# 2024 Gloucester Harbor Plan

Fourth Draft for HPC & State Review, Delivered on March 18, 2024

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The plan was shaped by the active participation of the Harbor Plan Committee, key stakeholders and landowners, and Gloucester residents and community members.

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## 1.0 Introduction

Gloucester's historic, working waterfront has always been and continues to be the center of both civic and commercial activity in the city. Gloucester Harbor is the city's most valuable asset, making planning for its future central to all economic and community development activity. With the 2024 Gloucester Municipal Harbor Plan and Designated Port Area Master Plan Renewal and Amendment ("2024 Gloucester MHP" or "the Plan"), the City of Gloucester continues to prioritize and explore ways to support infrastructure investment, create and retain jobs, and diversify its fisheries-based maritime economy.

Gloucester's previous Municipal Harbor Plan/Designated Port Area Master Plan (MHP/DPA MP) was approved on December 14, 2014, with a ten year expiration. While many of the priorities of the 2014 Plan still apply, this Plan addresses continued pressures to (1) its commercial fishing operations from changes in fisheries management and global competition, and (2) its existing and aging infrastructure from the risks associated with climate change and rising tides. Further, the Plan provides guidance for Gloucester's harbor economy to capitalize on new "blue economy" opportunities in fisheries, marine research and biotechnology, and ocean and seafood product development, as a way to diversify and expand economic activity while maintaining the centrality of the harbor to the City's identity.

The goals of the Gloucester MHP Renewal & Amendment are to:

- Align the MHP and DPA plan with the City's goals of diversifying and modernizing its maritime economy;
- Incorporate long term planning measures to adapt to risks associated with rising sea levels and climate change; and
- Renew the 2014 Gloucester MHP and the provisions of the DPA Master Plan for an additional ten years for those elements that are still consistent with the goals of the city.

The Plan's regulatory approach retains productive Chapter 91 and DPA substitutions and amplifications from the 2014 Gloucester MHP to ensure continued regulatory support for flexibility in Water Dependent Use Zones, non-displacement of commercial fishing vessel berthing, Water Dependent Industrial Use-compatible public access, and economic support options for DPA supporting uses. The Plan also adds a new Alternative Coverage Ratio to provide further guidance for supporting uses at 65 Rogers Street, an important City owned waterfront parcel that continues to be perceived as underutilized by Gloucester's residents.

While these regulatory modifications continue to be relevant to sustaining and growing Gloucester's harbor economy, the Plan acknowledges that they must work in parallel with additional economic initiatives for key maritime sectors to be undertaken by the City. These include planning and seeking funding for infrastructural repairs and improvements, investigating opportunities to expand the market for Gloucester's seafood catch and products, and pursuing new partnerships with regional institutions and living resources leaders to expand Blue Economy opportunities and build public and private sector capacity.

The Plan was crafted with extensive participation from the Harbor Planning Committee, which met regularly to provide ongoing advice on environmental, regulatory, and economic developments issues. In addition, several public meetings were held to solicit feedback on the resident priorities for the harbor and potential future uses. In addition to these public fora, multiple waterfront property owners and

stakeholders were interviewed to assess the status of their properties, their plans for the future and their experiences with the Chapter 91 regulations as modified by the 2014 Gloucester MHP.

## 2.0 Gloucester Harbor Planning Area Description and Background

### 2.1 Harbor Planning Area

As shown in Figure 1, the 2024 Gloucester Harbor Planning Area encompasses the entirety of Gloucester's Inner Harbor, Harbor Cove, and Smith Cove and adjacent landside areas extending from the Rocky Neck peninsula to the Blynman Canal. On the landside, the Harbor Planning Area extends to one parcel depth on the far or inland side of each of the DPA and harbor access roads: Western Avenue, Commercial Street and Fort Square, Rogers Street and Main Street in downtown, East Main Street, Rocky Neck Avenue, and Horton Street.





The 2014 planning process considered areas west of the Blynman canal to Stage Fort Park, along the boulevard, but that area ultimately played a very small role in the final emphasis of the plan which was centered mostly around areas in the inner harbor and the DPA areas in jurisdiction. This plan will therefore exclude those areas west of the canal and will focus on the inner harbor jurisdictional areas as well as an additional layer of upland impact areas.

The Harbor Planning Area for the 2024 Gloucester Harbor Plan encompasses approximately 424 acres. The DPA total area is approximately 215 acres, 184 acres of which are within Chapter 91 jurisdiction. The total Harbor Planning Area outside of the DPA is approximately 209 acres, 108 acres of which is in Chapter 91 jurisdiction.

As shown in Figure 2, the Harbor Planning Area includes the following sub-areas, each of which has distinctive physical, regulatory, and use characteristics that shape their economic identity and potential.



Figure 2. Gloucester Harbor Planning Sub-Areas

1. Downtown Commercial, Cultural, and Tourism District

This sub-area is entirely outside the DPA and encompasses the heart of downtown Gloucester's commercial corridor along Main Street and continues along Commercial Street and Western Avenue where there is a concentration of public open space and tourism uses. This area is significant for the harbor economy because it represents one of the areas where the public has the most visual connection with and interaction with the working waterfront, and so is an area of great economic importance and potential while also being an area of tension and conflict when resident and visitor uses interfere with maritime industrial operations.

#### 2. Harbor Cove Active DPA Small-Lot Industrial District

This sub-area is almost entirely within the DPA and encompasses a collection of privately held narrow pier-style small-lot marine industrial as well as several significant publicly-held assets such as the Harbormaster's office, US Coast Guard station, and several parks that anchor the public identity and experience of Gloucester's working waterfront. Despite the physical constraints

of the parcels, comparatively poor landside trucking access, and deteriorating conditions of waterside infrastructure, this area continues to be a vital part of the fishing and vessel servicing economies in Gloucester.

3. Urban Renewal Era Large-Lot Industrial Port District

This sub-area is entirely within the DPA and is dominated by privately held larger parcels with deep water access and comparatively better landside truck access that represent the core of Gloucester's maritime industrial capacity. However, despite its physical advantages, many of the parcels in this area are underutilized and have a waterside infrastructure and building maintenance backlog that constrains their capacity and potential.

4. East Gloucester Former DPA Marine Industrial District

This sub-area was removed from the DPA as part of the 2014 boundary review and so is now entirely outside the DPA boundary. Despite no longer benefiting from the state-level regulatory protections the DPA provides, this area has retained a maritime industrial character with many commercial marinas and several lobstering enterprises anchoring the waterfront, interspersed with harborside tourism and hospitality uses and smaller workshops and arts spaces on parcels along East Main Street.

5. Adjacent Residential, Recreational, and Commercial Districts

Concentrated in Smith Cove and Rocky Neck with a small area at the head of the harbor inland from the Fish Pier where Main and East Main Street meet, these districts are entirely outside the DPA but still have and economic, cultural, and physical relationship to active DPA uses. These areas are already, in many cases, home to complementary uses that bolster Gloucester's maritime economy but are not water-dependent industrial uses themselves.

See Appendix D for more detailed information on each of these districts.

### 2.2 History

#### **Groundfishing Roots**

Fishing has been a way of life in Gloucester since the Dorchester Company of Puritans landed here in 1623 and for centuries prior to that when it was occupied by the Pawtucket and other native peoples. For almost 400 years, Gloucester Harbor has been one of the country's most important commercial fishing communities. Boats from other ports in Massachusetts, New Hampshire, Maine, and Rhode Island have converged on Gloucester for centuries.

In recent years, the City's primary fishing industry and the myriad associated industries that support it (e.g., fish processing, fueling, ship and boat repair, ice supply) have gone through a series of dramatic changes that have fundamentally altered the economic and operational realities of these businesses. The first was a dramatic drop in the groundfishing supply due to centuries of overfishing on George's Bank, then the severe federal fishing restrictions that followed to prevent overfishing. These two interconnected changes alone destabilized Gloucester's economic base and required every maritime business in Gloucester to reinvent itself.

Compounding the sudden decline of local groundfishing populations and tightening regulations were global economic forces that drove changes in supply chain management and transportation, increased competition at a national and international scale, and rapid technological advancements in the

norms of the fishing industry. These global economic changes put Gloucester at risk because of the harbor's comparatively poor landside trucking infrastructure and distance to a major highway corridor.

Finally, climate change has resulted in changes to ecology, habitat, and flood risk that have shifted the catch types that are abundant and available to Gloucester fishing operations and have resulted in increased flood risk and storm damage. Despite this, Gloucester's fishing industry has persisted and demonstrated extraordinary ingenuity and resilience, but it has come at a cost - reduced profit margins and increased uncertainty have contributed to decades of degradation of the shoreside infrastructure that sustains the port's commercial fishery base.

### **Designated Port Area Role in Navigating Change**

In 1978, the Gloucester harbor became a Designated Port Area (DPA) in order to protect the viability of the harbor for marine industrial use. While the DPA has successfully protected the working waterfront from the encroachment of incompatible uses, it has also yielded some unintended consequences in part due to its convergence with globalization and technological advancements that have changed the fundamental economics of Gloucester's water-dependent industrial businesses and introduced inconsistency between the regulations and the intent of preserving an active waterfront. The harbor planning process represents an important mechanism to address these unintended consequences in a contextually appropriate way informed by economic analysis as well as the input of stakeholders and residents. The harbor plan addresses, among other issues, three friction points between the DPA regulations and the economic needs of Gloucester's harbor:

Exclusion of significant public access from the waterfront. In many cases, the protections the DPA
provided also resulted in deprioritizing public access to and use of the waterfront. The harbor
planning process represents an important tool to encourage a balanced approach to incorporating
public access while protecting operational needs of water-dependent industrial businesses. In the
introduction to the 1994 DPA regulations, the state agencies emphasize that

"judicious planning of the use mix in the DPA and its environs together with compatible incorporation of public access facilities into the design of individual projects can advance the quality-of-life objectives of the surrounding community without significant interference with maritime activities at or near the waterfront."

- Shifting Role of Waterside and Landside Supply Chains. Significant marine industries on the waterfront no longer use the dockage or waterside access to the property. With the decline of fish landings, East Coast groundfish has become too valuable to be used for the frozen seafood for which Clarence Birdseye made Gloucester famous. The frozen fish packaged and stored in Gloucester comes in by truck from the Pacific coast.
- 3. Unmet Commercial Fishing Dockage Demand & Waterside Infrastructure Maintenance Backlog. Due to a variety of factors, there has been a lack of investment in new dockage at the same time that commercial fishing vessel days at sea have been so seriously reduced that vessels require much more time at the dock. This has converged with increased demand for dockage among charter fishing and recreational fishing boat owners that are willing and able to pay far more for dockage than a typical commercial fishing operation is able to pay. The result has been a shortage of appropriately priced commercial fishing dockage in the city for active commercial fishing operations.

The harbor planning process represents an opportunity to strengthen the Designated Port Area

by simultaneously investing in marine industrial assets and finding ways to promote active use of the water's edge with a full range of uses that help to connect the economy, culture, and identity of downtown Gloucester with its working waterfront.

#### A Diversifying Maritime Economy

Today, even with the strictest federal regulations ever imposed on the groundfish industry and multi-faceted economic, environmental and regulatory pressures, Gloucester is still a vital working port. Boats from other ports in Massachusetts, New Hampshire, Maine, and Rhode Island are unloading in Gloucester, some seeking temporary dockage here to fish from Gloucester for periods during the year. Retaining, strengthening and continuing to build the capacity of Gloucester to fish, land, and process an increasingly diverse array of species continues to be vital to the identity and economic future of Gloucester's large natural harbor, its proximity to Georges Bank and the Gulf of Maine, the extent and variety of the marine know-how of its residents and the people it draws to it, the work ethic prized and practiced here: all these and more are elements from which to forge highly successful collaborations between fisheries, marine science and technology, and the professional maritime trades.

And so, while Gloucester harbor continues to be a regional hub for commercial groundfishing, lobstering, and tuna fishing, it is also increasingly being recognized for its other emerging strengths - its whale watching enterprises, research organizations, federal and state marine regulatory agencies, marine genomics expertise, and maritime educational organizations.

The future of Gloucester's harbor economy relies on simultaneously strengthening the harbor's traditional fishing industry and recruiting and supporting complementary emerging industries that provide economic stability, resilience, and diversity. Compatible industries for the commercial fishery (such as the professional maritime trades, renewable energy, and marine and climate change research) already have a foothold in Gloucester. These industries are providing additional work for the existing commercial fleet, increasing demand for shoreside property, and creating synergy between the existing knowledge base of the community and emerging blue economy industries. This plan provides an opportunity to further define the conditions under which these complementary uses can benefit one another and the Gloucester maritime economy as a whole.

## 2.3 Recent Planning Efforts

Since the 2014 Gloucester Harbor Plan, the City has implemented the recommended zoning and policy reforms and has undertaken several local planning efforts to help shape development priorities and ground local decision making. Provided below is a summary of relevant research and planning efforts since the 2014 Gloucester Harbor Plan:

1. Coastal Climate Change Vulnerability Assessment and Adaptation Plan (2015)

The Coastal Climate Change Vulnerability Assessment and Adaptation Plan (CCCVAAP) identified and prioritized public infrastructure at risk of increased flooding and conceptual strategies and costs to make them more resilient. This plan is discussed in greater detail as part of Section 5 on Coastal Resilience.

2. <u>Municipal Vulnerability Preparedness Workshop Summary of Findings</u> (2018)

The Municipal Vulnerability Preparedness (MVP) workshop summary of findings reiterates many of the priorities and strategies identified in the CCCVAAP. The purpose of the workshop was to:

- a. Define extreme weather and natural and climate related hazards;
- b. Identify existing and future vulnerabilities and strengths;
- c. Develop and prioritize actions for the community; and

d. Identify opportunities to take action to reduce risk and build resilience. This MVP workshop summary of findings is discussed in greater detail as part of Section 5 on Coastal Resilience.

#### 3. North Shore Blue Economy (NSBE) Phase 1 Assessment (2021)

The City of Gloucester partnered with the UMass Amherst Gloucester Marine Station, Gloucester Economic Development & Industrial Corporation (EDIC), and the Cape Ann Chamber of Commerce on a new exploration of the North Shore Blue Economy (NSBE). Phase 1 of this initiative was modeled after the report, *Navigating the Global Economy: A Comprehensive Analysis of the Massachusetts Maritime Economy*, commissioned by the SEC and with research conducted by the UMass Dartmouth Public Policy Center. The goal of the NSBE Phase I assessment was to determine both how current NSBE sectors are performing as well as where to focus investment for future, sustainable growth. This report was released in September of 2021 and was incorporated into the Gloucester Harbor Plan economic analysis with the expectation that Gloucester can and should play a leadership role within the region.

#### 4. Local Rapid Recovery Program (LRRP) Plan (2021)

Completed in October of 2021, this plan focused on the downtown area and its connections to the industrial waterfront. The LRRP Plan highlighted Gloucester's rich heritage rooted in fishing and the arts as important assets. The LRRP Plan recommended action in three areas to spur Downtown Gloucester's economic recovery: (1) building organizational capacity through creation of a Downtown district management organization, (2) creating a cohesive downtown by developing a Downtown brand identity and maximizing the physical connections between Main Street and the waterfront, and (3) balancing outdoor dining, downtown activations and parking by incorporating increased outdoor dining and public space activation, and mastering parking utilization and management practices that unlock the downtown's full potential. The goals, findings, and recommendations of this plan are most relevant to the Harbor Cove sub-area of Gloucester Harbor, and particularly for the streetscapes, wayfinding and programming along Rogers Street, the Harbor Walk, and at 65 Rogers Street (I4-C2).

#### 5. Building Resilience in Massachusetts Designated Port Areas (2021)

Completed in June of 2021, this report was prepared for the Massachusetts Office of Coastal Zone Management and addressed resilience for water dependent industrial users in the Chelsea Creek and Gloucester Inner Harbor Designated Port Areas. The report highlighted low-cost, easy-to implement near-term risk reduction strategies (e.g., increasing risk awareness, developing business-specific flood preparedness plans, relocating or elevating moveable assets, and purchasing and maintaining flood insurance) as well as longer-term comprehensive resilience strategies that reduce risk for high criticality assets and those that are necessary to maintain core mission services or life safety. The study researched and provided site-specific resilience recommendations for six representative sites in Gloucester: the Jodrey State Fish Pier, Gorton's, Maritime Gloucester, the Harbormaster's Office, 65 Rogers Street (I4-C2), and Cape Pond Ice.

#### 6. Climate Action and Resilience Plan (2022)

In September of 2021, the City of Gloucester was awarded \$69,890 through the Municipal Vulnerability Preparedness (MVP) Action Grant program to fund the creation of a Climate Action and Resilience Plan (CARP), in collaboration with the Metropolitan Area Planning Council (MAPC) and the City's Clean Energy Commission (CEC). The plan identified the highest priority challenges and the most feasible solutions to put Gloucester on track to meet long-term energy,

climate, and resilience goals. This plan is discussed in greater detail as part of Section 5 on Coastal Resilience.

7. Open Space and Recreation Plan (2022)

The 2022 Open Space and Recreation Plan (OSRP) builds on the accomplishments of Gloucester's 2010 – 2017 OSRP and represents a renewed commitment by the City and its residents to protect and improve the open space and recreational resources that contribute significantly to the quality of life in Gloucester. Gloucester's Open Space and Recreation Plan is a tool through which a community plans for the future of its conservation and recreation resources. It allows a municipality to plan for the protection and management of "green infrastructure" of water supply, land, working farms and forests, viable wildlife habitats, parks, recreation areas, trails, and greenways with the same importance as is placed on planning for schools, roads, water, and wastewater infrastructure. OSRPs are informed by a thorough public participation process and reflect the needs of its community members. The City's Open Space & Recreation Committee oversees the development of the City's OSRP, with the assistance of staff from the Community Development Department and consulting support from the Metropolitan Area Planning Council (MAPC).

### 2.4 Regulatory Conditions

Gloucester Harbor is subject to regulatory authorities of local, state, and federal governments. There are a number of key jurisdictions and regulations which affect land use around the harbor as is illustrated in Figure 3. They include:

- Chapter 91 Public Waterways Act Jurisdiction the Historic High Water line (HHW) is the inland limit of the state's jurisdiction under Chapter 91, the Public Waterfront Act, administered by the DEP. The HHW depicted on Figure 3 is the so-called "presumptive line "used by the DEP for planning purposes. The actual location of HHW may be more landward or seaward, and as determined by the DEP on a case-by-case basis.
- **Designated Port Area (DPA)** this is a sub-section of areas under Chapter 91 jurisdiction, and includes portions of developed waterfront designated by the state under 301 CMR 25.00 in which policies and regulatory authorities are directed toward preserving water-dependent maritime industry and supporting uses.
- Municipal Zoning this controls use, density and dimensions of site development within the city. The area subject to this Municipal Harbor Plan falls within several zoning districts. The majority of land adjacent to the harbor falls within the Marine Industrial (MI) zone, designed with the intent of promoting marine industrial use and requiring that the water's edge be reserved for vessel access, consistent with the Chapter 91 regulations that apply to these areas.





It is also worth noting the role of state and federal regulations in waterborne navigation, dredging, and filling. While not pictured in the map graphic, these regulations play an important role in water-dependent development throughout Gloucester harbor.

- **Board of State Harbor Commissioners Line** (also referred to as the Harbor Line) this line defines the seaward limit beyond which no structures can be built and is approved by the state legislature.
- U.S. Army Corps of Engineers (USACE) Harbor Jurisdiction for Section 10 (Rivers and Harbors Act) the USACE jurisdiction is up to the mean high water line and for Section 404 (Clean Water Act), USACE jurisdiction is up to the spring high (i.e., highest astronomical) tide line, including wetlands. The Gloucester Federal Navigational Channel is maintained by the USACE and work within or near the channel is regulated under Section 408.

These and other regulatory programs are discussed in greater detail in the remainder of Section 2.4.

#### **Federal Jurisdictions and Regulations**

The navigation, maintenance, and development along Gloucester's harbor are influenced by several federal regulations and agencies - the Federal Emergency Management Agency's flood risk management programs, the US Army Corps of Engineers' navigation, dredge and fill programs, and the US Environmental Protection Agency's stormwater management program.

#### Federal Emergency Management Act Regulations

The Federal Emergency Management Agency (FEMA) is the federal agency responsible for overseeing recovery and relief from natural disasters. FEMA administers the National Flood Insurance Program (NFIP), which provides flood insurance to anyone living in participating communities. In order to participate in NFIP, communities must adopt and enforce NFIP floodplain management regulations. NFIP produces Flood Insurance Rate Maps (FIRMs), which are the official maps of a community on which FEMA has delineated the special flood hazard areas, or 1-percent annual chance flood zones, based on a Flood Insurance Study. Within the special flood hazard areas, NFIP floodplain management regulations must be enforced and flood insurance is mandatory for homes and businesses with mortgages from federally-backed lenders. The City has recently formally adopted the FIRMs in a new Floodplain Overlay District zoning ordinance.

FEMA FIRMs for the City of Gloucester, effective since 2014, delineate the various flood zones within the study area. The majority of the study area, including all waterfront properties, is within special flood hazard areas subject to the 1-percent annual chance (100-year recurrence) flood.

Special flood hazard areas inside the mouth of the Inner Harbor are mapped as AE zones. FIRMs provide Base Flood Elevations (BFEs), or 1-percent annual chance flood elevations, for AE zones. Gloucester's FIRMS indicate that AE zones west of the State Fish Pier generally have a 4-foot higher BFE than areas east. AE zones are expected to have wave heights less than 3 feet in the 100-year flood. Portions of some Inner Harbor waterfront properties in the Fort Hill area are within the Limit of Moderate Wave Action, or Coastal A Zone, where wave heights are between 1.5 and 3 feet. Because of the orientation and shelter provided by the harbor, most of the Inner Harbor has wave heights less than 1.5 feet.

Special flood hazard areas along and outside the mouth of the Inner Harbor are mapped as VE zones, or velocity zones. FIRMs provide BFEs for VE zones as well, and they tend to be much higher. That is because VE zones are subject to wave heights 3 feet or greater. These large waves carry enormous forces that can easily erode shorelines and damage structures, making them particularly vulnerable areas for development. As such, VE zones are subject to stricter floodplain management regulations.

FEMA periodically updates flood hazard maps by conducting a detailed reevaluation of flood hazards, referred to as a Flood Insurance Study. FEMA has made a final determination based on such a reevaluation, and released new flood maps for all of Essex County Massachusetts early 2014. In order to maintain its standing in the Nation Flood Insurance Program, the City of Gloucester adopted the newly released flood maps, which became effective July 16, 2014, increasing the base flood elevation in several areas of the community.

There may be instances where site-specific information may demonstrate that the flood risk has been incorrectly mapped. FEMA has established procedures by which a community or property owner may compile appropriate data and request a map revision. An example in the Inner Harbor is the National Grid substation site. National Grid submitted site-specific information and analysis resulting in a reduction of the AE zone limits and BFE on their property. Further, if an individual property owner has technical information to indicate that their home or business has been inadvertently shown within the special flood hazard area on a FIRM, the property owner may submit that information to FEMA and request that FEMA remove the flood zone designation from their property by issuing a Letter of Map Amendment (LOMA) or a Letter of Map Revision Based on Fill (LOMR-F). Requests for LOMAs/LOMR-F must include the surveyed elevation of the lowest grade adjacent to the structure or the lowest enclosed level of the structure along with certain other information.

