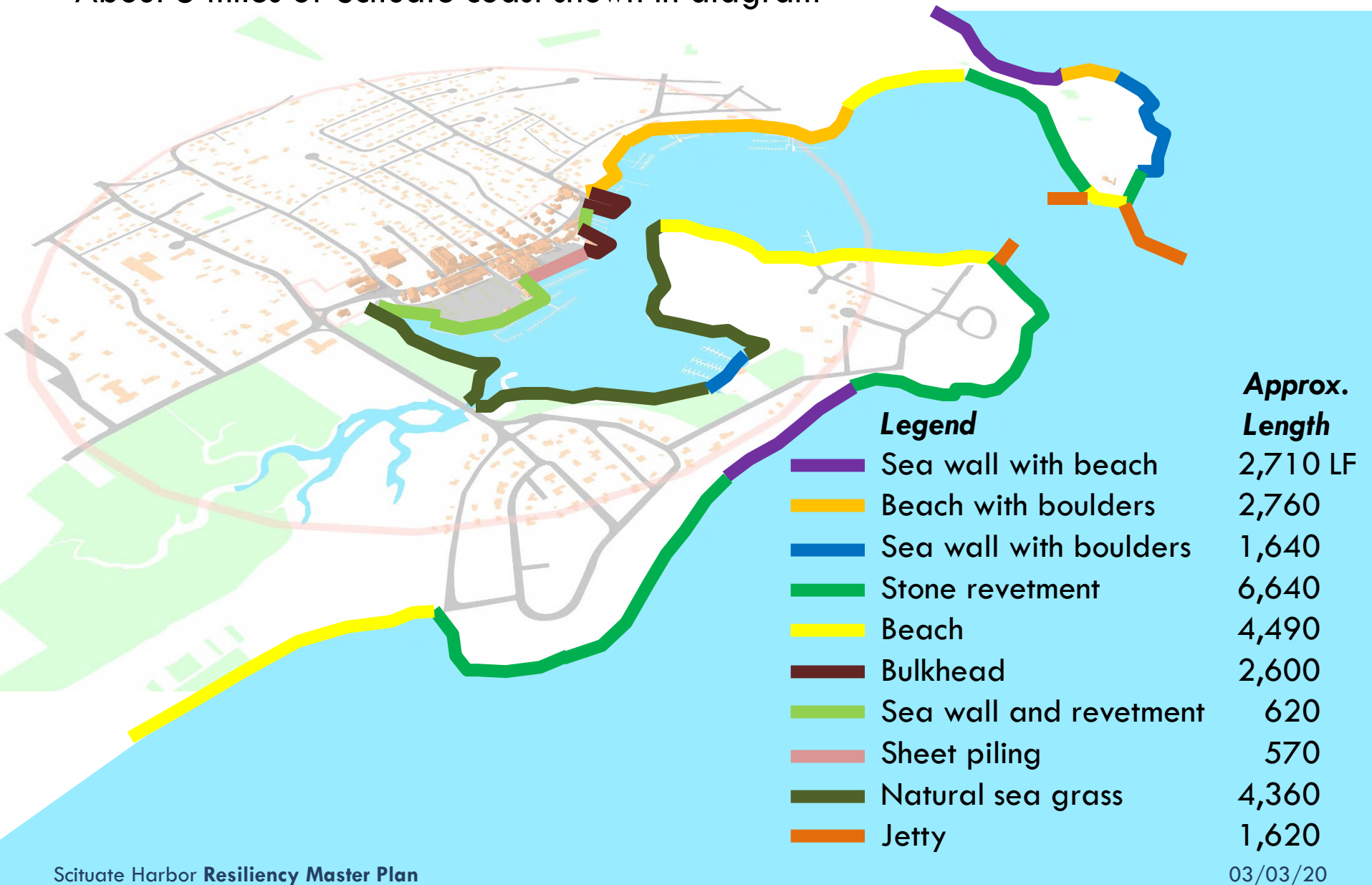
- Enhance economic vitality
- Improve the public realm
- Strengthen community and civic gathering
- Improve district parking
- Maintain cost effectiveness
- Retain the ability to implement
- Reduce the negative impacts

