Gloucester Municipal Harbor Plan Update
MHP Updates & I4C2 Workshop

May 12, 2022
Agenda

1. Timeline & Process update
2. MHP & Supporting Uses
   a. Draft Table of Contents
   b. Update on Supporting Uses
3. I4C2 Workshop
   a. Existing Conditions and Uses
   b. Past Proposals
   c. Site Constraints (FEMA, DPA/Dimensional/Local Zoning)
   d. Potential Uses
   e. Q&A / Discussion
4. Other MHP Considerations & Next Steps
Where are we in the process?
Timeline

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

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/amendments

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

WE ARE HERE
Public Meetings

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

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

Public Meeting #3
*TBD*
Draft Plan Recommendations

Public Meeting #4
*TBD*
Master Plan Draft

Public Meeting #5
*TBD*
Final Plan Report-back

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

Present Analysis
existing and projected market conditions surrounding the planning area

Present Recommended Strategies
opportunities to improve resilience and develop action plan

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

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

• Draft Table of Contents
• Update on Supporting Use Regs
# MHP & DPA Plan - Draft Table of Contents

## Acknowledgements

## Letter from Mayor

### 1.0 Executive Summary

### 2.0 Purpose and Authority of the MHP and DPA Master Plan

### 3.0 Gloucester Harbor Planning Area Description and Background

#### 3.1 Planning Area

#### 3.2 History

#### 3.3 Recent Planning Efforts

#### 3.4 Regulatory Conditions

### 4.0 Framework for the 2022 Gloucester MHP and DPA Master Plan

#### 4.1 Goals and Objectives

#### 4.2 Modifications to the 2014 Gloucester MHP and DPA Master Plan

#### 4.3 Public Engagement and Process

### 5.0 Climate Change

#### 5.1 Current Conditions and Projected Mapping of Flood Vulnerability

#### 5.2 Industry Impacts

#### 5.3 Approaches and Recommendations

### 6.0 Harbor Infrastructure

#### 6.1 Existing Conditions

#### 6.2 Affected Industries

#### 6.3 Approaches and Recommendations

### 7.0 Economic Analysis

#### 7.1 Baseline Conditions and Trends

#### 7.2 Industry Growth Potential

#### 7.3 Recommendations

### 8.0 Policies and Strategies of the Municipal Harbor Plan

#### 8.1 (organized by sub-areas?)

#### 8.2

#### 8.3

#### 8.4

### 9.0 DPA Master Plan

#### 9.1 Goals and Vision

#### 9.2 Strategies

#### 9.3 Land Use Context and Calculations

#### 9.4 Water Dependent Industrial Uses, Accessory and Temporary Uses

#### 9.5 Supporting Uses

#### 9.6 Guidance to DEP

#### 9.7 Implementation

#### 9.8 Standards for Approval

### 10.0 Overall Compliance with MHP Standards

#### 10.1 Compliance with CZM Policies

#### 10.2 Consistency with State Tidelands Policy Objectives

#### 10.3 Compatibility with State Agency Plans or Planned Activities

### 11.0 Implementation Strategies

### 12.0 Appendices (Notice to Proceed, Public Engagement)
Supporting Uses (2014)

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
Revised Approach for Supporting Use Allocation

Usable DPA Land Area and
DPA area less water area
(non-pier) and less public
roadways (within ch 91 area):
2,638,000 sq ft
60.5 acres

25% Maximum Supporting Use
(based on Usable DPA Land Area):
659,500 sq ft
15 acres
Requirements for Supporting Use

The Department shall waive the numerical standard for Supporting DPA Uses as defined at 310 CMR 9.02, if the project conforms to a DPA Master Plan or Marine Industrial Park Master Plan which specifies alternative site coverage ratios and other requirements which ensure that:

A. said Supporting Uses are relatively condensed in footprint and compatible with existing water-dependent industrial uses on said pier;
B. said Supporting Use locations shall preserve and maintain the site's utility for existing and prospective water-dependent industrial uses;
C. parking associated with a Supporting Use is limited to the footprint of existing licensed fill and is not located within a Water-dependent Use Zone; and
D. The use of tidelands for this purpose in a DPA shall also be governed by the provisions of 310 CMR 9.15(1)(d)1. and 310 CMR 9.36(5).
I4C2

- Existing Conditions and Uses
- Site Constraints (FEMA, DPA/Dimensional/Local Zoning)
- Potential Uses
- Past Proposals
## Existing Conditions and Uses

Currently there is commercial dockage storage, parking, commercial dockage access, and a shoreline protective structure on the site.