#### US Army Corps of Engineers Regulations

The US Army Corps of Engineers (ACOE) regulates shorefront activities including dredging and filling in or near coastal waters below the high water Mark (Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act).

Section 404 of the Clean Water Act authorizes the ACOE to regulate the discharge of dredged or fill material into "waters of the United States" which are all navigable waters, tributaries to navigable waters, wetlands adjacent to those waters. The limit of jurisdiction is the high tide line in tidal waters; where adjacent wetlands are present, it is the limit of the wetland. Regulated activities include the placement of fill for construction, site-development fill, riprap, seawalls, and beach nourishment.

Section 10 of the Rivers and Harbors Act of 1989 authorizes the ACOE to regulate structures and work in navigable waters of the US. Jurisdiction extends shoreward to the mean high water line. Regulated activities include construction of piers and wharves, permanent mooring structures such as pilings, intake and outfall pipes, boat ramps, and dredging and disposal of dredged material, excavation, and filling.

The ACOE's other major responsibility is to plan and carry out water resources projects such as improvements to navigation. Since 1986, the cost for such projects is shared between the federal government and the non-federal sponsors. An important consideration in the ACOE's decision to undertake a project is that its benefits exceed the cost. For projects such as dredging of harbors and navigation channels, highest priority goes to projects that benefit maritime industry such as shipping and fishing.

The entrance channel into Gloucester Harbor as well as its branches (Harbor Cove, Smith Cove, North Channel, and South Channel) are federally created and maintained navigation channels.

#### Phase II NPDES Storm Water Program

The US EPA's stormwater management program, initiated in 1990 under the Clean Water Act, is aimed at preserving, protecting and improving the nation's water resources from polluted stormwater runoff. The first phase of the program focused on using the National Pollutant Discharge Elimination System (NPDES) permits to address stormwater runoff from larger storm sewer systems serving populations of 100,000 or more and construction activities disturbing five acres or more and certain industrial activities. Phase II, which began in 1999, extended the NPDES permit coverage for storm water discharges from smaller storm sewer systems (under 100,000 population) in urbanized areas and smaller construction sites (activities disturbing between one and five acres of land).

Phase II is an attempt to further reduce adverse impacts to water quality and aquatic habitat through the use of controls such as public educational programs, storm sewer inspections for illegal connections, and ordinances to control construction site runoff.

#### **State Jurisdictions and Regulations**

At the State level, the Commonwealth of Massachusetts has a range of programs, regulations and tools that influence Gloucester's harbor development, including the State Harbor Line, Special Acts of the Legislature, the Public Waterways Act (Chapter 91, 310 CMR 9.00), the Massachusetts Ocean Sanctuary Program, Review and Approval of Municipal Harbor Plans (301 CMR 23.00), and the Designation of Port Area regulations (301 CMR 25.00), the Wetlands Protection Act and the State Building Code.

#### Board of State Harbor Commissioners Line (Harbor Line)

A Board of State Harbor Commissioners Line, commonly referred to as the Harbor Line or State Harbor Line, is a legislatively established line that defines the seaward limit beyond which no structures can be built. This mechanism has been used to guide maritime development in the US since 1837, and can be modified only by the State legislature.

#### Special Acts of the Legislature

Prior to 1866 when the Public Waterways Act (Chapter 91, 310 CMR 9.00) was first promulgated, the Massachusetts legislature issued special acts to transfer title of a property from the commonwealth to a waterfront landowner and to enable particular types of development to take place on the property as specified in the act. The rights granted within a special act are transferred to each successor at the time of sale, but they do not exempt a property owner from Chapter 91 review for a new or modified use of the property.

#### Chapter 91 Public Waterways Act (310 CMR 9.00)

The commonwealth has regulatory authority over the use and alteration of filled and flowed tidelands – the area seaward of the historic high water line – under Massachusetts General Law Chapter 91 (Public Waterways Act, 1866). The purpose of this law and its corresponding waterways regulations (310 CMR 9.00) are to protect the public's rights to use the state's waterways by ensuring that tidelands are used only for water-dependent uses or otherwise serve a proper public purpose. Chapter 91 applies to structures such as piers, wharves, floats, retaining walls, revetments, pilings, and buildings. All existing structures not previously authorized and any new construction or change of use of a structure requires Chapter 91 Authorization.

Chapter 91 (Public Waterways Act) and the Waterways Regulations (310 CMR 9.00) are Massachusetts' principal waterfront regulatory program in tidelands and other waterways. Chapter 91 and the corresponding Waterways Regulations (310 CMR 9.00) are administered by the Division of Wetlands and Waterways of the Massachusetts Department of Environmental Protection.

Chapter 91 jurisdiction extends landward to the historic high water mark and seaward three miles to the limit of state jurisdiction. The historic high water mark is "the high water mark which existed prior to human alteration of the shoreline by filling, dredging, excavating, impounding, or other means" (310 CMR 9.02). Thus, Chapter 91 applies to filled as well as flowed tidelands, so that any filled areas, moving inland to the point of the historic high tide mark, are subject to Chapter 91 jurisdiction.

Chapter 91 authorization is generally required for any fill, structure, or use not previously authorized in tidelands, including any changes of use and structural alterations. Types of structures include: piers, wharves, floats, retaining walls, revetments, pilings, bridges, dams, parking lots, and buildings (if located on filled lands or over the water).

For planning purposes, the location of the historic high water mark (i.e., upland limits of Chapter 91 jurisdiction) may be established through a review of maps that reliably show the original natural shoreline or through engineering studies. Previously issued Chapter 91 licenses may also be a source of information on the historic high tide line for specific parcels. The Office of Coastal Zone Management initiated a project to map the historic shoreline of the commonwealth, including Gloucester Harbor. The historic high water mark on these maps, known as the "presumptive line" may be used by DEP and waterfront property owners as the line of Chapter 91 jurisdiction. Ultimately, jurisdiction will be determined by DEP on a property-by-property basis at the time of licensing or as part of the review of any application for a Request for Determination of Applicability.

#### Massachusetts Ocean Sanctuary Program

In 1970, Massachusetts passed the Ocean Sanctuaries Act (Ch. 132A, Section 12A) which applies to the area between the mean low water line and three miles offshore, except for the area between Lynn and Marshfield. The act is designed to protect coastal waters by prohibiting activities that could be environmentally or aesthetically damaging. The act prohibits exploitation or development that would seriously alter or endanger the ecology or appearance of the ocean, seabed or the subsoil. Some of these prohibited activities include building on the seabed, drilling, dumping wastes, and commercial advertising. However, fishing, sand extraction, and special projects are still allowed under the act. The Office of Coastal Zone Management (CZM) has jurisdiction over the ocean sanctuaries and CZM must approve all activities that occur on, or in, these areas.

#### Designated Port Area (301 CMR 25.00)

The Designated Port Area (DPA) regulations (301 CMR 25.00) govern the designation and review of boundaries for DPAs, which are designed to protect the marine industrial areas of the state from encroachment by other uses. work in conjunction with the Chapter 91 regulations (310 CMR 9.00) and with the provisions of the Municipal Harbor Plan regulations (301 CMR 23.00) governing the review and approval of DPA Master Plans. Within a DPA, no new hotels, residences, or recreational marinas may be developed; the amount of commercial uses is limited; and there are dimensional and other requirements to carefully guide development.

Regulations pertaining to the DPA are part of the Chapter 91 Waterways Regulations (310 CMR 9.00), but DPAs include areas within and outside of Chapter 91 jurisdiction. For DPA areas within Chapter 91 jurisdiction, the state has significant control over uses, structures, and activities through the Chapter 91 licensing process. Development on DPA lands outside of Chapter 91 jurisdiction is primarily under the control of the local municipality, through the local zoning bylaws.

#### Municipal Harbor and DPA Master Planning

Under the Municipal Harbor Plan regulations (301 CMR 23.00), CZM and DEP work with municipalities to take a comprehensive approach to DPA planning through DPA Master Plans. A DPA Master Plan is the component of a Municipal Harbor Plan (MHP) pertaining to lands and waters of a DPA. As part of the Municipal Harbor Plan, the DPA Master Plan must comply with a series of approvability standards, which include measures to preserve and enhance the capacity of the DPA to accommodate water-dependent industrial use and to prevent substantial exclusion of such use by any other eligible uses. In a DPA Master Plan, a municipality may request flexibility for certain use standards, but must balance that flexibility with strategic elements that ensure that DPA interests are still protected.<sup>1</sup> DPA Master Plans provide a mechanism to customize and clarify interpretation of the statewide Chapter 91 regulations by introducing amplifications, substitutions, and offsets that respond to local conditions, needs, and priorities. A Municipal Harbor Plan and it's associated DPA Master Plan, once approved, provides critical local guidance for DEP in applying the numerous discretionary requirements of the Waterways Regulations.

Much of Gloucester's Inner Harbor was identified by the state as a Designated Port Area (DPA) in 1978. Gloucester's original DPA boundary was modified on April 23, 2014, as a result of the CZM Boundary Review Decision summarized below in this section, and attached to this Plan as Appendix C.

#### Gloucester DPA Boundary Change (2014)

In March 2013, at the request of the Gloucester Harbor Plan Committee, Gloucester Mayor Carolyn Kirk formally requested that CZM initiate a review of the entire boundary of the Gloucester Inner Harbor DPA.

<sup>&</sup>lt;sup>1</sup> https://www.mass.gov/service-details/czm-port-and-harbor-planning-program-designated-port-areas

CZM accepted the request in April 2013, and notices of the review were published in the Environmental Monitor and the Gloucester Daily Times. CZM found that the East Gloucester and Smith Cove planning units did not meet the criteria for inclusion in a DPA boundary as required by 301 CMR 25.04(2)(d) and concluded that they should be removed from the Gloucester Inner Harbor DPA. In addition, as the shorelines in these areas no longer establish a functional connection to a DPA land area, CZM found that the waterways adjacent to these areas did not meet the criteria for inclusion at 25.04(1) and concluded they should also be removed from the DPA. This decision became effective on April 23, 2014.

#### Local Jurisdictions and Regulations

The City of Gloucester regulates land use, density, and dimensions of new development through its Zoning Ordinance. It also regulates wetlands through its General Wetlands Ordinance and regulates waterways through its Waterways Regulations, which are managed and maintained by the Harbormaster and Waterways Board.

#### **Municipal Zoning**

Figure 4 shows the zoning districts that govern local development within and surrounding Gloucester Harbor. The Harbor Planning Area includes Marine Industrial, Neighborhood Business, Central Business and Civic Center zoning districts. At its periphery, the Harbor Planning Area also includes some areas of Residential (R-5 and R-10) which are in close proximity to the harbor.



Figure 4. Gloucester Harbor Zoning

The bulk of the Harbor Planning Area, and virtually all of the DPA (except for the sliver of DPA between Rogers and Main Streets, which is Central Business) falls within the Marine Industrial (MI) District; the only area in the city zoned as MI is the inner harbor waterfront. As stated in Section 2.1 of the Zoning Ordinance, the zone was "established only where the district borders coastal and tidal waters, and where the access and utilities roads can support high-intensity, industrial and commercial development that is primarily marine-related."

The Central Business District's purpose is to accommodate a combination of retail and business uses, residential uses, office uses, and institutional uses - all of which make up the city's central core. Gorton's headquarters building is located in this district.

The Neighborhood Business District allows a variety of retail business uses consisting primarily of convenience shopping for the surrounding residential areas.

The Gloucester Zoning Ordinance is structured in a way to generally be in alignment with the State's Chapter 91 and DPA goals and objectives. Gloucester's local Maritime Industrial (MI) zoning was established in 2010 as a result of the 2009 Gloucester Harbor Plan to protect and promote marine industrial use of the harbor by reinforcing and ensuring consistency with the State's Chapter 91 and DPA regulations. The MI District promotes water dependent industrial uses in several ways:

- <u>Reserving the immediate waterfront for vessel-related activities.</u> The MI District zoning stipulates that within the water-dependent use zone, as defined in 310 CMR 9.02, no use shall be permitted unless it provides access to water-borne vessels wherever possible.
- <u>Restricting incompatible uses</u>. The MI District prohibits residential development, hotels, and motels.
- <u>Discouraging displacement of existing marine industrial uses</u>. The MI district carries a requirement that any new or expanded use that exceeds Site Plan Review thresholds, must "comply with the standards and requirements with regard to the placement and dimensions of structures as regulated by G.L. c.91 and 310 CMR 9.00 et seq." Additionally, many uses which would be characterized as "supporting uses" require the review and approval by special permit of the City Council, which must make the following findings:
  - The proposed use will not displace an existing water-dependent use with a non-waterdependent use;
  - The proposed use will not, by virtue of its location, scale, duration, operation, or other aspects, pre-empt or interfere with existing or future development of water-dependent uses of the project site or surrounding property;
  - The proposed use is compatible with the working waterfront character of the zone;
  - The proposed project will not displace existing commercial fishing vessel berthing in Gloucester Harbor, without providing equivalent space and draft at a suitable alternative site not already used by commercial fishing vessels;
  - The proposed use will not adversely affect the preservation of water-dependent uses on surrounding properties.

These provisions in the local zoning continue to strengthen and support the goals and objectives of the DPA program.

#### Wetlands

One of the primary responsibilities of the Gloucester Conservation Commission is the administration and enforcement of the Massachusetts Wetlands Protection Act (MGL Ch. 131, sec. 40) along with its corresponding Wetlands Regulations (310 CMR 10.00). In addition, Gloucester has adopted under general Home Rule powers a municipal wetlands by-law (Article II, Sec. 12.10 – 12.21). Under the Wetlands Act and local by-law, the Conservation Commission has authority over projects in or affecting any categories of resource areas: bank, beach, dune, flat, marsh, swamp, freshwater, or coastal wetlands which border on the ocean or any estuary, creek, river, stream, pond, or lake. The commission also has jurisdiction for land under water bodies, land subject to tidal action, land subject to coastal storm flowage, and land subject to flooding. Activities within these resource areas subject to jurisdiction include activities that would remove, fill, dredge, or alter the resource. The commission also has the right of review for activities within a 100-foot buffer zone around wetlands bordering water bodies, banks, beaches, and dunes.

#### **Gloucester Waterways Regulations**

Gloucester's Waterways Regulations outline the procedures and rules regarding moorings, boat ramps and public landings, traffic, and safety. No one can moor, anchor or set any moored vessel or float within the limits of Gloucester Harbor without obtaining a permit from the harbormaster. Permits are issued on a first come, first serve basis. The harbormaster has the authority to reassign mooring locations of any permitted vessels at any time. If there is no room for an applicant's vessel, the person's name will be put on a waiting list that is maintained by the harbormaster. No mooring is allowed in any navigational channel or where it might interfere with the public's rights of fishing, fowling and navigating on tidelands. Mooring holders may transfer their mooring permits only to a member of their immediate family.

The Harbormaster works with other City Staff and the Waterways Board to ensure that Gloucester's waterways are well-planned and maintained, utilized to the maximum extent possible, are safe, and reflect positively upon the City of Gloucester. The purpose of the Waterways Board is to provide a broad-based citizen management organization that guides the use and development of Gloucester's waterways and public waterfront facilities. The Waterways Board is the City body which establishes policies and regulations for Gloucester's waterways, including but not limited to proposing changes to the State Harbor Line. It is intended that the Board adopt clear, concise, and fair policies and regulations that promote improved access to the water for all citizens including commercial fishermen, business owners, and recreational boaters.

## 3.0 Framework for the 2024 Gloucester MHP and DPA Master Plan

As described in Section 2, to effectively promote specific goals and objectives within Gloucester's varied waterfront, the plan divides Gloucester's waterfront into five planning sub-areas. While each sub-area is optimal for different types of development and public access, they each contribute to a unified, integrated harbor-wide vision and implementation plan.

Consistent with the goal to update the 2014 MHP and DPA plan in light of changing economic and environmental challenges, Sections 4 - 6 provide detailed analysis and recommendations in the three primary areas of concern to Gloucester across all five Harbor Planning Sub-Areas, and culminates in regulatory and economic development recommendations in Section 7:

- Coastal Resilience Needs: Section 4 provides an evaluation of infrastructure and property-level vulnerabilities, needs, and potential approaches to increase resilience in Gloucester's DPA. This section concludes with specific strategies to protect infrastructure and assets, and informs subsequent harbor infrastructure and economic development strategies.
- Harbor Infrastructure Needs: Section 5 provides an evaluation of utility condition and capacity, navigational and shore side infrastructure condition and need, dockage demand, and options that would encourage greater investment in new dockage and repair of docks, piers, and wharfs. This section concludes with specific strategies to address infrastructure needs to support a more resilient, thriving 21st century harbor economy.
- Economic Development Needs: Section 6 documents economic baseline and trends within the existing and emerging waterfront industries: the frozen and fresh fish markets, the visitor-based maritime industry, and the city's emerging marine science, research and technology cluster, off-shore wind and ocean monitoring potential, and value added seafood product development. This section concludes with specific recommendations that encompass resilience, infrastructure, and economic development potential within a comprehensive framework to encourage a more robust and resilient maritime economy in Gloucester.

Section 8 covers the 2024 Gloucester DPA Master Plan. While there is considerable overlap between Section 8 and the prior sections, the boundaries of the DPA and the MHP study area are slightly different and the DPA Master Plan has specific regulatory requirements and so it is covered separately.

This plan's primary value is to renew the 2014 plan's productive recommendations, incorporate climate resilience and harbor infrastructure considerations, and provide clear strategic guidance on priorities for licensing so that the kinds of DPA-compatible uses Gloucester needs most can have a more efficient,

streamlined, and well-supported path to approval, especially on catalytic public redevelopment opportunity sites like 65 Rogers Street (I4-C2).

The 2024 Gloucester Harbor Plan continues four of the five substitute provisions, offsets, and amplifications that were approved in the 2014 Gloucester Harbor Plan as they remain consistent with community priorities and documented needs. Some of the 2014 substitute provisions, offsets, and amplifications have been further refined to facilitate ease of interpretation and clarity of purpose. The one amplification that is no longer included, which clarified the inclusion of water-dependent marine research as a WDIU, has been removed because that type of use is now allowed under the current Chapter 91 regulations, and therefore is no longer necessary as part of the Gloucester Harbor Plan. No new amplifications are proposed. One new Alternative Site Coverage Ratio is proposed to provide updated guidance on supporting uses at 65 Rogers Street.

In addition to the 2014 Gloucester Harbor Plan substitute provisions, offsets, and amplifications, the 2024 Gloucester Harbor Plan relies on a variety of strategies to implement its objectives, including organizational capacity building, refinement of other regulations (local zoning, state harbor line, federal navigational channel, FEMA FIRM map refinements), physical development and site-specific investment, and economic development programs and initiatives.

### 3.1 Purpose, Goals, and Objectives

On August 20, 2021, at the outset of the 2024 Gloucester Harbor Plan process, the City submitted a Request for a Notice to Proceed (RTNP) (see Appendix A) to the state's Office of Coastal Zone Management (CZM). Included in the RNTP is the purpose of renewing the Plan as well as the City's goals for this Plan:

Gloucester's historic, working waterfront has always been and continues to be the center of both civic and commercial activity in the City. Gloucester Harbor is the city's most valuable asset, making planning for its future central to all economic and community development activity. The City of Gloucester continues to prioritize and explore ways to support infrastructure investment, create and retain jobs, and diversify our fisheries-based maritime economy. While Gloucester's current Municipal Harbor Plan/Designated Port Area Master Plan (MHP/DPA MP) was approved on December 14, 2014 with a ten year expiration, we believe our evolving harbor economy faces continued pressures (1) to its commercial fishing operations from changes in fisheries management and global competition, and (2) to its existing and aging infrastructure from the risks associated with climate change and rising tides. We also believe that our harbor economy is poised to capitalize on new "blue economy" opportunities in fisheries, marine research and biotechnology, and ocean and seafood product development. We seek to plan for both eventualities, and to amend the existing MHP to help address these new challenges and opportunities.

The goals of the Gloucester MHP Renewal & Amendment are to:

- Align the MHP and DPA plan with the City's goals of diversifying and modernizing its maritime economy;
- Incorporate long term planning measure to adapt to risks associated with rising sea levels and climate change; and

• Renew the 2014 Gloucester MHP and the provisions of the DPA Master Plan for an additional ten years for those elements that are still consistent with the goals of the city.

CZM approved the City's request in its August 20, 2021 Notice to Proceed (see Appendix B) as well as the City's proposed study program in support of this goal, which included 5 key areas:

- 1. Conduct a Baseline Assessment of Coastal Resilience, Harbor Infrastructure, and Economic Development Conditions and Needs
- 2. Develop Plan Framework (Vision, Goals, and Objectives) through Engagement
- 3. Develop and Refine Recommended Actions and Implementation Strategies
- 4. Review Existing Conditions and Needs Relative to the 2014 Harbor Plan
- 5. Update the MHP & DPA Master Plan

Within the overall goals and study program, and based on an expansive public engagement process, the following 2024 Gloucester Harbor Plan objectives were developed:

# Objective 1. Strengthen organizational capacity and regulatory foundation to support harbor economic development.

Throughout the baseline assessment, stakeholder engagement, and analysis of dimensional and regulatory constraints relative to the economic trends and potential, it became clear that in most cases economic factors were the primary barrier, not regulations. The community vision that emerged over the course of the process was inherently in alignment with the intent of the Chapter 91 and DPA regulations, but property owners, developers, and business owners lacked the technical and financial resources to successfully navigate the processes required to protect and grow their businesses. Therefore, the strategies and recommendations nested under this objective focus on rebuilding a foundation for effective harbor economic development in Gloucester that incorporates climate resilience and harbor infrastructure needs, and is spatially specialized to maximize the economic potential of the harbor as a whole. Some of the specific and concrete actions identified to advance this objective include:

- Retain productive Chapter 91 and DPA substitutions and amplifications from the 2014 Gloucester Harbor Plan to ensure continued regulatory support for flexibility in WDUZ, non-displacement of commercial fishing vessel berthing, WDIU-compatible public access, economic support options for DPA supporting uses, and increased supporting use to facilitate productive redevelopment of 65 Rogers Street (I4-C2) for continued WDIU.
- Determine if the potential updates to the Federal Navigational Channel Boundary, State Harbor Line, FEMA FIRM, and local zoning identified in this plan would benefit harbor economic development, and pursuing them if determined to be beneficial.
- Re-establish and fill a permanent full-time dedicated staff position for harbor planning, development, and coordination within the City of Gloucester Community Development Department.
- Develop a "Harbor Plan Implementation Committee" framework that ensures more continuous coordination and collaborative work amongst the entities involved in planning and development in the harbor, and includes a mechanism for these entities to support and extend the capacity of a dedicated city staff position. Tie the goals and deliverables of this group to a broader citywide vision for the future of Gloucester.
- Define an administrative structure and funding priorities for the Gloucester Port Maintenance and Improvement Fund.