Alternative Approaches and Evaluation



Existing Coastal Conditions

About 5 miles of Scituate coast shown in diagram



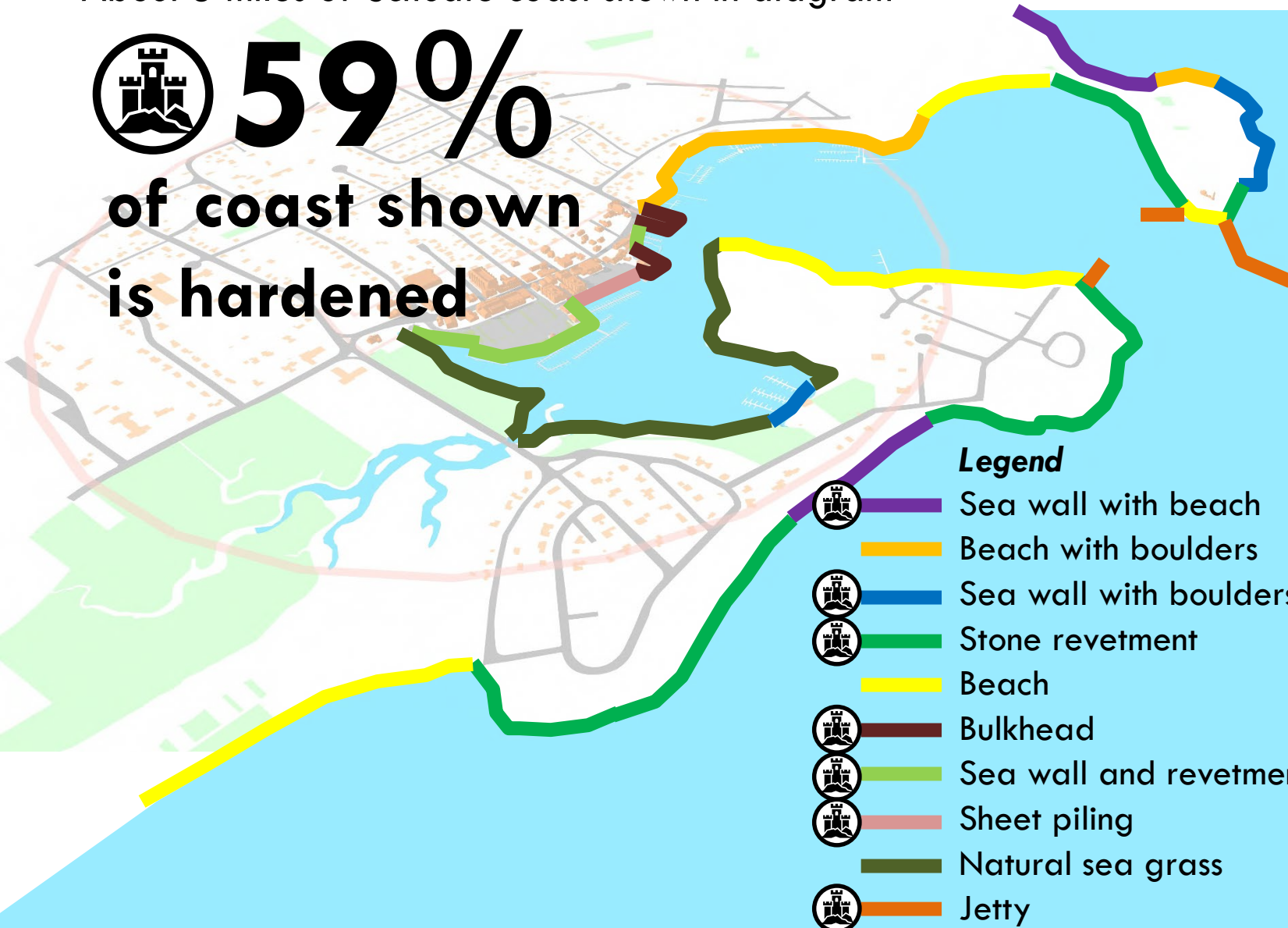
Existing Coastal Conditions

About 5 miles of Scituate coast shown in diagram



59%

of coast shown
is hardened

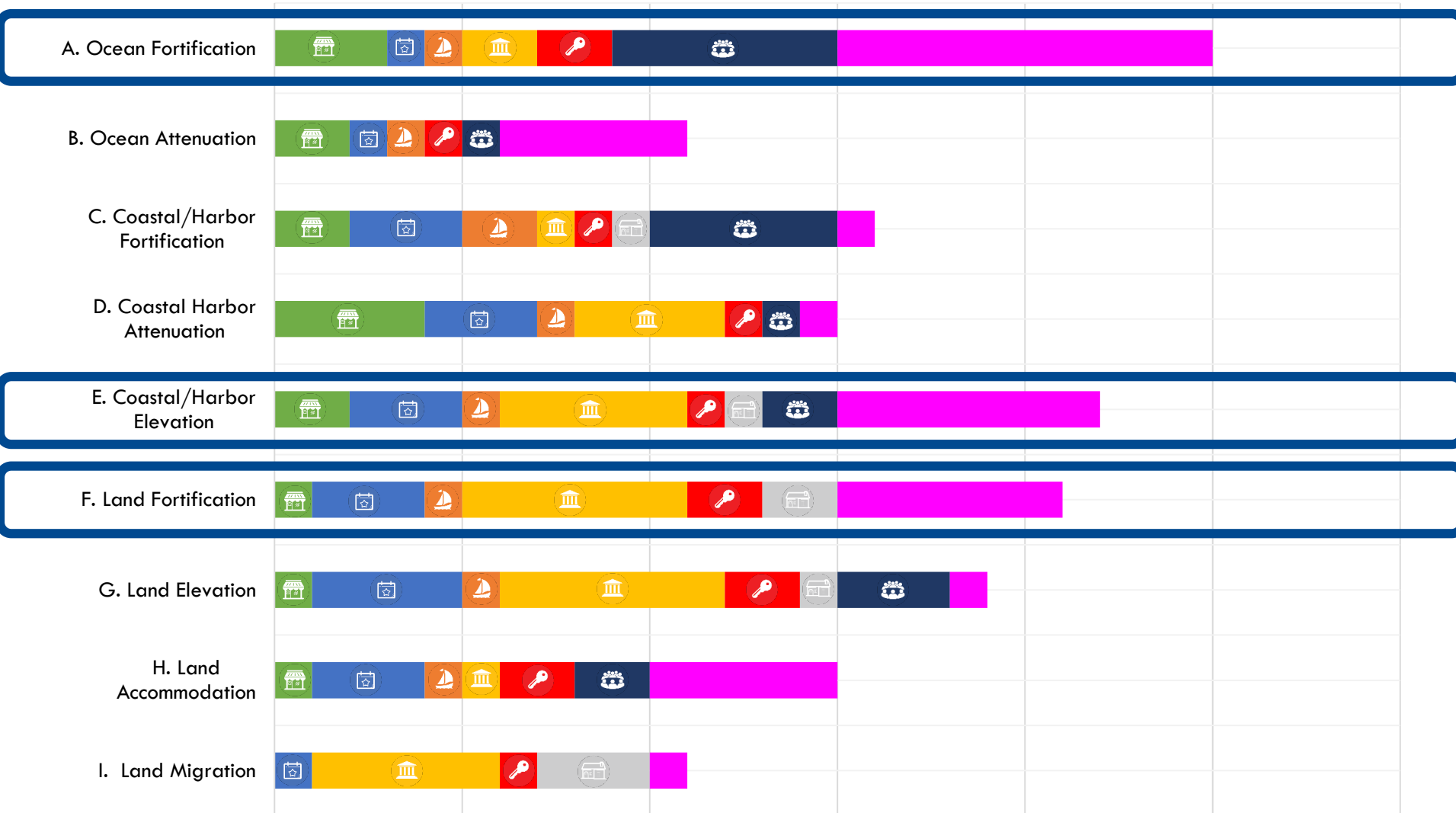


**Approx.
Length**

2,710 LF
2,760
1,640
6,640
4,490
2,600
620
570
4,360
1,620

Most Preferred Approaches

Which types of solutions do you think are most appropriate?



Most Preferred Approaches

Ocean fortification

Conceptual Alternative A

"Close the mouth" –

Harbor barrier infrastructure



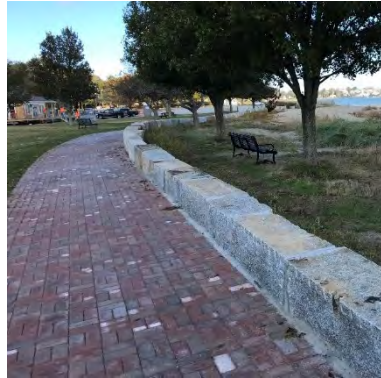
About **10,000 linear feet** of adaptations, including harbor gate

Coastal elevation

Conceptual Alternative B

"Lift the edge" –

Incremental elevation of coast



About **5,000 linear feet** of adaptations

Land fortification

Conceptual Alternative C

"Floodproofing with infrastructure" –

Adapt coast and land configuration



About **5,000 linear feet** of adaptations

Conceptual Alternative A

“Close the mouth” –

Harbor barrier infrastructure

Ocean fortification

Approach most similar to the New Bedford Hurricane Protection Barrier case study:



Image credit: US Army Corps of Engineers

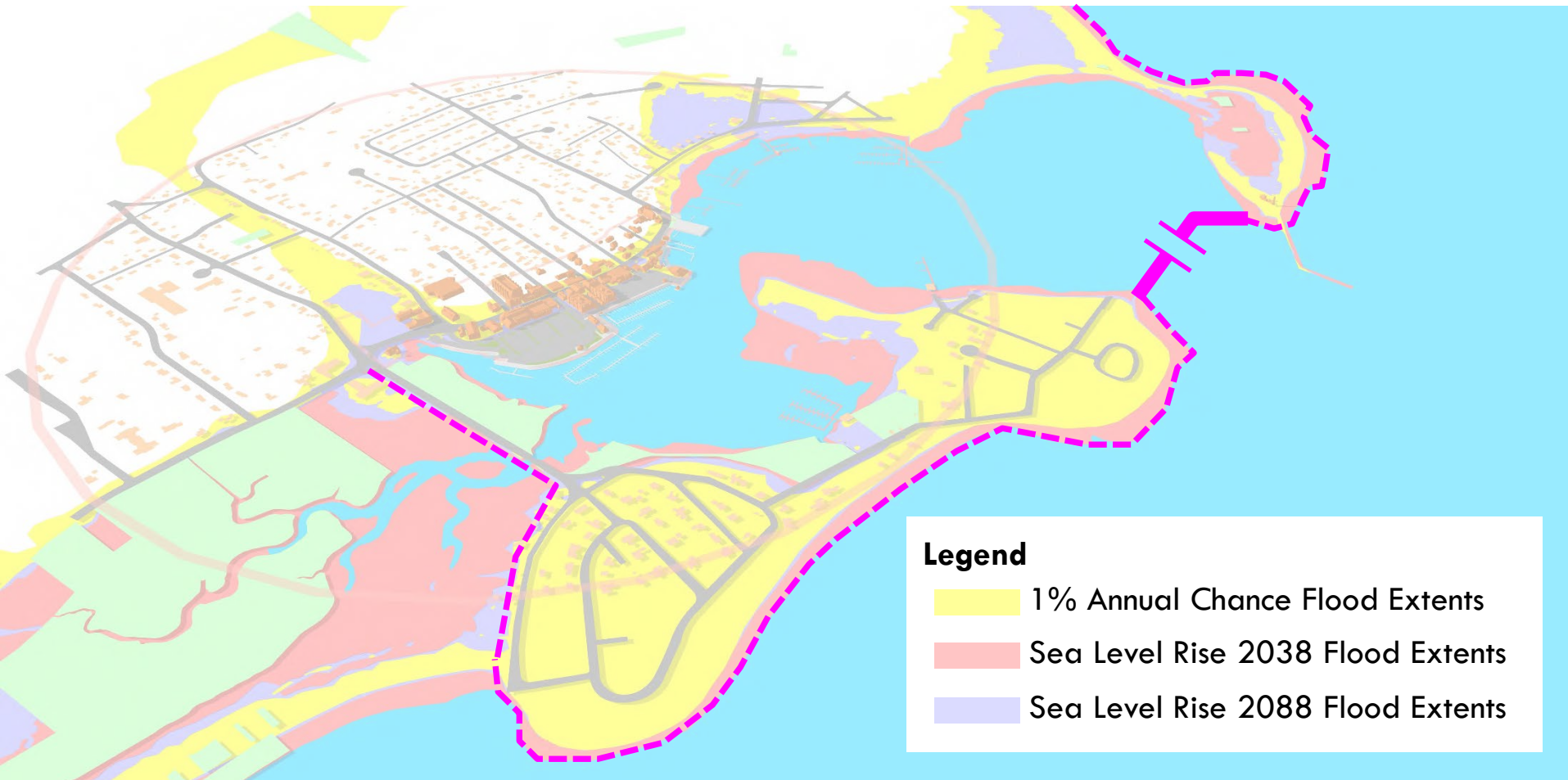


Image credit: Jesse Costa/WBUR

Conceptual Alternative A

“Close the mouth” –

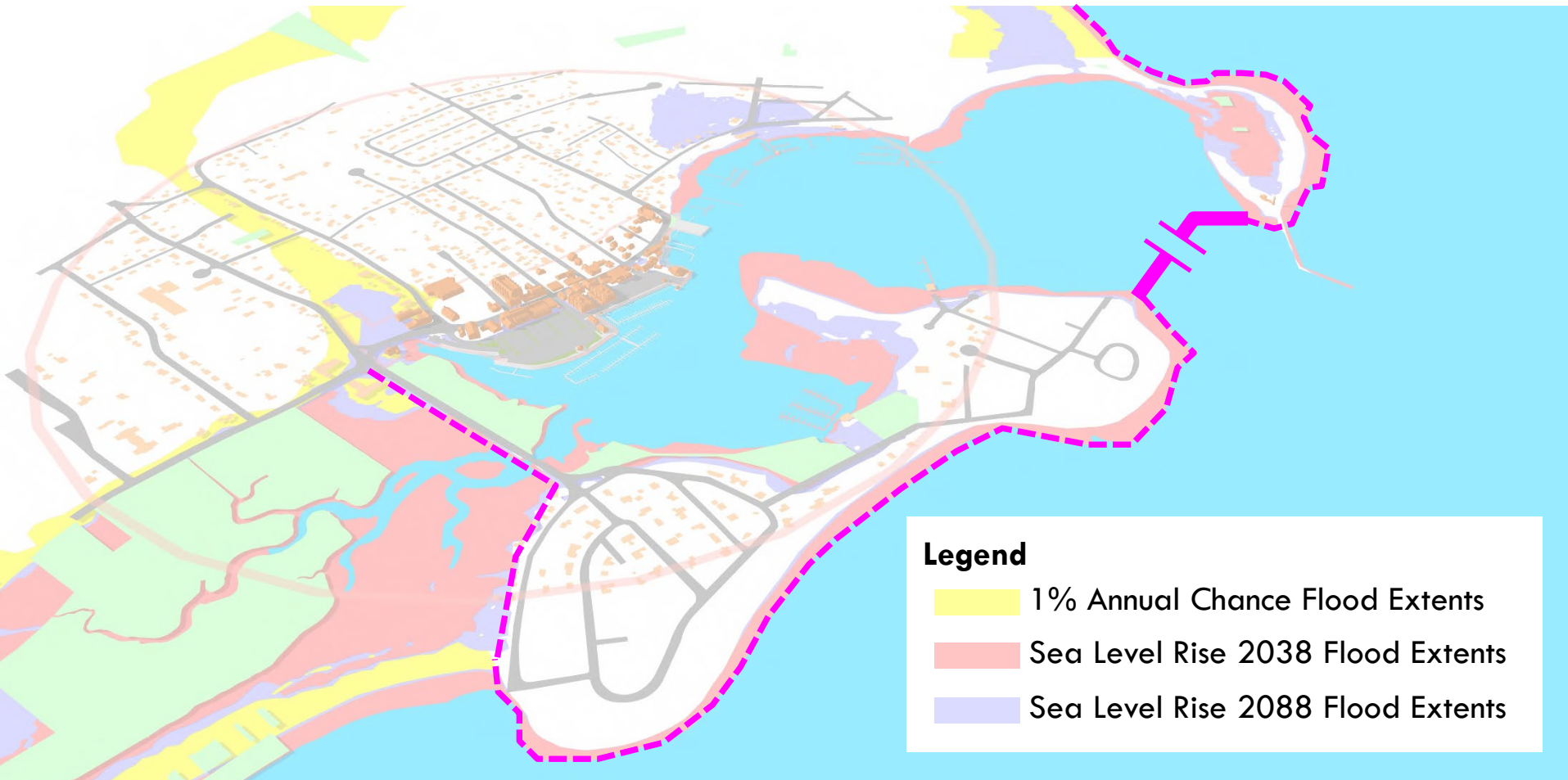
Harbor barrier infrastructure



Conceptual Alternative A

“Close the mouth” –

Harbor barrier infrastructure



Conceptual Alternative A

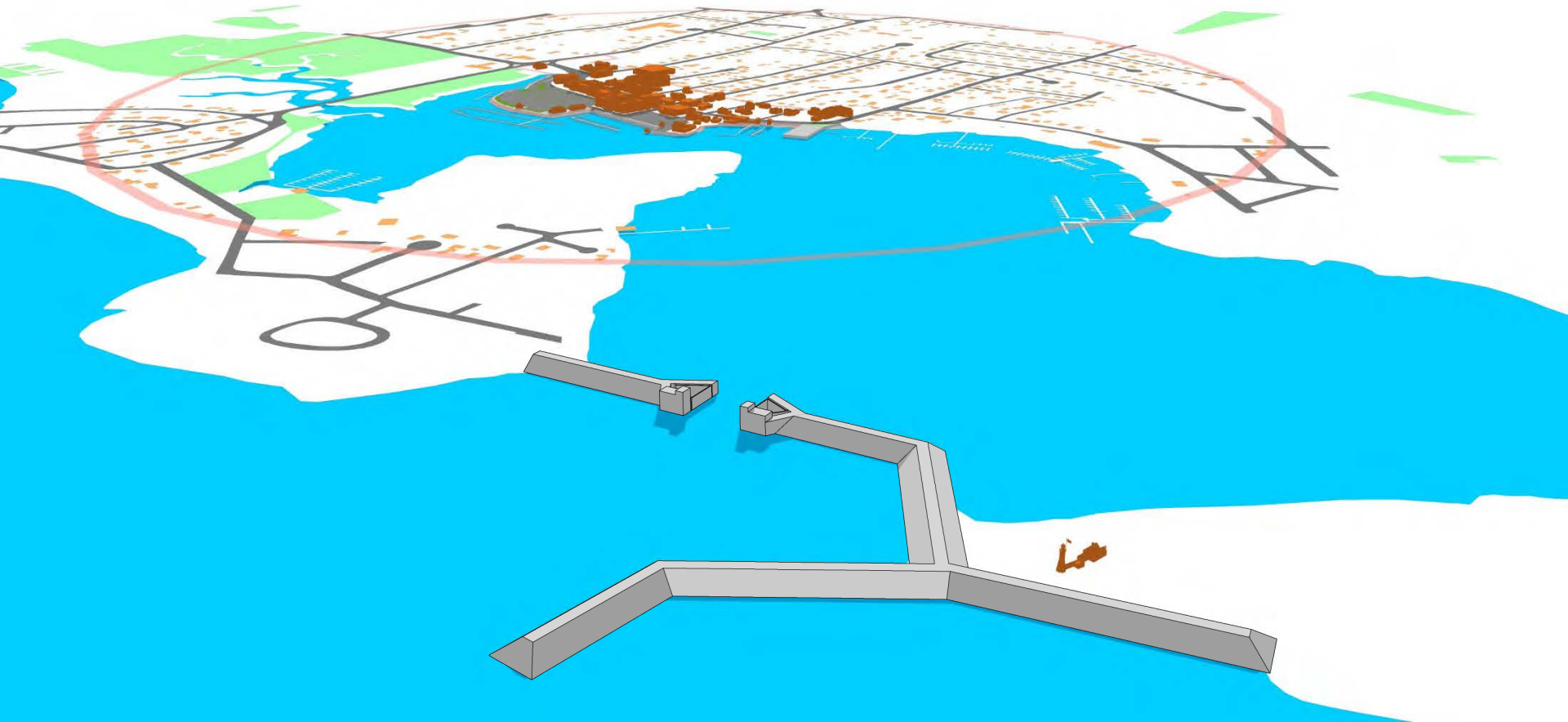
“Close the mouth” – Harbor barrier infrastructure



