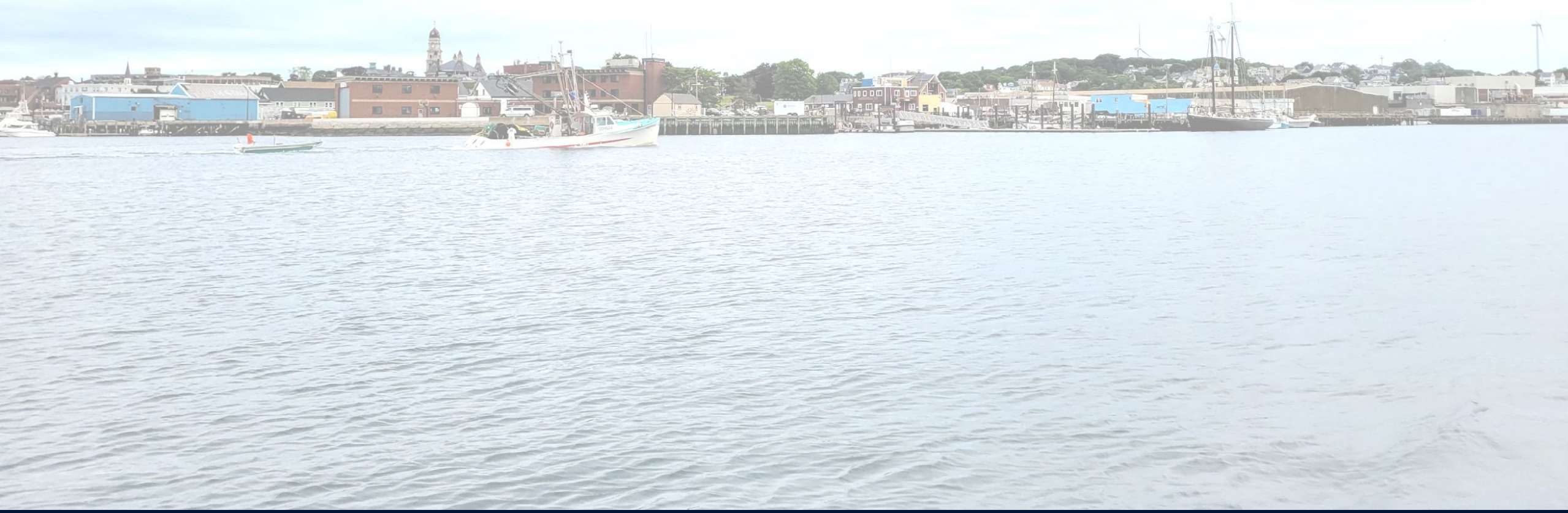
Gloucester Municipal Harbor Plan Update

Economic Strategy Wrap-Up (Part 2)

February 16, 2022



Agenda

I. Meeting Minutes Approval (15 min)

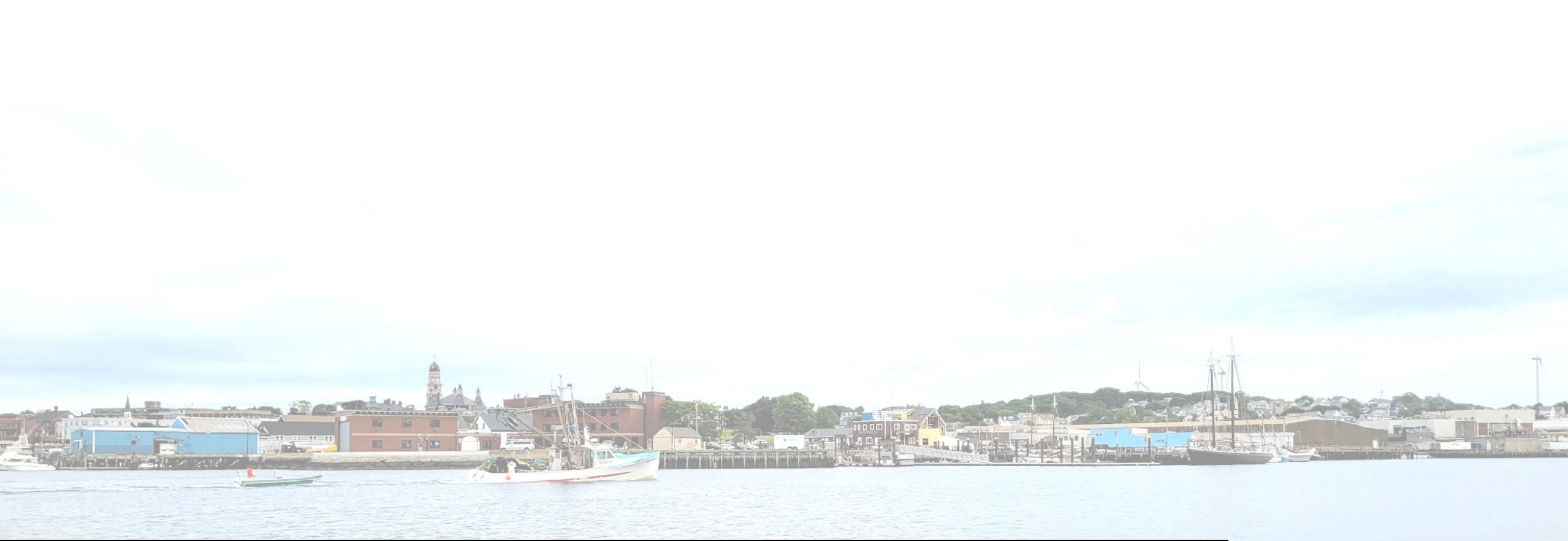
II. Continued Discussion (45 min)

- Coastal Infrastructure & Flood Resilience
- Sub-Area Study & Considerations
- Regulatory Plan Opportunities

III. March Public Meeting Content & Format (25 min)

- Economic Strategy HPC Discussion Recap
- Public Meeting Content
- Public Meeting Agenda/Format

IV. Next Steps (5 min)



Coastal Infrastructure & Flood Resilience

Understanding how infrastructure and resilience needs vary throughout the harbor.

Infrastructure Condition Assessment

Priority Parcels Assessed

First Floor Elevations vs. Design Flood Elevations (ft, NAVD88)

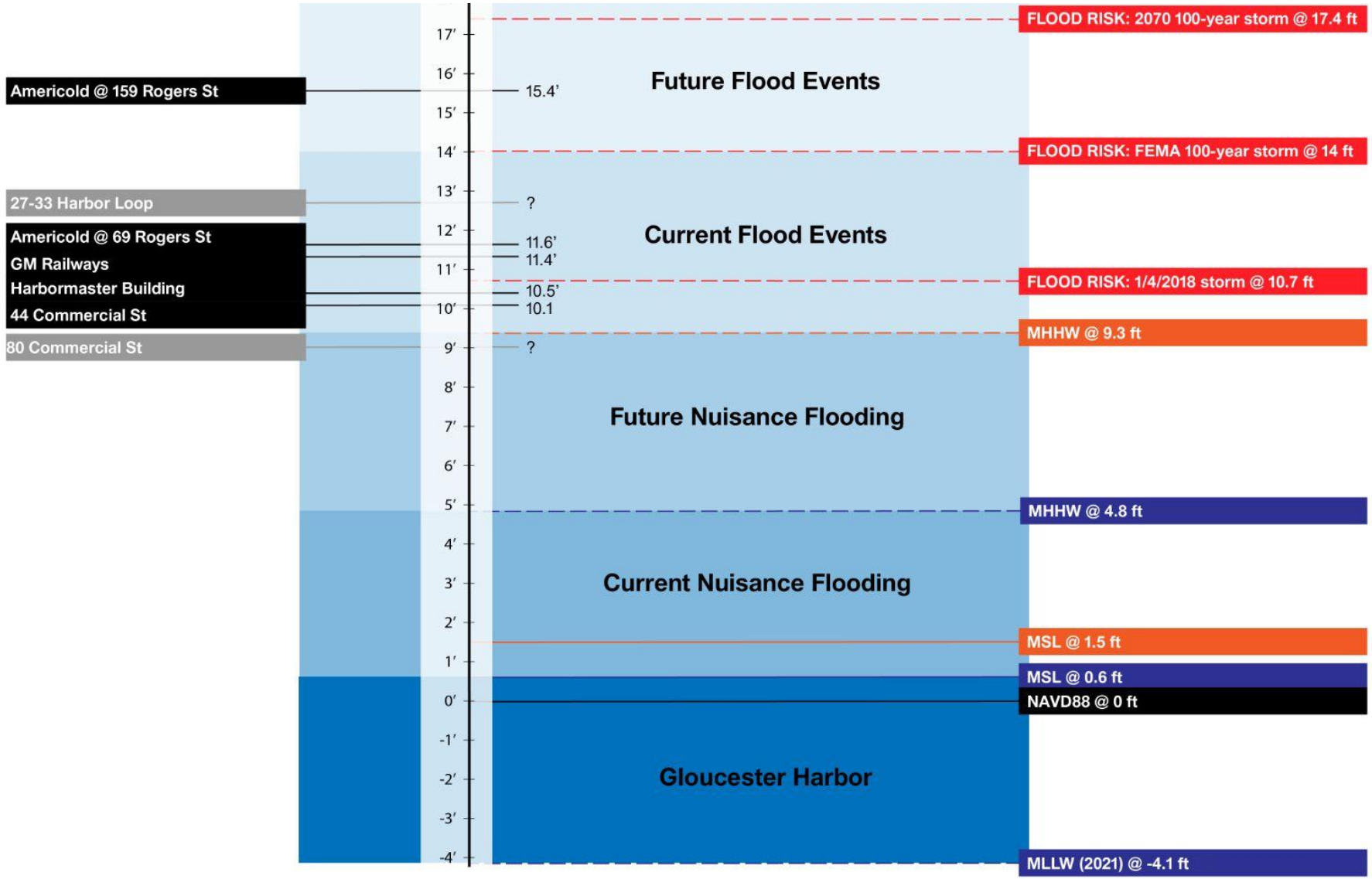
No.	Building / Parcel	First Floor Elev. (ft NAVD88)	FEMA / MSBC DFE	MC-FRM Max 1% DFE for 2030	MC-FRM Max 1% DFE for 2050	MC-FRM Max 1% DFE for 2070
1	Harbormaster	10.5	15	11.1	13.3	15.9
2	Americold @ 69 Rogers St	11.6	15	12.6	15.1	17
3	Americold @ 159 E Main St	15.4	15	11.9	14	16.2
4	GM Railways	11.4	15	11	13.3	15.5
5	80 Commercial St		15	11.9	14.4	16.7
6	44 Commercial St	10.1	15	12.2	14.5	16.3
7	27-33 Harbor Loop		15	13	15.1	17.4

Red indicates buildings exposed to 1% annual chance flood wave depths >3 feet. Substantial damage (>50% building) is possible for most building types.

Substantial damage (>50% building) is unlikely from stillwater flooding alone even through 2070 in the 1% annual chance floods.

Infrastructure Condition Assessment

Takeaway:
For the parcels that have uncertain futures and have the potential to contribute positively to the marine economy, it will take a lot of investment to make them viable given their levels of flood risk.



Abbreviations:

MHHW - Mean Higher-High Water
MSL - Mean Sea Level
MLLW - Mean Lower-Low Water

Storm-Based Flood Risk
2070 Sea Level Rise
2021 Current Conditions

All elevations are provided in NAVD88, unless otherwise noted.

Infrastructure Condition Assessment

Takeaway:
This is an example of the damage a flood can do - this is why it will take a lot of investment to make them viable given their levels of flood risk.