- Create or appoint a public or non-profit harbor economic development entity to lead, monitor, and implement the vision of working waterfront development and consolidate applicable funds and organizations as part of that lead entity. This entity would be responsible for communicating the vision, assembling the funds, and identifying and managing partner organizations to inform and lead specific components of the timebound strategic plan.
- Identify a person or committee to create a comprehensive funding pipeline of opportunities. Apply for philanthropic, state, and federal funds to provide a more substantial and sustainable base of resources to support the work of the city staff dedicated to harbor planning, development and coordination, as well as the identified lead harbor economic development entity.
- Explore funding sources to establish an integrated local technical assistance and financing program within the lead organization identified that incentivizes private capital investment in projects that address the infrastructure, resilience, and modernization needs of Gloucester harbor businesses.

# Objective 2: Diversify and invest in Gloucester's harbor holistically to create a stronger and more resilient harbor economically and environmentally.

The strategies nested under this objective convey the community and public sector intent in a consistent, clear, and unified way across physical investment and economic development programs and initiatives. A critical element of this objective is strategic investment in the redevelopment of publicly held harbor sites, particularly 65 Rogers Street (I4-C2), as a way of signaling a vision and providing supportive infrastructure. This objective also requires investment in harbor infrastructure beyond 65 Rogers Street (I4-C2), including enhancements to internet service, wastewater treatment, electrical service and streetscape and wayfinding. Some of the specific and concrete actions identified to advance this objective include:

- Updated Chapter 91 and DPA guidance on flexibility in WDUZ, economic support options for DPA supporting uses, WDIU-compatible public access, and increased supporting use allowance to facilitate productive redevelopment of 65 Rogers Street (I4-C2) are all critical regulatory foundations for this objective - they enable the kind of mixed-use harbor development needed to cross-subsidize the infrastructure and resilience needs of Gloucester Harbor documented in Section 4 and 5 of this plan.
- Explore feasibility of public sector preliminary design and investment in critical harbor infrastructure on 65 Rogers Street.
- Conduct a geotechnical, harbor infrastructure, and Phase 1 Environmental study of 65 Rogers Street (I4-C2) to determine baseline development costs.
- In the upgrading of the Gloucester Wastewater Treatment Facility (WWTF), ensure future treatment options accommodate and reduce economic barriers to Gloucester-based seafood processing operations.
- Continue City efforts to establish high-speed fiber optic internet infrastructure around downtown, the harbor, and industrial and commercial districts in Gloucester.
- Continue working with the State and USACE to assess and plan for dredging needs as they arise in the harbor to support the Harbor Plan.
- Work with National Grid to ensure sufficient energy capacity, reliability, and quality of harbor electrical utility service to meet existing and future marine industry needs.
- Conduct an observational study of trucking operations along Rogers Street and Commercial Street to identify operational needs and conflict and congestion points with other users.

- Develop a Harbor and Downtown district parking plan that takes into account both working waterfront and hospitality and tourism parking demands.
- Make targeted streetscape, wayfinding, and pedestrian infrastructure improvements, especially around Rogers Street and Commercial Street where there are the most conflicts between working waterfront and hospitality and tourism uses.
- Explore public investment in and/or pursue public private partnerships on strategic underutilized large privately held industrial sites (both inland and on the harbor) with good landside truck access and dockage potential to maximize their benefit to the maritime economy.

# Objective 3: Cultivate a high-profile, unified, supported, and well-resourced fishing and shellfishing network in Gloucester.

The slim margins and unpredictability of catch volume, particularly in fin fishing, has limited Gloucester businesses' ability to carry out critical capital investments in resilience, fleet modernization, dock and bulkhead maintenance and repair, and modern seafood processing. The strategies nested under this objective lay out ways that Gloucester's civic leadership can invest in building a supportive foundation that grows the capacity of a network of individual operators in the fishing and shellfishing industry through investing in shared infrastructure, technical assistance, seafood processing and wholesale, marketing and recruitment, workforce development and related hospitality and tourism initiatives. These strategies are designed to grow and maintain the existing culture of independent private operators while creating stronger support infrastructure for those operators. Some of the specific and concrete actions identified to advance this objective include:

- Updated Chapter 91 and DPA guidance on flexibility in WDUZ, non-displacement of commercial fishing vessel berthing, WDIU-compatible public access, economic support options for DPA supporting uses, and increased supporting use allowance to facilitate productive redevelopment of 65 Rogers Street (I4-C2) are all critical regulatory foundations for this objective - they allow for flexibility in operational and economic configurations that are unique to the physical attributes and economic needs of Gloucester fishing and fishing support businesses documented in Section 6 of this plan.
- Retain and continue to invest in the maintenance of the Gloucester fishing permit bank.
- Retain and pursue opportunities to expand publicly controlled dockage and associated loading, unloading, and berthing space for commercial fishing vessels and operations with poor landside trucking access.
- Explore development of shared public loading, unloading, and berthing space that can provide shoreside access for moored vessels and operators with poor landside trucking access.
- Partner with regional institutions and living resources leaders to conduct a seafood supply chain workforce assessment of current and projected future gaps in the local workforce needed to support a thriving living resources sector in Gloucester.
- Pursue regional partnerships with organizations like MassHire North Shore Workforce Board, Mass Maritime, Maine Maritime, and regional trade schools to recruit, train, and mentor local talent in living resources and fleet repair careers to meet current and future workforce needs.
- Conduct an economic feasibility study to establish or grow an existing local seafood processing and wholesale facility (on the harbor or in an accessible inland location) that could be used by local Gloucester operations, structured either as a fee-for-service or a co-op based model.

- Invest in deepening the market influence and reach of Gloucester Fresh.
- Pursue opportunities to expand direct-to-consumer seafood retail and wholesale as part of existing fishing, shellfishing, and seafood processing operations on Gloucester harbor, particularly in Harbor Cove.
- Develop innovative seafood products that expand the market and increase the profit margins for Gloucester fish and shellfish.

# Objective 4: Advance relevant innovation in blue tech, marine life sciences, and offshore wind industries within and beyond Gloucester's working harbor.

Going forward, Gloucester needs to navigate economic change in a way that balances preservation of the traditional fishing industry with emerging opportunities like the blue economy and marine life sciences cluster. Building on the success of existing local anchors like UMass Amherst Gloucester Marine Station, GMGI, Ocean Alliance, and LifeMine Gloucester has an opportunity to establish shared infrastructure and recruit partners that can signal Gloucester's leadership potential in life sciences, marine electronics, and fleet repair and modernization. Many of these blue tech, marine life sciences, and wind industry uses will not be water-dependent or will have only a small arm of their operations that are truly water-dependent, so their recruitment can be focused on complementing more so than replacing existing water-dependent industrial businesses - they can locate close to the Commuter Rail station, in inland industrial parks and along Main Street and Rogers Street in potential vacant inland sites in close proximity to the harbor. The strategies under this objective outline opportunities for Gloucester to build on existing momentum and cultivate a more robust and mutually beneficial ocean cluster that radiates out from the harbor. Some of the specific and concrete actions identified to advance this objective include:

- Updated Chapter 91 and DPA guidance on flexibility in WDUZ, economic support options for DPA supporting uses, WDIU-compatible public access, and increased supporting use allowance to facilitate productive redevelopment of 65 Rogers Street (I4-C2) are all critical regulatory foundations for this objective they allow for flexibility in operational and economic configurations that allow for the kinds of spatial configurations these uses require to align market-viable floor plates and loading/servicing needs with the parcel and roadway configurations of a historic maritime community like Gloucester.
- Invest City of Gloucester and Harbor Plan Implementation Committee time and resources in strengthening Gloucester's connections with regional research anchors, established larger businesses with a vested interest in growing local entrepreneurship in their sector, business incubators, and workforce development organizations to establish a more robust marine research and development network in Gloucester.
- Facilitate increased interaction within Gloucester's marine research and development network.
- Partner with regional institutions and marine research and innovation leaders to assess current and projected gaps in the local workforce needed to support a thriving marine life sciences and technology ecosystem in Gloucester.
- Pursue regional partnerships with organizations like MassHire North Shore Workforce Board, Mass Maritime, Maine Maritime, and regional trade schools to recruit, train, and mentor local talent in marine life sciences and technology and offshore wind careers.
- Help to establish a shared collective water access resource for marine research and development entities that do not require dedicated full-time water access but may require occasional access. This could make use of an existing facility or involve creation of a new facility.

- Partner to raise awareness and visibility of existing institutional research with a local Gloucester presence, and partner to expand the local presence of institutional research.
- Recruit marine biomaterials industry leaders and identify opportunities to attract private sector marine research and development industry investment.
- Partner with regional offshore wind developments to assess gaps in Gloucester's capacity to support servicing and repair in terms of workforce, infrastructure, fleet, and services.
- Explore feasibility of establishing a Gloucester deployment center for marine construction and monitoring.

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

Harbor planning in Gloucester has evolved over several decades, with each era adding a layer of refinement and additional considerations and opportunities, while retaining many core elements that demonstrate Gloucester's enduring commitment to the success of its commercial fishing industry. The current harbor plan carries elements from each of these eras of planning, analysis, and engagement.

- **1999 Original Harbor Plan.** The first Gloucester Harbor Plan was developed in 1998 and approved by the Secretary on July 6, 1999.
- **2009 Harbor Plan.** This subsequent harbor plan was developed in fits and starts from 2006 to 2009. Waterfront property owners objected to the lack of flexibility of uses allowed in the initial 2006 draft plan, but following a community-wide visioning process in 2008, the revised Harbor Plan was endorsed by multiple city stakeholders, and was formally accepted by the State on December 9, 2009.
- **2014 Harbor Plan.** A community-wide discussion began in 2012 to update the 2009 Gloucester Harbor Plan and DPA Master Plan, concluding in the adoption of an updated plan in 2014.

Throughout each of these cycles of harbor planning, the themes, challenges, and opportunities have remained remarkably consistent - a focus on increasing private and public investment in critical infrastructure, support for and revitalization of the core commercial fishing industry, cultivating a strong and mutually beneficial relationship between downtown and the waterfront, and seeking out innovative marine-related research and development activities.

Much of the 2024 Gloucester Harbor Plan therefore continues the waterfront vision set out in the 2014 Gloucester Harbor Plan, with a greater emphasis on climate resilience and a renewed focus on how to facilitate productive redevelopment of underutilized public assets on the waterfront. As detailed in Section 7, four of the five substitute provisions, offsets, and amplifications in the 2014 Gloucester Harbor Plan have been continued in the 2024 Gloucester Harbor Plan. The one amplification that is no longer included, which clarified the inclusion of water-dependent marine research as a WDIU, has been removed because that type of use is now allowed under the existing Chapter 91 regulations, , and therefore is no longer necessary as part of the Gloucester Harbor Plan. One new Alternative Site Coverage Ratio is proposed to provide updated guidance on the quantity of supporting uses at 65 Rogers Street.

A summary of the DPA Master Plan continuations and changes appears below:

DPA Activity or Use	2014 Gloucester DPA Master Plan	2024 Gloucester DPA Master Plan
Water-dependent industrial (WDI) use focus	commercial fishing vessel berthing;	Primary focus on preserving and expanding commercial fishing vessel berthing.
	development uses	Secondary focus on expanding WDI marine research and development uses; offshore wind servicing capacity.
Other WDI uses (WDIU)	off-shore energy support services; training in the maritime trades	Other WDIU at 310 CMR 9.12(2)(b) or accessory uses thereto, including but not limited to critical fishing fleet services (e.g., ice supply, fueling, ship and boat repair).
% of land for supporting DPA uses (SU)	50% everywhere but specific parcels and areas limited to 0% SU as detailed in the 2014 Plan.	25% maximum SU everywhere, measured on a per project basis, except for 65 Rogers Street which has up to 50% SU provided additional supporting use have an offset to ensure that it meets the goals of the standard as well as or better than the existing standard
% of land for commercial uses	28%	Less than 25%
Allowable supporting DPA (SDPA) uses that meet the definition at 310 CMR 9.02	Not specified	Small-scale commercial, restaurant, retail, research & development, visitor center/tourist related facilities and accessory uses thereto as permitted in DPA.
Public Access	Allow, to the extent practicable for a site, the integration of public access facilities into a project to activate the waterfront as part of the open space required with a nonwater-dependent supporting DPA use, so long as it is sited to	Allow, to the extent practicable for a site, the integration of public access facilities into a project to activate the waterfront as part of the open space required with a nonwater-dependent supporting DPA use, so long as it is sited to

Table 1. 2024 Gloucester DPA Master Plan Summary of Plan Focus and Changes Since 2014

be compatible with and not interfere with water-dependent industrial uses and activities.	be compatible with and not interfere with water-dependent industrial uses and activities.
Allow open areas used to support working waterfront activities seasonally during the year to accommodate temporary public access when possible.	Allow open areas used to support working waterfront activities seasonally during the year to accommodate temporary public access when possible.

### **3.3 Public Engagement and Process**

As with the 2014 Gloucester Harbor Plan, the 2023 Gloucester Harbor Plan has focused on a vigorous outreach and engagement process. Residents, other community members, businesses, nonprofits, academic institutions, and state and federal partners have all participated in an active dialogue that included site visits, video conferencing, and interactive mapping tools. A project website, <u>https://harborplan.gloucester-ma.gov</u>, was developed to provide accessible information to the public, including events, agendas, and information on how to get involved.

Due to the Covid-19 pandemic, much engagement for the process was shifted to digital platforms - a series of virtual stakeholder interviews, an interactive online mapping tool, and a series of virtual public meetings.

At the outset of the process from June to November of 2021, the planning team conducted 15 individual and small group stakeholder interviews with over 30 invitees. These stakeholder interviews included all members of the Harbor Plan Committee, representatives from key City of Gloucester departments and positions, and 19 private DPA property and business owners. Representatives were interviewed from the following departments, organizations, and positions:

- City of Gloucester Economic Development
- City of Gloucester Public Works
- Gloucester Planning Board
- Gloucester Waterways Board
- Gloucester Economic Development & Industrial Corporation
- Gloucester Fisheries Commission
- Gloucester Fishermen's Wives Association
- Gloucester Fishing Community Preservation Fund and Fishing Permit Bank
- Gloucester Harbormaster
- Gloucester Marine Genomics Institute
- MA Fishing Partnership
- MassDevelopment State Fish Pier
- UMass Amherst Gloucester Marine Station & North Shore Blue Economy Initiative
- US Coast Guard Station

In the early stages of the process, an interactive mapping exercise was shared for public input. This engagement activity prompted community members to place a marker in a location to represent one of three comment types:

- Harbor strengths successful areas on the harbor or development activity that should be maintained or protected
- Harbor weaknesses areas of concern or issues that can be improved upon or redeveloped, and
- Harbor opportunities areas and places that present potential for new ideas, visioning, and development.

After choosing their marker type and placing it in a specific location, community members were able to add a comment explaining the details of what they think about that location. This engagement activity was used as part of the Public Kickoff Meeting in November of 2021, and was available from November through March of 2021. The activity generated 587 visits from 167 unique users, and 67 comments from 28 unique stakeholders.

A series of public meetings using remote meeting platforms on the internet were held for both the Harbor Plan Committee and the general public to convey information about research and regulations and to obtain feedback on how best to focus the 2024 Gloucester Harbor Plan. A schedule of these public events are visible at (<u>https://harborplan.gloucester-ma.gov/events</u>) and are listed below, with links to meeting agendas, minutes, and presentation materials.

May 12, 2021	Harbor Plan Committee Kick-Off
July 14, 2021	Harbor Plan Committee Meeting #2
August 11, 2021	Harbor Plan Committee Meeting #3
September 15, 2021	Harbor Plan Committee Meeting #4
November 15, 2021	Public Kick-Off Meeting
December 1, 2021	Harbor Plan Committee Meeting #5
February 2, 2022	Harbor Plan Committee Meeting #6
February 16, 2022	Harbor Plan Committee Meeting #7
March 7, 2022	Public Meeting #2
May 12, 2022	Harbor Plan Committee Meeting #8
June 23, 2022	Harbor Plan Committee Meeting #9
July 28, 2022	Harbor Plan Committee Meeting #10
August 25, 2022	Harbor Plan Committee Meeting #11
September 7, 2022	Public Meeting #3
November 17, 2022	Harbor Plan Committee Meeting #12
December 1, 2022	Harbor Plan Committee Meeting #13

#### January 26, 2023 Harbor Plan Committee Meeting #14



Public Meeting #4

Overall, the engagement process clarified a community preference for continued support of the traditional fishing and seafood processing industries, retention of associated fleet services and ship and boat repair capacity, and a desire to pursue complementary offshore wind servicing and marine research opportunities. Residents and community members continued to express an interest in synergies between working waterfront and the hospitality and tourism industries, including a desire to see hospitality and tourism strategies that build off of the character of the working waterfront as an attraction. There was also a shared understanding that addressing flood risks and infrastructure needs was critical to the long-term health and vitality of Gloucester's harbor economy, and that education, marketing, and recruitment were important to preserve workforce and customer interest in Gloucester's traditional industries. The engagement process also revealed two underlying tensions or concerns - (1) how to balance downtown vibrancy and resident quality of life with harbor infrastructure and economic development, especially along Rogers Street, and (2) how to maintain the agency and influence of individual property owners in an economic environment that requires increased public sector investment and involvement.

## 4.0 Coastal Resilience Needs

## 4.1 Current Conditions and Projected Mapping of Flood Vulnerability

Existing businesses, property, and infrastructure on the Inner Harbor are already impacted by coastal flooding. Annual King Tides and storms cause minor flooding impacts in only the lowest-lying areas. However, when extreme coastal storms hit at high tide, as nor'easters did in January and March of 2018, the impacts and areas affected are much greater. Even structures built to modern standards, like the City's Harbormaster building, were evacuated and damaged during the historic January 2018 flood (Figure 5).

Figure 5. Harbormaster Building Flooding on January 4, 2018



The Inner Harbor will experience increasing coastal flood risks over the coming decades due to climate change. The Massachusetts Coast Flood Risk Model (MC-FRM) provides the best available information on which to plan and design for these risks. Figure 6 maps the MC-FRM daily high tide (Mean Higher High Water or MHHW) and 1% annual chance storm flood extents in the Present, 2030, 2050, and 2070 time horizons. These include projections for a high rate of sea level rise and storm intensification.





## 4.2 Industry Impacts

Industry is and will increasingly be negatively impacted by coastal flood risks through added costs of dealing with damage and disruption and through added operating and capital costs to mitigate risks.

Figure 6 illustrates that, in the long-term, sea level rise poses an existential threat to the working waterfront if operations, land, buildings, and infrastructure are not adapted in tandem over time. In 2070, most Inner Harbor property, fixed piers, and portions of the surrounding road network will be flooded twice daily at high tide, causing physical damage and excessive disruption to landside marine industrial operations. King Tides and storms will result in worse flooding than at normal high tide.

Figure 6 also shows that coastal flooding from extreme storms will only grow modestly in extent, due to the steep rise in topography surrounding the Inner Harbor. However, flooding in the Inner Harbor will grow deeper in these events. Increasing coastal flood depths will pose a greater safety risk for people and put more structures, equipment, and inventory at greater risk of damage.

The minimum 1% annual chance flood depth, not including wave crests, was estimated for each building

in each time horizon using MC-FRM data.<sup>2</sup> The results are summarized in Table 2 and Figure 7. Table 2 shows that between Present and 2070 the number of buildings and building area at risk will increase threefold and twelvefold, respectively. Figure 7 shows that flood depths will rise from a median over 0.5 ft in Present (maximum around 2 ft) to a median over 3 ft in 2070 (maximum over 6 ft). It also shows that, while only small buildings are at risk in Present (all less than 10,000 sf), in 2070 some of the largest buildings in the Inner Harbor will be at risk (maximum over 120,000 sf). The minimum flood depth is a conservative estimate and therefore likely to underestimate the risks to existing buildings.

Metric	Present	2030	2050	2070
DPA				
Number of Buildings	18	28	40	52
Percent of All DPA Buildings	27%	42%	60%	78%
Building Area (sf), Rounded	32,000	102,000	225,000	563,000
Percent of All DPA Building Area	4%	11%	25%	61%
Non-DPA				
Number of Buildings	23	35	57	85
Building Area (sf), Rounded	35,000	68,000	161,000	217,000
Total				
Number of Buildings	41	63	97	137
Building Area (sf), Rounded	67,000	170,000	386,000	780,000

Table 2. Minimum Number of Buildings and Building Area at 1% Annual Chance Flood Risk

<sup>&</sup>lt;sup>2</sup> The following process was used for this analysis. The 2022 MassGIS Structures layer was modified to separate buildings that were improperly grouped as single structures due to abutting footprints and to add or remove outbuilding footprints that were not accurately captured. GIS tools were used to estimate the maximum ground elevation and minimum MC-FRM 1% annual chance water surface elevations for each time horizon within each building footprint. Estimated maximum ground-level elevations were subtracted from minimum MC-FRM 1% annual chance water surface elevations to estimate the minimum flood depths for each building. For buildings on structures over water, upland ground elevations (LiDAR) and Google street view were examined and judgment used to estimate the maximum ground-level elevation.

Figure 7. Minimum 1% Annual Chance Flood Depth and Ground-Level Building Area



All waterfront properties in the Inner Harbor are at least partially within the special flood hazard area delineated in FEMA Flood Insurance Rate Maps (FIRMs). This adds flood insurance to businesses' operating costs for those who can afford and are required or choose to purchase it. This also makes planning and implementing capital improvements more costly, time consuming, and uncertain. Owners must seek and obtain approvals from State and City regulatory bodies for potential environmental impacts, as the FEMA floodplain is a regulated resource area.

Large capital investments in the FEMA floodplain must also comply with flood-resistant design and construction standards in the Massachusetts State Building Code (MSBC). These standards require that new construction, substantial improvements to existing structures, and rebuilding of substantially damaged structures (e.g., after a flooding disaster) be designed to withstand flood hazards that are 1 ft higher than the Base Flood Elevation (BFE) mapped on the FIRM. This is referred to as the Design Flood Elevation (DFE). Anecdotally, property owners cite the high DFE west of the State Fish Pier, where the BFE jumps from 10 ft to 14 ft NAVD88, as a significant disincentive to making capital improvements. Land in this area is 5-8 feet lower than the DFE (15 ft NAVD88), making typical design strategies for meeting MSBC flood resistance standards more costly, technically challenging, and in conflict with water-dependent industrial operations. As a result, implementing any substantial improvements, including those that would improve coastal resiliency in the nearer term, poses a hardship for small maritime industrial businesses with limited financial means.

What's more, the reason for the 4 ft jump in BFE west of the State Fish Pier is not likely due to a real 4 ft difference in present flood risk, but because FEMA conducted a coarse mapping of Inner Harbor flood risks based on conditions outside the Inner Harbor. If FEMA mapping protocols were applied at a finer level within the Inner Harbor, it is likely that the BFE west of the State Fish Pier would be reduced. National Grid was successful in applying for a revision to the FEMA map by conducting such an analysis for their substation on Rogers Street, resulting in a reduction of the BFE at their property from 14 ft to 12 ft NAVD88.

While the existing FIRM may overestimate the present risk west of the State Fish Pier, designing to the current DFE in this area does mitigate long-term risks projected by the MC-FRM. Figure 8 and Figure 9 compare the current FEMA BFEs to the MC-FRM 2070 water surface elevations and MC-FRM 2050 maximum wave crest elevations, respectively. They show that buildings designed to a 15 ft NAVD88 DFE today would have substantial resilience to long-term risks from sea level rise, storm surge, and waves. They also show that buildings in the 10 ft NAVD88 BFE zone east of the State Fish Pier that are designed to the current DFE of 11 ft NAVD88 will be under-designed for long-term coastal flooding risks.