Conceptual Alternative A

“Close the mouth” –

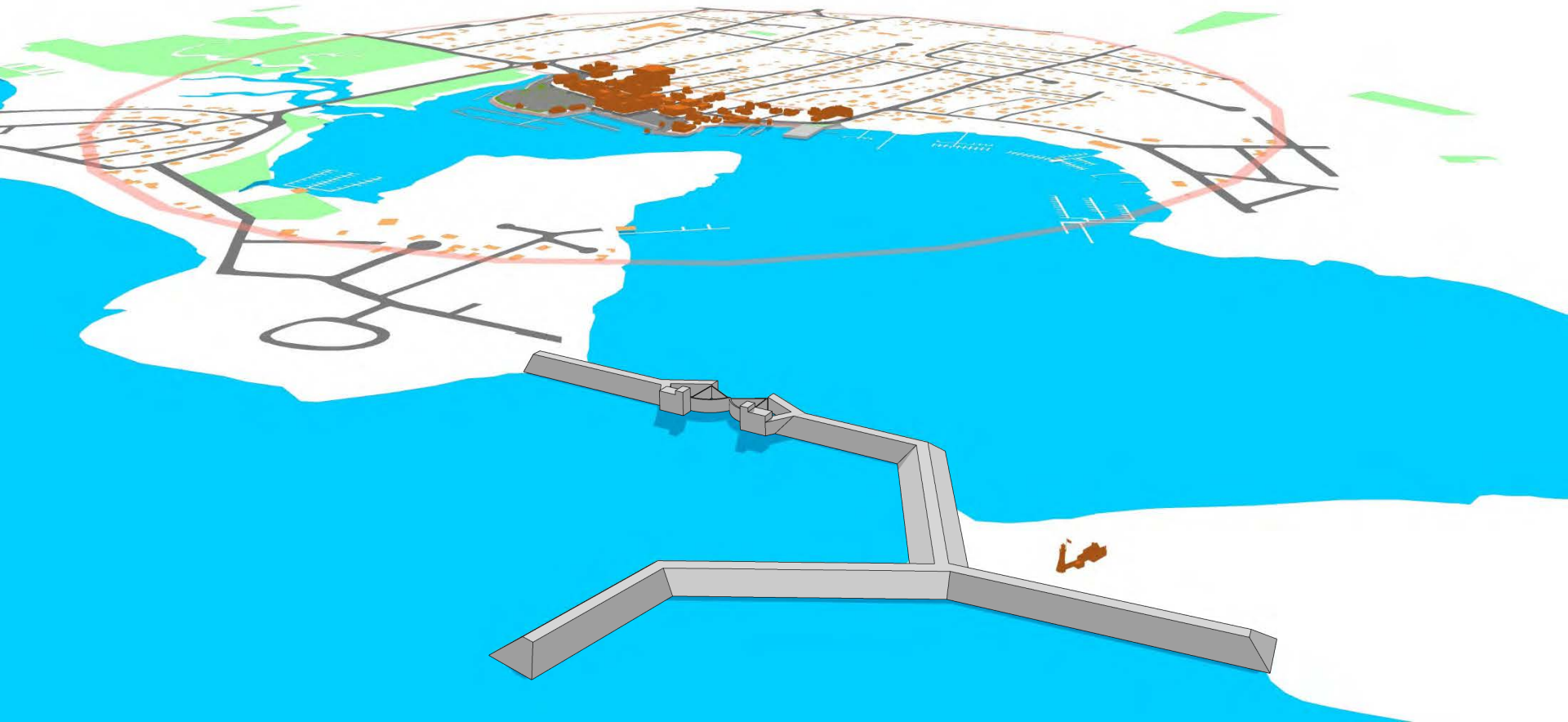
Harbor barrier infrastructure



Conceptual Alternative A

“Close the mouth” –

Harbor barrier infrastructure



Conceptual Alternative B

“Lift the edge” –

Incremental elevation of coast

Coastal elevation

Approach most similar to the Hingham Harbor Resilience Investments case study:

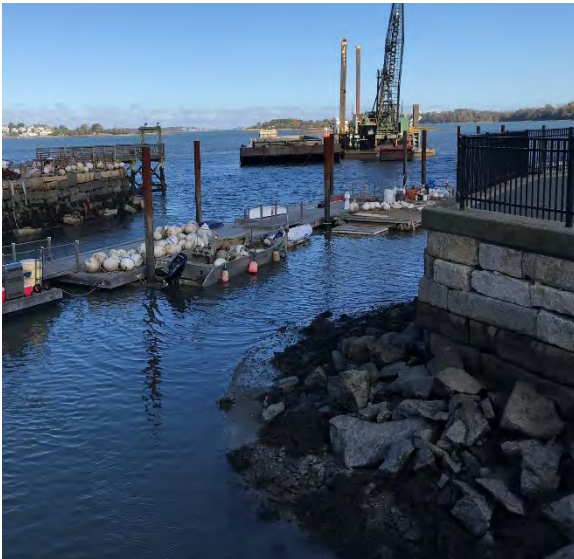


Image credit: MAPC

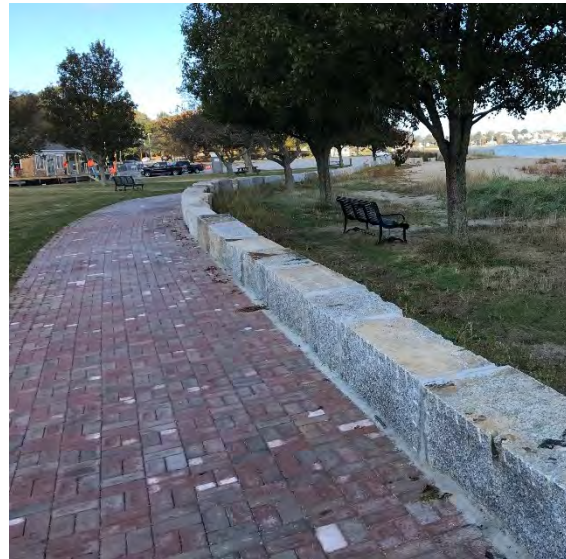


Image credit: MAPC

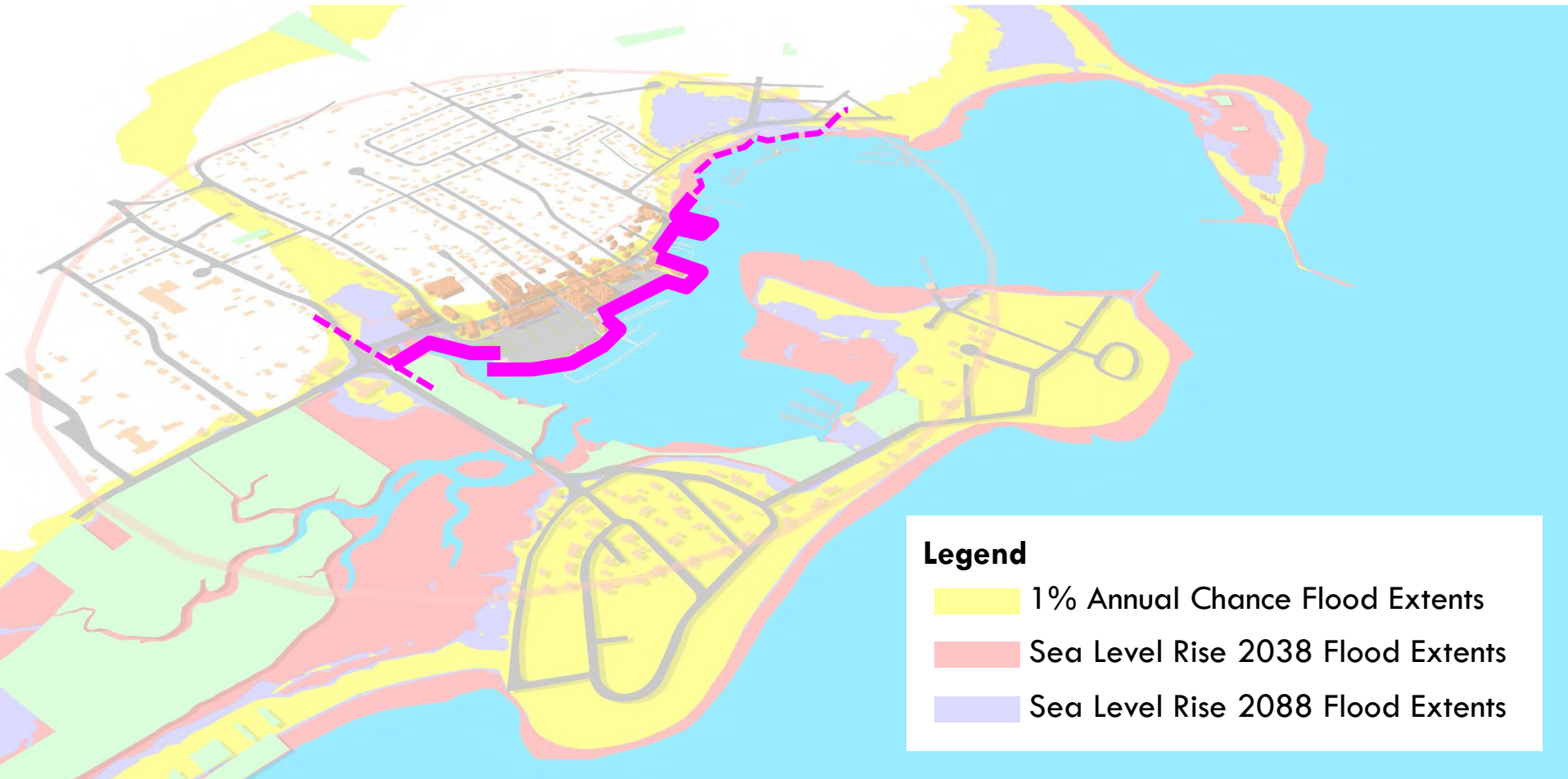


Image credit: MAPC

Conceptual Alternative B

“Lift the edge” –

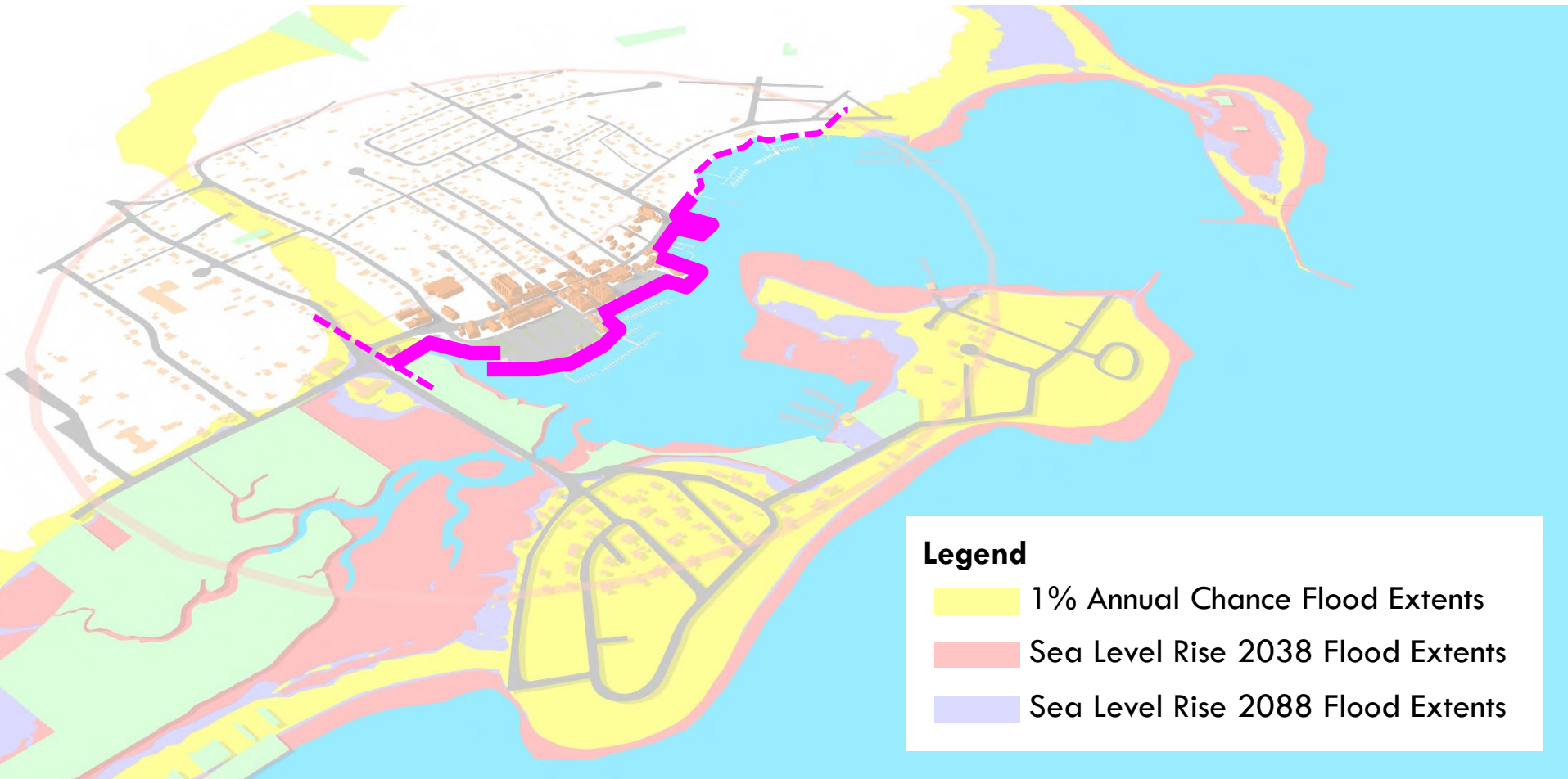
Incremental elevation of coast



Conceptual Alternative B

“Lift the edge” –

Incremental elevation of coast



Conceptual Alternative B

“Lift the edge” –

Incremental elevation of coast



Conceptual Alternative B

“Lift the edge” –

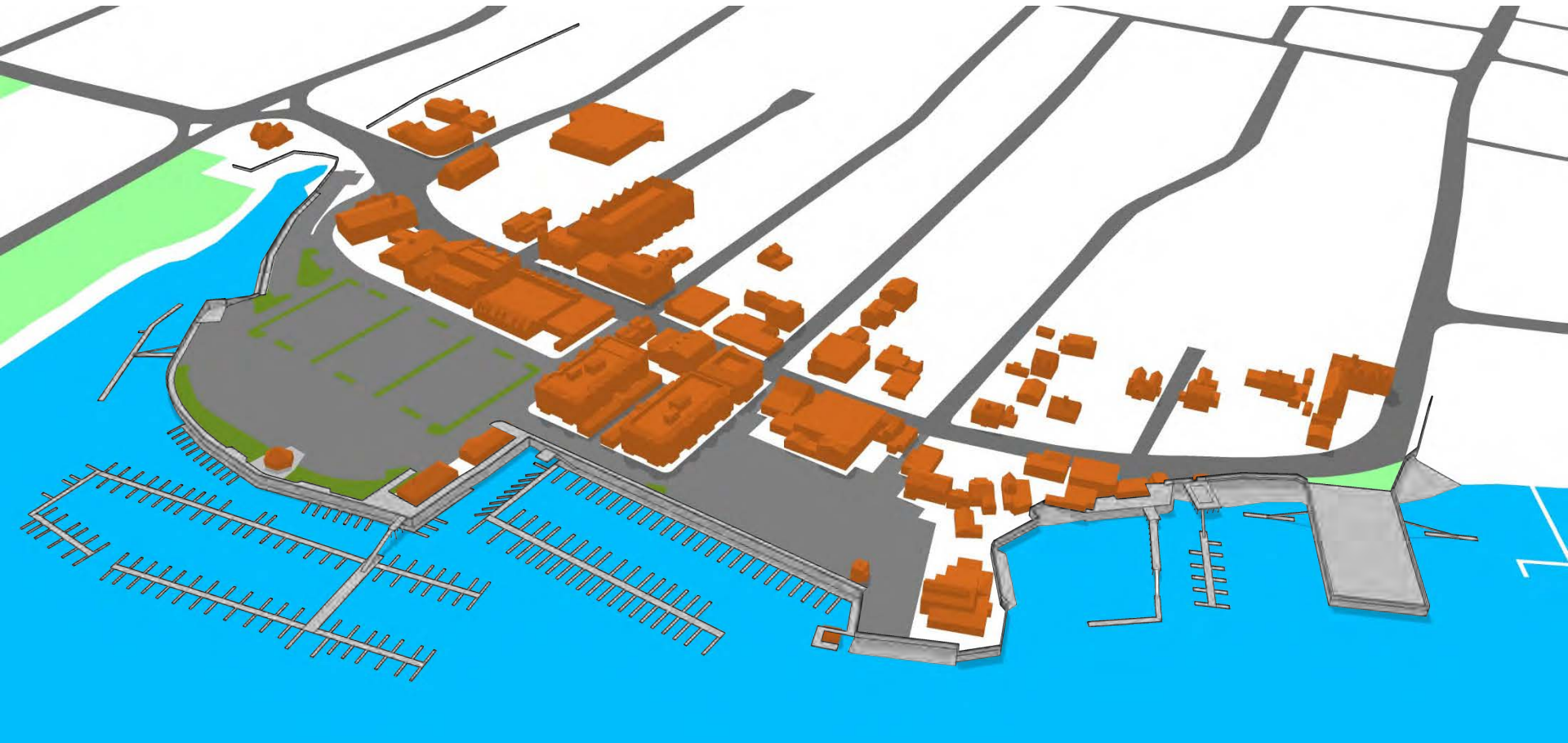
Incremental elevation of coast



Conceptual Alternative B

“Lift the edge” –

Incremental elevation of coast



Conceptual Alternative C

“Floodproofing with infrastructure” – Adapt coast and land configuration

Land fortification

Approach most similar to the Boston Martin Richard Park case study:



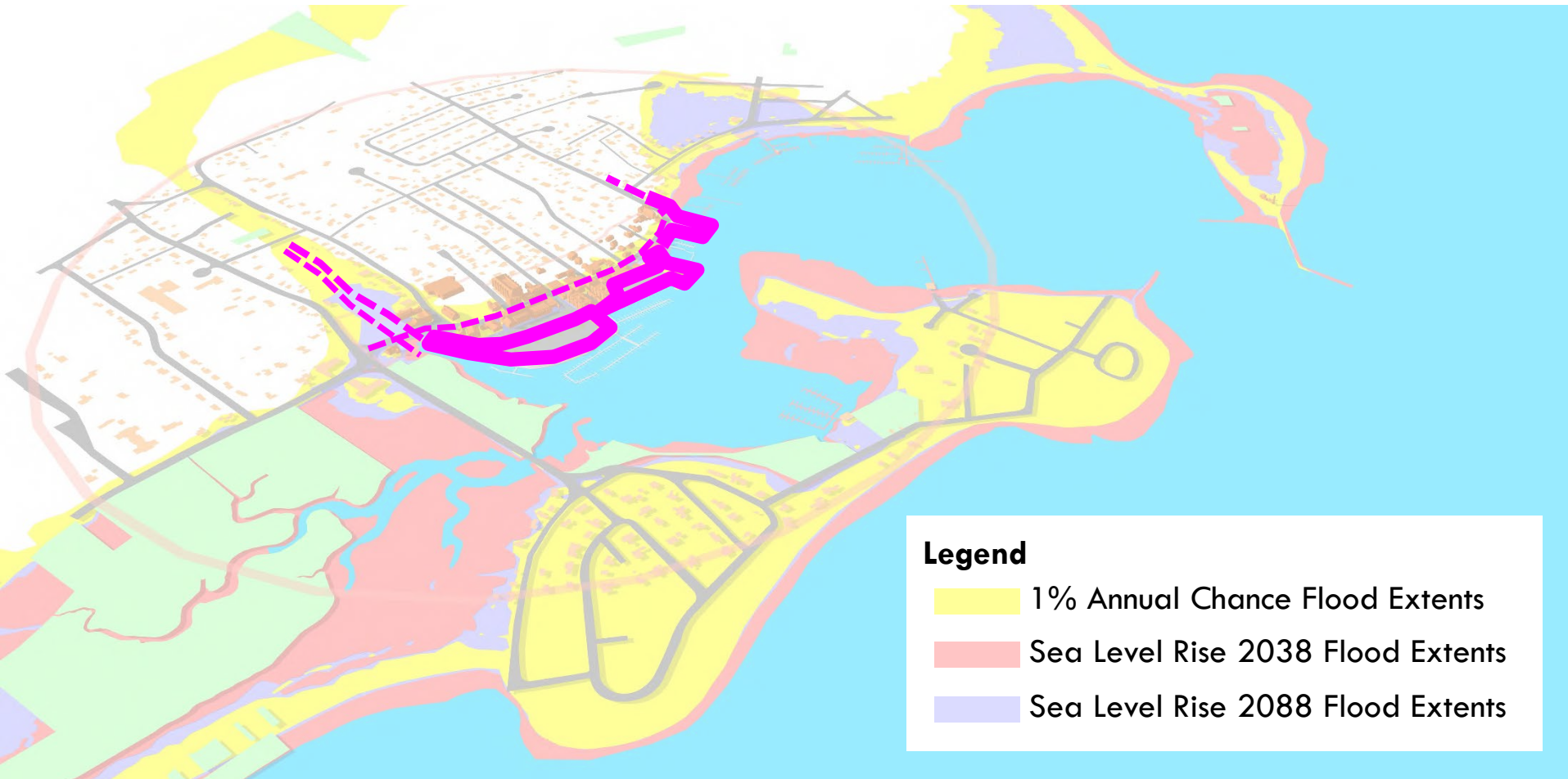
Image credit: Boston Globe



Image credit: Boston Herald

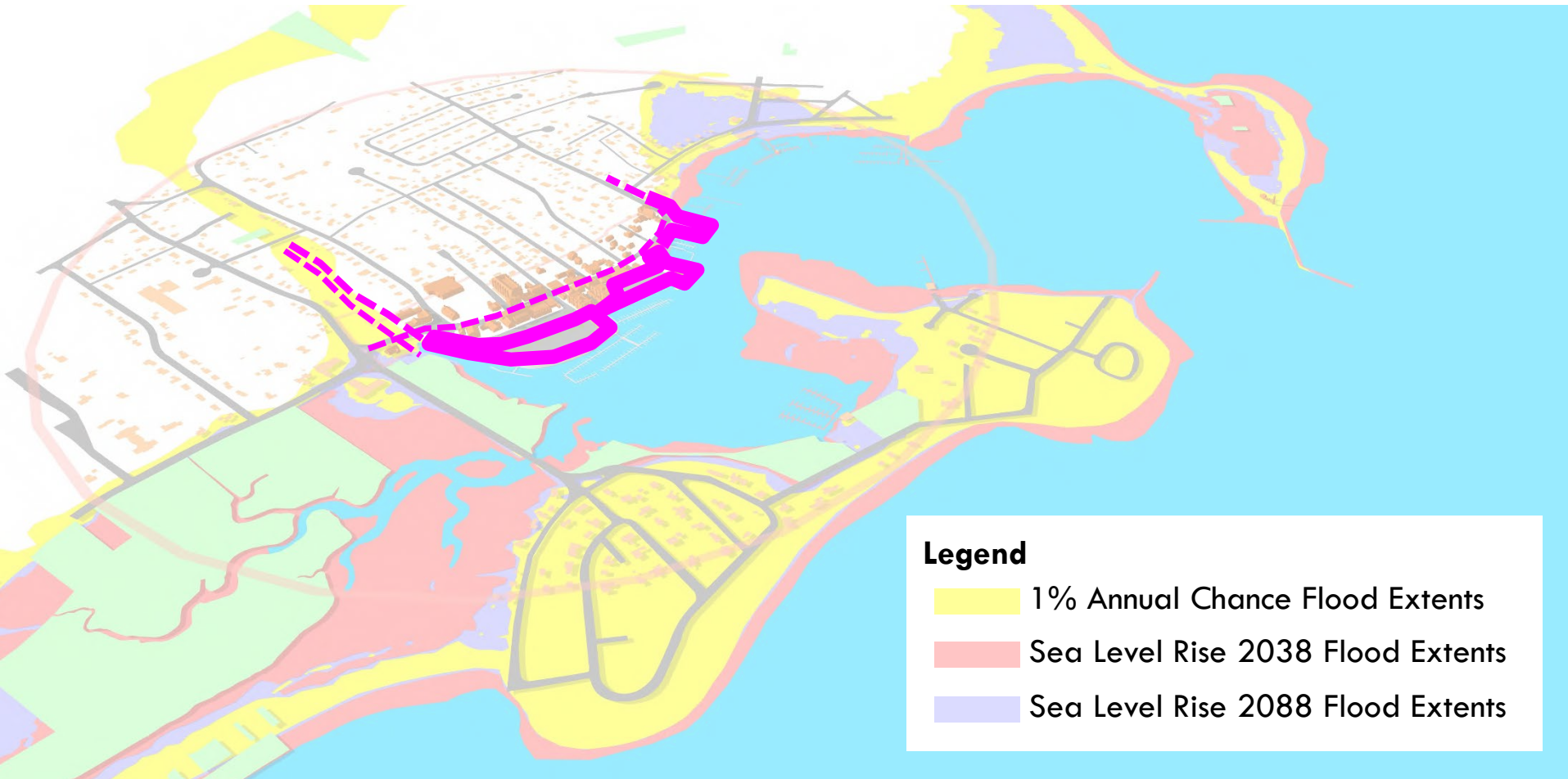
Conceptual Alternative C

“Floodproofing with infrastructure” –
Adapt coast and land configuration



Conceptual Alternative C

“Floodproofing with infrastructure” –
Adapt coast and land configuration



Conceptual Alternative C

“Floodproofing with infrastructure” –
Adapt coast and land configuration



Conceptual Alternative C

“Floodproofing with infrastructure” –
Adapt coast and land configuration



Conceptual Alternative C

“Floodproofing with infrastructure” –
Adapt coast and land configuration



Most Preferred Approaches

Ocean fortification

Conceptual Alternative A

"Close the mouth" –

Harbor barrier infrastructure



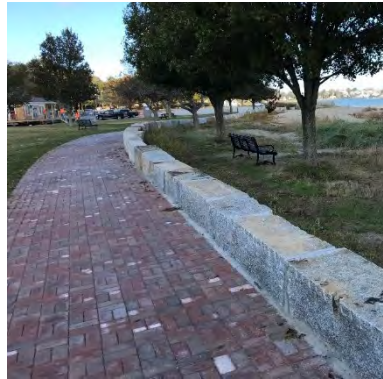
About **10,000 linear feet** of adaptations, including harbor gate

Coastal elevation

Conceptual Alternative B

"Lift the edge" –

Incremental elevation of coast



About **5,000 linear feet** of adaptations

Land fortification

Conceptual Alternative C

"Floodproofing with infrastructure" –

Adapt coast and land configuration



About **5,000 linear feet** of adaptations

Problem Statement

Create a cohesive vision that will build resilience incrementally, through coordinated and layered measures, while creating additional benefits to the district that will:

	Enhance economic vitality	Improve the public realm	Strengthen community and civic gathering	Improve district parking	Maintain cost effectiveness	Retain the ability to implement	Reduce negative impacts
Alternative A							
Alternative B							
Alternative C							

Most Preferred Approaches Evaluation

Create a cohesive vision that will build resilience incrementally, through coordinated and layered measures, while creating additional benefits to the district that will:

	Enhance economic vitality	Improve the public realm	Strengthen community and civic gathering	Improve district parking	Maintain cost effectiveness	Retain the ability to implement	Reduce negative impacts	Overall Performance
Alt. A	-1	0	0	0	-1	-1	-1	-4
Alt. B	0	0	-1	+1	+1	+1	+1	+4
Alt. C	+1	+1	+1	-1	0	0	0	+3

Enhance economic vitality

Conceptual Alternative A

"Close the mouth" –
Harbor barrier infrastructure

-1

- Protection from storm surge, does not protect against more frequent tidal flooding
- + Protects about 450 acres of total land
- May impact recreational and commercial boating with impacts to local economy



Conceptual Alternative B

"Lift the edge" –
Incremental elevation of coast

0

- + Protection from storm surge and more frequent tidal flooding
- Protects about 35 acres of total land
- No substantial positive or negative impact foreseen for economy



Conceptual Alternative C

"Work with water" –
Adapt coast and land configuration

+1

- + Protection from storm surge and more frequent tidal flooding
- Protects about 35 acres of total land
- + May create new destinations and attractions for the business district



Improve the public realm

Conceptual Alternative A

"Close the mouth" –
Harbor barrier infrastructure

0

- ➕ Opportunity to create extensive expanded harbor walk
- ➖ No investments directly in the Scituate Harbor business district that could be used for improvements



Conceptual Alternative B

"Lift the edge" –
Incremental elevation of coast

0

- Opportunity to create expanded harbor walk
- Investments directly in Scituate Harbor business district, but focused on the coastal edge



Conceptual Alternative C

"Work with water" –
Adapt coast and land configuration

+1

- Opportunity to create expanded harbor walk
- ➕ Investments directly in Scituate Harbor business district that may create new destinations and attractions for the business district



Improve district parking

Conceptual Alternative A

"Close the mouth" –
Harbor barrier infrastructure

0

-  May create more opportunity for walking with a desirable pathway connecting nearby neighborhoods
-  Parking is not reduced
-  Parking is not impacted by the infrastructure
-  Parking is not protected from tidal flooding

Conceptual Alternative B

"Lift the edge" –
Incremental elevation of coast



+1

-  Does not add walking connections beyond what exists today
-  Parking is not reduced
-  Edges of district parking areas may be improved
-  Parking is protected from tidal flooding