<table>
<thead>
<tr>
<th>Map ID#</th>
<th>Asset/ System</th>
<th>Description</th>
<th>Critical Elevation (ft-NAVD88)</th>
<th>Ranking Critically</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shoreline</td>
<td>Street pile wall</td>
<td>0</td>
<td>High</td>
</tr>
<tr>
<td>2</td>
<td>Marine Transportation</td>
<td>Commercial dockage</td>
<td>0</td>
<td>High</td>
</tr>
<tr>
<td>3</td>
<td>Vehicular Site Access</td>
<td>Parking lot</td>
<td>5</td>
<td>Low</td>
</tr>
<tr>
<td>4</td>
<td>Storage</td>
<td>Commercial dockage storage</td>
<td>0</td>
<td>Low</td>
</tr>
</tbody>
</table>

*Building Resilience in Massachusetts Designated Port Areas, June 2021*
Site Constraints
I4C2 Parcel Dimensions

Parcel Area on Solid Land
80,000 sq ft

Parcel Area on Pilings
5,500 sq ft

Parcel Water
22,000 sq ft
Chapter 91 Tidelands & WDUZ

Chapter 91 Jurisdiction
(85,000 sq ft)

- Commonwealth Tidelands
  - 65,000 sq ft
  - Subject to additional open space and Facilities of Public Accommodation (FPA) requirements

- Water-Dependent Use Zone
  - Approx. 20,000 sq ft

- Area Outside of Chapter 91 Jurisdiction
  - 5,500 sq ft
Parking + Storage for Current Users

- Double Loaded Parking: Approx. 38 spaces (20,000 sq ft)
- Dedicated Temporary Storage: Area Required TBD

Chapter 91 Jurisdiction (85,000 sq ft)

- Commonwealth Tidelands: 65,000 sq ft
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- Chapter 91 Jurisdiction: (85,000 sq ft)
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- Water-Dependent Use Zone: Approx. 20,000 sq ft
- Area Outside of Chapter 91 Jurisdiction: 5,500 sq ft
Supporting Use Buildings and Parking

Supporting Use
Approx. 8,000 sq ft

Supporting Use Parking
Approx. 40 spaces (11,500 sq ft)

Chapter 91 Jurisdiction
(85,000 sq ft)

Commonwealth Tidelands
65,000 sq ft
Subject to additional open space and Facilities of Public Accommodation (FPA) requirements

Water-Dependent Use Zone
Approx. 20,000 sq ft

Area Outside of Chapter 91 Jurisdiction
5,500 sq ft

* Supporting use parking and building do not exceed 25% of Chapter 91 jurisdiction area
Supporting Use Buildings and Parking

- Supporting Use Parking
  - Approx. 80 spaces (24,000 sq ft)

- Supporting Use
  - Approx. 16,000 sq ft

Chapter 91 Jurisdiction
  - (85,000 sq ft)

- Commonwealth Tidelands
  - 65,000 sq ft
  - Subject to additional open space and Facilities of Public Accommodation (FPA) requirements

- Water-Dependent Use Zone
  - Approx. 20,000 sq ft

- Area Outside of Chapter 91 Jurisdiction
  - 5,500 sq ft

* Supporting use parking and building do not exceed 50% of Chapter 91 jurisdiction area
FEMA and Ch 91 on I4C2

- FEMA Zone
- Ch 91 Jurisdiction
- Overlap of Both
FEMA and Ch 91 on I4C2

I4C2 Site – Present Day Flood Risk

- 1% Annual Chance or 100-year Storm Flooding
- Mean Monthly High Water Tidal Flooding