Figure 8. Comparison of FEMA Base Flood Elevations with MC-FRM 2070 1% Annual Chance Water Surface Elevation

Figure 9. Comparison of FEMA Base Flood Elevations with MC-FRM 2050 1% Annual Chance Maximum Wave Crest Elevations



Typical strategies to meet MSBC flood resistance standards that are feasible for mitigating lower depths of flooding (elevating bulkheads and backfilling uplands, elevating first floors of buildings, dry floodproofing, and/or wet floodproofing) each pose difficulties under the current FEMA flood maps.

# 4.3 Recent Resilience Planning Efforts

The City of Gloucester has taken important steps to understand and address increasing coastal flood risks due to climate change since the last Municipal Harbor Plan. These include resiliency planning initiatives, raising vulnerable sewage pump stations, designing a perimeter flood barrier to protect the Water Pollution Control Facility, and launching a Floodplain Zoning Working Group, among others.

The City completed an initial Coastal Climate Change Vulnerability Assessment and Adaptation Plan (CCCVAAP) in 2015. The CCCVAAP identified and prioritized public infrastructure at risk of increased flooding and conceptual strategies and costs to make them more resilient. Several of the highest priority assets identified are in the Inner Harbor, including waterfront structures (seawalls, bulkheads, and revetments) and roadways. High-level engineering alternatives were considered for actions the City could take to protect the Inner Harbor and its infrastructure, including raising all waterfront seawalls/bulkheads (public and private), installing flood barriers along roadways, raising roadways, and constructing a

hurricane barrier. These public-led, Harbor-wide strategies had extremely high estimated costs in the tens to hundreds of millions of dollars, in addition to significant private property, regulatory, and engineering challenges. The CCCVAAP did not evaluate the feasibility or cost of implementing site- or building-level resilience improvements on Inner Harbor private properties as an alternative, given its focus was on protecting public infrastructure. However, it did include recommended changes to City policies and regulations, including incentives for raising or protecting buildings from flooding, restrictions on development in floodplains, and incorporating resiliency standards in City design and approvals processes.

The City later completed a 2018 Municipal Vulnerability Preparedness (MVP) plan and 2022 Climate Action and Resilience Plan (CARP). The MVP plan reiterates many of the priorities and strategies identified in the CCCVAAP. The CARP had a broader scope, including both greenhouse gas reduction and climate resilience. It identifies guiding principles, goals, strategies, and next steps relevant to coastal resilience and the MHP. Relevant CARP strategies are summarized in Table 3.

Table 3. Relevant CARP Planning Areas and Strategies

Planning Areas	Strategies
Buildings	<ul> <li>Develop guidance for new construction and major renovations, including standards for a high-performance building design (i.e., LEED, net zero) and incorporating climate resilience measures into practices.</li> <li>Restrict residential development in flood zones and create guidelines for additional areas prone to flooding or expected to see further flooding in the future.</li> <li>Require new construction and major renovations to conduct energy efficiency, renewable energy feasibility, and a flood vulnerability assessment as part of permitting requirements.</li> <li>Review and revise existing requirements, in addition to exploring incentives, to advance energy efficient, resilient building performance measures. Ensure that these programs do not negatively impact the cost of living for renters.</li> </ul>
Energy	<ul> <li>Conduct a community-wide energy resiliency assessment.</li> <li>Continue to monitor and participate in regional conversations regarding Gloucester's opportunities to support offshore wind development. Advocate for discussion of potential offshore wind development that is in concert with ocean habitat and the seafood/ fishing industry.</li> </ul>
Infrastructure	<ul> <li>Develop measures and guidelines to enhance resilience of infrastructure in floodplains including seawalls, floodproofing, wet floodproofing, elevating, and potential relocation.</li> <li>Provide educational materials for coastal businesses and property owners on resilient site management to minimize the impact of flooding.</li> <li>Advocate for improvements of the existing grid infrastructure, and better understanding of its vulnerability and capacity in responding to climate change impacts.</li> </ul>
Mobility	• Work with fishing industry representatives to address challenges and opportunities to transition fishing infrastructure to more energy efficient, low-carbon solutions and also to prepare the industry for climate change impacts.
Social	<ul> <li>Develop an evacuation plan, particularly addressing isolation in neighborhoods during severe events and equip communities so that they have access to essential services, foods, clean water, and other necessities during an extreme event.</li> </ul>

The City and some Inner Harbor water dependent industrial users also participated in the 2021 *Building Resilience in Massachusetts' Designated Port Areas* project led by the Massachusetts Office of Coastal Zone Management (CZM). The CZM project evaluated future flood risks in the Inner Harbor DPA and identified flood resilience measures, summarized in Table 4, that property owners could take to reduce flood risks while providing for continued operation of facilities during dry conditions. The report provides risk assessments and flood resilience recommendations for 6 representative case study sites.

Strategy Classification	Timeframe	Ease of Implementation	Examples
Easy Win	0-1 year	No capital investment or expert consultation required	<ul> <li>Purchase and maintain flood insurance</li> <li>Increase risk awareness</li> <li>Flood preparedness and business continuity planning</li> <li>Relocate moveable assets</li> </ul>
Larger Investments	1-3 years	Moderate capital investment and expert consultation required	<ul><li>Elevate buildings</li><li>Dry floodproof buildings</li><li>Wet floodproof buildings</li></ul>
Capital Intensive and Site-Wide	3+ years	High capital investment and expert consultation required	<ul> <li>Elevate waterfront structures</li> <li>Raise grades</li> <li>Construct flood walls</li> <li>Raise roads</li> <li>Relocate operations/uses</li> </ul>

Table 4. Example Strategies in CZM DPA Resilience Study

## 4.4 Recommendations

Taking stock of all the planning and strategies considered to date, some approaches are more likely to result in tangible coastal resiliency improvements within the 10-year time horizon of the MHP. A publicly sponsored Harbor-wide engineering strategy, such as those considered in the CCCVAAP, is unrealistic for the City of Gloucester to substantially advance within the MHP timeframe. The most pragmatic path forward is to focus on supportive actions, like those identified in the CARP, that advance incremental property-level investments in risk reduction compatible with working waterfront uses, such as those identified in the CZM DPA resilience project report.

Incremental property-level adaptation strategies to meet Massachusetts State Building Code (MSBC) flood resistance standards that are feasible for mitigating lower depths of flooding include:

Elevating bulkheads and backfilling uplands. This is a passive flood mitigation strategy, requiring no pre-storm labor to be made effective. It is also highly effective. However, as noted in the CZM study, it is highly capital intensive. The poor condition of many existing bulkheads indicates that the cost of maintaining what is already there is already too high to afford, let alone the cost of major upgrades. If bulkheads are raised, existing docks and marine rails may also need to be modified. These design changes may affect what vessels or equipment are compatible for ship to shore operations. Due to the high density of buildings and small parcel sizes, projects will also require analysis to ensure that raising land in the floodplain will not redirect flood water and energy to neighboring properties. Costs, operational disruption, and conflicts with water-dependent operations can be somewhat controlled if this strategy is implemented incrementally over time. For example, foundations for a new higher bulkhead can be designed with the necessary structural capacity to raise it even higher in the future when needed so that the entire bulkhead does not have to be replaced again. Similarly, replacing fixed piers with floating docks would provide adaptability to future sea level rise, as incrementally extending floating dock pilings

vertically is easier and less costly than raising fixed piers.

- <u>Elevating first floors of buildings.</u> This is also a passive and highly effective flood mitigation strategy. The CZM study identified it as a larger investment, it is generally technically feasible as long as flood depths are not too high. As an exception, it may be difficult to raise existing buildings on fixed piers over the water. It is far less feasible, in the water-dependent industrial context, for mitigating higher flood depths. Raising buildings very high above the ground or pier deck may be incompatible with typical operations and equipment used to move goods between docks, yards, and buildings and at a minimum may reduce efficiency. There is also limited space on most parcels to accommodate the ramps and turning radiuses needed to facilitate such movements to reach a much higher first floor. Also, current zoning restricts building heights as measured from the ground plane, so raising a first floor significantly will result in a commensurate loss of usable interior space.
- Dry floodproofing. This is primarily an active flood mitigation strategy, involving temporarily installing floodproof barriers across building doors and openings and permanently sealing other entry points. Modern floodproof barriers offer much better protection and ease of installation than traditional sandbagging. However, in addition to being more costly (a larger investment, per the CZM study), it requires planning, early warning, and labor to install barriers in advance of a flood. The feasibility of this strategy depends on several factors including the structure type and condition and flood depth. Dry floodproofing is more feasible and effective for masonry and concrete structures than wood or metal structures. Dry floodproofing of existing buildings may be more difficult here given the older building stock. Dry floodproofing for design flood depths greater than 3 ft typically require structural analysis, and building foundations and walls may need to be strengthened to withstand the high flood loads.
- Wet floodproofing. This combines both passive and active flood mitigation measures. Permanent passive elements include modifying structures to allow water to enter and exit the building, raising sensitive equipment and building utilities, and using flood damage resistant materials, all towards the goal of minimizing flood damage. Wet floodproofing may broadly be the most technically and economically viable design strategy. However, it does pose some technical and operational challenges. Raising sensitive equipment like ice machines and freezers may be feasible for lower flood depths, but for high flood depths may not be compatible with operations. Wet floodproofing needs to be paired with operational plans to temporarily raise or relocate equipment and inventory above the DFE in advance of a flood, which requires planning, early warning, and labor. It also accepts that significant cleanup will be needed following a flood to remove salt and contamination. Property owners will also need to ensure that contaminants are prevented from being released into flood waters. Because wet floodproofing does not stop flooding and the associated operational disruptions, there are also limits to its long-term viability once flooding becomes too frequent.

The following actions are recommended to promote the implementation of adaptation strategies listed above and in Section 4.3, including reducing barriers to incremental investment that achieves compliance with current FEMA and Massachusetts State Building Code (MSBC) requirements as a baseline:

1. <u>In the DPA area, revise local zoning height within FEMA floodplain to be measured from the Design Flood Elevation instead of from the ground plane.</u>

This recommendation is aligned with strategies identified in Gloucester's prior resilience planning initiatives. The purpose is to incentivize and reduce barriers to implementing resilient design strategies like elevating buildings. To account for future risks, this allowance could also be

applied to the future floodplain and flood elevations (e.g., 2070) based on MC-FRM. By redefining building height within flood hazard areas, property owners would be able to raise their first floors without losing usable space within the building. These allowances should be contingent upon proof that the proposed improvements meet building code flood resistance standards up to the selected DFE.

 <u>Complete a technical evaluation of the FEMA Flood Insurance Rate Map (FIRM) for the Inner</u> Harbor, and if warranted, consider applying for a FIRM revision to more accurately account for present day coastal flood risks.

This recommendation is responsive to the difficulties Inner Harbor property owners have faced in finding feasible design strategies that meet building code flood-resistance standards and are compatible with water-dependent industrial operations. While designing to a lowered DFE will result in less protection from long-term coastal flood hazards than designing to the existing DFE, the existing DFE is so high that improvements are simply not being made. Buildings designed to a lowered DFE will be incrementally more resilient than the existing unimproved building stock.

3. <u>Pursue grant funding to support resilience retrofits for all public properties and infrastructure to</u> <u>model best practices and provide harbor-wide emergency management resources.</u>

This recommendation is aligned with strategies identified in Gloucester's prior resilience planning initiatives. Pursuing federal, nationally competitive grants may be beyond Gloucester's current capacity, but state grants are much less resource intensive to pursue. The City is eligible for funding from state Municipal Vulnerability Preparedness (MVP) Action Grants, CZM Coastal Resilience Grants, Seaport Economic Council Grants, and Dam and Seawall Repair Grants and Loans, all of which could support resiliency improvements to Inner Harbor public infrastructure. Through the course of planning normal capital improvements, like reconstructing a roadway or seawall or renovating a pump station, the City should pursue grants to cover the cost of incremental adaptation to future flood hazards. It may not be feasible, for example, to raise the entirety of Rogers Street to 2070 1% annual chance flood levels, but it may be feasible to raise the lowest sections by 1 or 2 ft at a time. Taking incremental steps like raising a portion of roadway or seawall can also make it easier for abutting private properties to follow suit. In addition, existing emergency management plans and practices should be enhanced to account for the increasing frequency and severity of flooding that the Inner Harbor will experience in the future. This should include additional training and resources to support small business recovery after a flooding disaster. Nationally, 1 out of 4 small businesses do not reopen after a disaster.

4. Explore funding sources to develop integrated local technical assistance and financial support (e.g., small grants, low-interest loans) for private marine industrial resilience adaptation investment in strategies like raising bulkheads, introducing flexible floating infrastructure, wet floodproofing, and other operational adaptations.

This recommendation is aligned with strategies identified in Gloucester's prior resilience planning initiatives. Given the complexities of implementing the types of property-level adaptation strategies described above, education and technical support are needed to help small businesses understand their design, operational, and insurance options and navigate regulatory processes. Financial support can be provided through both new and existing mechanisms and should leverage state and federal resources to the extent possible. For example, many Inner Harbor

small businesses are within Low and Moderate Income areas targeted by Gloucester's federally supported Community Development Block Grant (CDBG) programs. CDBG small business technical and financial assistance programs could be adapted to explicitly include resilience improvements as eligible activities. As a longer-term strategy, the City should also consider requesting that the US Army Corps of Engineers conduct a coastal storm risk management feasibility study for the Inner Harbor, focusing on non-structural strategies like building floodproofing and elevation. If the study identifies cost-effective opportunities and the US Congress appropriates funding, eligible property owners would be able to receive direct technical assistance and grant funding (65% of total costs) for implementation. Local and potentially state funds could be pooled to help small businesses finance the required match.

# 5.0 Harbor Infrastructure Needs

# 5.1 Existing Conditions

Harbor Infrastructure affects the harbor activity in three primary areas:

#### **Municipal Utilities**

Among municipal utilities affecting development in the project study area, the Sewer System and Wastewater Treatment Facility (WWTF) likely provide the greatest opportunity to support the economic development goals in the Harbor Plan. The City has been in negotiations with the United States Environmental Protection Agency (USEPA) to provide secondary treatment at the WWTF. The exiting primary WWTF is limited to which effluent can be properly treated there. For example, fish processing plants are required to follow the Industrial Pretreatment Program (IPP) where effluent from the fish processing plant is pretreated, with an onsite treatment system, before being discharged into the City's collection system and ultimately treated at the WWTF. This adds additional cost and considerations to existing and any potential new fish processing facilities that may consider Gloucester as a destination.

A secondary concern for municipal utilities in the inner harbor is electric power, owned and operated by National Grid, where reliability is a concern. National Grid has been taking measures to improve reliability to the system, specifically at a substation in the inner harbor. However, it is understood the investments were only addressing current flooding threats and did not address future threats exacerbated by sea level rise or increased storm surge.

#### Waterside Infrastructure

Dockage was a primary concern raised in the 2014 MHP and concerns have similarly been raised about available dockage in the inner harbor and loss of dockage space for commercial vessels during the planning process. The 2014 Harbor Plan had an accompanying Dockage Study prepared by the Dockage Committee which noted vessels with federal and or state permits whose homeport or principal port is Gloucester or that landed fish in Gloucester had been declining. But, much of the dockage is reserved for commercial fishing by virtue of the Chapter 91 license. Also, the Dockage Study noted many of the harbor's privately owned docks and wharves used by commercial vessels are badly deteriorated and in need of major renovation and repairs. The Study also identified multiple locations in the harbor (i.e., the Americold East Gloucester, MassElectric, and the Building Center) where berthing has been available in the past but the docks and/or wharves have been completely removed or where the property owners no longer permit access to the water's edge.

One of the challenges of the inner harbor is the number of smaller parcels making up the study area: 33 of the 58 parcels (2014) are less than 1 acre, and 21 are less than a ½ acre. The smaller parcels require investments in piles, piers, bulkheads, docks, and dredging, but don't have much water frontage as well as upland area for shore side development. As noted in the 2014 Harbor Plan, these smaller, private facilities have been challenged by the competing lower rates, and facilities, offered at the State Pier, and are falling further behind. These conditions have continued to deteriorate since the 2014 Plan and remain a challenge that needs to be addressed today. One new challenge is that the City has a clearer understanding of the impacts of climate change and sea level rise today than it did in 2014; these impacts will further exacerbate the need for investments in the future.

#### **Harbor Navigation**

Gloucester Harbor is used for a variety of purposes, including marine shipping, commercial and recreational fishing, boating tourism, and a mix of other commercial, industrial, and recreational uses. The harbor has not been comprehensively dredged since 1965, although individual improvements have periodically taken place, including removal of hazards, rocks, debris, or other individual improvements, such as at the Jodry State Fish Pier and National Grid. There are no plans for a comprehensive dredging of the harbor; a 1995 study did not demonstrate an economic need per a cost benefit analysis and vessel traffic. The harbor has slow rates of shoaling and siltation as it is not fed by a river and offshore drift does not transport significant amounts of sediment in the harbor (the Annisquam River contrasts from the harbor in that manner and has had dredging take place more recently). Reported areas of reduced depth are primarily in private marinas, not in the federal navigation channel, because of several factors, including resuspension of sediments from boat propellers and slower water currents.



Figure 10. Gloucester Harbor Federal Navigational Channel Authorized Depth and Shoaling

Channel Segment	Authorized Depth	Current Operating Depth <sup>3</sup>
Entrance Channel	20 ft	20.0'4
North Channel	20 ft	19.9'-17.2' <sup>5</sup>

20 ft

16 ft

Table 5. Gloucester Harbor Federal Navigational Channel Authorized versus Current Operating Depth

South Channel

Inner Harbor Anchorage

19.4'-18.7'6

16.0'7

<sup>&</sup>lt;sup>3</sup> Depths per the US Army Corps of Engineers, Report of Channel Conditions (ER 1130-2-520, May 31, 2017) – depth listed is middle half of channel, in feet, except where footnoted.

<sup>&</sup>lt;sup>4</sup> Isolated shoaling on right outside of quarter of channel to 19.2' located about 1,075 feet seaward of buoy.

<sup>&</sup>lt;sup>5</sup> Middle half of channel 19.9' down to 17.2' at end of Federal Navigation Project. Right outside quarter of channel at 18.1'.

<sup>&</sup>lt;sup>6</sup> Middle half of channel 19.4' down to 18.7' at end of Federal Navigation Project. Right outside quarter of channel at 17.9' to 18.3'.

<sup>&</sup>lt;sup>7</sup> Some shoaling to 15.8' within 20' along east limit.

Harbor Cove Channel	18 ft	17.2'-14.8' <sup>8</sup>
Harbor Cove Anchorage	15 ft	14.7'
Smith Cove Channel	16 ft	15.6' <sup>9</sup>

The operating depth of the shipping channel at mean low water is 18.5 feet and the relatively small size of the harbor makes it impractical for use by very large ships (generally not greater than 450 feet and with drafts of over 20 feet). While the federal navigation channel is functioning and provides suitable access to the State Pier, it could use dredging, as some vessels with a lower draft do pose challenges; of greater need is dredging to outlying private access within the inner harbor away from the navigation channel where shoaling has occurred.

## 5.2 Industry Impacts

In general, the investments in Harbor Infrastructure – Municipal Utilities, Waterside Infrastructure, and Harbor Navigation – are citywide systems that impact the entirety of the Project Area. Of note, the municipal utility systems (water, sewer, electric, etc.), the roadway network, and federal navigation channels, provide utilities and access to the Project Area and all of the individual parcels – whether from the landside or waterside connections. Any improvements to these systems benefit all of the parcels within the Project Area.

# 5.3 Recommendations

### **Municipal Utilities**

The City is initiating upgrades to the WWTF to construct secondary treatment, to not only modify the treatment process to no longer require industrial pretreatment, but also to construct other floodproofing measures. The City could receive various state and federal funds including, but not necessarily limited to, Clean Water State Revolving Fund (CWSRF), the Water Pollution Control Grants Program (Section 106 of the Clean Water Act), the U.S. Department of Housing and Urban Development, Community Development Block Grants, as well as the 2021 Bipartisan Infrastructure Investment and Jobs Act (IIJA), which provided a \$13.8 billion increase to SRF authority and \$55 billion available in supplemental appropriations. In addition to the IIJA, there may be additional funds available to the City remaining from their allocation, or allocations to the County or State, from the 2021 American Rescue Plan Act (ARPA). The City should continue pursuing these funding sources to move these plans forward, as upgrading the WWTF to secondary treatment would support economic development in the Harbor by not requiring fish processors to meet the IPP.

Additionally, the City should continue pursuing installation of high-speed fiber-optic internet infrastructure to ensure Gloucester is competitive and supports growth of marine research and development uses.

<sup>&</sup>lt;sup>8</sup> Middle half of channel 17.2' down to 14.8' at end of Federal Navigation Project. Minor shoaling to 16.5' and 16.8' on Left Outside Quarter and Right Outside Quarter, respectively, within 10' of outer limit of channel.

<sup>&</sup>lt;sup>9</sup> Right outside quarter of channel at 11.6'; left outside quarter at 15.0', with shoaling to 14.1' within 10' of limit.

#### Waterside Infrastructure

Incentive or direct financial support is needed to maintain the publicly owned bulkheads and seawalls that support the industrial port as well as the properties directly owned by the city. Similarly, support is needed to invest in the privately owned properties that support the waterfront industry. As noted previously, smaller facilities are competing with the larger facilities at the State Pier, as well as reduced rates, and therefore have not been able to invest in the improvements necessary to upgrade the aging infrastructure.

The 2014 DPA Master Plan recommended that the Gloucester City Council establish a Port Maintenance and Improvement Fund. The purpose of the fund is to receive money from Chapter 91 mitigation, grants, gifts, and other sources to be used for dredging or improving waterfront infrastructure critical to the Gloucester DPA and for other purposes consistent with the Gloucester Harbor Plan and DPA Master Plan. This remains an opportunity for funds to invest in private marine infrastructure (piers, bulkheads, wharfs, dredging).

At the same time this Plan has been in development, the Office of Coastal Zone Management and the consultants working on this Plan, have continued to evaluate shoreline infrastructure needs in Gloucester's DPA. These needs are only heightened by the potential impacts of climate change. Gloucester's 2009 and 2014 Harbor Plan/ Designated Port Area Master Plans recognized that there are sites in Gloucester's DPA that are absent of any water dependent industrial use and that it may not be possible for such sites to provide improvements on site to support the DPA. An amplification was introduced and sustained to provide a means in such scenarios for a project to provide economic support of off-site infrastructure improvement through contributions to a Port Maintenance Improvement Fund. To date the City has received payments from one project licensed at 9-11 Rogers Street from the former Cape Ann Brewery. Such Port Maintenance Improvement Funds will be utilized by the city in concert with capital planning relating to shoreside infrastructure conducted by the Waterways Board, Department of Public Works and Community Development Department.