Conceptual Alternative C

"Work with water" –
Adapt coast and land configuration

-1

-  Does not add walking connections beyond what exists today
-  Number of district spaces would be reduced
-  District parking would be reconfigured to accommodate new infrastructure
-  Parking is protected from tidal flooding

Maintain cost effectiveness

Conceptual Alternative A

"Close the mouth" –
Harbor barrier infrastructure



- About 10,000 linear feet of adaptations
- About \$8,000 per linear foot based on price escalations from New Bedford Hurricane Barrier
- Minimum of \$80M order of magnitude cost
- \$500,000 order of magnitude annual operational cost to Town
- Protects about \$444M in assessed value

Conceptual Alternative B

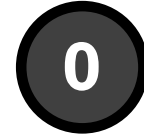
"Lift the edge" –
Incremental elevation of coast



- About 5,000 linear feet of adaptations
- About \$3,000 per linear foot based on price estimations for Hingham Resilience
- Minimum of \$16.5M order of magnitude cost
- Annual maintenance cost would be minimal except for wall replacements in the future
- Protects about \$86M in assessed value

Conceptual Alternative C

"Work with water" –
Adapt coast and land configuration



- About 5,000 linear feet of adaptations
- About \$3,000 per linear foot based on price estimations for Hingham Resilience; \$7M destination park cost based on Martin's Park Boston
- Minimum of \$19.9M order of magnitude cost
- Annual maintenance cost would include additional park features
- Protects about \$86M in assessed value




Reduce negative impacts

Conceptual Alternative A


"Close the mouth" –
Harbor barrier infrastructure



Water:

-  Potential environmental disruption to salinity, fisheries, pollution, tidal circulation, sedimentation, water exchange rate
-  Potential impacts to recreational and commercial boating navigation and safety
-  Potential impacts to abundance, distribution, and behavior of fish populations

Land:



-  Potential impacts to landowners at locations requiring elevated or improved flood resilience measures

Conceptual Alternative B


"Lift the edge" –
Incremental elevation of coast



Water:

-  Potential impacts to tidal circulation and sedimentation
-  Potential expansion of marina docks adjacent to shoreline edge

Land:



-  Potential Impacts to landowners at locations requiring elevated or improved flood resilience measures

Conceptual Alternative C



"Work with water" –
Adapt coast and land configuration



Water:

-  Potential impacts to tidal circulation and sedimentation
-  Potential expansion of marina docks adjacent to shoreline edge

Land:

-  Potential Impacts to landowners at locations requiring elevated or improved flood resilience measures
-  Potential impacts to current patterns of circulation and parking near shoreline

Most Preferred Approaches Evaluation

Ocean fortification

Conceptual Alternative A

"Close the mouth" –

Harbor barrier infrastructure



-4



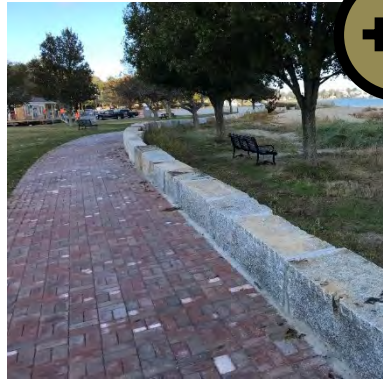
About **10,000 linear feet** of adaptations, including harbor gate

Coastal elevation

Conceptual Alternative B

"Lift the edge" –

Incremental elevation of coast



+4



About **5,000 linear feet** of adaptations

Land fortification

Conceptual Alternative C

"Floodproofing with infrastructure" –

Adapt coast and land configuration



+3



About **5,000 linear feet** of adaptations

Other District Improvements

- Pedestrian safety and streetscape improvements – enhanced or raised crosswalks, curb bump-outs, expanded sidewalks
- Stormwater and streetscape improvements – rain gardens, new plantings
- Parking management program
- Vacant storefront program and policies
- Zoning revisions to enhance resilience

Discussion



Discussion

- **What are your reactions to this evaluation?**
- **What is your preferred approach to resilience in Scituate Harbor?**
- **Do you think that approach would protect the future of the district?**

Next Steps



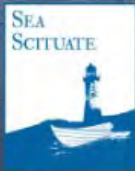
Next Steps

- **Task Force Meeting – March**
- Shift to preferred resilience approach, district strategies and actions
- **Community Open House – April**
- **Final Community Forum – May**

Scituate Master Plan

Our many thanks to everyone that took the time to fill out the SeaScituate 2040 Master Plan survey. Results of the survey will be posted in the Spring of 2020.