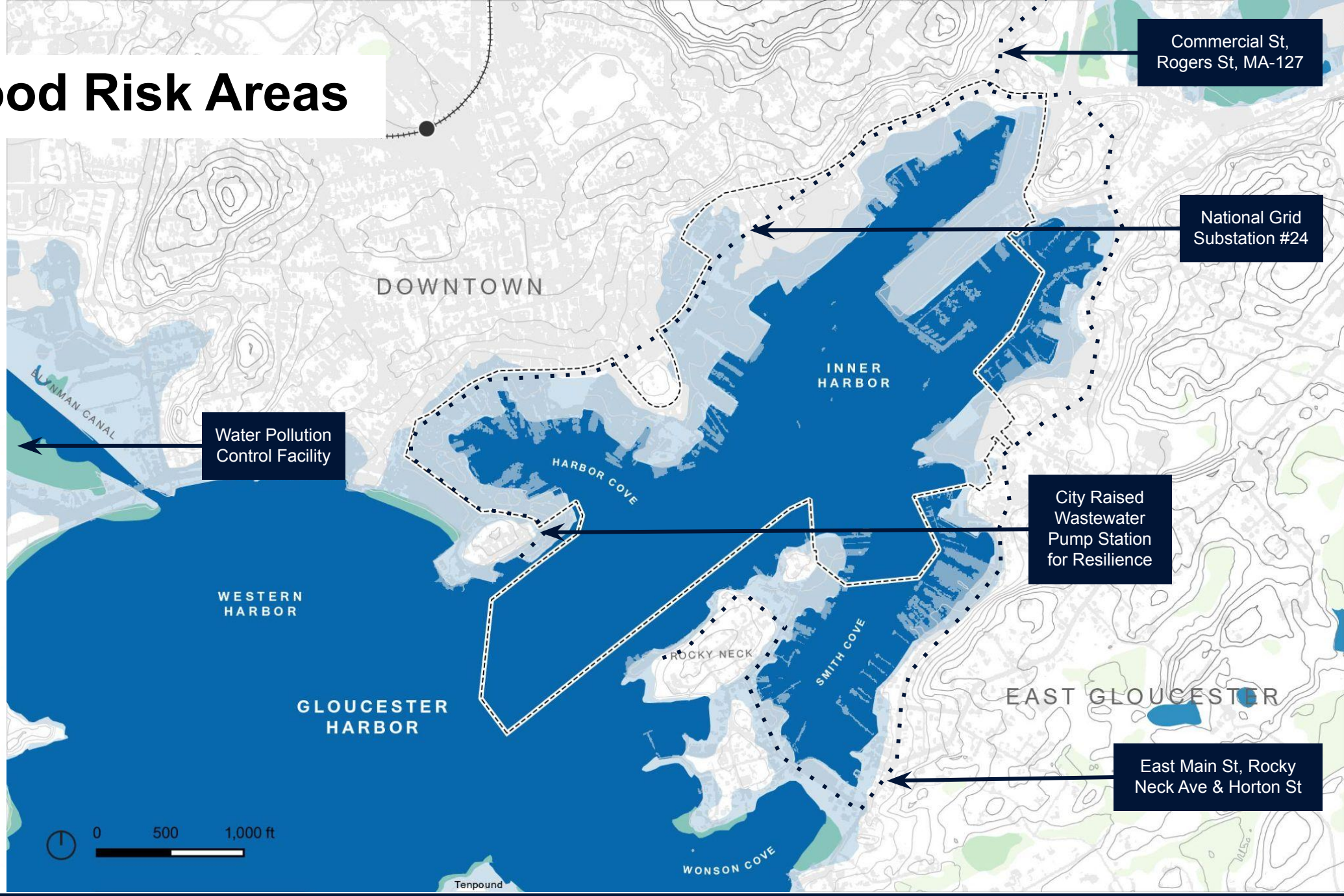
This shows the coastal surge of January 4, 2018 as observed at the harbormaster building.

Storm Photo Credit:
Harbormaster at 1pm on 2018-01-04, when water level was at 10.7 feet.
All measurements given in NAVD88

Current Flood Risk Areas

2015 CCVA & 2021 CZM Resiliency report (forthcoming) provide guidance on strategies to protect the Harbor from flooding.

Data Source: FEMA DFIRM



Flood Risk – Existing Requirements

Note: MA State Building Code requires +1 foot of freeboard above the Base Flood Elevation (DFE = 15 ft or 11 ft NAVD88)

FEMA Flood Insurance Rate Maps

- 1% Base Flood Elevations in Inner Harbor are 4 ft higher based on wave setup modeled along one transect in the outer harbor.
- The City (or property owners) could fund a restudy and likely obtain Letter of Map Revision by running multiple new transects, lowering the Base Flood Elevation.
- This would lower flood insurance costs and increase redevelopment feasibility in the short-run, but lower long-term resilience.

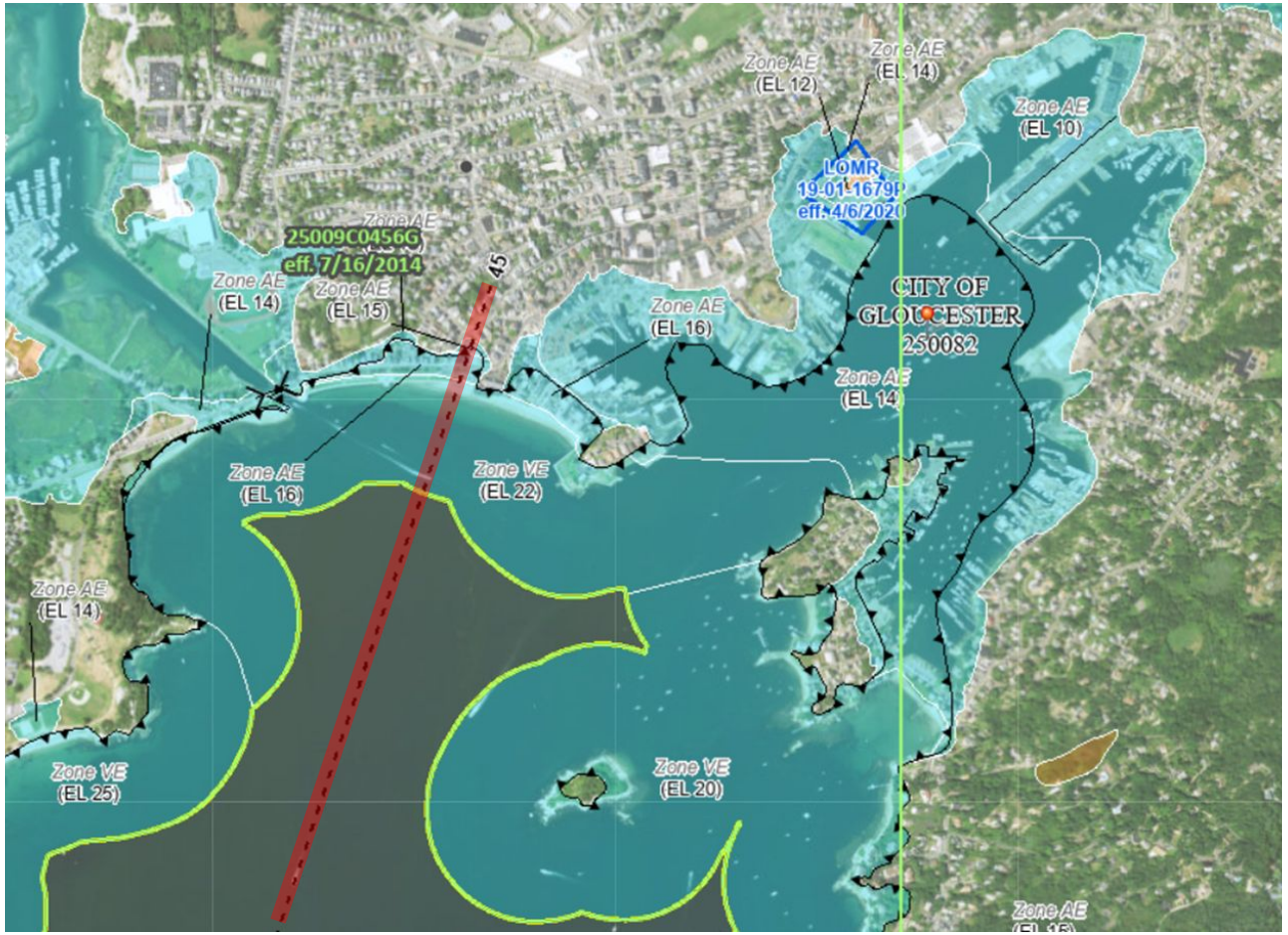
TABLE 11 - TRANSECT DATA-continued

TRANSECT	FLOODING SOURCE	STILLWATER ELEVATION 10-PERCENT-ANNUAL-CHANCE	2-PERCENT-ANNUAL-CHANCE	1-PERCENT-ANNUAL-CHANCE	0.2-PERCENT-ANNUAL-CHANCE	ZONE	BASE FLOOD ELEVATION (feet NAVD88*)[1]
45	Atlantic Ocean	8.3	9.4	9.9	11.3	VE	22
						AE	15-16

TABLE 10 - TRANSECTS DESCRIPTIONS-continued

Transect	Location	ELEVATION (feet NAVD88[1]) 1-PERCENT-ANNUAL-CHANCE STILLWATER[2]	MAXIMUM 1-PERCENT-ANNUAL-CHANCE WAVE CREST[3]
	southeast towards the Atlantic Ocean.		
45	The transect is located in Gloucester Harbor at a point approximately 100 feet northwest of the intersection of Church Street and Pine Street, extending southwest towards the Atlantic Ocean.	14.1	22.1

[1]North American Vertical Datum of 1988
[2]Including stillwater elevation and effects of wave setup.

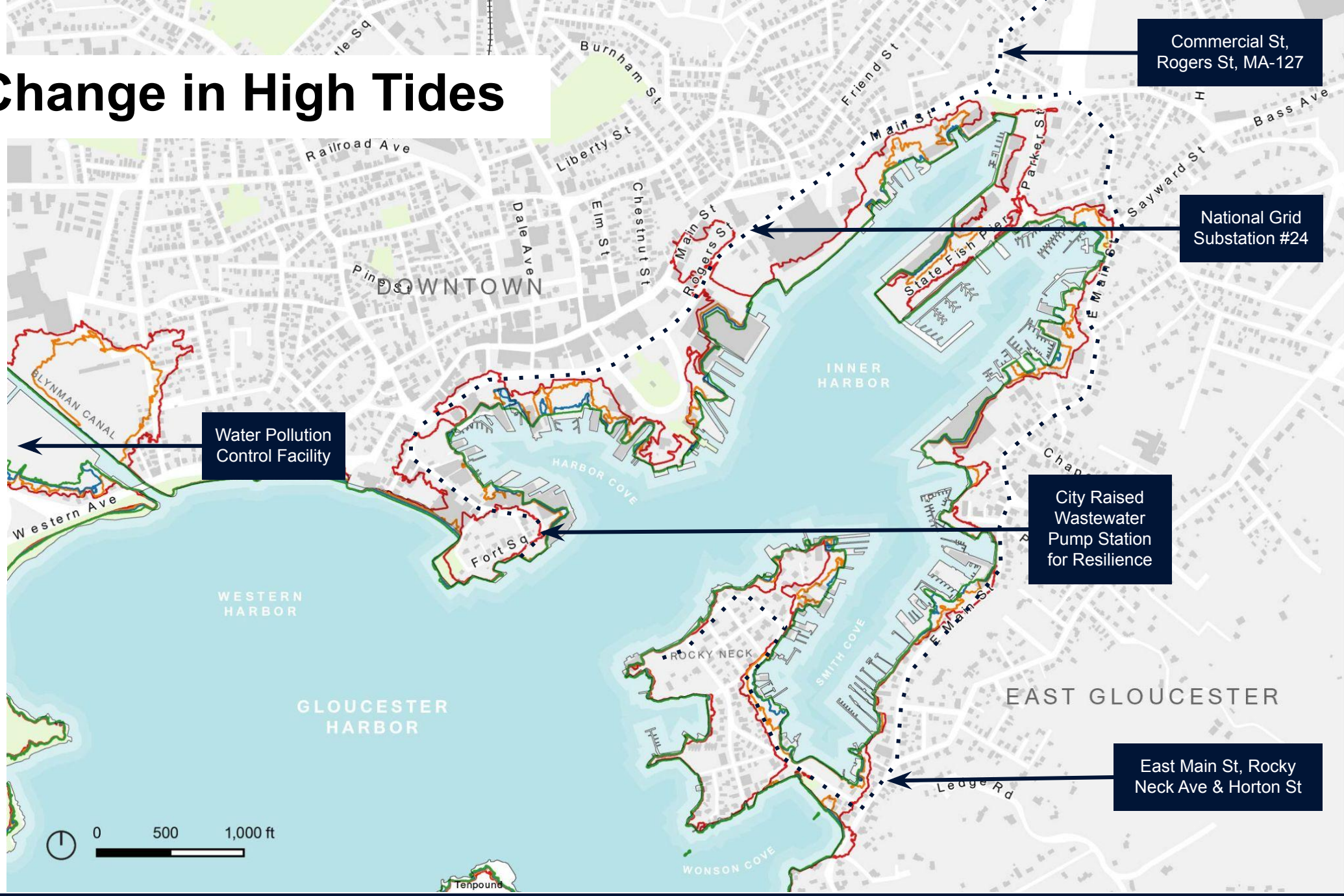


Projected Change in High Tides

Map shows projected change in Mean Higher High Water (MHHW) through 2070. Elevations provided in table for MHHW & Mean High Water (MHW).