#### **Harbor Navigation**

The 2009 Plan recommended dredging of several areas of Gloucester's Inner Harbor, and noted the challenge of funding and finding suitable locations to dispose of dredge materials. This was repeated in the 2014 Plan, and highlighted challenges of funding from the US Army Corps of Engineers, while also noting the creation in 2013 of the Massachusetts Department of Transportation (MassDOT) developing the Ports of MA Strategic Plan. It was reported earlier in the year (Gloucester Daily Times, January 22, 2022), that \$20.8 million was awarded to the USACE to spend in Massachusetts for dredging projects, including \$9.8 million in communities surrounding Gloucester (Essex River, Salem Harbor, and Newburyport harbor). The City should continue working with the state and USACE to assess and plan for dredging needs as they arise in the harbor to support the Harbor Plan.

As noted, the federal channel generally provides the minimum depths, or close to the minimum depths, with the exceptions noted, while many shallower areas exist in private marinas. This creates a tie/trade-off between navigable depths and dockage, where it is also noted that necessary investments in the marinas have not been made in recent years. The City should further study the possibility to increase dockage, and tied with those improvements, providing dredging that is necessary to maintain the private marinas, as well as needed dredging in the federal navigation channel. The study should further address if an ownership and economic model to maintain and improve dockage for commercial fishing vessels is necessary.

# 6.0 Economic Development Needs

Gloucester continues to show strength and flexibility in its core blue economy industries, but those traditional industries require increased support and capacity building in order to successfully navigate the escalating and accelerating pace of change in species and habitat, flood risk and storm damage, and economic shifts due to global competition and technological advancement.

# 6.1 Economic Development Activity Since 2014

The City's recent economic development efforts have focused on branding and marketing the local commercial fishing industry, while also actively working towards retaining current businesses and attracting new, diverse, and complementary industries. The period from 2014 to 2022 included successes and emerging opportunities as well as some losses that have collectively informed the focus and direction of economic development strategy going forward.

#### **Economic Development Programs, Activities, and Investments**

Below are some of the successes and challenges the City has experienced, strategies the City is implementing, and opportunities that were considered as part of this harbor planning effort.

- <u>Gloucester Fresh</u>. The City of Gloucester launched the Gloucester Fresh brand (www.gloucesterfresh.com) in 2015. The intent of the branding campaign is to promote Gloucester's local, fresh, delicious, and sustainable seafood and its local fishermen and seafood processors. 112 restaurants now participate in the program. A strong fish harvesting sector, along with fish processing operations, is crucial to the continued success of this initiative.
- <u>Opportunity Zone Designations</u>. In 2017, the City of Gloucester applied for, and received designation, of two Federal Opportunity Zones (OZ). These zones cover most of the working waterfront as well as the downtown area. This designation makes it advantageous for investors to consider Gloucester. It also enhances eligibility of other funding sources, such as federal grants from the US Economic Development Administration.
- <u>Harbormaster Office and Visiting Boating Center Investment</u>. With the support of the SEC, the City invested in the redevelopment of the Harbormaster's Office and Visiting Boater Center located at 19 Harbor Loop. The vision of this project was to improve the Harbormaster's facilities to allow for enhanced public safety functions, continued public access to the harbor, support for the transient boating community, and to promote the local coastal tourism economy including maritime and tourism-related job growth.
- <u>Tax Increment Financing Agreement for Private Investment</u>. In 2015, the City of Gloucester supported a \$2 million investment by Mortillaro Lobster, Inc. in the expansion and modernization of their facility at 58-60 Commercial Street. The investment was needed, as the company has the capacity to handle over 60,000 lbs. of lobster per day, shipped all over the world. The Tax Increment Financing agreement included a 50% discount over five years on the incremental property tax. The investment helped Mortillaro Lobster, Inc., remain competitive despite the tariff on exported US lobster. This represents a model for how the City can continue to support local business and encourage private investment in harborfront properties.
- <u>Ocean Alliance.</u> While outside of the DPA, it is worth noting that in 2008 the Ocean Alliance, a whale conservation non-profit, purchased the iconic Tarr & Wonson Paint Manufactory at the outermost tip of Rocky Neck with the support of the Annenberg Foundation, invested over \$2 million in renovating and remediating the property, and moved into the first building by 2013. Ocean Alliance has since developed leasable transient dock space and is now studying the

feasibility of constructing a conservation-themed makerspace innovation center on site, funded in part by the U.S. Economic Development Administration.<sup>10</sup>

- <u>Gloucester Marine Genomic Institute (GMGI) and LifeMine</u>. The 2014 MHP/DPA MP clarified marine research that meets specific WDI characteristics as an allowed use in Gloucester's Designated Port Area. This clarification allowed a world class marine research institute, Gloucester Marine Genomic Institute (GMGI) to open its doors on our working waterfront. GMGI's corporate headquarters and research laboratories occupy 6,000 sf of this spectacular space, made possible by a Mass Life Sciences Center grant that financed the project and Windover Construction who built it. The research laboratories are outfitted with the specialized, state of the art equipment needed to bring genomics science to the study of marine life, including a tank room that provides recirculated ocean water to the housed specimens. The success of GMGI has opened the door to the City pursuing a life sciences cluster for marine research along the Gloucester harbor. A second life science company, LifeMine, opened in January of 2020.
- <u>Life Science Infrastructure and Recruitment</u>. The City is currently pursuing several strategies to
  encourage the development of a life science cluster, including the installation of a fiber network
  that would create the technology infrastructure necessary. The City is also connecting new and
  existing property owners, including Mass Development, with potential marine research, marine
  technology, biomanufacturing, and life sciences tenants.

#### **Seafood Processing Losses**

New challenges have been observed associated with aging infrastructure, climate change, and disruption to the seafood supply system associated with the Covid-19 Pandemic.

In 2019, Gloucester experienced the closure of two fish processing plants located on our harbor within three months. While the causes and outcomes of each closure are unique, they highlighted the critical importance of diversifying Gloucester's maritime economy, and the businesses located on Gloucester harbor.

In June of 2020, the parent company of National Fish and Seafood closed without warning. As soon as the City of Gloucester found out; the Mayor's Office and the Community Development Department engaged with our partners at the Commonwealth's Office of Business Development, Rapid Response Team, and MassHire to hold a job fair at City Hall with over 30 employers. A new buyer reached out to the Mayor to ask for the City's support in the purchase and reopening of the company under the new name Atlantic Fish and Seafood. The City worked together with the Baker Administration to assist with permitting and workforce development. The end result is that a majority of the employees were rehired, and the new company is planning on making additional investments.

In August of 2020, Whole Foods announced the closure of its Pigeon Cove Seafood facility in Gloucester. The plant closing eliminated 60 full-time positions. The City of Gloucester again consulted with state partners to assist employees in finding new opportunities and worked toward siting new businesses in vacant spaces along the harbor.

These recent losses have highlighted the need for public sector support and involvement in the retention and expansion of seafood and value-added processing operations in Gloucester.

### 6.2 Baseline Conditions and Trends

Overall, Gloucester's economy has performed well since 2014 with job and wage growth across several sectors. Today Gloucester's core blue economy sectors, in terms of both salaries and wages, represent over 25% of the city's employment base, and 19% of the income base. As a percentage, this is

<sup>&</sup>lt;sup>10</sup> https://whale.org/innovation-center/

approximately the same as in 2013, indicating that Gloucester's blue economy continues to be an important contributor to the regional economy.<sup>11</sup>

	2019 Jobs	2019 Wages \$M
Marine Education, Advocacy, Research, and Innovation	220-230	\$16-17M
Seafood (processing & wholesale) <sup>12</sup>	583	\$46M
Fishing and Fishing Fleet Services <sup>13</sup>	770	\$41M
Tourism	1,200	\$31M
Total	2,700 - 2,800	at least \$135M

Table 6. Gloucester 2019 Blue Economy Jobs and Wages

This section quantifies the harbor's current economic base, and describes significant trends since the 2014 plan within each of the six blue economy sectors: living resources, ship and boat building, marine construction, transportation, coastal tourism and recreation, and offshore minerals.<sup>14</sup> The blue economy sectors are inclusive of traditional industries as well as emerging "blue tech" and "research and development" clusters within each sector.

#### **Living Resources**

The Living Resources sector includes fishing, seafood markets, seafood processing, as well as fish hatcheries and aquaculture, oceanography, and marine life sciences. While this sector is most intuitively associated with food (e.g., fishing, shellfishing, kelp harvesting, seafood processing), it is also inclusive of biopharmaceuticals, biomaterials, and additives that derive from living resources. For example, an emerging field is restoration of kelp and eelgrass to help with carbon sequestration.

Within Gloucester's blue economy, the living resources sector alone accounts for just under 50% of jobs and over 60% of wages demonstrating that Gloucester's traditional fishing and seafood processing industry continues to anchor the local blue economy. Gloucester fisheries activity levels have performed better than other New England ports and the US fishing industry as a whole, and despite recent seafood processing closures, it remains one of the top 10-15 seafood processing locations in the country in terms of number of employees with one of the highest wage bases in the country thanks to its mix of jobs. This

<sup>&</sup>lt;sup>11</sup> Data Source: Ninigret Partners estimates, mixed sources. Fleet services excludes recreational marinas and includes ship repair facilities. Employment was estimated using D&B, BBB, Manta and other sources where employment was reported. Wages were based on state average for ship repair. Fishing and fleet services employment is estimated based on the ratio of Gloucester W2 employees to Essex County W2 employees using the Blue Economy aggregate employment as the baseline minus seafood processing and wholesale employment. Wages based on BEA 2019 CAINC5N Hunting Fishing Trapping personal income for Essex County multiplied times the ratio used for employment.

<sup>&</sup>lt;sup>12</sup> Note that seafood processing and wholesale as well as fishing and fishing fleet services together constitute the Living Resource Sector in the Blue Economy Study.

<sup>&</sup>lt;sup>13</sup> Note that seafood processing and wholesale as well as fishing and fishing fleet services together constitute the Living Resource Sector in the Blue Economy Study.

<sup>&</sup>lt;sup>14</sup> The Blue Economy Sectors framework derives from the 2021 North Shore Blue Economy Report and 2017 Navigating the Global Economy: A Comprehensive Analysis of the Massachusetts Maritime Economy.

continued strength is owed to the ingenuity, flexibility, and initiative of Gloucester's living resources businesses in navigating several significant transitions:

- A decline in landing weight and simultaneous increase in landing value from 2013-2019 indicates that there has been a shift from large-scale groundfishing to lobstering and small-scale operations with a higher per-pound value. The principal catch from a dollars perspective in Gloucester Harbor has changed significantly from finfish to lobster. This, in some cases, requires the adaptation of existing infrastructure to align with the operational needs of different catch types and business models.
- 2. The slim margins and unpredictability of catch volume, particularly in fin fishing, have already and are likely to continue to limit future capital investments (boats, docks, processing). Many harvesting operations have thin margins, and need ways of capturing more value from their work.
- 3. The seafood processing industry is consolidating and employment is shrinking nationally while the wholesale market is expanding. There have been several significant closures of traditional seafood processing facilities locally. This indicates that hybrid seafood processing and seafood wholesale business models are the most likely to succeed in the Gloucester context, but that they may still require some level of subsidy to contend with national and international competition.

Finally, it is also worth noting that Gloucester has an emerging cluster in marine life science conservation, education, research, and development based on the presence and activities of UMass Amherst Gloucester Marine Station, GMGI, LifeMine, and Ocean Alliance, among others.

### Ship and Boat Building

The ship and boat building sector includes boat building and repair, ship building and repair, as well as materials research, prototyping, and testing. Globalization and technological advancements have made it unrealistic for Gloucester to compete with ship and boat building operations that have access to deeper harbors with larger parcels and better trucking access that can operate more efficiently and effectively with the supply chains and technological needs of modern ship and boat building. However, Gloucester still has a role to play in the repair and servicing of local and regional fleets, as well as research, prototyping, and testing of materials and construction methods.

#### **Marine Construction**

The marine construction sector encompasses all marine related construction including offshore wind, dredging, and environmental engineering. Similar to the ship and boat building sector, Gloucester's physical attributes (harbor depth and configuration, parcel size and configuration, lack of hardened laydown space, and limited landside trucking access) are not competitive in modern marine construction, but Gloucester still has a role to play in monitoring and servicing of regional offshore wind developments.

#### **Offshore Minerals**

The offshore minerals sector includes exploration and production of oil and gas, and mining of sand and gravel. This sector is not present in Gloucester currently and is not relevant for future consideration as it is in conflict with the existing sectors and economic strengths of the region, which rely on minimal disruption and careful management of fragile ecosystems.

#### Transportation

The transportation sector includes deep sea freight, marine passenger transportation, marine transportation services, and warehousing, as well as search and navigation equipment. Similar to the ship

and boat building and marine construction sectors, Gloucester's physical attributes (harbor depth and configuration, parcel size and configuration, and limited landside trucking access) are not competitive in modern marine transportation, but Gloucester still has a role to play in research, prototyping, and testing of search and navigation equipment. The Ocean Alliance docks, just outside the DPA, has 132 linear feet of brand new docks capable of hosting vessels from 30-150 feet in length with drafts up to 9 feet.<sup>15</sup> While not competitive with larger cruise ports, this demonstrates some of the small ways in which Gloucester harbor properties (within or outside the DPA) can incorporate marine passenger transportation engagement and income streams that are compatible with their core operations. Given the small scale and integration with the Ocean Alliance mission, this use can be considered within the transportation or coastal tourism and recreation sector.

#### **Coastal Tourism and Recreation**

The coastal tourism and recreation sector includes amusement and recreation services, boat dealers, eating and drinking places, hotels and lodging places, marinas, RV parks and campgrounds, scenic water tours, sporting goods, as well as conservation and zoos and aquaria.

While many tourism related activities are permitted in a DPA, including passenger vessels, water shuttles, charters, whale watches, excursion vessels, and schooners, many tourist related uses are generally not permitted as primary uses. These include retail, restaurants, hotels and lodging and marinas serving noncommercial vessels. That said, tourism and hospitality uses have been an integral part of Gloucester's harbor for centuries and still provide important co-benefits to the working waterfront by increasing visibility, expanding customer base and loyalty, and promoting a positive image of the harbor that helps with business recruitment efforts. This is especially true for the living resources sector, which benefits greatly from the boost in visibility and marketing of locally harvested seafood products. Gloucester has taken small steps along the Harbor to increase its value as a tourism asset, but there continues to be tension between downtown and harbor development priorities. Since 2014 there have been several developments that have underscored this:

- Growth in charter fishing, particularly for tuna, has created demand for dock space.
- The Beauport Hotel (which opened as a full-service hotel, event and conference center in 2016) serves as a new anchor for harbor and downtown tourism.
- Discover Gloucester, Gloucester's destination marketing organization, was formalized.
- Gloucester's Local Rapid Recovery Program Plan, completed in 2021, focused on the downtown area and its connections to the industrial waterfront.

The analysis of this sector revealed several notable patterns:

- Gloucester is a regional destination for visitors. Gloucester is the destination for 70% of all visitors within the North Shore trade area (which includes Salem, Beverley, and Manchester-by-the-Sea). Among regional visitors, they predominantly originate from areas north of the Mass Pike.<sup>16</sup>
- Tourism in Gloucester is highly seasonal, concentrated in the summer and early fall 75% of Gloucester's hotel activity and 55% of Gloucester's meals tax is generated during the summer and early fall.<sup>17</sup>
- The harbor is very much a part of the visitor experience, particularly along Rogers Street and in Harbor Cove where the working waterfront is most accessible from Downtown. This relationship

<sup>&</sup>lt;sup>15</sup> https://whale.org/ocean-alliance-docks/

<sup>&</sup>lt;sup>16</sup> Data Source: Ninigret Partners analysis of UM VISTA Mobile Location Data Insights 7/31/20 to 7/31/21

<sup>&</sup>lt;sup>17</sup> Data Source: Ninigret Partners calculations based on MA DOR Data and Analytics Research Bureau Rooms and Meals Tax Liabilities by Month, 2019

is organic and undefined at the moment, which sometimes generates tension and conflict with the trucking and industrial operation needs of the working waterfront.<sup>18</sup>

# 6.3 Industry Growth Potential

The baseline conditions and trend analysis of the Gloucester economy revealed several strategic opportunities to strengthen and diversify the harbor economy. Gloucester can capitalize on its unique assets and capacity by reinforcing existing strengths and supporting growth in the following areas, within and beyond the harbor and DPA:

- Fisheries and seafood
  - Hybrid seafood processing and wholesale operations
  - Innovative value-added seafood products
- Fleet repair, servicing, and support (including offshore wind monitoring and maintenance fleets)
- Marine life science conservation, education, research, and development
  - Ocean observation
  - Biopharmaceuticals, biomaterials, and additives
  - Marine technology research, prototyping, and testing
    - Search, navigation, observation, and monitoring (e.g., unmanned undersea vehicles)
    - Ship and boat building materials
    - New fishing technologies
- Coastal tourism and recreation
  - Transient boating and charter fishing accommodations
  - Conservation and ocean observation tours
  - Working waterfront visitor experiences and education program partnerships

Some of these opportunities are aligned with the DPA regulations and should be encouraged within the DPA, but many should be focused in areas outside of Gloucester's DPA where they can contribute to the regional blue economy without occupying land that is uniquely well suited to water dependent industrial uses. Some may also be best addressed through a hybrid approach with limited or shared water access for specific water-dependent functions and a larger office, lab, or production facility located inland.

# 6.4 Recommendations

For Gloucester to deliver on the economic development potential in each of the industry growth areas listed in Section 6.3 while addressing the coastal resilience needs (Section 4) and harbor infrastructure needs (Section 5), Gloucester will have to engage in a period of organizational capacity building, guided by the objectives and strategies of this plan. The objectives and strategies are sequenced to align roughly with the intended sequencing and prioritization of economic development efforts. Objective one builds the foundation necessary for all subsequent efforts, objective two addresses areas where the public sector has the biggest role to play, and objectives three and four outline the role of the City and civic leadership in partnering to cultivate sector-specific solutions to demonstrated needs. These are addressed at length in Appendix F, Detailed Economic Development Recommendations, but are summarized here for easy reference.

<u>Objective 1. Strengthen organizational capacity and regulatory foundation to support harbor economic</u> <u>development.</u> Gloucester will need additional staff and financial capacity within Gloucester's government

<sup>&</sup>lt;sup>18</sup> Data Source: Ninigret Partners analysis of UM VISTA Mobile Location Data Insights 7/31/20 to 7/31/21

and nonprofit sector to lead, execute, and monitor economic development initiatives such as business development, promoting innovation, driving marketing, and conducting recruitment at the scale necessary to "move the needle." Additionally, through this harbor planning process, several local and federal regulatory issues (such as the state harbor line and Federal Navigational Channel Boundary, FEMA Flood Insurance Rate Map variation, and local zoning) have been raised that should be addressed in the next five years according to the prioritization indicated in Strategy 1.2 and 1.4 to promote alignment and clarity, especially around issues of harbor infrastructure investment, climate resilience, and property investments.

Gloucester can address this need through the following strategies (see Appendix F for the Detailed Economic Development Recommendations that nest under each strategy):

- Strategy 1.1 Build organizational capacity to support harbor economic development.
- Strategy 1.2 Pursue aligned, supportive regulations at state and federal levels of government.
- Strategy 1.3 Build an integrated technical assistance and capital investment financing system.
- Strategy 1.4 Pursue local zoning updates that enhance strategic clarity and alignment with state and federal regulations.

<u>Objective 2. Diversify and invest in Gloucester's harbor holistically to create a stronger and more resilient</u> <u>harbor economically and environmentally.</u> The strategies nested under this objective convey the community and public sector intent in a consistent, clear, and unified way across physical investment and economic development programs and initiatives. This will be most effective if action is grounded in and supportive of a time-bound strategic plan, as described in Strategy 1.1.

Gloucester can address this need through the following strategies (see Appendix F for the Detailed Economic Development Recommendations that nest under each strategy):

- Strategy 2.1 Invest in publicly owned sites to serve as supportive infrastructure for Gloucester's maritime economy.
- Strategy 2.2 Invest in public infrastructure and utilities to support Gloucester's maritime economy.
- Strategy 2.3 Shape the local hospitality and tourism economy to better support, and benefit core maritime industries.
- Strategy 2.4 Continue to pursue a spatially specialized strategy that maximizes economic development potential and strengthens the harbor-upland relationship.

Objective 3. Cultivate a high-profile, unified, supported, and well-resourced fishing and shellfishing <u>network in Gloucester</u>. The slim margins and unpredictability of catch volume, particularly in fin fishing, is limiting critical capital investments in resilience, fleet modernization, dock and bulkhead maintenance and repair, and modern seafood processing. The strategies nested under this objective are designed to grow and maintain the existing culture of independent private operators while creating stronger support infrastructure for those operators. To this end, Gloucester's civic leadership – both the City and the network of local non-profit organizations, institutions and agencies that serve the harbor – should continue to invest in building a supportive foundation that grows the capacity of a network of individual operators in the fishing and shellfishing industry. This civic leadership should invest in shared infrastructure, technical assistance, seafood processing and wholesale distribution, marketing and recruitment, workforce development and related hospitality and tourism initiatives.

Gloucester can address this need through the following strategies (see Appendix F for the Detailed Economic Development Recommendations that nest under each strategy):

- Strategy 3.1 Protect and grow fishing capacity of the harbor in terms of permits, workforce, fleet, dockage, and processing.
- Strategy 3.2 Help Gloucester fishing and shellfishing operations capture more value.

<u>Objective 4. Advance relevant innovation in blue tech, marine life science, and offshore wind industries</u> within and beyond Gloucester's working harbor. The strategies nested under this objective outline how Gloucester's civic leadership can capitalize on the city's potential in these areas by investing in recruiting 21<sup>st</sup> century marine life science and blue tech partners that can signal Gloucester's leadership potential in life sciences, marine electronics, and fleet repair and modernization. These efforts are not confined to the harbor, but rather include areas close to the Commuter Rail station, in inland industrial parks, and along Main Street and Rogers Street in underutilized inland sites in close proximity to the harbor.

Gloucester can address this need through the following strategies (see Appendix F for the Detailed Economic Development Recommendations that nest under each strategy):

- Strategy 4.1 Invest in proactively establishing Gloucester as an emerging hub for marine research and innovation.
- Strategy 4.2 Retain and grow Gloucester's capacity to serve as a deployment center for marine construction and monitoring.

# 7.0 Policies and Strategies of the Municipal Harbor Plan

### 7.1 Objectives and Regulatory Approach

As stated in the August 20, 2021 Request for a Notice to Proceed (RTNP), the goals of the 2024 Gloucester Harbor Plan update are to:

- Align the MHP and DPA plan with the City's goals of diversifying and modernizing its maritime economy;
- Incorporate long term planning measure to adapt to risks associated with rising sea levels and climate change; and
- Renew the 2014 Gloucester MHP and the provisions of the DPA Master Plan for an additional ten years for those elements that are still consistent with the goals of the city.

Within the overall goals and study program, and based on an expansive public engagement process, the following 2024 Gloucester Harbor Plan objectives were developed:

- Objective 1. Strengthen organizational capacity and regulatory foundation to support harbor economic development.
- Objective 2: Diversify and invest in Gloucester's harbor holistically to create a stronger and more resilient harbor economically and environmentally.
- Objective 3: Cultivate a high-profile, unified, supported, and well-resourced fishing and shellfishing network in Gloucester.
- Objective 4: Advance relevant innovation in blue tech, marine life sciences, and offshore wind industries within and beyond Gloucester's working harbor.