I4C2 Site – 2070 Flood Risk

- 1% Annual Chance or 100-year Storm Flooding
- Mean Monthly High Water Tidal Flooding
## Resilience Strategies

<table>
<thead>
<tr>
<th>Resilient Strategy</th>
<th>Resilience Approaches</th>
<th>Strategy Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Develop Flood Preparedness Plan</td>
<td>Although this site is vacant, it is recommended that all Easy-Win resilience approaches be implemented on site in its existing condition and with future development as they aid in building consensus around future resilience approaches.</td>
</tr>
<tr>
<td></td>
<td>Purchase and maintain flood insurance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increase risk awareness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relocate moveable assets including vehicles</td>
<td></td>
</tr>
<tr>
<td>Resilient Strategy 1</td>
<td>Elevate site grade and all future buildings/structures to DFE</td>
<td>Strategy 1 is preferred for this undeveloped site. Before development, elevating the site grade to DFE or future DFE is recommended.</td>
</tr>
<tr>
<td>Resilient Strategy 1</td>
<td>Design location of utilities and critical assets at or above 2070 DFE</td>
<td>If Strategy 1 is not feasible, Strategy 2 can be implemented to build resilience of the site to future flood risk.</td>
</tr>
<tr>
<td>Resilient Strategy 1</td>
<td>Floodproof buildings and assets if 2070 flood exposure is expected</td>
<td></td>
</tr>
</tbody>
</table>

*Building Resilience in Massachusetts Designated Port Areas, June 2021*
We conducted a detailed assessment of a sample of six industrial parcels that have the potential to contribute positively to the marine economy to assess their resilience.

**Takeaway:**
It will take a lot of investment to make these properties viable given their levels of flood risk.

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

All elevations are provided in NAVD88, unless otherwise noted.
Design Flood Elevation (DFE)
Potential Uses & Past Proposals
Potential DPA-compliant and Supporting Uses and Considerations

- Marine Research / Education
- Fish Processing
- How can we maximize support for fishing industry utilizing the site?
  - Storage, equipment, offloading
  - Expansion of dockage
  - Shared Parking
- Boat Repair
- Support for open space programming, point access to the working waterfront for tourists
- Fish Retail and/or Wholesale, public market
- Restaurant
Past Idea Proposals (mini grant): I4-C2-4U

- Sets aside a portion of the waterfront as a development site for allowed MI, DEP uses.
- Parking and loading, increased boat slips, fisherman storage units
- New Building Center for retail activity fronting Rogers street.
- Flex community open space and public toilets
Past Idea Proposals (mini grant): Marine Innovation Center

- Envisioned as a multi-use, multi-tenant facility that will leverage the synergy of a blend of partners - facility with a balanced mix of compatible tenants
- Study identified potential tenants in three broad categories: Ocean Engineering, Adaptive Fisheries Management, Ocean Product Development
- Spaces: Lab/Workshop Suites, Office Space, Test Kitchens, Shared Tenant Uses and Amenities, Water Access and Logistics, Public Amenities
Past Idea Proposals (mini grant): Harbor Center

- Harbor Walk both along the existing waterfront piers, as well as along Rogers Street.
- Whale Watch office and gift shop and dockage for 2 boats or 200 ft. of dockage.
- Water shuttle based at the Whale Watch facility, along with dockage.
- Year-round city market with both inside and outside vendor areas.
- Facility for the Gloucester Chamber of Commerce, including a Visitor Center.
- Center for fishing industry history and awareness.
- Large deck area for cultural events.
- Parking for the general public with public access to the waterfront.
Q&A / Discussion

1. **Dockage**: is there room for increased dock space and boat access on site?
2. **Supporting Uses**: what would be the preferred supporting use mix?
3. **Other Uses**: how could additional uses on site provide support (if licensing is approved)?
4. **Tourism**: Should there/could there be some form of public point access (provided it does not hinder primary marine industrial uses)?
5. **Local Zoning**: Should zoning changes be contemplated that facilitates more compatible supporting use i.e. parking restrictions, height
Other MHP Considerations & Next Steps

• 112 Commercial St Review
• East Gloucester Zoning
• Local Zoning Considerations - Commercial Vessels & Dock Space
• Public Meeting #3: Draft Recommendations
Parking + Storage for Current Users