Data Source: Massachusetts Coast Flood Risk Model (MC-FRM). Projection is based on LiDAR, which can be imprecise for pier-type shore conditions, leading to an under-estimation of surface elevations.

Tidal Datums (ft, NAVD88)		
	MHW	MHHW
Present	4.4	4.8
2030	5.8	6.2
2050	7	7.4
2070	8.9	9.3

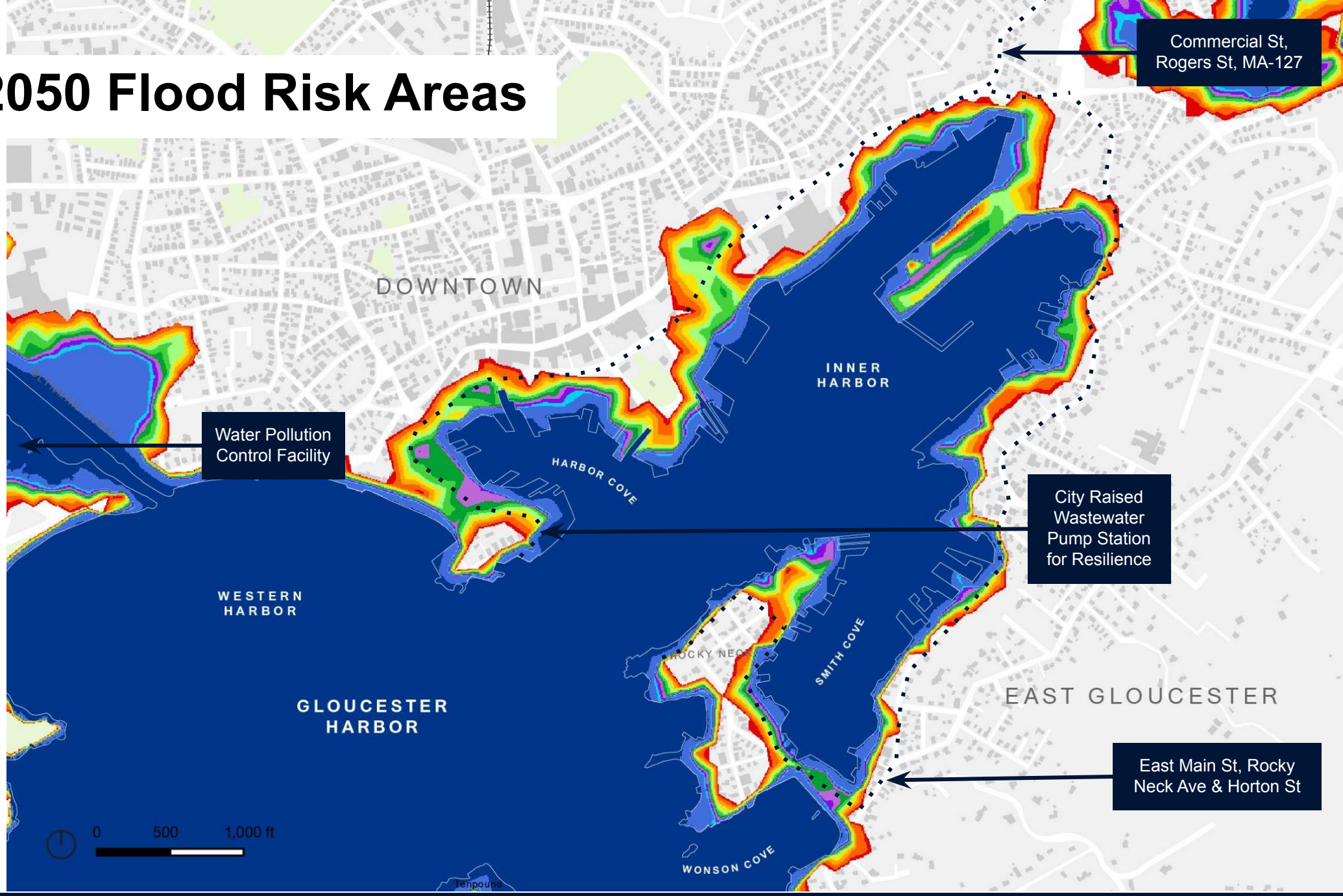


Projected 2050 Flood Risk Areas

100-year (1%) flood extent and depth for 2050. Assumes 2.5 ft of sea level rise.

Data Source: Massachusetts Coast Flood Risk Model (MC-FRM) & NOAA CUSP Shoreline

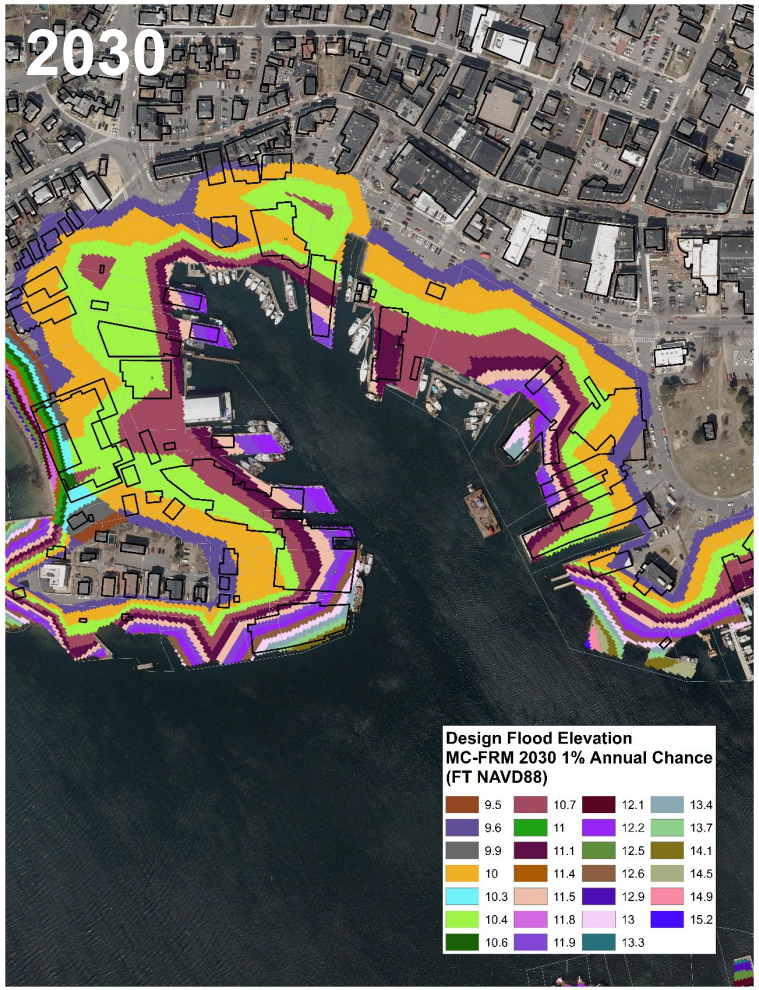
- 0.5 ft or less
- 1 ft
- 1.5 ft
- 2 ft
- 2.5 ft
- 3 ft
- 3.5 ft
- 4 ft
- 4.5 ft
- 5 ft
- 10 ft
- more than 10 ft

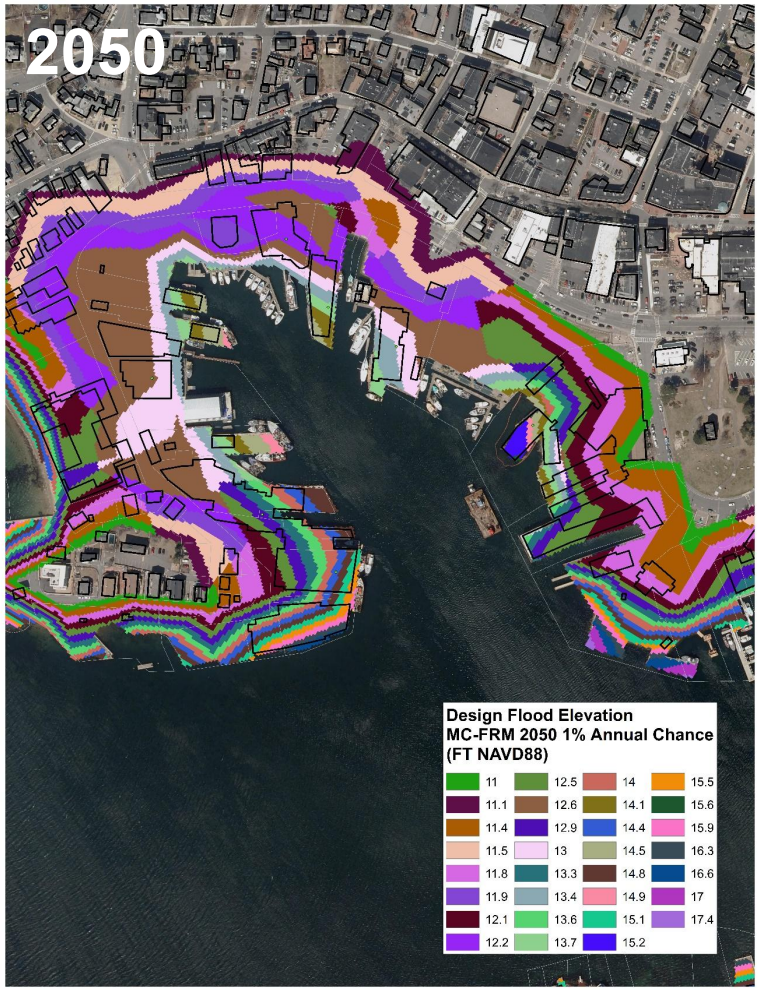


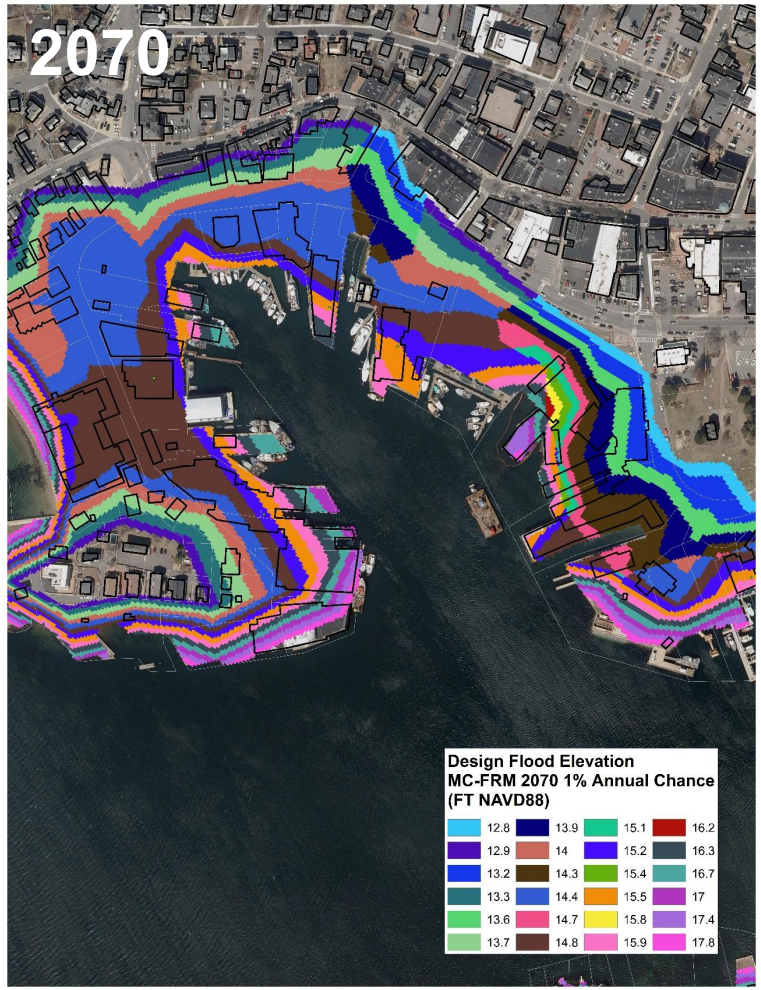
Flood Risk – Future Planning

Massachusetts Coast Flood Risk Model (MC-FRM) Maps

- 1% Design Flood Elevations in Inner Harbor based on hydrodynamic modeling, including stillwater and wave heights (do not include freeboard)
- Designing redevelopment and substantial improvements to 15 ft NAVD88, as required by MSBC, provides significant long-term resilience (2050-2070)