The majority of the implementation strategies and recommendations associated with these objectives require implementation action beyond the powers of this plan, which are detailed in Section 10.

In terms of regulatory approach, much of the 2024 Gloucester Harbor Plan continues the waterfront vision set out in the 2014 Gloucester Harbor Plan, with a greater emphasis on climate resilience and a renewed focus on how to facilitate productive redevelopment of underutilized public assets on the waterfront. Four of the five substitute provisions, offsets, and amplifications in the 2014 Gloucester Harbor Plan have been continued in the 2024 Gloucester Harbor Plan. The one amplification that is no longer included, which clarified the inclusion of water-dependent marine research as a WDIU, has been removed because that type of use is now allowed under the existing Chapter 91 regulations, and therefore is no longer necessary as part of the Gloucester Harbor Plan. One new Alternative Site Coverage Ratio at 65 Rogers Street is proposed to provide updated guidance on the quantity of supporting uses at 65 Rogers Street.

# 7.2 Updates and Revisions since the 2014 Gloucester MHP and DPA Master Plan

The process began by updating the 2014 Harbor Planning sub-areas to represent current conditions, including distinctive physical and economic characteristics. However, in the course of investigations it became apparent that the sub-areas were most significant for the economic development strategy more so than regulatory customization. The regulatory needs of each sub-area were aligned with one another and therefore best addressed at the harbor-wide scale and did not warrant customizations by sub-area. The only exception to this approach is 65 Rogers Street (I4-C2), which merits site-specific accommodations to facilitate productive redevelopment of this large, prominent, and underutilized publicly-owned site within the DPA.

A signature component of the 2024 Gloucester MHP is the 2024 Gloucester DPA Master Plan that is included as Section 8 in this document. Section 8 includes public feedback, plan objectives, implementation strategies, and regulatory consistency.

As described in Section 8, the 2024 Gloucester DPA Master Plan also continues four of the five substitute provisions, offsets, and amplifications in the 2014 Gloucester Harbor Plan, and details a new approach to allowing for increased supporting use , with a particular focus on facilitating productive redevelopment of the underutilized public asset at 65 Rogers Street (I4-C2).

# 7.3 Coastal Resilience Considerations

Existing businesses, property, and infrastructure on the Inner Harbor are already impacted by coastal flooding. Annual King Tides and storms cause minor flooding impacts in only the lowest-lying areas. However, when extreme coastal storms hit at high tide, as nor'easters did in January and March of 2018, the impacts and areas affected are much greater. Even structures built to modern standards, like the City's Harbormaster building, were evacuated and damaged during the historic January 2018 flood. The Inner Harbor will experience increasing coastal flood risks over the coming decades due to climate change. The Massachusetts Coast Flood Risk Model (MC-FRM) provides the best available information on which to plan and design for these risks.

While the entirety of the Gloucester Harbor Planning Area is subject to these risks, the projected flood extents and depths vary. In many parts of Gloucester's Inner Harbor the topography constrains the flood extent resulting in a lesser extent with greater depths, however the projected tidal and storm flood extents do extend significantly inland in several low-lying areas like Harbor Cove the area just east of Captain Solomon Jacobs Park and may even cut off access to parts of the Rocky Neck and Fort Point peninsulas. Both frequency and depth of flooding will only increase over time.

Taking stock of all the planning and strategies considered to date, some approaches are more likely to result in tangible coastal resiliency improvements within the 10-year time horizon of the MHP. A publicly sponsored Harbor-wide engineering strategy, such as those considered in the CCCVAAP, is unrealistic for the City of Gloucester to substantially advance within the MHP timeframe. The most pragmatic path forward is to focus on supportive actions, like those identified in the CARP, that advance incremental property-level investments in risk reduction compatible with working waterfront uses, such as those identified in the CZM DPA resilience project report.

Incremental property-level adaptation strategies to meet Massachusetts State Building Code (MSBC) flood resistance standards that are feasible for mitigating lower depths of flooding include elevating bulkheads and backfilling uplands, elevating first floors of buildings, dry floodproofing, and/or wet floodproofing. The following actions are recommended to promote the implementation of adaptation strategies listed above and in Section 5.3, including reducing barriers to incremental investment that achieves compliance with current FEMA floodplain Massachusetts State Building Code (MSBC) requirements as a baseline:

- In the DPA area, revise local harbor zoning height within FEMA floodplain to be measured from the Design Flood Elevation instead of from the ground plane.
- Complete a technical evaluation of the FEMA Flood Insurance Rate Map (FIRM) for the Inner Harbor, and if warranted, consider applying for a FIRM revision to more accurately account for present day coastal flood risks.
- Pursue grant funding to support resilience retrofits for all public properties and infrastructure, according to prioritization, to model best practices and provide harbor-wide emergency management resources.
- Develop integrated local technical assistance and financial support (e.g., small grants, lowinterest loans) for private marine industrial resilience adaptation investment in strategies like raising bulkheads, introducing flexible floating infrastructure, wet floodproofing, and other operational adaptations.

The objectives and implementation strategies of this plan incorporate these recommended actions to increase resilience and promote coastal flooding adaptations that support Gloucester's harbor and its broader blue economy.

## 7.4 Harbor Infrastructure Considerations

Investments in harbor infrastructure can support harbor activity in three primary areas: municipal utilities, waterside infrastructure, and harbor navigation. The following infrastructure investments have the potential to support increased stability, resilience, and economic vitality in Gloucester's harbor and beyond:

- Municipal Utilities
  - In the upgrading of the Gloucester Wastewater Treatment Facility (WWTF), ensure future treatment options accommodate and reduce economic barriers to Gloucester-based seafood processing operations.
  - Continue City efforts to establish high-speed fiber-optic internet infrastructure around downtown, the harbor, and industrial and commercial districts in Gloucester to ensure Gloucester is competitive and supports growth of marine research and development uses.

- Work with National Grid to ensure sufficient energy capacity, reliability, and quality of harbor electrical utility service to meet existing and future marine industry needs.
- Waterside Infrastructure
  - Pursue capital and grant funding to maintain and upgrade publicly owned bulkheads, seawalls, and pile-supported piers and docks to meet modern industrial and climate resilience standards. This includes 65 Rogers Street (I4-C2) and 112 Commercial Street as well as the various City of Gloucester parks and other state and federal sites like the State Fish Pier and US Coast Guard Station. The Harbormaster Office serves as a good example of this.
  - Create a mechanism to offer grant funding and low-interest financing to private property owners seeking to maintain and upgrade their bulkheads and seawalls; pile-supported piers and docks; localized dredging; and implement climate resilience adaptations.
- Harbor Navigation
  - Conduct a cost-benefit analysis of the Federal Navigational Channel boundary and Board of State Harbor Commissioners Line to determine if a change in boundary, for either or both, could support expanded commercial fishing vessel dockage, especially in Harbor Cove without limiting Gloucester's ability to (a) retain critical navigation in the harbor and (b) secure funding for future dredging needs.
  - Continue working with the State and USACE to assess and plan for dredging needs as they arise in the harbor to support the Harbor Plan.

The objectives and implementation strategies of this plan incorporate these identified areas of opportunity for infrastructure investment to support Gloucester's harbor and its broader blue economy.

# 7.5 Economic Development Considerations

As described in Section 6.2, the baseline conditions and trend analysis of the Gloucester economy revealed several strategic opportunities to strengthen and diversify the harbor economy. Gloucester can capitalize on its unique assets and capacity by reinforcing existing strengths and supporting growth in the following areas, within and beyond the harbor and DPA:

- Fisheries and seafood
  - Hybrid seafood processing and wholesale operations
  - Innovative value-added seafood products
- Fleet repair, servicing, and support (including offshore wind monitoring and maintenance fleets)
  - Marine life science conservation, education, research, and development
    - Ocean observation
    - Biopharmaceuticals, biomaterials, and additives
- Marine technology research, prototyping, and testing
  - Search, navigation, observation, and monitoring (e.g., unmanned undersea vehicles)
  - Ship and boat building materials
  - New fishing technologies
- Coastal tourism and recreation
  - Transient boating and charter fishing accommodations
  - Conservation and ocean observation tours
  - Working waterfront visitor experiences and education program partnerships

Some of these opportunities are aligned with the DPA regulations and should be encouraged within the DPA, but many should be focused in areas outside of Gloucester's DPA where they can contribute to the

regional blue economy without occupying land that is uniquely well suited to water dependent industrial uses. Some may also be best addressed through a hybrid approach with limited or shared water access for specific water-dependent functions and a larger office, lab, or production facility located inland.

The objectives and implementation strategies of this plan focus on pursuing these identified areas of opportunity for economic development within Gloucester's harbor and its broader blue economy.

# 7.6 Vision for Underutilized Public Land

## 65 Rogers Street (I4-C2)

Figure 11. 65 Rogers Street (I4-C2) Regulatory Jurisdictions and Implications



As shown in Figure 11, 65 Rogers Street (I4-C2) is entirely within the DPA, therefore the entire area is subject to both Chapter 91 and DPA regulations. 65 Rogers Street (I4-C2) has a need for an increased supporting use allowance to drive reinvestment in infrastructure and expansion of fishing support dockage and storage. Figure 11 demonstrates the scale of potential supporting uses relative to the site area at the Chapter 91 standard of 25% (approximately 20,000 sf) and the proposed increase to 50% (approximately 40,000 sf). The rationales for this include:

- The significant infrastructure and foundation costs require higher profit margin uses to crosssubsidize investment and provide financial support for existing fishing operations.
- The site topography renders the upland portions of the site difficult to use for water dependent purposes as the prevailing topography changes significantly across the site.
- As shown in Figure 11, a supporting use with a footprint of 40,000 sf (50% of the site area) leaves ample site area to maintain the commercial fishing docks and associated parking and storage.
- While there isn't a specific proposal, the public has identified many ideas of supporting uses (operational and/or financial) and flexibility is needed to keep options open for this range of uses given the constraints of the site.

#### Community Ideas & Preferences

Table 7 and Table 8 below show public meeting participants' top 3 priorities for the site in terms of DPAcompliant water-dependent industrial uses and DPA-compliant supporting uses. Public benefits criteria are also included in Table 9 based on public meeting participants' input. Community ideas shared during the planning process are listed below:

- Land-Sea Mixed-Use Market & Innovation District an inexpensive, flexible, small multi-use concept with an agricultural and seafood market on ground floor and flex office type space on upper floor
- **Commercial Kitchen** a community kitchen to teach consumers how to cook using less used parts of the fish in many ethnic traditions of Gloucester, also a potential for use as a test kitchen or incubator
- Education fishing workforce training program
- **Ocean Innovation Campus** modern ship and boat building and maritime trades workforce training
- **Cultural and Civic Center** an educational, cultural, and gathering center for the city's residents, and a tourism and event destination for visitors
- Offshore Wind Staging Area hardened waterfront to support loading large objects for wind farms

Table 7. Community Preferences for 65 Rogers Street (I4-C2) DPA-compliant Water-Dependent Industrial Uses

Top DPA-compliant uses (36 poll participants)	# of Votes	% of Votes
Water-dependent marine research and education	21	19%
Fishing loading/unloading	18	17%
Shared parking for water-dependent uses	17	16%
Fishing storage (for equipment etc.)	15	14%
Fishing dockage expansion	14	13%
Seafood Processing	6	6%
Boat/ship repair	7	6%
Boat/ship essential services (fueling, ice, etc.)	7	6%
Other	4	4%

Table 8. Community Preferences for 65 Rogers Street (I4-C2) DPA-compliant Supporting Uses

Top DPA supporting uses (37 poll participants)	# of Votes	% of Votes
--	------------	------------

Seafood retail and/or wholesale, public market	20	24%
Parking	18	22%
Community/visitor center	16	19%
Commercial kitchen for community use	14	17%
Other	11	13%
Restaurant, food vendor, retail	4	5%

Table 9. Community Preferences for 65 Rogers Street (I4-C2) Public Benefits Criteria

Top Criteria (38 poll participants)		% of Votes
Is resilient to flooding and other climate change risks	26	23%
Supports marine activity consistent with image/identity of Gloucester as a fishing port and working waterfront	21	18%
Maintains and improves access to commercial dockage	13	11%
Maintains viewshed to water	13	11%
Public use and/or public access	13	11%
Has positive financial impact to the City	10	9%
Strengthens connection of Rogers Street uses with downtown		6%
Provides public district parking		4%
Supports tourism (summer and shoulder seasons)	4	3%
<ul> <li>Other</li> <li>Includes open public space or other infrastructure that functions as sponge and buffer to protect Rogers St and existing businesses from flooding.</li> <li>Avoids increasing activities that can take place elsewhere and would add congestion</li> </ul>	3	3%

#### Suggested Public Benefits Criteria

Based on community input, we suggest the following community benefits criteria are applied when evaluating potential future developments at 65 Rogers Street (I4-C2):

- 1. Is resilient to flooding and other climate change risks.
- 2. Provides financial support to repair and modernize critical fishing infrastructure (docks, bulkheads, storage etc.) to be resilient to flood risk and versatile for many catch types.
- 3. Builds capacity and increases resident and tourism engagement with fishing and other marine activities consistent with Gloucester's image/identity as a fishing port and working waterfront.
- 4. Provides a public view corridor and access to the waterfront to the extent possible without hindering water-dependent primary uses.

#### **112 Commercial Street**





As shown in Figure 12, 112 Commercial is just outside of the DPA, therefore it is only subject to Chapter 91 regulations. Additionally, because the entire site is Commonwealth Tidelands, it is required to have all ground floor Facilities of Public Accommodation (except upper floor accessory).

While this property is very exposed and has limited landside vehicular access, it has been used for waterdependent industrial operations in the past. Historically, 112 Commercial Street was used by a fish house that bought and processed fishermen's catch. While conditions are not ideal due to the limited trucking access and exposure to wave action, it is still a viable marine industrial site.

Based on community engagement, there isn't a single preferred use and the uses are so different from one another it would be hard to make regulatory customizations to facilitate productive redevelopment.

Key Questions to Evaluate Potential Future Redevelopment Concepts

• Does it play a supporting role for other DPA properties and uses in Harbor Cove?

- Does it include public uses and programs (e.g., harborwalk, facilities of public accommodation)?
- If private market driven development is not feasible, what are some possible low intensity uses (e.g., public space, temporary storage etc.)?

Potential Beneficial Uses

- Supporting fishing industry and operations
  - Trap storage
  - Staging and loading (less feasible due to wave action)
  - Fueling (less feasible due to wave action)
- Public district parking
- Marine research and development or office uses (with public component)
- Other private development (with public component)
- Public/open space
- Flood mitigation infrastructure

# 7.7 Implementation Strategies

The primary implementation strategy for the Gloucester Harbor Plan is the 2024 Gloucester DPA Master Plan in Section 8. Other implementation strategies include organizational capacity building, refinement of other regulations, public infrastructure investment, public site investment, and economic development programs and initiatives. These are all detailed within Section 10 along with potential implementation partners and funding sources.

# MHP Substitute Provisions, Offsets, Amplifications, and Alternative Site Coverage Ratios

Four of the five substitute provisions, offsets, and amplifications are continued from the 2014 Gloucester MHP. The one amplification that is no longer included, which clarified the inclusion of water-dependent marine research as a WDIU, has been removed because that type of use is now allowed under the existing Chapter 91 regulations No new amplifications are proposed. One new Alternative Site Coverage Ratio is proposed to provide updated guidance on the quantity of supporting DPA uses at 65 Rogers Street.

Gloucester MHP Chapter 91 Substitutions and Offsets

Establishment of a Water Dependent Use Zone

**Regulatory Provision:** 310 CMR 9.51(3)(c)1.-3. **History:** Revision from 2014 Plan **Location:** Entire Gloucester Harbor Planning Area

#### Chapter 91 Standard:

- 1. along portions of a project shoreline other than the edges of piers and wharves, the zone extends for the lesser of 100 feet or 25% of the weighted average distance from the present high water mark to the landward lot line of the property, but no less than 25 feet; and
- 2. along the ends of piers and wharves, the zone extends for the lesser of 100 feet or 25% of the distance from the edges in question to the base of the pier or wharf, but no less than 25 feet; and
- 3. along all sides of piers and wharves, the zone extends for the lesser of 50 feet or 15% of the distance from the edges in question to the edges immediately opposite, but no less than ten feet.

#### Substitution:

• For non-water dependent use project sites that meet the eligibility standard, the required WDUZ dimensions may be modified as long as a minimum width of 25 feet is maintained along the project shoreline and the ends of piers and wharfs and a minimum of 10 feet along the sides of piers and wharves, and as long as the modification results in no net loss of WDUZ area.

#### Offsets:

- Substitution provision can only be applied to those project sites where the reconfiguration of the WDUZ achieves greater effectiveness in the use of the water's edge for water-dependent industrial use and other water-dependent use.
- The reconfigured zone must be adjacent to the waterfront. In no case will a reconfigured WDUZ that results in an area separated from the waterfront or in a net loss of WDUZ be allowed.

#### Gloucester MHP Chapter 91 Amplifications

Standards to Protect Water-Dependent Uses (displacement)

**Regulatory Provision:** 310 CMR 9.36(4)(b) **History:** Revision from 2014 Plan **Location:** Entire Gloucester Harbor Planning Area

#### Chapter 91 Standard:

- 4. The project shall not displace any water-dependent use that has occurred on the site within five years prior to the date of license application, except upon a clear showing by the applicant that said use:
  - a. did not take place on a reasonably continuous basis for substantial period of time; or <del>did</del> not take place on a reasonably continuous basis, for a substantial period of time; or
  - b. has been or will be discontinued at the site by the user, for reasons unrelated to the proposed project or as a result of voluntary arrangements with the applicant.

Absent the above showings, the project shall include arrangements determined to be reasonable by the Department for the water-dependent use to be continued at its existing facility, or at a facility at an alternative location having physical attributes, including proximity to the water, and associated business conditions which equal or surpass those of the original facility and as may be identified in an Approved Municipal Harbor Plan, if any. Permanent relocation to an off-site facility may occur in order to accommodate a public service project for which relocation arrangements are governed by law, or if the Department determines that it is not appropriate for the waterdependent use to continue on the site. Otherwise, only temporary relocation may occur as necessary for project construction.

#### Amplification:

MassDEP shall not license any project which will displace any commercial fishing vessel berthing in Gloucester Harbor without consulting with the City of Gloucester to confirm that there are reasonable arrangements to provide equivalent berthing space on site or at a suitable alternative site not already used by commercial fishing vessels. The following criteria should be considered by MassDEP when determining what would be considered reasonable accommodations or a suitable alternative for commercial fishing vessel berthing in Gloucester Harbor:

- 1. The site should be accessible by pickup trucks and service vehicles.
- 2. The site should be protected from strong wave action which would limit its utility for long term

berthing of commercial fishing vessels.

- 3. The site should have available landside space to store fishing gear on a temporary basis.
- 4. The site should have water and electric utility service suitable for commercial fishing vessel berthing.
- 5. The lease terms and pricing shall be comparable to similarly situated and equipped berthing locations elsewhere in the harbor.
- 6. Water depth should be sufficient for proposed vessel sizes.

For each criteria listed above, the reasonable accommodations or suitable alternative should be equivalent or better than the original commercial fishing vessel berthing being displaced.

Utilization of Shoreline for Water Dependent Purposes

**Regulatory Provision:** 310 CMR 9.52(1)(a) **History:** Revision from 2014 Plan **Location:** Gloucester Harbor DPA

#### Chapter 91 Standard:

A nonwater-dependent use project that includes fill or structures on any tidelands shall devote a reasonable portion of such lands to water-dependent use, including public access in the exercise of public rights in such lands. In applying this standard, the Department shall take into account any relevant information concerning the capacity of the project site to serve such water-dependent purposes, especially in the vicinity of a water-dependent use zone; and shall give particular consideration to applicable guidance specified in an Approved Municipal Harbor Plan, as provided in 310 CMR 9.34(2)(b)2. Except as necessary to protect public health, safety, or the environment, the Department shall act in accordance with the following provisions.

- 1. In the event the project site includes a water-dependent use zone, the project shall include at least the following:
  - a. one or more facilities that generate water-dependent activity of a kind and to a degree that is appropriate for the project site, given the nature of the project, conditions of the water body on which it is located, and other relevant circumstances; in making this determination, the Department shall give particular consideration to:
    - facilities that promote active use of the project shoreline, such as boat landing docks and launching ramps, marinas, fishing piers, waterfront boardwalks and esplanades for public recreation, and water-based public facilities as listed in 310 CMR 9.53(2)(a); and
    - 2) facilities for which a demonstrated need exists in the harbor in question and for which other suitable locations are not reasonably available;

#### Amplification:

For any project located along the water's edge of the DPA, the priority land use is water dependent industrial.

- 1. To the extent practicable for a site, public access facilities shall be integrated into a project to activate the waterfront as part of the open space required with a nonwater-dependent supporting DPA use, not to interfere with water-dependent industrial uses and activities.
- 2. Open areas used for working waterfront activities seasonally during the year shall accommodate public access when possible.
- 3. Within the water-dependent use zone, no use shall be licensed that would result in any adverse impact to and/or restriction of access to water-borne vessels wherever possible.

**Regulatory Provision:** 310 CMR 9.36(5)(b)(4) **History:** Revision from 2014 Plan **Location:** Gloucester Harbor DPA

#### Chapter 91 Standard:

- 5. The project shall not include fill or structures for nonwater-dependent or water-dependent, nonindustrial uses which preempt water-dependent-industrial use within a Designated Port Area (DPA). In applying this standard the Department shall act in accordance with the following provisions:
  - b. reasonable arrangements shall be made to prevent commitments of space or facilities that would significantly discourage present or future water-dependent-industrial activity on the project site or elsewhere in the DPA; such arrangements shall include, but are not limited to, the following:
    - 4) in the case of supporting DPA use, conditions governing the nature and extent of operational or economic support must be established to ensure that such support will be effectively provided to water-dependent-industrial uses.

#### Amplification:

The nature and extent of operational or economic support provided by a supporting DPA use will be considered according to the following tiered approach. In each case, in order to fulfill the obligations of a supporting use using a particular tier, the applicant must demonstrate that it is infeasible to meet the obligation through the previous preferred tier. DEP will consider economic support to on-site WDI use, or if a project site does not have existing water-dependent industrial uses on-site or if an on-site WDI use does not have a need for support, DEP will consider commensurate investment in on-site waterfront infrastructure, off-site waterfront infrastructure, or an appropriate contribution to the Gloucester Port Maintenance and Improvement Fund as mitigation according to a tiered approach:

- 1. For properties with a water-dependent industrial use, economic or operational support from the supporting use to the on-site water-dependent industrial use is preferred.
- 2. If no water-dependent industrial use exists or is proposed on the site, or if the WDI user does not have a need for support, an investment in on-site waterfront infrastructure to improve capacity for water-dependent industrial use will be required. Improvement/maintenance of existing berthing and/or creation of new berthing for commercial vessels is required where feasible.
- If it is infeasible to invest in on-site waterfront infrastructure to improve capacity for waterdependent industrial use, offsite operational or economic support to WDI uses within the DPA will be considered.
- 4. If none of the above can be achieved, a contribution to the Gloucester Port Maintenance and Improvement Fund will be considered. This fund shall be used only for support to water-dependent industrial uses within the DPA. The City prefers the fund to be used for WDI infrastructure where possible.