- **Chapter 91 Jurisdiction**
  - (80,000 sq ft)

- **Dedicated Temporary Storage**
  - Area Required TBD

- **Single Loaded Parking**
  - Approx. 22 spaces (15,000 sq ft)

- **Commonwealth Tidelands**
  - 51,000 sq ft

- **Alternative Water-Dependent Use Zone**
  - 15,000 sq ft

- **Tidelands**
  - 14,000 sq ft

- **Area Outside of Chapter 91 Jurisdiction**
  - 5,500 sq ft
Design Flood Elevation (DFE)

- Building Code Floodproofing Line
- FEMA 100-Year Storm (14 ft)
- 1/4/2018 Storm (10.7 ft)
- 2070 Mean Sea Level Rise (1.5 ft)

Design Flood Elevation incorporating SLR
Existing Conditions and Uses

Currently there is commercial dockage storage, parking, commercial dockage access, and a shoreline protective structure on the site.

<table>
<thead>
<tr>
<th>ID</th>
<th>Asset or System</th>
<th>Description</th>
<th>Critical Elevation (ft NAVD 88)</th>
<th>Ranking Criticality</th>
<th>Loss of Service Consequences</th>
<th>Flood Exposure Floodplain MFR/NFW</th>
<th>Flood Exposure 1%, 0.2% Storm</th>
<th>Flood Type</th>
<th>Recommended Resilience Approach*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shoreline</td>
<td>Sheet pile wall</td>
<td>0</td>
<td>High</td>
<td>Increased shoreline erosion and flooding resulting in operations</td>
<td>2020</td>
<td>None</td>
<td>None</td>
<td>Retain shoreline protection to one</td>
</tr>
<tr>
<td>2</td>
<td>Marine Transportation</td>
<td>Commercial dockage</td>
<td>0</td>
<td>High</td>
<td>Loss of access to boats and use</td>
<td>2020</td>
<td>None</td>
<td>None</td>
<td>Elevate structure to ODE, elevate/ select mooring and anchoring systems to ODE</td>
</tr>
<tr>
<td>3</td>
<td>Vehicle site access</td>
<td>Parking lot</td>
<td>3</td>
<td>Low</td>
<td>Loss of vehicle access and site use</td>
<td>2020</td>
<td>None</td>
<td>None</td>
<td>Elevate grade to ODE</td>
</tr>
<tr>
<td>4</td>
<td>Storage</td>
<td>Commercial dockage storage</td>
<td>0</td>
<td>Low</td>
<td>Loss of equipment and materials</td>
<td>2020</td>
<td>None</td>
<td>None</td>
<td>Retain use to low flood risk location</td>
</tr>
</tbody>
</table>

*All ODE determinations should consider criticality and be made on an asset-by-asset basis in consultation with a qualified professional. Accessibility to the waterfront and maintaining waterfront functionality are important considerations in implementing any strategy, including the evaluation of shoreline infrastructure.
Chapter 91 Tidelands & WDUZ

Setbacks and dimensional requirements along the water restrict where uses can be located.

**Chapter 91 Jurisdiction**
*(80,000 sq ft)*

- Commonwealth Tidelands
  - 65,000 sq ft
  - Subject to additional open space and Facilities of Public Accommodation (FPA) requirements

- Water-Dependent Use Zone
  - 15,000 sq ft

- Area Outside of Chapter 91 Jurisdiction
  - 5,500 sq ft
Chapter 91 Water-Dependent Use Zone

Setbacks and dimensional requirements along the water restrict where uses can be located.

Parcel Area on Solid Land
80,000 square feet

Land outside Water-Dependent Setback
70,500 square feet

Water-Dependent Use Zone
9,500 on land (with 5,500 on pilings)

Regulations for determining this zone are complex and the exact boundaries may change, but this example is illustrative.