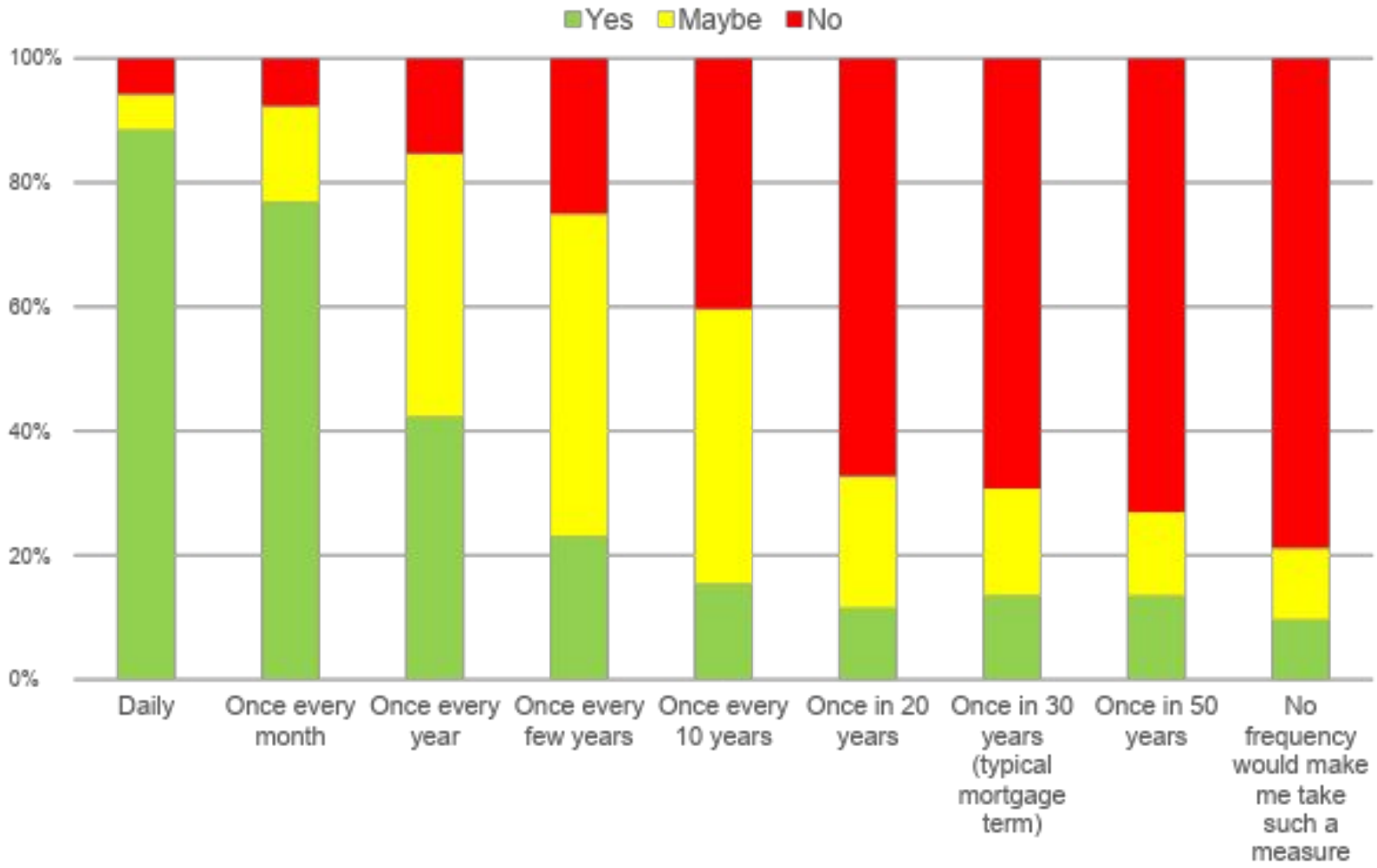
Flood Risk Thresholds

More than 50 community members were surveyed in a high flood risk coastal area.

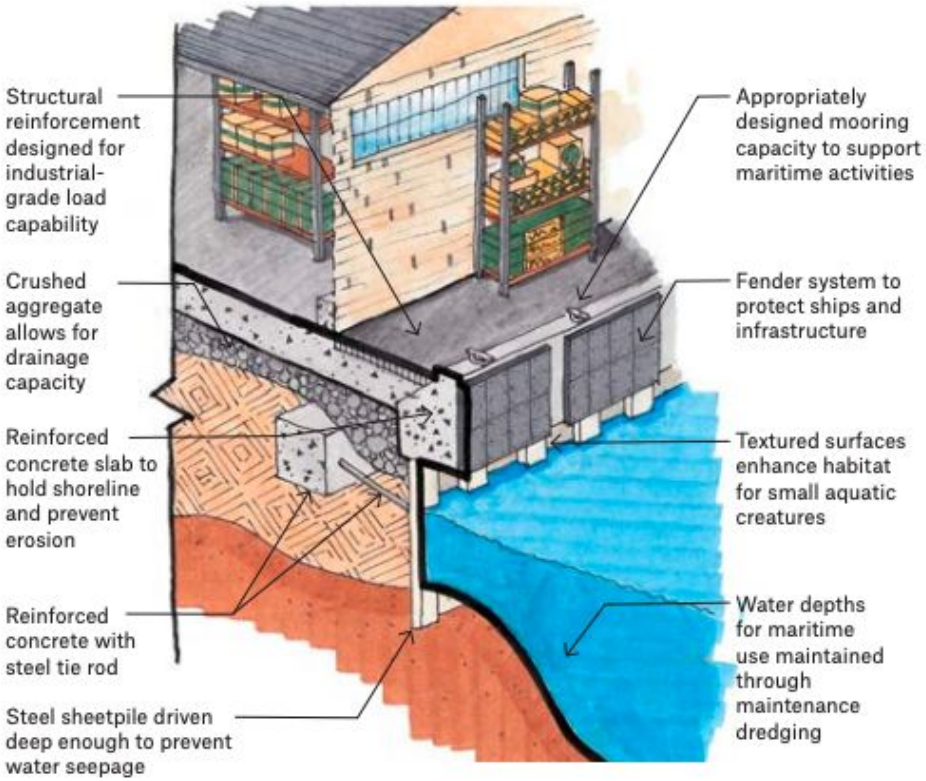
They were asked what frequency of flood damage and loss would make them likely to take substantial actions such as moving/selling, elevating, or floodproofing their home.

We found that:

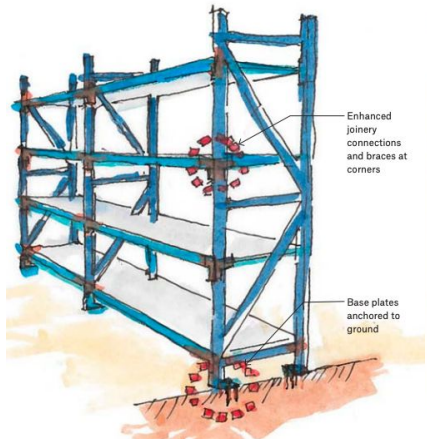
- Daily and monthly flooding is too much for almost all respondents to deal with.
- People become a lot less certain of what they would do if flooding happened annually or less frequently
- Most people are not considering risks beyond 10 years

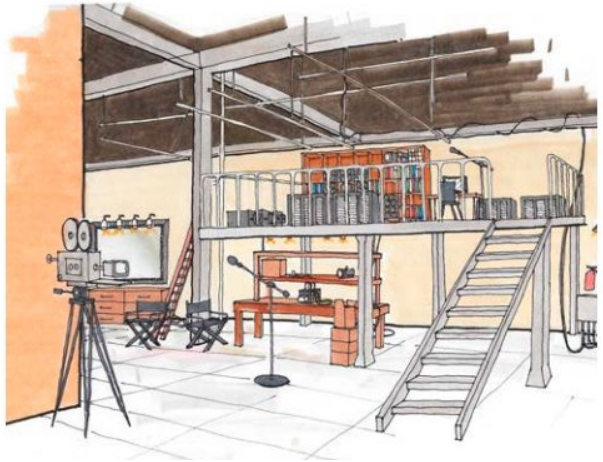


Flood Code Compliance: Wet Floodproofing



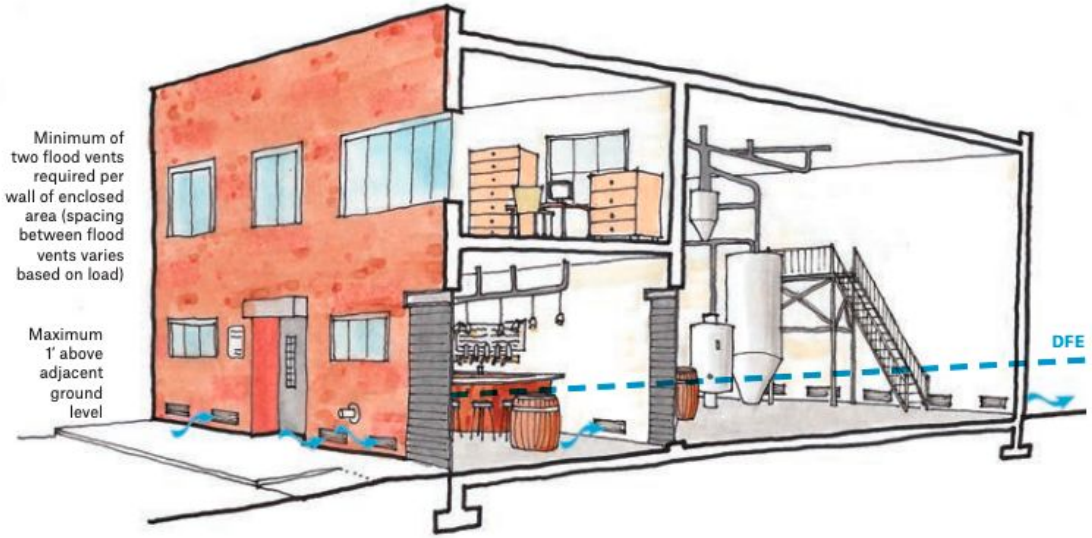
Bulkhead Repair





Elevate or Relocate Critical Infrastructure

Elevate, Reinforce or Enclose Storage

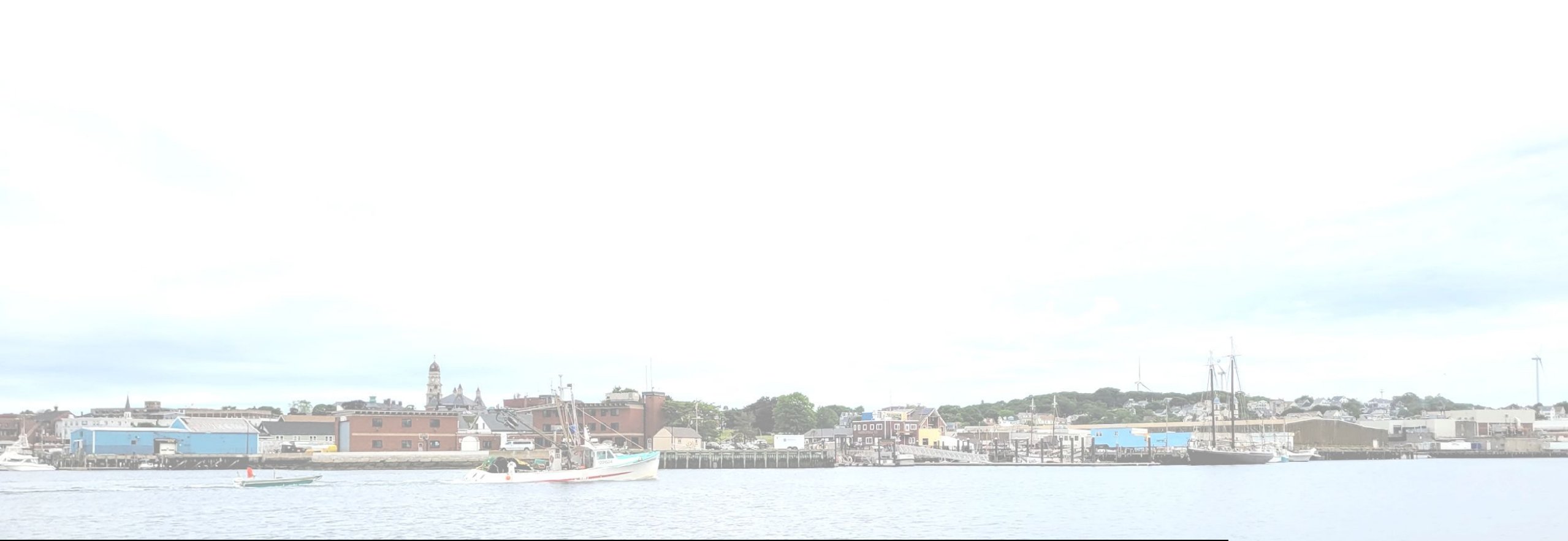


Retrofitting with flood vents and flood-resistant materials below the Design Flood Elevation