Gloucester DPA Master Plan Chapter 91 Alternative Site Coverage Ratio

Categorical Restrictions on Fill and Structures in Tidelands Within Designated Port Areas (DPAs)

**Regulatory Provisions:** 310 CMR 9.32 (1)(b)(5) **History:** New **Location:** 65 Rogers Street (I4-C2)

#### Chapter 91 Standard:

The Department shall waive the numerical standard (25%) for Supporting DPA Uses if the project conforms to a DPA 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 waterdependent 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).

#### Alternative Site Coverage Ratio:

Supporting DPA Uses may be increased up to 50% for the 65 Rogers Street site.

#### Offsets:

To be eligible for an alternative site coverage ratio, an applicant must demonstrate that their project not only preserves but improves the utility of the site for WDI uses by satisfying the following criteria:

- 1. Existing commercial fishing vessel berthing facilities shall be maintained and enhanced through operational and/or capital support.
- 2. The location of the Supporting Use shall be adjacent to Rogers Street and the ground floor for the purposes of FPAs shall be at the Rogers Street level.
- 3. New buildings for nonwater-dependent use shall be designed to be resilient to sea level rise and storm surge flooding over the expected useful life of the building and the open areas of the site adjacent to the docks shall be modified as needed to be resilient to frequent flooding.
- 4. Any buildings will be designed to maintain vehicular access to the waterfront and to prevent conflicts with the existing ongoing use of the site for commercial fishing vessel berthing. Dedicated area shall be provided for storage of fishing gear and parking of vehicles for commercial fishing vessels.

#### **DPA Master Plan**

See Section 8.

#### **Other Implementation Strategies**

See Section 10 for a detailed description of additional implementation strategies beyond the mechanisms available within the Chapter 91 and DPA regulations.

#### **Potential Sources of Funding**

See Section 10.6 for an inventory of potential partners and funding sources to support the implementation strategies recommended in this plan.

### 7.8 Consistency

See consistency tables in Section 9.

#### **CZM** Coastal Policies

The 2024 Gloucester Harbor Plan is consistent with CZM Coastal Policies. See Section 9.1 for additional information on consistency with CZM Coastal Policies.

#### **Chapter 91 Waterways Regulations**

All projects requiring a Chapter 91 Waterways license within the Gloucester Harbor Planning Area shall be consistent with Chapter 91 Waterways regulations. See Section 9.2 for additional information on consistency with Chapter 91 Waterways Regulations.

#### **Other Governmental Agency Plans and Activities**

Gloucester will coordinate implementation of the 2024 Gloucester Harbor Plan with other relevant local, state and federal agency plans and activities, including but not limited to plans for the US Coast Guard Station, MassDevelopment State Fish Pier, and Harbormaster Office. See Section 9.3 for additional information on consistency with other governmental agency plans and activities.

# 8.0 DPA Master Plan

# 8.1 Objectives and Regulatory Approach

As stated in the August 20, 2021 Request for a Notice to Proceed (RTNP), the goals of the 2024 Gloucester Harbor Plan update are to:

- Align the MHP and DPA plan with the City's goals of diversifying and modernizing its maritime economy;
- Incorporate long term planning measure to adapt to risks associated with rising sea levels and climate change; and
- Renew the 2014 Gloucester MHP and the provisions of the DPA Master Plan for an additional ten years for those elements that are still consistent with the goals of the city.

Within the overall goals and study program, and based on an expansive public engagement process, the following 2024 Gloucester Harbor Plan objectives were developed:

- Objective 1. Strengthen organizational capacity and regulatory foundation to support harbor economic development.
- Objective 2: Diversify and invest in Gloucester's harbor holistically to create a stronger and more resilient harbor economically and environmentally.
- Objective 3: Cultivate a high-profile, unified, supported, and well-resourced fishing and shellfishing network in Gloucester.
- Objective 4: Advance relevant innovation in blue tech, marine life sciences, and offshore wind industries within and beyond Gloucester's working harbor.

The majority of the implementation strategies and recommendations associated with these objectives require implementation action beyond the powers of this plan, which are detailed in Section 10.

In terms of regulatory approach, much of the 2024 Gloucester Harbor Plan continues the waterfront vision set out in the 2014 Gloucester Harbor Plan, with a greater emphasis on climate resilience and a renewed focus on how to facilitate productive redevelopment of underutilized public assets on the waterfront. Four

of the five substitute provisions, offsets, and amplifications in the 2014 Gloucester Harbor Plan have been continued in the 2024 Gloucester Harbor Plan. The one amplification that is no longer included, which clarified the inclusion of water-dependent marine research as a WDIU, has been removed because that type of use is now allowed under the existing Chapter 91 regulations, . One new Alternative Site Coverage Ratio is proposed to provide updated guidance on the quantity of supporting uses at 65 Rogers Street.

## 8.2 Public engagement

See Section 3.3 for a summary of public engagement, and Appendix E for a more complete Public Engagement and Process Documentation.

# 8.3 Land Use Context and Calculations

The Gloucester DPA consists of flowed tidelands, including present submerged lands and tidal flats and the area of pile-supported piers; filled tidelands which are subject to Chapter 91 jurisdiction; and upland areas that have always been landward of normal tidal action and are not within jurisdiction of Chapter 91.

Table 10. Area of the Gloucester DPA Within and Outside of Chapter 91 Jurisdiction (not including flowed tidelands)

	Acres	Percent
Total Area of filled Tidelands and pile-supported piers	45.92	58.50%
Total area outside of jurisdiction	32.52	41.46%
Total land area within the DPA	78.44	100.00%

## 8.4 Changes Since 2014 DPA Master Plan

The table below summarizes continuations and changes since the 2014 Gloucester DPA Master Plan,

DPA Activity or Use	2014 Gloucester DPA Master Plan	2024 Gloucester DPA Master Plan
Water-dependent industrial (WDI) use focus	commercial fishing vessel berthing; WDI marine research and	Primary focus on preserving and expanding commercial fishing vessel berthing.
	development uses	Secondary focus on expanding WDI marine research and development uses; offshore wind servicing capacity.

Table 11. 2024 Gloucester DPA Master Plan Summary of Plan Focus Relative to 2014

Other WDI uses (WDIU)	off-shore energy support services; training in the maritime trades	Other WDIU at 310 CMR 9.12(2)(b) or accessory uses thereto, including but not limited to critical fishing fleet services (e.g., ice supply, fueling, ship and boat repair).
% of land for supporting DPA uses (SU)	Up to 50% everywhere but specific parcels and areas limited to 0% SU as detailed in the 2014 Plan.	25% maximum SU everywhere, measured on a per site basis, except for 65 Rogers Street which may have up to 50% SU provided additional supporting use have an offset to ensure that it meets the goals of the standard as well as or better than the existing standard
% of land for commercial uses	Less than 25%	Less than 25%
Allowable supporting DPA (SDPA) uses that meet the definition at 310 CMR 9.02	Not specified	Small-scale commercial, restaurant, retail, research & development, visitor center/tourist related facilities and accessory uses thereto as permitted in DPA.
Public Access	Allow, to the extent practicable for a site, the integration of public access facilities into a project to activate the waterfront as part of the open space required with a nonwater-dependent supporting DPA use, so long as it is sited to be compatible with and not interfere with water-dependent industrial uses and activities. Allow open areas used to support working waterfront activities seasonally during the year to accommodate temporary public access when possible.	Allow, to the extent practicable for a site, the integration of public access facilities into a project to activate the waterfront as part of the open space required with a nonwater-dependent supporting DPA use, so long as it is sited to be compatible with and not interfere with water-dependent industrial uses and activities. Allow open areas used to support working waterfront activities seasonally during the year to accommodate temporary public access when possible.

# 8.5 Water Dependent Industrial Uses, Accessory and Temporary Uses

Gloucester Harbor, as noted above, has a high proportion of Water Dependent Industrial (WDI) Uses within the DPA. Traditional WDI Uses include commercial fishing vessel berthing, seafood processing

(fresh and frozen) and cold storage. Beyond the seafood related sector, the DPA supports commercial passenger vessel operations, notably whale watching, cruise ships and harbor tours, and vessel repair and servicing. The seafood sector of the local economy continues to struggle with declining availability of fishery resources that has discouraged investment in this sector. One bright spot has been the shifting of fishing efforts toward the lobster resource which has a relatively healthy resource and strong price structure. Commercial passenger vessel operations have struggled with the impacts of Covid along with the rest of the tourist economy, but as the pandemic eases a return to normalcy is anticipated.

Two potential opportunities for future growth have been identified through the harbor planning process. As renewable energy facilities utilizing offshore wind, tidal, or wave energy sources are developed, Gloucester is well positioned to provide supporting services, including vessel support, crew changes, and ongoing maintenance. Gloucester has also seen the development of the marine research sector as a promising part of the local economy and the further development of marine research with ship to shore transfers or use of large volumes of harbor water is encouraged.

Accessory uses to WDI uses are allowed in the DPA and include a variety of activities related to the primary WDI uses. In Gloucester, this includes office space related to the seafood industry, such as marketing and sales offices, shipping and transportation related offices, and retail/commercial uses associated with commercial passenger vessels. These uses generally account for a very small percentage of uses within the DPA other than the Gorton's corporate offices.

Temporary uses are limited in scope and duration and allow the use of otherwise vacant land and buildings in a DPA for productive economic use while markets for WDI uses are being explored. Examples of potential temporary uses could include use of open land for parking and reuse of existing buildings for industrial, non-water-dependent uses.

Gloucester has adopted a strong zoning ordinance that limits uses within the MI zoning district, including importantly, the non-jurisdictional portions of the DPA, to those uses traditionally associated with the DPA and prohibiting those uses which are in conflict with the DPA.

# 8.6 Supporting Uses

In light of the economic challenges faced by WDI uses as noted above and the aging infrastructure upon which they rely, there has been a desire to leverage the potential economic value of other non-WDI uses to contribute to the financial viability of these WDI uses. Economic forces have not allowed for the required reinvestment to maintain the aging infrastructure in buildings, piers, docks and wharves. The threat of rising sea levels introduces another challenge to reinvesting in port facilities.

Introducing other non-WDI uses in limited circumstances can provide for a financial boost that helps to leverage additional investment and support ongoing operational and maintenance costs. Chapter 91 regulations provide that certain non-WDI uses known as Supporting DPA Uses may be allowed in circumstances where the total area of Supporting Uses is limited, does not conflict with WDI uses, and provides direct economic or operational support to the WDI uses. Supporting DPA Uses are limited to 25% of the Project Site in jurisdiction but a Harbor Plan may allow a greater percentage in certain cases. All Supporting DPA uses must comply with the definition of supporting DPA use at 310 CMR 9.02, any associated written guidance from DEP and the applicable standards in 310 CMR 9.00. In general, this harbor plan supports the inclusion of Supporting DPA Uses where they comply with the Chapter 91 standards and lead to strengthening the viability of WDI uses.
This harbor plan recommends that a single location be authorized to exceed the standard 25% Supporting DPA Use allowance under the Chapter 91 regulations. Gloucester has long struggled with the future of the 65 Rogers Street site. This property, commonly known as I-4/C-2, was taken by eminent domain in the early 1960s as part of a larger urban renewal plan that led to the reconstruction of Rogers Street and redevelopment of the industrial waterfront. The site has remained under-developed for more than fifty years, although many proposals have been put forth for its reuse over the past decades. There continues to be a strong interest in pursuing options for the redevelopment of the site in ways which preserve and potentially expand the use of the waterfront for commercial fishing vessel berthing while leveraging the economic potential of the area adjacent to Rogers Street for cultural, tourist, and commercial related uses. The land is owned by the City of Gloucester which allows the City to exercise control over its use and redevelopment beyond the usual zoning and regulatory powers of the City.

The factors which merit increasing the allowable percentage of Supporting DPA Uses up to 50% on this particular site include the following:

- Despite many efforts on the part of the City since the parcel was acquired in the early 1960s, the site has not proved attractive and economically viable for large scale water dependent industrial use.
- The City constructed commercial fishing berthing facilities in the 1980s which have kept the shoreline in active water dependent use for commercial fishing vessel berthing, a City priority, but the infrastructure is close to 50 years old and in need of significant capital investment.
- The parcel is low lying and is currently subject to frequent flooding. The site will be subject to more frequent and deeper flooding in coming years due to sea level rise. There is a significant grade change from the street frontage on Rogers Street to the water's edge.
- The site requires substantial capital investment to maintain its current utility, including raising the grade to reduce flooding, replacing the existing sheet pile bulkhead and replacing/maintaining the current docking facilities.
- The scale of the site and the infrastructure investment needed cannot be achieved with the "normal" 25% Supporting DPA use and a higher density is required to fund the needed infrastructure.
- Additional Supporting DPA uses beyond 25% can provide a greater economic investment in infrastructure assuring the continued functionality of the site to support the existing water dependent industrial uses at affordable dockage rates.
- Site analyses demonstrate that an area up to 50% of the site area can easily be utilized for SDPA Uses while still providing for robust use of the site in support of commercial fishing vessel dockage and related access, parking and storage.
- The frontage area of the site along Rogers Street which is the least suitable for WDIU is also the area most suitable for Supporting DPA uses. The area of the site most suitable for WDIU to the rear of the site and along the waterfront will not be used for Supporting DPA uses and will be maintained for WDIU.
- Grade changes on the site allow the potential for an expansion of the horizontal area of Supporting DPA use beyond 25% while maintaining and improving essential ground level area for WDIU.

# 8.7 Guidance to DEP

This DPA Master Plan provides five substitutions/amplifications/Alternative Site Coverage Ratios that would apply to activities within the DPA Master Plan area. These recommendations are derived from the

City's experience in implementing the 2014 Harbor Plan, the input received during the public involvement phase and the technical analysis developed during the Harbor Plan. The recommendations include flexibility in the delineation of the WDUZ, Non-displacement of commercial vessel docking. Utilization of Shoreline for Water Dependent Purposes Provision of operational and economic support from Supporting DPA Uses and Alternative Site coverage for Supporting DPA uses with Site Specific guidance.

• Substitution: Establishment of a WDUZ (310 CMR 9.51(3))

Flexibility of the delineation of the Water Dependent Use Zone while maintaining the overall size and enhancing its effectiveness has been found to be useful in prior Gloucester Harbor Plans. Gloucester's unique structure of relatively small parcel sizes while at the same time having a few relatively large parcels makes this flexibility even more important where it can be applied. The provisions of the 2014 Harbor Plan should be continued.

• This substitute provision pursuant to 310 CMR 9.51(3)(c) allowing a reconfiguration of the WDUZ will be applied to those project sites where it is shown that application of the Ch. 91 standard would result in an inefficient siting of uses in the WDUZ, and where the reconfiguration achieves greater effectiveness in the use of the water's edge for water-dependent use.

#### Offsetting Measures:

- a. The minimum width of the WDUZ shall be 25 feet along the Project Shoreline and at the ends of piers and 10 feet along the edges of piers to ensure that there is sufficient room to support water dependent uses
- b. There shall be no net loss of WDUZ area as a result of the reconfiguration.
- c. The reconfigured zone must be adjacent to the water and in no case will a reconfigured WDUZ result in an area separated from the water.
- Amplification: Standards to Protect Water-Dependent Uses (displacement) (310 CMR 9.36(4)(b))

The Harbor Planning process has placed a heavy emphasis on preventing the displacement of commercial fishing vessels from existing berthing areas and on expanding berthing areas where possible. The harbor has experienced some erosion of commercial berthing spaces from conversion to recreational use. This provision will be carried over from the 2009 and 2014 Harbor Plan provisions.

The Harbor Plan recognizes that berthing space for commercial vessels on the harbor is limited, specifically for commercial fishing boats, and seeks to protect these important spaces. The Harbor Plan includes a previously approved provision from the 2014 Harbor Plan that guides DEP in its Chapter 91 licensing to specifically protect commercial fishing vessel berthing, consistent with the DEP goal of protecting water dependent industrial uses. The plan requires that any proposed project subject to a Chapter 91 license that would result in the displacement of a commercial vessel from an existing berth must include the assurance of reasonable accommodation at a comparable and suitable alternative site, assuring that no commercial fishing vessel will be displaced at the alternative site.

<u>Amplification to 310 CMR 9.36(4)(b)</u>: MassDEP shall not license any project which will displace any commercial fishing vessel berthing in Gloucester Harbor without consulting with the City of Gloucester to

confirm that there are reasonable arrangements to provide equivalent berthing space on site or at a suitable alternative site not already used by commercial fishing vessels. The following criteria should be considered by MassDEP when determining what would be considered reasonable accommodations or a suitable alternative for commercial fishing vessel berthing in Gloucester Harbor:

- 1. The site should be accessible by pickup trucks and service vehicles.
- 2. The site should be protected from strong wave action which would limit its utility for long term berthing of commercial fishing vessels.
- 3. The site should have available landside space to store fishing gear on a temporary basis.
- 4. The site should have water and electric utility service suitable for commercial fishing vessel berthing.
- 5. The lease terms and pricing shall be comparable to similarly situated and equipped berthing locations elsewhere in the harbor.
- Water depth should be sufficient for proposed vessel sizes.
   For each criteria listed above, the reasonable accommodations or suitable alternative should be equivalent or better than the original commercial fishing vessel berthing being displaced.

#### • Amplification: Utilization of Shoreline for Water Dependent Purposes (310 CMR 9.52)

The nuances of balancing public access with water dependent industrial uses on the unique and irregular parcels in Gloucester's harbor continues to be an issue that merits additional guidance. This only applies where there is a nonwater-dependent use within a DPA and would allow public access only secondarily to WDIU. This amplification seeks to improve public access to the working harbor without interfering with the water-dependent industrial uses that make up the waterfront. The third element of this amplification is intended to improve access to vessel berthing to meet the need for additional berthing and access to water-borne vessels.

<u>Amplification to 310 CMR 9.52(1)(a)</u>: For any project located along the water's edge of the DPA, the priority land use is water dependent industrial.

- 1. To the extent practicable for a site, public access facilities shall be integrated into a project to activate the waterfront as part of the open space required with a non-water-dependent supporting DPA use but must be sited to be compatible with and not interfere with water-dependent industrial uses and activities.
- 2. Open areas used to support working waterfront activities seasonally during the year shall accommodate temporary public access when possible.
- 3. Within the water-dependent use zone no use shall be licensed unless it provides access to water-borne vessels wherever possible.

#### Amplification: Standard to Protect Water Dependent Uses (operational or economic support)(310 CMR 9.36(5)(b)(4)

There is a continued need for improving the water-dependent marine industrial infrastructure on the waterfront. Maintenance of certain marine industrial uses is critical to preserving Gloucester Harbor as a full-service regional port for the commercial fishing industry. Supporting DPA use projects seeking approval must provide economic and/or operational support to water-dependent industrial uses in the DPA. Typically, this is addressed on-site and economic support from the supporting use to the primary WDIU is presumed. However, in some cases, there may be no marine industrial use on a site or a clear opportunity to directly support such infrastructure

improvements on a given project site. In all cases, the level and nature of economic support must be specified. The tiering approach of this amplification ensures that on-site investment is required first unless not feasible or a more appropriate and/or beneficial alternative is identified, in which case offsite support within the DPA or using the Port Maintenance and Improvement Fund can serve an important role in allowing the City to direct where the funds can best be applied. This provision is carried over from the 2014 Harbor Plan.

<u>Amplification to 310 CMR 9.36(5)(b)(4)</u>: If a project site does not have existing water-dependent industrial uses on-site, or if an on-site WDI use does not have a need for support, DEP will consider commensurate investment in on-site waterfront infrastructure, off-site waterfront infrastructure or an appropriate contribution to the Gloucester Port Maintenance and Improvement Fund as mitigation according to a tiered approach:

- 1. For properties with a water-dependent industrial use, economic or operational support from the supporting use to the on-site water-dependent industrial use is preferred.
- If no water-dependent industrial use exists or is proposed on the site, or if the WDI user does not have a need for support, an investment in on-site waterfront infrastructure to improve capacity for water-dependent industrial use will be required. Improvement/maintenance of existing berthing and/or creation of new berthing for commercial vessels is required where feasible.
- 3. If it is infeasible to invest in on-site waterfront infrastructure to improve capacity for waterdependent industrial use, offsite operational or economic support to WDI uses within the DPA will be considered.
- 4. If none of the above can be achieved, a contribution to the Gloucester Port Maintenance and Improvement Fund will be considered. This fund shall be used only for support to water-dependent industrial uses within the DPA. The City prefers the fund to be used for WDI infrastructure where possible.

### • Site-Specific Guidance for Supporting DPA Use area

The Harbor Planning process found that reinvestment in port infrastructure, including the need to adapt to rising sea levels, would benefit from inclusion of Supporting DPA Uses where economic or operational support can be provided to an extent that adequately compensates for the reduced amount of tidelands on the project site that will be available for water-dependent industrial use during the term of the license. While the 2014 Harbor Plan provided for greater than the standard 25% Supporting Uses in most of the harbor, this plan is recommending a targeted approach based on site specific criteria for just 65 Rogers Street.

<u>Alternative Site Coverage Ratio for 310 CMR 9.36(5)(b)(4) and 310 CMR 9.32 (1)(b)(5)</u>: Through this DPA Master Plan the amount of Supporting DPA Uses as allowed in 9.02 will be increased to 50% for the 65 Rogers Street parcel and the direct economic and operational support required for a Supporting DPA Use area to exceed the standard 25% shall be subject to the following conditions:

To be eligible for an alternative site coverage ratio, an applicant must demonstrate that their project not only preserves but improves the utility of the site for WDI uses by satisfying the following criteria:

- 1. Existing commercial fishing vessel berthing facilities shall be maintained and enhanced through operational and/or capital support.
- 2. The location of the Supporting Use shall be adjacent to Rogers Street and the ground

floor for the purposes of FPAs shall be at the Rogers Street level.

- 3. New buildings for nonwater-dependent use shall be designed to be resilient to sea level rise and storm surge flooding over the expected useful life of the building and the open areas of the site adjacent to the docks shall be modified as needed to be resilient to frequent flooding.
- 4. Any buildings will be designed to maintain vehicular access to the waterfront and to prevent conflicts with the existing ongoing use of the site for commercial fishing vessel berthing.

Dedicated area shall be provided for storage of fishing gear and parking of vehicles for commercial fishing vessels.

For project sites other than 65 Rogers Street, the standard Chapter 91 provisions for Supporting DPA Use area of 25% shall apply.

# 8.8 Implementation

The Gloucester DPA Master Plan updates the guidance provided in the 2014 DPA Master Plan and lays out the Gloucester community's vision for its working waterfront. The 2024 Gloucester DPA Master Plan will be implemented through four primary vehicles:

- Providing guidance to state and federal licensing agencies, and to government and nongovernmental funding sources for projects that are consistent with the 2024 Gloucester DPA Master Plan;
- 2. Through adoption of the Gloucester DPA Master Plan as a strategic plan and mission statement by the City of Gloucester;
- 3. Through current local zoning that may be amended from time-to-time, as long as it is consistent with the 2024 Gloucester DPA Master Plan; and
- 4. Through building permit review by the Building Inspector to ensure conformance with the City of Gloucester MI zoning district and through the review of any Special Permits allowed under the zoning and issued by the City Council or Zoning Board of Appeals. Special permit procedures require the consideration of impacts on WDI uses.