Upcoming **Public Workshop** is **March 25** at **7pm** at the **Gates Middle School Dining Hall, 460 First Parish Rd, Scituate, MA 02066.**



SEA SCITUATE 2040

Seeing Scituate's Future

[Overview](#)

[Meetings](#)

[Draft Plan](#)



Scituate Coastal Vision

Scituate2070Vision



Search



[Home](#) [Project Overview](#) [Neighborhood Gatherings](#)

[Sign In](#) | [Register](#)

In 50 years, what do you envision for Scituate's coast?



Get Involved **Sign Up Here**

Steps in the Process

● **Neighborhood**

Stay up to date & sign up @ scituate2070vision.org

Scituate Coastal Vision

Timeline of the 2070 Coastal Vision Process



January-early March: Building the framework for the Vision:
What questions should the Visioning process explore?



March: Community Workshops: Weighing and honing options for the Vision



3/26 6:30 PM @ Library Community Room, 85 Branch St.

OR



3/31 6:30 PM @ Harbor Community Center, 44 Jericho Rd.



April 29: Present a draft Vision for community input and refinement



June: Share a revised, final Vision with the community and apply for phase 2 funding to develop 10-year action plan

Ongoing online engagement at each phase @ scituate2070vision.org

Scituate Coastal Advisory Commission



Town of
Scituate

Coastal Advisory Commission

**Engagement
Opportunities**

This is a one-time mailing to encourage you to stay involved in “all things coastal” year-round! A LOT is happening with Scituate’s coast, and we want YOUR INPUT!

The Coastal Advisory Commission (CAC) is committed to keeping you informed on all related events via town emails. Make sure you’re on our mailing list!

**Go to: <https://www.scituatema.gov>
and select “subscribe to news” on the home page**

Scituate Coastal Advisory Commission

ENGAGEMENT OPPORTUNITIES:

Go to <https://Scituate2070vision.org> to share your vision for Scituate's coast in 2070 by 3/13. Join us for a public workshop on 3/26 and 3/31.

Stay up-to-date on the Scituate Master Plan @ <https://seascituate2040.com>. Next public workshop: 3/25 @ 7 PM (Gates Middle School)

Attend the next Scituate Harbor Resiliency Plan Community Forum: 3/3 @ 7 PM (44 Jericho Rd)

Questions?

Contact Kyle Boyd, Coastal Management Officer at: kboyd@scituatema.gov.
Ask to be added to the CAC mailing list.



Schedule

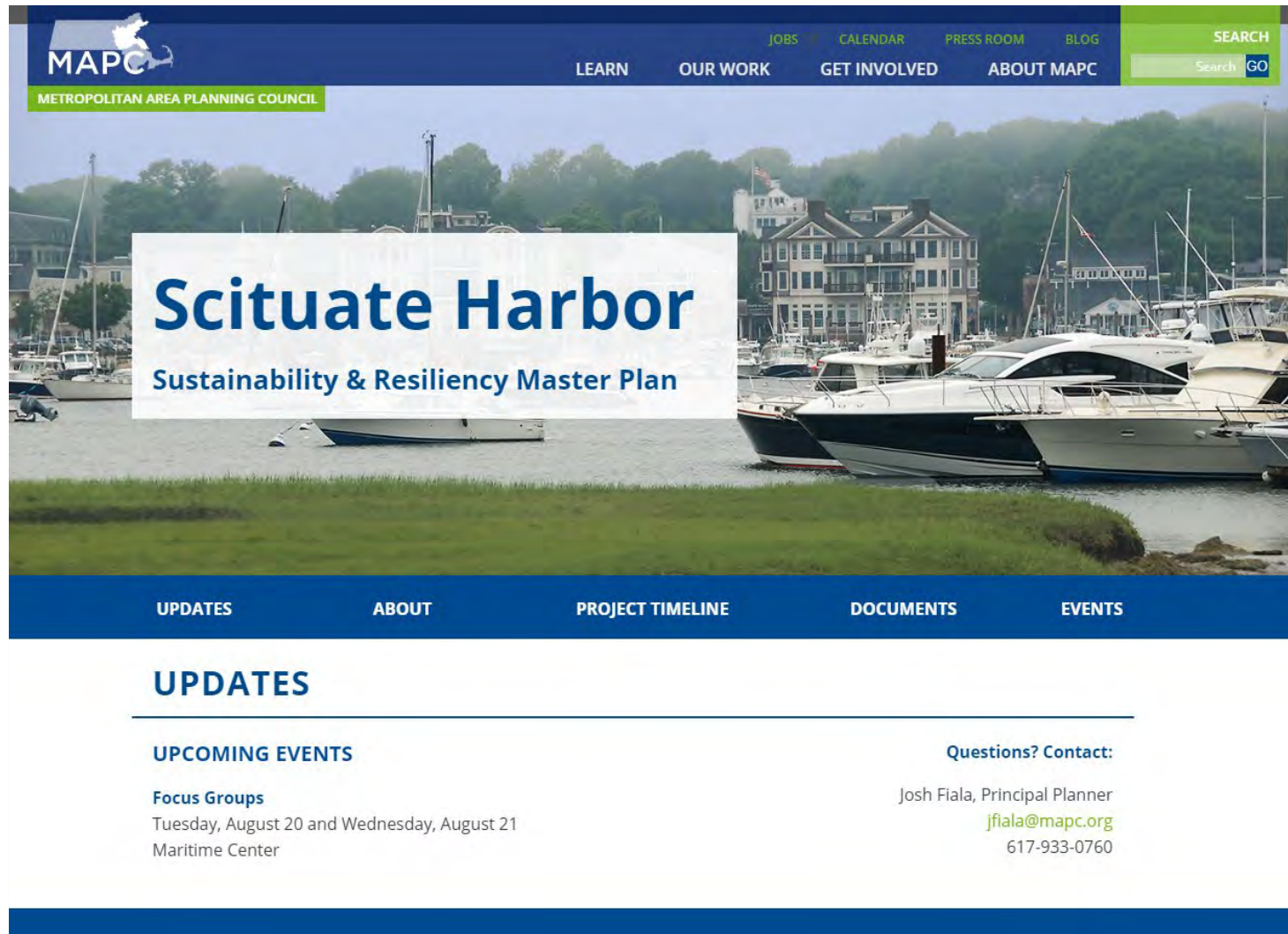
Task	Year/Month													
	2019								2020					
	05	06	07	08	09	10	11	12	01	02	03	04	05	06
Task 1 – Existing Conditions														
Task 2 – Review of Relevant Plans and Policies														
Task 3 – Resiliency Assessment and Action Plan														
Task 4 – Vision Plans/Zoning Amendments														
Task 5 – Implementation Plan														
Task 6 – Community Engagement	Preparation and Engagement				More Public-facing Engagement									
Task Force Meetings														
Community Engagement Meetings														



- Community Meeting and Board/Committee Presentations
- Community Open House
- Focus Group Meetings

Project website

<https://www.mapc.org/ResilientScituateHarbor>



Scituate Harbor Resiliency Master Plan

Community Forum

March 3, 2020



Scituate Harbor Resiliency Master Plan

Photo: Town of Scituate Harbormaster

03/03/20