Source: [Resilient Industry Report](), NYC DCP

Identifying Resources for Infrastructure Investment

Gloucester MHP - DRAFT				
Use	**Targeted Investment**	**Fund**	**Available Funds**	**Notes**
Environmental				
Climate Vulnerabilities	Water edge, roads, utilities, municipal facilities	EEA MVP Action Grant		
Community Development (variable)	Housing, business, municipal facilities	HUD CDBG and DR programs		
Climate Vulnerabilities	Water edge, roads, utilities, municipal facilities	FEMA BRIC (was pre-Disaster Mitigation)		
Climate Vulnerabilities	Water edge, roads, utilities, municipal facilities	FEMA Hazard Mitigation Program		
Climate Vulnerabilities	Water edge, roads, utilities, municipal facilities	CZM Coastal Resilience Grant Program		
Public infrastructure, Water, Wastewater	Water, Sanitary for utility upgrades or climate adaptation	American Rescue Plan Act (ARPA) - city and state funds, but being allocated now		public infrastructure including sewer, utilities, street improvements and parks
Brownfields (Phase 1 & 2 ESA)	Impacted sites	EPA Revolving Fund		
Brownfields	Impacted sites	State Brownfields Tax Credit		
Development (Private)				
Public infrastructure for development	Local Infrastructure	Community One Stop for Growth (EOHED, DHCD & MassDevelopment)		public infrastructure including sewer, utilities, street improvements and parks
Public infrastructure for development	Tax Increment Financing (TIF)	Tax Increment Financing (TIF)		public infrastructure including sewer, utilities, street improvements and parks
Public infrastructure for development	District Improvement Financing (DIF)	District Improvement Financing (DIF)		public infrastructure including sewer, utilities, street improvements and parks
Public infrastructure for development	Infrastructure Investment Incentives Act (I-Cubed)	Infrastructure Investment Incentives Act (I-Cubed)		public infrastructure including sewer, utilities, street improvements and parks
Public infrastructure for development	Local Infrastructure Development Program (23-L)	Local Infrastructure Development Program (23-L)		public infrastructure including sewer, utilities, street improvements and parks
Utilities/Inf				
Utilities	Sanitary, Storm, Water	SRF		
Utilities	Sanitary, Storm, Water	Rates & Bonding		
Utilities	CSO, Storm, + GI	Green Bonds?		
Utilities	CSO, Storm, + GI	WIFIA?		
Transportation				
Roads		Congestion Mitigation Funds		
Ferry/Water Taxi	Ferry	EOT/MBTA		
TOD	Dock, Platforms, Street connections	Infrastructure Investment Incentives Act (I-Cubed)		public infrastructure including sewer, utilities, street improvements and parks
Open Space				
PARC (Acquisition, Rec, Conservation)	Landfill, water edge, connections	DCS		
Trails	Water edge	State Trails MP		
Open Space/Recreation	Landfill, water edge, connections	Land & Water Conservation Fund		



Sub-Area Constraints & Opportunities

Understanding how the broader economic strategy could manifest in each Sub-Area.

Sub-Area Study and considerations

Key regulatory questions:

- Supporting Use / DPA Use dynamic
- Local Zoning & Resilience/Flood interaction with DPA/local zoning

Existing Conditions / Opportunity & Constraints For Each:

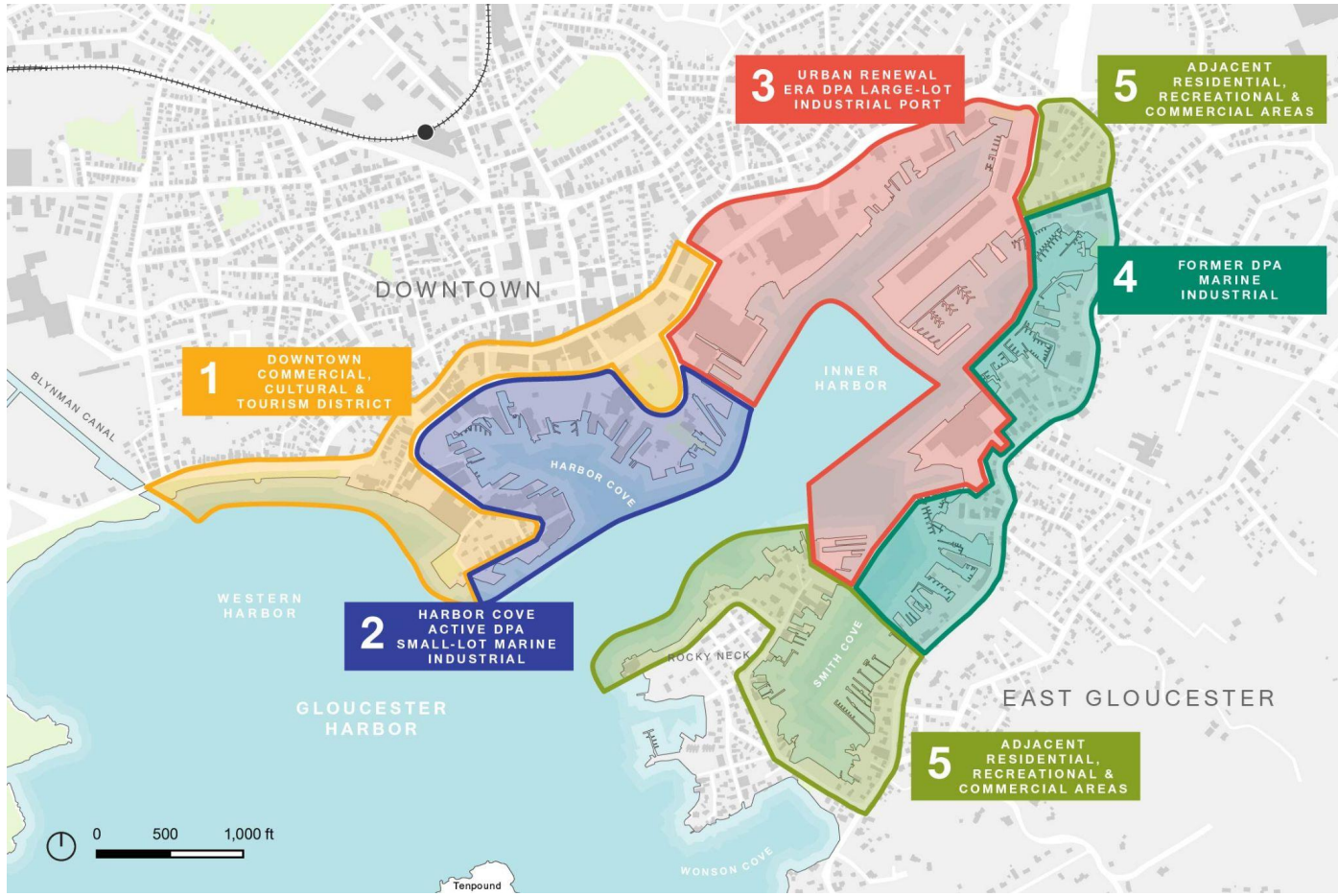
- Goals/Preference/Implementation for DEP
- City Needs - Zoning, City Subsidy/Incentive, State $ (resilience, infrastructure)

  <u>USE:</u>

  - Current land use mix (on-site and adjacent)
  - Supporting Use Attempts (successful or unsuccessful)
  - Viable Supporting Use Candidates - workshop DPA + supporting use combinations with City, DEP & HPC

  <u>FORM:</u>

  - Ch91/DPA constraints
  - Local zoning constraints
  - Flood-related constraints
  - Truck Route access & access to DPA vs. supporting use
  - Parking constraints



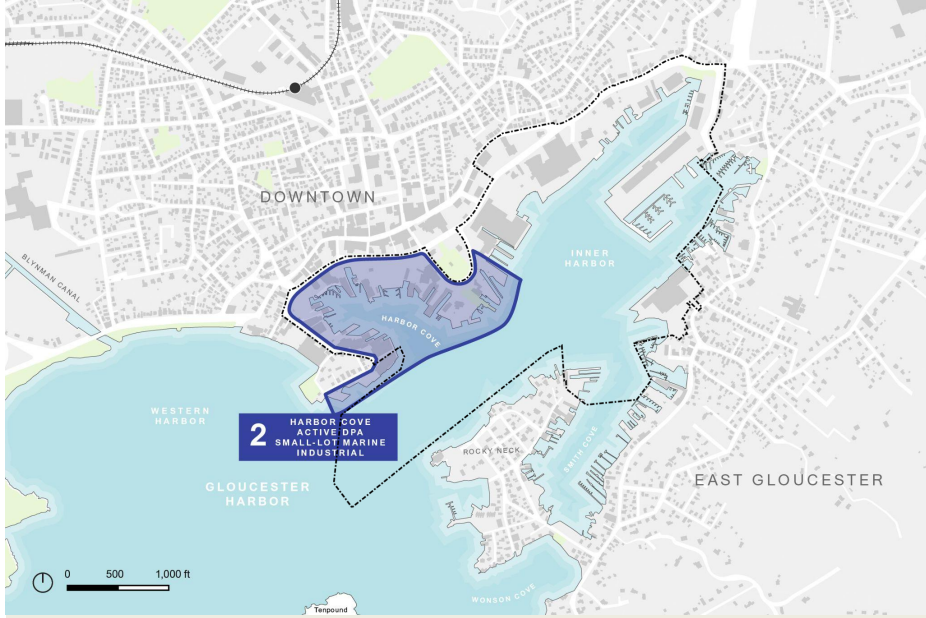
Sub-Area : Harbor Cove DPA

- **Regulatory Environment:** DPA + Ch91

- **Distinctive Characteristics**
  - Close relationship to Downtown
  - Presence of Harbor Walk & quasi-public spaces (St Peter's Park, Captain Solomon Jacobs Park, I4C2)
  - Harbormaster & USCG Station
  - Active DPA
  - Narrow pier-style small-lot marine industrial
  - Most significant public ownership of all sub-areas
  - High vacancy/underutilization

- **Economic Considerations**
  - I4C2 future (probably most important)
  - 112 Commercial
  - Most tourism pressure and cross-over with Downtown
  - How best to leverage St Peter's park (parking & fish market)?

- **Infrastructure/Resiliency Needs**
  - Dredging Maintenance Offset: question of whether some Federal Navigation Channel sub-areas should be decommissioned
  - Seafood processing wastewater treatment
  - Deteriorating pier/pile infrastructure
  - Beginning part of commercial street floods out



Potential Redevelopment/Catalyst Sites for Detailed Study

- St Peter's Park
- Fort Square parcels outside DPA (underutilized, vacant, for-sale)
- I4C2
- 112 Commercial

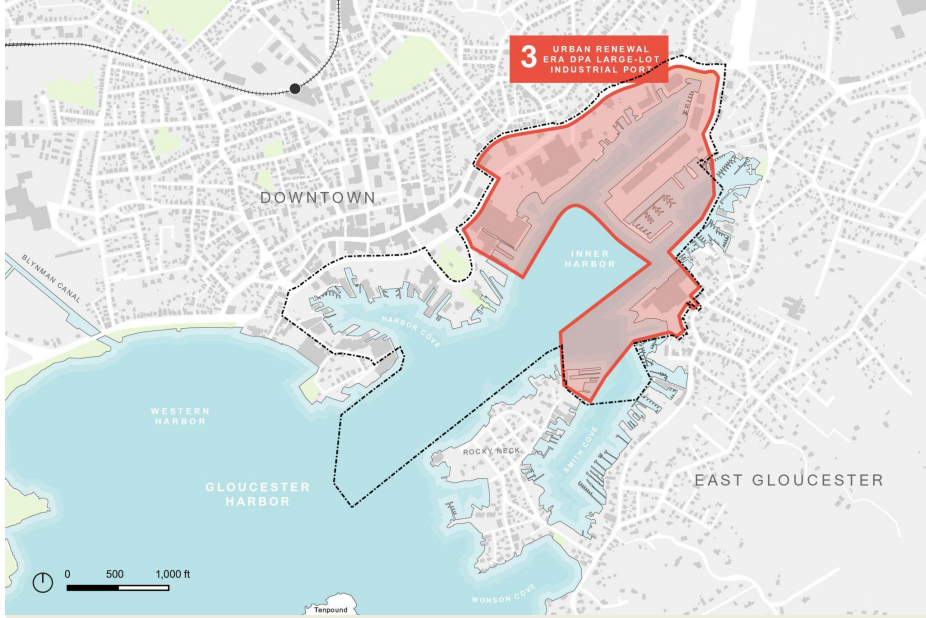
Sub-Area : Large-Lot Industrial DPA

- **Regulatory Environment:** DPA + Ch91

- **Distinctive Characteristics**
  - Urban Renewal Era DPA
  - Large-lot Industrial
  - State Fish Pier

- **Economic Considerations**
  - Highest and Best Use for limited large-lot properties - what types of maritime industrial uses need parcels of this type? How can we encourage current tenants/users who do not need large lots to shift to different parts of the harbor?
  - Is the State Fish Pier being used to its highest potential? What might leverage this asset more effectively?
  - Is trucking access being handled well by the existing roadways?
  - What are the relationships between these properties and inland fish processing and other industrial facilities?