(increase WDUZ to the red line which should be approximately 70’ from the pier’s water edge - this is a more conservative interpretation, it depends on whether the pile supported structure is a “pier” or not. Recalculate area and call it “approximate”)

Chapter 91 Tidelands

- Land outside Water-Dependent Setback
  70,500 square feet

- Non-Chapter 91 Parcel
  5,500 square feet

- Commonwealth Tidelands
  65,000 square feet
Existing WDUZ

(Note - everything is commonwealth tidelands because the parcel is public property - delete regular tidelands category and only show commonwealth tidelands - can delete this slide and subsequent reference to regular tidelands)

Chapter 91 Jurisdiction
(80,000 sq ft)

- Commonwealth Tidelands: 51,000 sq ft
- Water-Dependent Use Zone: 15,000 sq ft
- Tidelands: 14,000 sq ft
- Area Outside of Chapter 91 Jurisdiction: 5,500 sq ft
Alternative WDUZ

(Note - delete all material related to alternative WDUZ - it does not achieve much and complicates the narrative)

- Commonwealth Tidelands: 51,000 sq ft
- Alternative Water-Dependent Use Zone: 15,000 sq ft
- Tidelands: 14,000 sq ft
- Area Outside of Chapter 91 Jurisdiction: 5,500 sq ft

Chapter 91 Jurisdiction: 80,000 sq ft
Parking + Storage for Current Users

Chapter 91 Jurisdiction
(80,000 sq ft)

Dedicated Temporary Storage
Area Required TBD

Double Loaded Parking
Approx. 38 spaces (20,000 sq ft)

Commonwealth Tidelands
51,000 sq ft

Alternative Water-Dependent Use Zone
15,000 sq ft

Tidelands
14,000 sq ft

Area Outside of Chapter 91 Jurisdiction
5,500 sq ft

(Note - maintain this scheme, but eliminate alternative WDUZ and regular tidelands per previous slides - and going forward)
Supporting Use Footprints

(Note - maintain this scheme, but eliminate alternative WDUZ and regular tidelands per previous slides - and going forward)

Chapter 91 Jurisdiction (80,000 sq ft)

- Commonwealth Tidelands 51,000 sq ft
- Alternative Water-Dependent Use Zone 15,000 sq ft
- Tidelands 14,000 sq ft
- Area Outside of Chapter 91 Jurisdiction 5,500 sq ft
Supporting Use Footprints

Chapter 91 Jurisdiction
(85,000 sq ft)

Commonwealth Tidelands
65,000 sq ft
Subject to additional open space and Facilities of Public Accommodation (FPA) requirements

Water-Dependent Use Zone
Approx. 20,000 sq ft

Area Outside of Chapter 91 Jurisdiction
5,500 sq ft
Supporting Use Buildings and Parking

- **Supporting Use Parking**: Approx. 80 spaces (23,000 sq ft)
- **Supporting Use**: Approx. 16,000 sq ft
- **Chapter 91 Jurisdiction**: (80,000 sq ft)

*(Note - need to adjust the layout so the supporting use parking does not hinder access to waterfront. Area in upper right is now landlocked - will follow with concept)*

- **Commonwealth Tidelands**: 51,000 sq ft
- **Alternative Water-Dependent Use Zone**: 15,000 sq ft
- **Tidelands**: 14,000 sq ft
- **Area Outside of Chapter 91 Jurisdiction**: 5,500 sq ft

*Supporting use parking and building do not exceed 50% of Chapter 91 jurisdiction area*
Supporting Use Buildings and Parking

Supporting Use Parking
Approx. 80 spaces (23,000 sq ft)

Chapter 91 Jurisdiction
(80,000 sq ft)

Supporting Use*
Approx. 16,000 sq ft

This area free for future water dependent use, access to water

(reconfigure bldg so that are to the right is unobstructed and still 16k sf)

two aisles of double loaded parking, 60ft wide

(Note - need to adjust the layout so the supporting use parking does not hinder access to waterfront. area in upper right is now landlocked - will follow with concept)

Area Outside of Chapter 91 Jurisdiction
5,500 sq ft

Commonwealth Tidelands
51,000 sq ft

Alternative Water-Dependent Use Zone
15,000 sq ft

Tidelands
14,000 sq ft

* Supporting use parking and building do not exceed 50% of Chapter 91 jurisdiction area