- **Infrastructure/Resiliency Needs**
  - Deteriorating pier/pile infrastructure
  - Dockage is at-capacity - maxed out, all commercial boats
  - Are roads (especially truck routes) adequately future-proofed for flooding?
  - Significant inland flooding projected adjacent to National Grid substation and Americold Site
  - SLR projections are difficult to interpret for State Fish Pier - can that be refined?



Potential Redevelopment/Catalyst Sites for Detailed Study

- State Fish Pier
- National Grid Substation #24
- Former Whole Foods Pigeon Cove Fish Processing Facility (15 Parket St)
- Rogers St Americold Site: flooding and economic repositioning
- East Gloucester Americold Site / Former National Fish & Seafood
- Rocky Neck / Smith Cove For-Sale Site (Gloucester Marine Railways)
- Gordon Thomas Park
- Wedge between Rogers & Main St currently Office use - how to leverage this more? Gorton's multi-site strategy is an example of how a single business can specialize different functions for different areas, blurring boundary between harbor and upland.

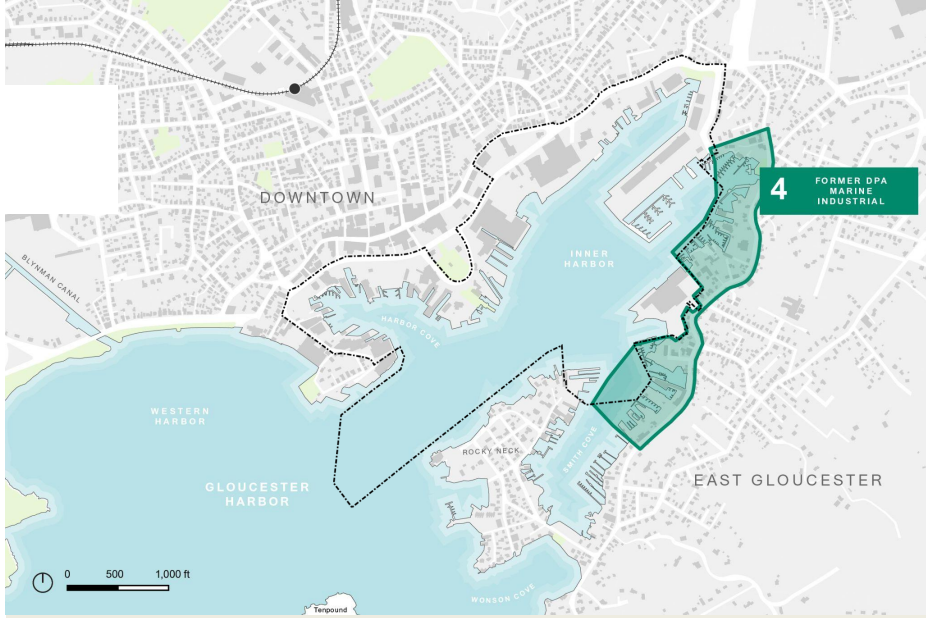
Sub-Area : East Gloucester Former DPA

- **Regulatory Environment:** Ch91 Only

- **Distinctive Characteristics**
  - Former DPA, still mostly zoned Marine Industrial
  - Predominantly commercial character with some residential and industrial
  - Presence of some arts organizations (e.g. North Shore Arts Association, Calvo Studio), event venues and recreational marinas

- **Economic Considerations**
  - Can it help **absorb demand for recreational and transitory boating**, so that more optimal industrial dockage is reserved for active commercial vessels
  - Cape Ann Lobstermen opened in area no longer protected as part of the DPA - have they encountered any operational problems in this more residential/recreational context? Does their success signal that lobstering is more **compatible with small-lot, residential-adjacent harbor properties**? Could this be a good sign for Harbor Cove repositioning?
  - Many commercial/recreational marinas appear to be in poor condition or have collapsed into the harbor. What would be the **cost of rebuilding piers/piles** that have fallen into the harbor? Is there any use in entertaining an incentive to support the rebuilding as a way to increase the overall dockage?
  - Is there a **market for tourist-oriented functions** that are competing with industrial uses on the other side of the harbor to shift to East Gloucester (whalewatch, harbor tours, cruiseport, wedding/event venues)?
  - Would rezoning help shape a more focused/specialized economic development trajectory for this area?

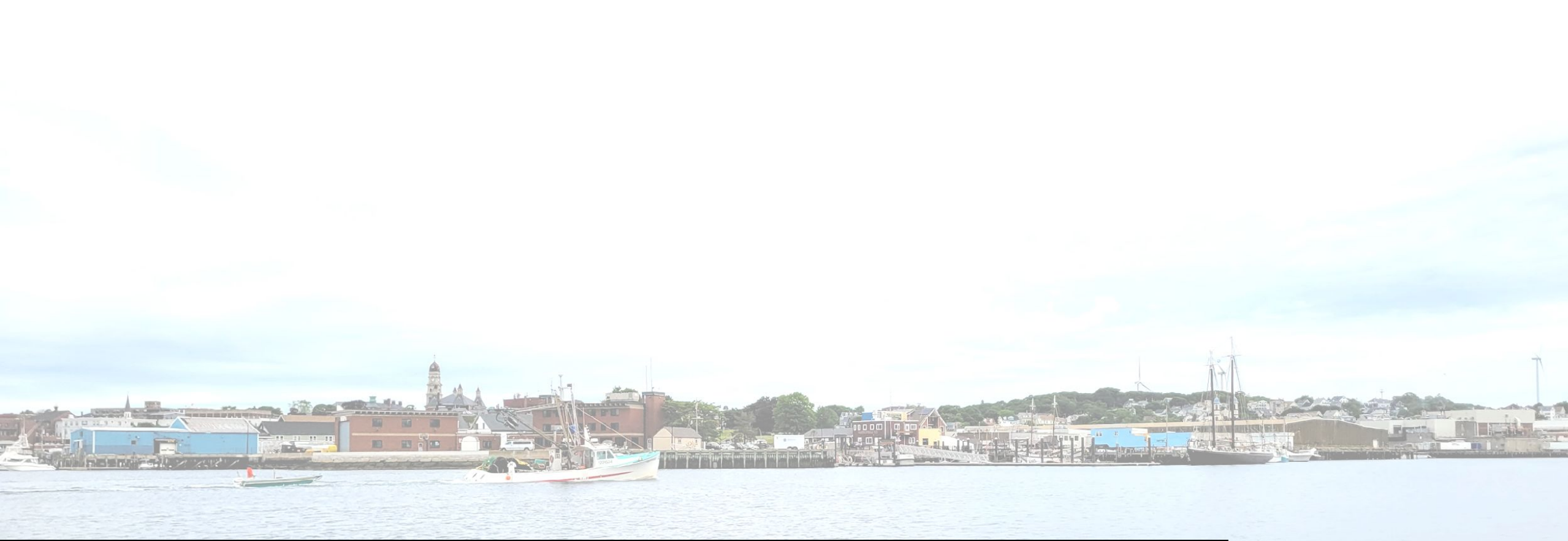
- **Infrastructure/Resiliency Needs**
  - East Main St flood risk



Potential Redevelopment/Catalyst Sites for Detailed Study

- Would rezoning help shape outcomes more effectively?

- Is there any location where it would make sense to have a water taxi / ferry to connect the East Gloucester tourism sites to Downtown, make it possible to open up East Gloucester to absorb tourism-oriented uses that are currently competing with marine industrial Downtown?



Regulatory Plan Opportunities

Understanding how the regulatory plan can support the broader economic strategy.

How can the regulatory plan can support the broader economic strategy?

Local Zoning & City Site Development

Berths and docking space - are there ways for the City to acquire more property or control who uses dock space?

The only mechanism through zoning is for new docking space that is tied to permitting processes for new construction, so it doesn't touch many places.

Are there dimensional and/or use adjustments needed within zoning to customize it to different sub-areas unique needs?

DPA / Ch 91

Regulatory process for people who can do as of right by DPA.

What are the current regulations doing for us?

- Supporting use allowance - What type of supporting uses make sense from an economic perspective?
- Do we want to add anything around education and training as a specific use?

Permitting / Licensing Process

More docking and berthing space for local fisherman

- In the DPA, we can't differentiate between different types of commercial vessels

Difficulty and uncertainty and long duration of any permitting/licensing process

- Can we advocate for changes to the process

Zoning : Marine Industrial District

USE REGULATIONS

As-of-Right Uses

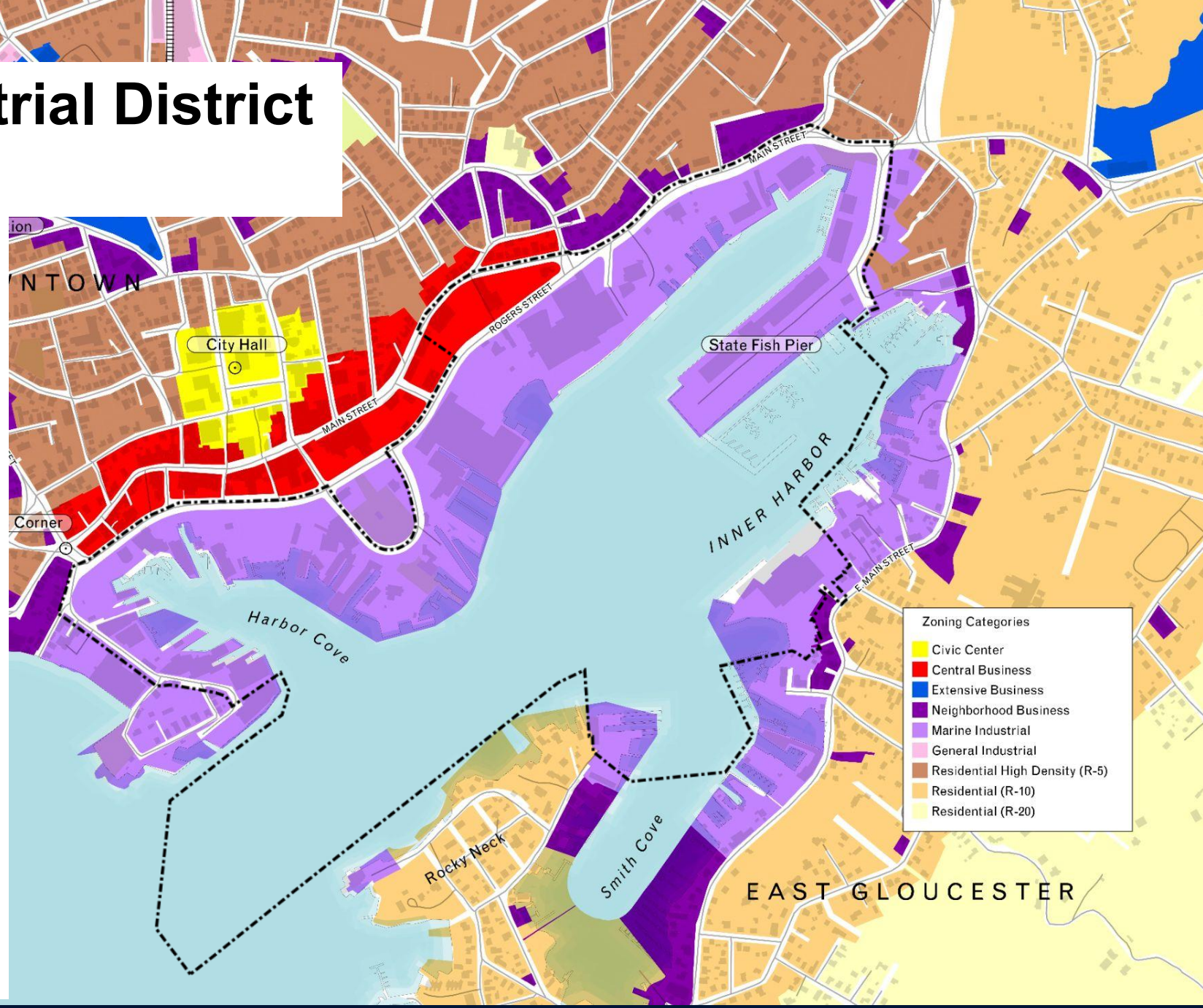
- Marine related service, storage or repair, sales or rental, limited primarily to commercial fishing vessels
- Manufacturing, processing or research
- Bulk storage, warehousing
- Contractor Yard
- Fuel or ice establishment, other than gas stations
- Feed or building materials establishment
- Facilities for water transportation loading and unloading
- Retail, consumer service or other non-industrial business use
- Office
- Schools *(including Trade School or Industrial Training Center)*
- Municipal
- Public Utility

Special Permit uses within 200' of the water's edge cannot adversely impact water dependent uses or otherwise adversely affect the primary character of the area as a working waterfront.

- Restaurant
- Non-profit Club/Lodge
- Philanthropic Institution
- Protein recovery plant

No Residential.

Note: this list is not exhaustive, it is intended to give a picture of the intent and focus of the district and what desirable complementary uses might not be allowed current.



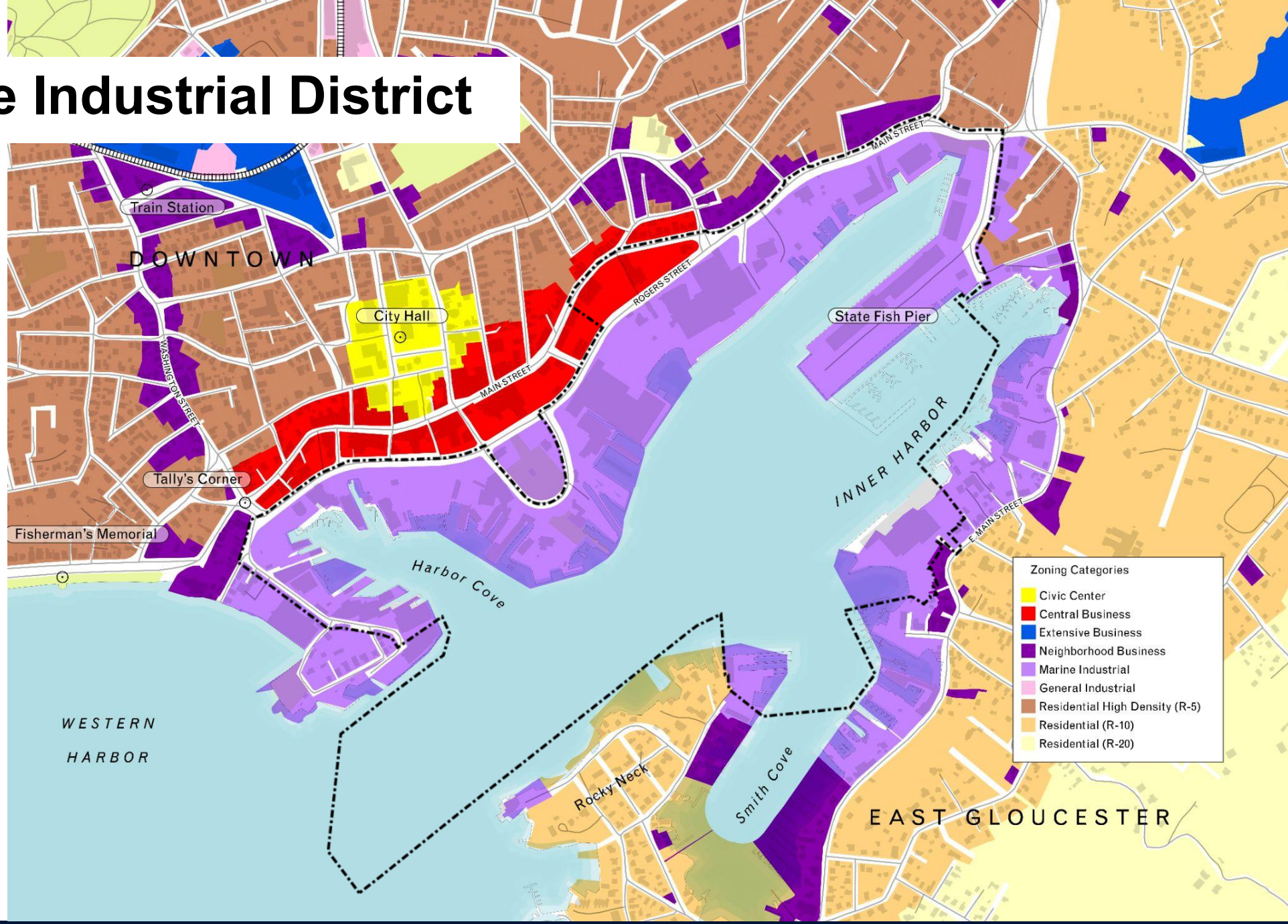
Zoning : Marine Industrial District

DIMENSIONAL REGULATIONS

Criteria	Principal	Accessory
Min. Front Yard	10’	0’
Min. Side Yard	Increase by 0.5’ for every 1’ in excess of a 30’ building height	
Min. Rear Yard		
Distance from Principal	n/a	10’
Max. Height	40’	12’

No principal building shall be closer to another principal building on the same site than the sum of their respective heights; Special Permit override is possible if it is not detrimental because of view obstruction, overshadowing, service access or visual crowding.

For Accessory uses, at least 65% of required front yard area shall consist of vegetative cover, to be established and maintained by the applicant or its successor in interest.



Uses Allowed in DPA

Water Dependent Industrial (WDI)

Industrial in nature and water dependent.

Examples:
Boat Repair

Supporting DPA Uses

Commercial or industrial uses
Provide direct economic or operational support to WDI use.
Can exist without WDI use, no more than 25% of jurisdictional area.
Certain uses prohibited by regulation (hotel/motel, certain recreational boating, office buildings, etc.)

Examples:
Shaws supporting Marine Contractor Yard

Accessory to WDI

Uses associated with WDI uses
Cannot exist on their own

Examples:
Accessways
Parking
Administrative offices
Employee cafeteria

Temporary Uses

Allowed for max. 10 years.
Intended to fill vacant spaces/facilities and to help maintain infrastructure.

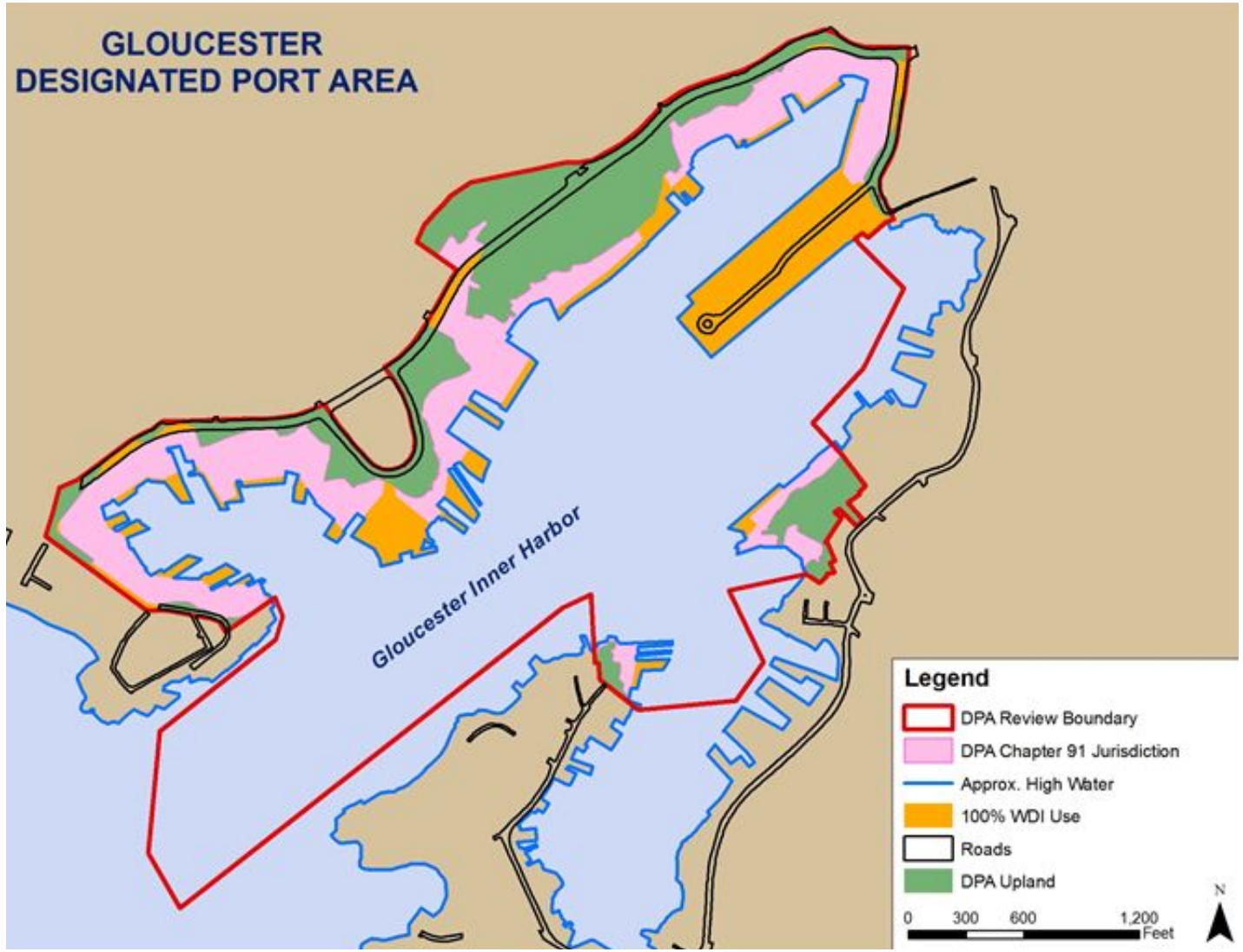
Examples:
Parking
Warehousing
Trucking
Food Trucks

Supporting Uses

2014 Change to Supporting Use Calculation:

- State Fish Pier, USCG, Cruiseport, DPA roadways, and pile supported piers remain 100% WDI uses
- The other DPA parcels within Chapter 91 jurisdiction each must have a minimum of 50% WDI uses, but each may have up to a maximum of 50% supporting uses
- No complex formula required
- Any transition from WDI uses to supporting uses by a large DPA property owner does not affect most other DPA property owners
- City zoning becomes the operative land use mechanism for DPA properties outside Chapter 91 jurisdiction

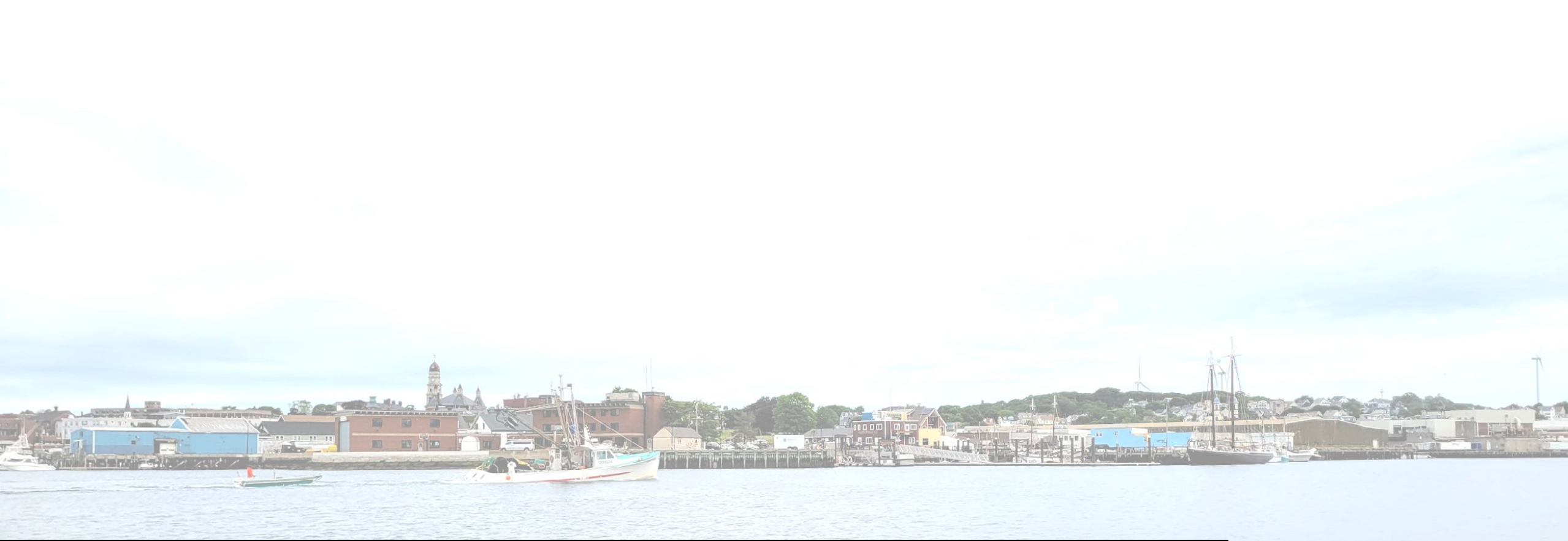
This hasn't yielded any new projects - what else can we do to make this an easy path to economic stability for fishing/shellfishing operations?



Supporting Uses - Case Study

Mac Bell Property Example - 44 Commercial St

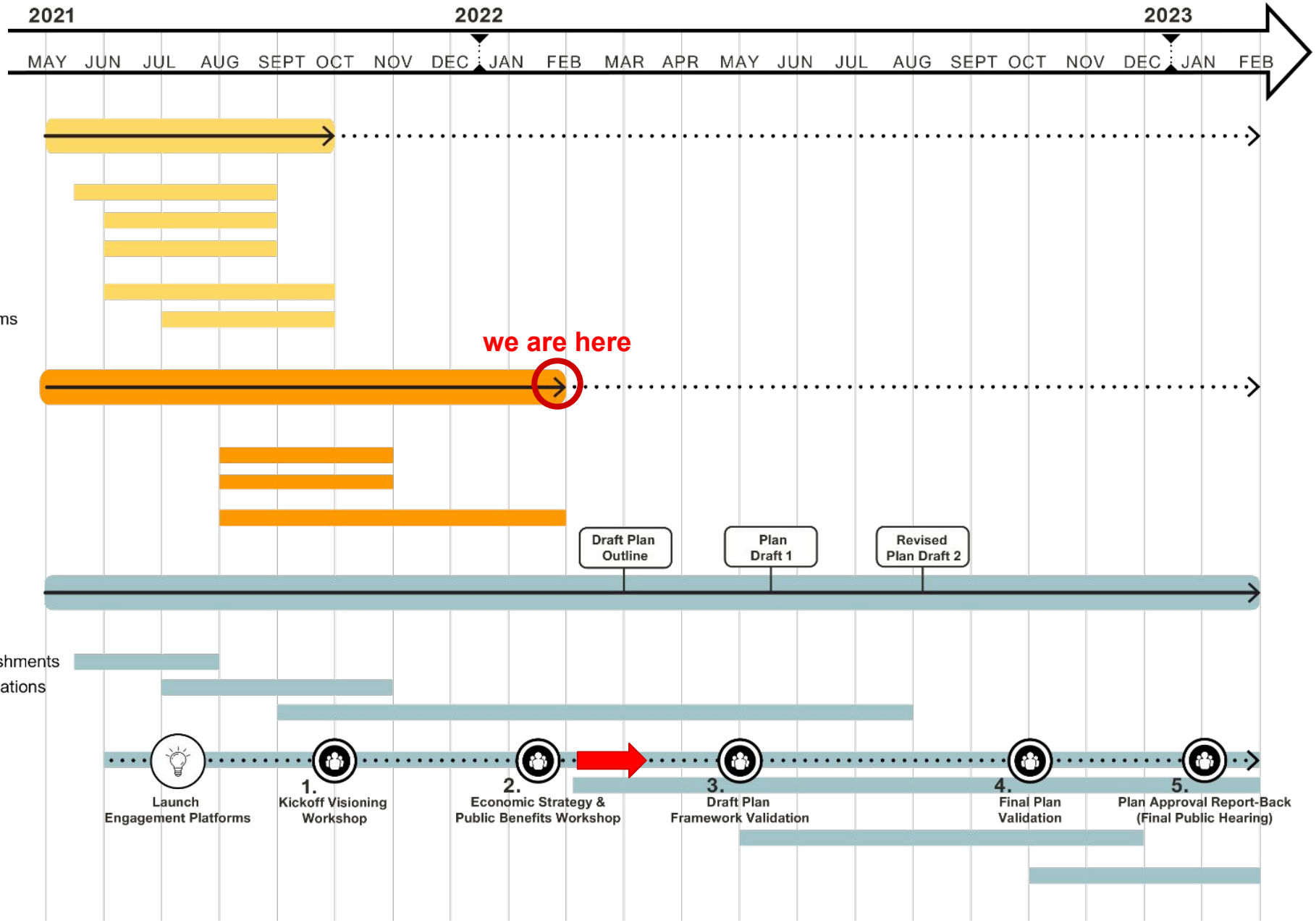
- Why is it so hard to do supporting uses here in Gloucester?
- Does the size and shape of the parcels matter?
- Are these issues unique to Gloucester when compared with parcel types in other DPAs?



Public Meeting Content & Format

an orientation to the content and format we imagine for the upcoming March public meeting.

Schedule


2021
2022
2023
MAY JUN JUL AUG SEPT OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEPT OCT NOV DEC JAN FEB
Provide Baseline, Assessment, and Economic Strategy
1.1 Economic Baseline Inventory
1.2 Coastal Resilience Strategy
1.3 Evaluate shore side infrastructure, dockage demand and options
1.4 Define goals, objectives and strategies
1.5 Identify and prioritize projects and programs
we are here
Evaluate the State Regulatory Environment
2.1 Examine maritime industrial market
2.2 Assess supporting use interpretations
2.3 Review existing and recommend new Chapter 91 substitutions/amplifications
Draft Plan Outline
Plan Draft 1
Revised Plan Draft 2
Update the MHP & DPA Master Plan
3.1 Analyze existing MHP/DPA MP accomplishments
3.2 Identify inconsistencies with current regulations
3.3 Update goals, objectives, strategies and land use regulatory changes
3.4 Conduct public engagement
3.5 Produce plan and ensure compliance with MHP regulations
3.6 Implementation Action Plan
3.7 DEP Waterways to amend the Chapter 91 regulations/adopt the new changes to the Gloucester MHP
Launch Engagement Platforms
1. Kickoff Visioning Workshop
2. Economic Strategy & Public Benefits Workshop
3. Draft Plan Framework Validation
4. Final Plan Validation
5. Plan Approval Report-Back (Final Public Hearing)

Public Meetings

Project Kickoff Meeting #1
November 16th, 2021
Project Introduction and Visioning

Introduce & Review
MHP
Ch 91
DPA
Project Site
Project Schedule
Goals

Public Meeting #2
March 7th, 2022
Economic Strategy and Benefits

Present Analysis
existing and projected market conditions surrounding the planning area

Public Meeting #3
TBD
Draft Plan Recommendations

Present Recommended Strategies
opportunities to improve resilience and develop action plan

Public Meeting #4
TBD
Master Plan Draft

Present Draft Plan
opportunities to review key elements of draft plan and provide feedback

Public Meeting #5
TBD
Final Plan
Report-back

Present Plan
MHP Update will be submitted for public comment and reviewed by EEA Secretary for final decision

Public Meeting Content

LAYER 4:
Implementation Tools

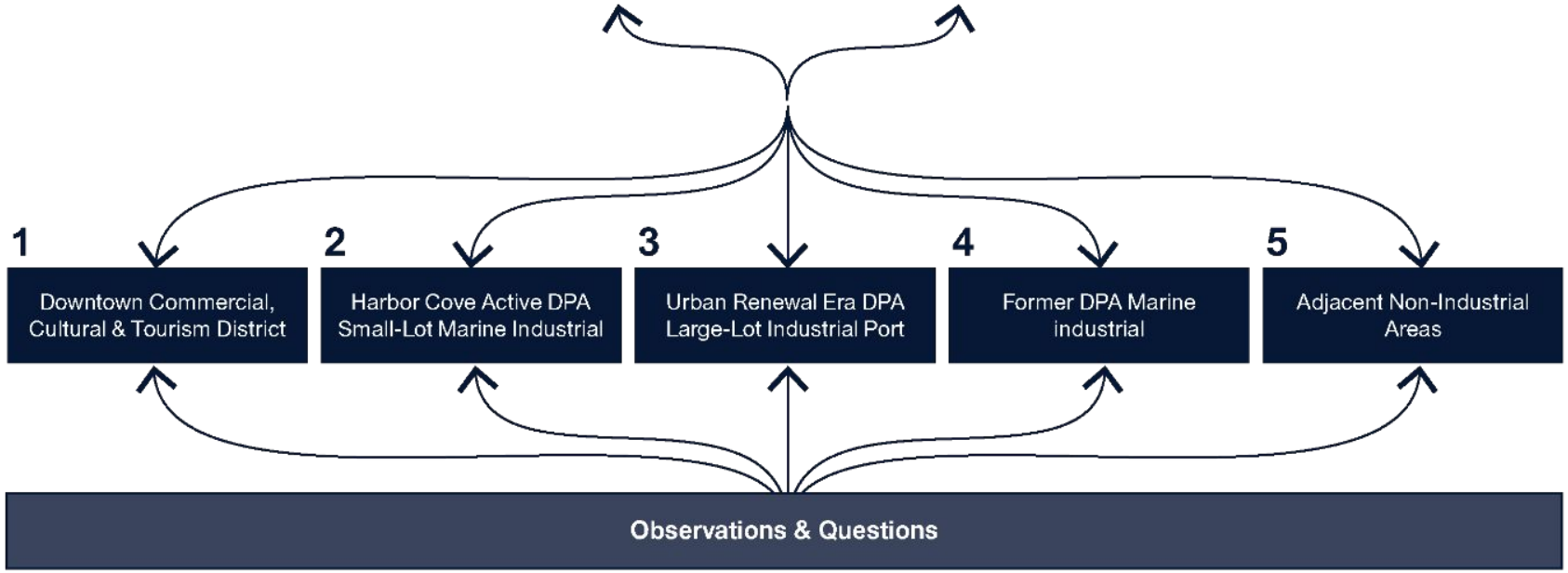
Regulatory Plan	Local Zoning DPA Chapter 91
Economic Development Programs	Fundraising, Financing, Grantmaking Marketing, Recruiting, Networking Capacity Building

LAYER 3:
Sub-Area Character & Potential

- 3-5 Representative Parcels per Sub-Area
- Infrastructure Condition Overview
- Overall Assessment of Physical Character
- Prediction of Resiliency Strategy Mix
- Site-Specific Opportunities:
  - Inland (non-DPA + non-Ch91)
  - Upland (DPA + non-Ch91)
  - Coastal (DPA + Ch91)
  - Near Shore
  - Offshore / Deep Ocean

LAYER 2:
Economic Development Goal Setting

LAYER 1:
Foundational Trends & Influences



Public Meeting Agenda / Format

Format: Zoom meeting, invite questions via chat throughout to be answered at the end

1. **Process & Engagement Summary**
   Summary of Engagement to Date (Stakeholders, Public Meeting #1, Social Pinpoint, General Comments)

2. **Foundational Trends & Influences**
   a. Infrastructure & Flood Risk Needs
   b. Sector-Specific Economic Opportunities

3. **Economic Development Goal Setting**
   a. Live Zoom Opinion Polling: Observations, Questions & Initial Ideas
   b. Breakout Groups: Sub-Area Identity + Strengths-Weaknesses-Opportunities-Threats

Next Steps

1. **Public Meeting #2**
   Economic Baseline and Framework - TBD March 7th

2. **Clarify Fish Processing Constraints/Opportunities**
   Summarize 9/1 meeting content on this as it relates to value capture

3. **Advancing Regulatory Plans**
   MHP and DPA, Local Zoning

4. **Infrastructure Investment Framework:**
   Recommendations, mechanisms and prioritization for addressing infrastructure issues.

5. **Publicly Owned Parcel Studies:**
   I4C2 and 112 Commercial

- Thank you-