# 8.9 Standards for Approval

The 2024 Gloucester DPA Master Plan meets all of the DPA Master Plan standards for approval at 301 CMR 23.05(2)(e) through four primary methods:

- 1. Maintaining the regulatory standards of not more than 25% supporting DPA uses for a project site within Chapter 91 jurisdiction and generally not more than 25% commercial uses within the DPA land area;
- 2. Providing Chapter 91 licensing direction to DEP for supporting DPA uses that not only are located away from the shoreline but also do not compromise large areas that may be used for water-dependent industrial uses;
- 3. Based on considerable local, state, and federal support and details in the Plan, engaging in extensive efforts to market water-dependent industrial uses and improve infrastructure (e.g., dredging and bulkhead repair); and
- 4. Ensuring that supporting DPA uses provide water-dependent industrial uses within the DPA with direct economic and/or operational support to an extent that adequately compensates for the reduced amount of tidelands on the project site that will be available for water-dependent industrial use during the term of the license.

Specific provisions on how the Plan meets each approval standard appear below.

#### Under 301 CMR 23.05(2)(e), the 2024 Gloucester DPA Master Plan shall:

• Demonstrate that it preserves and enhances the capacity of the DPA to accommodate water-dependent industrial use, and must prevent substantial exclusion of such use by any other use eligible for licensing in a DPA pursuant to 310 CMR 9.32: Categorical Restrictions on Fill and Structures.

The 2024 Gloucester DPA Master Plan recognizes that the capacity of the DPA to accommodate WDIU is threatened by deteriorating infrastructure, rising sea levels and competition from higher value land uses. The DPA Master Plan preserves and enhances the capacity of the DPA through the priority assigned to WDI uses, by precluding the displacement of commercial fishing vessel berthing, and by encouraging investment in infrastructure improvements through Supporting DPA uses are limited to 25% of a project site except for 65 Rogers Street where a higher percentage can be reasonably accommodated and a greater infrastructure investment will be required.

#### Under 301 CMR 23.05(2)(e)(1), the 2024 Gloucester DPA Master Plan shall:

• Ensure that an extensive amount of the total DPA land area in close proximity to the water will be reserved for water-dependent industrial uses.

The 2024 Gloucester DPA Master Plan achieves this goal by ensuring compliance with Chapter 91 licensing standards at 310 CMR 9.36 and through the City's MI zoning district which restricts land uses in areas outside of jurisdiction but within the DPA.

• Allow Temporary Use on such reserved lands in accordance with the Master Planestablished guidelines as approved by MassDEP after failed solicitation of a maritime industrial tenant as a pre-condition of the temporary occupancy and in compliance with all other specifications for Temporary Uses at 310 CMR 9.02.

The 2024 Gloucester DPA Master Plan does not make any modifications to the DEP regulations or procedures regarding Temporary Uses. Temporary uses have been limited in their utilization in Gloucester and this is not likely to be changed in the future.

# • Ensure that commercial uses and any accessory uses thereto will not occupy more than 25% of the total DPA land area covered by the Master Plan

The existing percentage of commercial uses in the DPA is 12.8% of the land area. This was calculated using the entire DPA land area, including pile supported piers and wharfs, and land areas both in jurisdiction and beyond. The calculated land area includes roads, public rights of way and parks within the DPA boundary.

Table 12. DPA Area Summary Commercial Uses

Total land area in DPA (acres)	78.44
Total existing non-water dependent commercial uses in DPA (acres)	10.02

Existing % of DPA with commercial uses	12.78%	
-		

A detailed parcel by parcel accounting is included in Appendix G.

Significant land use changes that would increase the percentage of commercial uses are not anticipated from this DPA Master Plan, nor are likely to occur. Reasons for this include:

- 59% of the land area is in jurisdiction, and subject to the area limitations that apply to Supporting Commercial uses on filled tidelands.
- Approximately 8 acres, or nearly 10% of the overall DPA land area, are on pile supported piers on which supporting commercial uses are not allowed.
- Many large parcels on which substantial commercial development would impact the overall percentage of commercial uses are unlikely to acquire commercial uses during the duration of this Plan. They represent over 13 acres and include the
  - Fish Pier, whose use is dedicated solely to commercial fishing related activities (8.76 acres)
  - Coast Guard (1.97 acres)
  - Electrical substation at 109 Rogers Street (2.64 acres)

The Plan ensures that the percentage of commercial uses in the DPA will not be significantly increased, nor will exceed 25% of the DPA land area through the underlying Marine Industrial zoning. The portions of the DPA that do not fall under the MI zoning, and are not constrained by the limitations that apply to non water dependent uses on filled tidelands (specifically the parcels bound by Rogers St and Main St) are already counted toward the existing commercial use total and therefore cannot contribute toward any increases in commercial uses.

#### Under 301 CMR 23.05(2)(e)(2), the 2024 Gloucester DPA Master Plan shall:

• Set forth reasonable arrangements, as required in 310 CMR 9.36: Standards to Protect Water-dependent Uses, to prevent commitments of any space or facilities that would significantly discourage present or future water-dependent industrial activity, especially on waterfront sites.

The 2024 Gloucester DPA Master Plan includes reasonable arrangements to prevent commitments of any space or facilities that would discourage present or future water-dependent industrial activities, especially on waterfront sites, by: (1) maintaining the regulatory standard at 310 CMR 9.02: Definition of not more than 25 percent of each project site within jurisdiction occupied by Supporting DPA Uses and accessory uses thereto with the exception of 65 Rogers Street; (2) prioritizing the use of the shoreline for commercial fishing vessel berthing, and (3) drawing upon the City's MI zoning to protect areas not subject to Chapter 91 from incompatible land uses.

• Provide details on these arrangements that include, but are not limited to, appropriate limits on the type, location, density, scale, duration, operation, or other relevant aspects of commercial uses, in order to ensure that such uses will comprise a compatible mix and not significantly alter the predominantly maritime industrial character of the DPA.

While it is not known how individual parcels within the Gloucester DPA may be developed in the future, the DPA Master Plan provides limited opportunities for commercial uses both within and outside of jurisdiction. Waterfront areas are generally reserved for water-dependent industrial uses. Supporting uses, including commercial uses, are limited to 25% Supporting Uses except on one site, only a portion of which may ultimately be commercial uses. Furthermore, waterfront portions of a project site will be limited to WDI uses.

• If appropriate, specify reasonable limitations on any uses in the DPA, if necessary to mitigate undue conflict with existing residential uses on properties abutting the DPA.

Gloucester is fortunate to have only a few areas where the DPA abuts residential neighborhoods. These are longstanding neighborhoods where the mix of uses has been sustained for decades. It is not believed to be necessary or appropriate to generally restrict the nature and types of WDI uses to protect residential uses.

Under 301 CMR 23.05(2)€(3), the 2024 Gloucester DPA Master Plan shall:

• Identify any industrial or commercial uses allowable under the municipal zoning code that shall qualify as a Supporting DPA Use, provided such uses comply with the provisions of the definition set forth in 310 CMR 9.02: Definitions and any associated written guidelines of DEP.

The Gloucester Zoning Ordinance has been revised to allow in the MI district only those uses which are either WDI uses or otherwise comply with the provisions of the definitions of Supporting DPA Uses. In the event of any conflicts, the definitions at 310 CMR 9.02 prevail.

• For supporting uses on piers over flowed tidelands, the Master Plan shall specify limitations and other requirements that ensure that supporting uses do not decrease the functionality of the working waterfront.

The 2024 Gloucester DPA Master Plan does not make any special provisions for Supporting DPA Uses over the water.

### Under 301 CMR 23.05(2)(e)(4), the 2024 Gloucester DPA Master Plan shall:

• Set forth a strategy to guide the on-going promotion of water-dependent industrial use by appropriate municipalities, state agencies, and federal government.

The 2024 Gloucester DPA Master Plan identifies needs for the Harbor that would benefit from the involvement of local, state and federal agencies, including the expansion of commercial fishing dockage which may require relief from federal navigational project and state harbor line limitations. In addition, the task of adapting to climate change for the harborfront properties will be challenging and costly and there may be opportunities to benefit from state or federal funding. At the local level, the Harbor Plan presents a new focus on economic development activities which can spur new industries, particularly in the marine research sector and new market opportunities for higher value seafood products.

- As part of that strategy, include but not be limited to:
  - <u>Recommendations</u> for capital improvements or other economic or operational benefits to be provided by projects involving Supporting DPA Uses, in accordance with municipal goals and priorities for development of water-dependent industrial uses on the project sites in question.

The 2024 Gloucester DPA Master Plan provides specific recommendations for capital improvements associated with 65 Rogers Street and general recommendations for other sites in Sections 7.4 and 7.6.

# <u>Recommendations</u> to preserve or enhance the infrastructure of navigation channels, truck routes and rail lines, and other transportation facilities providing user access to the working waterfront and its backlands from both the water and the land sides.

The Gloucester DPA does not directly rely on rail transport and generally has adequate access for trucks serving the port. Commercial vessel dockage is perceived to be in demand and the Plan recommends further investigation of navigation channels within Harbor Cove to see to what extent commercial fishing vessel dockage can be expanded.

 <u>Commitments</u> to maintain a surrounding land-development pattern that provides an appropriate buffer between industrial uses in the DPA and community uses that require separation therefrom in order to avoid significant operational conflict.

The Gloucester DPA has developed over time in a manner which for the most part has avoided land use conflicts with surrounding residential uses. The Gloucester zoning ordinance prioritizes maritime uses on the harbor, consistent with existing land use patterns. The DPA Master Plan does not propose any changes to the existing land use patterns.

# 9.0 Overall Compliance with MHP Standards

# 9.1 Compliance with CZM Policies

The MHP regulations at 301 CMR 23.05(1) require that MHPs be consistent with all applicable CZM Policies. The 2024 Gloucester MHP is consistent with all applicable CZM Policies as described below.

CZM Policy	Consistent or Not Applicable	Discussion
<b>Coastal Hazards Policy #1 (enforceable)</b> Preserve, protect, restore, and enhance the beneficial functions of storm damage prevention and flood control provided by	Not Applicable	

Table 13.	Gloucester	MHP	Compliance	with	CZM Policies
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natural coastal landforms, such as dunes, beaches, barrier beaches, coastal banks, land subject to coastal storm flowage, salt marshes, and land under the ocean.		
<b>Coastal Hazards Policy #2 (enforceable)</b> Ensure that construction in water bodies and contiguous land areas will minimize interference with water circulation and sediment transport. Flood or erosion control projects must demonstrate no significant adverse effects on the project site or adjacent or downcoast areas.	Consistent	Infrastructure repair and replacement will maintain existing water circulation and sediment transport.
<ul> <li>Coastal Hazards Policy #3 (enforceable) Ensure that state and federally funded public works projects proposed for location within the coastal zone will: <ul> <li>Not exacerbate existing hazards or damage natural buffers or other natural resources.</li> <li>Be reasonably safe from flood and erosion-related damage.</li> <li>Not promote growth and development in hazard-prone or buffer areas, especially in velocity zones and Areas of Critical Environmental Concern.</li> <li>Not be used on Coastal Barrier Resource Units for new or substantial reconstruction of structures in a manner inconsistent with the Coastal Barrier Resource/Improvement Acts.</li> </ul> </li> </ul>	Consistent	No new public works projects are proposed which will be consistent with policy.
<b>Coastal Hazards Policy #4</b> Prioritize acquisition of hazardous coastal areas that have high conservation and/or recreation values and relocation of structures out of coastal high-hazard areas, giving due consideration to the effects of coastal hazards at the location to the use and manageability of the area.	Consistent	No land acquisition is proposed and any new structures should be elevated to account for sea level rise.
<b>Energy Policy #1 (enforceable)</b> For coastally dependent energy facilities, assess siting in alternative coastal locations. For non-coastally dependent	Not applicable	

energy facilities, assess siting in areas outside of the coastal zone. Weigh the environmental and safety impacts of locating proposed energy facilities at alternative sites.		
Energy Policy #2 Encourage energy conservation and the use of renewable sources such as solar and wind power in order to assist in meeting the energy needs of the Commonwealth.	Consistent	MHP provides support for offshore wind services which may be needed in the future.
<b>Growth Management Policy #1</b> Encourage sustainable development that is consistent with state, regional, and local plans and supports the quality and character of the community.	Consistent	MHP supports continued stability of the commercial fishing industry through support for infrastructure and vessel berthing.
<b>Growth Management Policy #2</b> Ensure that state and federally funded infrastructure projects in the coastal zone primarily serve existing developed areas, assigning highest priority to projects that meet the needs of urban and community development centers.	Consistent	MHP encourages ongoing reinvestment in already developed urban center.
Habitat Policy #1 (enforceable) Protect coastal, estuarine, and marine habitats—including salt marshes, shellfish beds, submerged aquatic vegetation, dunes, beaches, barrier beaches, banks, salt ponds, eelgrass beds, tidal flats, rocky shores, bays, sounds, and other ocean habitats—and coastal freshwater streams, ponds, and wetlands to preserve critical wildlife habitat and other important functions and services including nutrient and sediment attenuation, wave and storm damage protection, and landform movement and processes.	Not applicable	
Habitat Policy #2 (enforceable) Advance the restoration of degraded or former habitats in coastal and marine areas.	Not applicable	
Ocean Resources Policy #1 (enforceable)	Not applicable	

Support the development of sustainable aquaculture, both for commercial and enhancement (public shellfish stocking) purposes. Ensure that the review process regulating aquaculture facility sites (and access routes to those areas) protects significant ecological resources (salt marshes, dunes, beaches, barrier beaches, and salt ponds) and minimizes adverse effects on the coastal and marine environment and other water-dependent uses.		
Ocean Resources Policy #2 (enforceable) Except where such activity is prohibited by the Ocean Sanctuaries Act, the Massachusetts Ocean Management Plan, or other applicable provision of law, the extraction of oil, natural gas, or marine minerals (other than sand and gravel) in or affecting the coastal zone must protect marine resources, marine water quality, fisheries, and navigational, recreational and other uses.	Not applicable	
Ocean Resources Policy #3 (enforceable) Accommodate offshore sand and gravel extraction needs in areas and in ways that will not adversely affect marine resources, navigation, or shoreline areas due to alteration of wave direction and dynamics. Extraction of sand and gravel, when and where permitted, will be primarily for the purpose of beach nourishment or shoreline stabilization.	Not applicable	
<b>Ports &amp; Harbors Policy #1 (enforceable)</b> Ensure that dredging and disposal of dredged material minimize adverse effects on water quality, physical processes, marine productivity, and public health and take full advantage of opportunities for beneficial re-use.	Consistent	No dredging is proposed as part of the MHP.
<b>Ports &amp; Harbors Policy #2 (enforceable)</b> Obtain the widest possible public benefit	Consistent	MHP provides protection for the DPA and encourages ongoing

from channel dredging and ensure that Designated Port Areas and developed harbors are given highest priority in the allocation of resources.		reinvestment in port infrastructure.
<b>Ports &amp; Harbors Policy #3 (enforceable)</b> Preserve and enhance the capacity of Designated Port Areas to accommodate water-dependent industrial uses and prevent the exclusion of such uses from tidelands and any other DPA lands over which an EEA agency exerts control by virtue of ownership or other legal authority.	Consistent	MHP protects capacity of DPA to support WDI uses and supports the ongoing use of publicly owned properties in the harbor for WDI uses with a priority on commercial fishing vessel berthing
<b>Ports &amp; Harbors Policy #4 (enforceable)</b> For development on tidelands and other coastal waterways, preserve and enhance the immediate waterfront for vessel-related activities that require sufficient space and suitable facilities along the water's edge for operational purposes.	Consistent	MHP provides requirements for water's edge to be used for WDI uses and ensures access and support facilities will be provided.
<b>Ports &amp; Harbors Policy #5</b> Encourage, through technical and financial assistance, expansion of water-dependent uses in Designated Port Areas and developed harbors, re-development of urban waterfronts, and expansion of physical and visual access.	Consistent	MHP coordinates maritime activities within the City of Gloucester leading to information sharing and technical assistance.
<b>Protected Areas Policy #1 (enforceable)</b> Preserve, restore, and enhance coastal Areas of Critical Environmental Concern, which are complexes of natural and cultural resources of regional or statewide significance.	Not Applicable	
<b>Protected Areas Policy #2 (enforceable)</b> Protect state designated scenic rivers in the coastal zone	Not Applicable	

<b>Protected Areas Policy #3 (enforceable)</b> Ensure that proposed developments in or near designated or registered historic places respect the preservation intent of the designation and that potential adverse effects are minimized.	Not Applicable	
Public Access Policy #1 (enforceable) Ensure that development (both water- dependent or nonwater-dependent) of coastal sites subject to state waterways regulation will promote general public use and enjoyment of the water's edge, to an extent commensurate with the Commonwealth's interests in flowed and filled tidelands under the Public Trust Doctrine.	Consistent	Public access is promoted through substitute provisions where it will not conflict with WDI use and/or where seasonally feasible
Public Access Policy #2 (enforceable) Improve public access to existing coastal recreation facilities and alleviate auto traffic and parking problems through improvements in public transportation and trail links (land- or water-based) to other nearby facilities. Increase capacity of existing recreation areas by facilitating multiple use and by improving management, maintenance, and public support facilities. Ensure that the adverse impacts of developments proposed near existing public access and recreation sites are minimized.	Not Applicable	
<b>Public Access Policy #3 (enforceable)</b> Expand existing recreation facilities and acquire and develop new public areas for coastal recreational activities, giving highest priority to regions of high need or limited site availability. Provide technical assistance to developers of both public and private recreation facilities and sites that increase public access to the shoreline to ensure that both transportation access and the recreation facilities are compatible with	Not Applicable	

social and environmental characteristics of surrounding communities.		
Water Quality Policy #1 (enforceable) Ensure that point-source discharges and withdrawals in or affecting the coastal zone do not compromise water quality standards and protect designated uses and other interests.	Consistent	Point source discharges for any proposed project will meet water quality standards and protect designated uses and other interests.
Water Quality Policy #2 (enforceable) Ensure the implementation of nonpoint source pollution controls to promote the attainment of water quality standards and protect designated uses and other interests.	Consistent	Applicable nonpoint source pollution controls will be implemented on any project to promote the attainment of water quality standards and protect designated uses and other interests
Water Quality Policy #3 (enforceable) Ensure that subsurface waste discharges conform to applicable standards, including the siting, construction, and maintenance requirements for on-site wastewater disposal systems, water quality standards, established Total Maximum Daily Load limits, and prohibitions on facilities in high- hazard areas.	Not applicable	

# 9.2 Consistency with State Tidelands Policy Objectives

The MHP regulations at 301 CMR 23.05(2)(a) state that the Plan must be consistent with state tidelands policy objectives and associated regulatory principles, as set forth in the Waterways regulations of DEP. The 2024 Gloucester MHP is consistent with these objectives in much the same way as was the 2014 Gloucester MHP. The 2024 Gloucester MHP's consistency with these primary state tidelands policy objectives are described below.

• To ensure that development of all tidelands complies with other applicable environmental regulatory programs of the Commonwealth as provided in 310 CMR 9.33, Environmental Protection Standards, and is especially protective of aquatic resources within coastal Areas of Critical Environmental Concern, as provided in 310 CMR 9.32(1)(e) and 9.33: Areas of Critical Environmental Concern (ACEC's)

Any proposed projects under the 2024 Gloucester MHP will comply with all applicable environmental standards and ensure that coastal resources will be protected. There are no ACECs in the harbor planning area.

• To preserve any rights held by the Commonwealth in trust for the public to use tidelands for lawful purposes, and to preserve any public rights of access that are associated with such use, as provided in 310 CMR 9.35: Standards to Preserve Water-related Public Rights

The 2024 Gloucester MHP strongly supports the public interest in navigation and the use of tidelands for water dependent uses. While the MHP prioritizes the use of the DPA areas for WDI uses, it also allows and encourages general public pedestrian access where it does not conflict with or preempt WDI.

• To preserve the availability and suitability of tidelands that are in use for water-dependent purposes, or that are reserved primarily as locations for maritime industry or other specific types of water-dependent use, as provided in 310 CMR 9.32 (1)(b): Tidelands Within Designated Port Areas (DPAs) and 9.36: Standards to Protect Water-dependent Uses

The 2024 Gloucester MHP at its heart is about preserving and protecting tidelands so that they may better serve WDI uses in the DPA. The Plan recognizes the economic challenges faced by property owners and businesses in maintaining the required infrastructure in the current economic climate. The MHP maintains protection on the use of the DPA for WDI uses while also providing mechanism for additional economic and operational support through Supporting DPA uses.

• To ensure that all licensed fill and structures are structurally sound and otherwise designed and built in a manner consistent with public health and safety and with responsible environmental engineering practice, especially in coastal high hazard zones and other areas subject to flooding or sea-level rise, as provided in 310 CMR 9.37: Engineering and Construction Standards

The MHP investigated the conditions of waterfront structures and found that many are in need of upkeep and repair. The challenging economic viability of marine industries makes maintaining infrastructure difficult. The MHP helps to provide mechanisms to allow for Supporting DPA uses to provide economic support to ensure that waterfront structures are maintained in a structurally sound condition.

• To ensure patronage of public recreational boating facilities by the general public and to prevent undue privatization in the patronage of private recreational boating facilities, as provided in 310 CMR 9.38: Use Standards for Recreational Boating Facilities; and to ensure that fair and equitable methods are employed in the assignment of moorings to the general public by harbormasters, as provided in 310 CMR 9.07: Activities Subject to Annual Permit

The 2024 Gloucester MHP makes no changes to the provisions regarding private recreational boating facilities, although it is recognized that recreational boating can provide economic competition to commercial fishing vessels for berthing locations. Accordingly, the MHP strengthens the non-displacement provisions of the 310 CMR 9.36 to ensure commercial fishing vessel berthing will not be displaced by recreational vessels.

• To ensure that marinas, boatyards and boat-launching ramps are developed in a manner that is consistent with sound engineering and design principles, and include such pumpout facilities and other mitigation measures as are appropriate to avoid or minimize adverse impacts on water quality, physical processes, marine productivity, and public health, as provided in 310 CMR 9.39: Standards for Marinas/Boatyards/Boat Ramps The 2024 Gloucester MHP supports the use of best operating practices for recreational marinas throughout the harbor in order to preserve and protect harbor water quality. The Harbormaster's office provides the pump out boat for both visiting and home ported recreational boaters and provides routine harbor patrols to ensure harbor waters are protected.

 To ensure that dredging and disposal of dredged material is conducted in a manner that avoids unnecessary disturbance of submerged lands and otherwise avoids or minimizes adverse effects on water quality, physical processes, marine productivity, and public health, as provided in 310 CMR 9.40: Standards for Dredging and Dredged Material Disposal

The 2024 Gloucester MHP does not propose any new or maintenance dredging as part of the plan. However, the City of Gloucester through its Conservation Commission would review any such plans and ensure that the appropriate standards of care were exercised to minimize any adverse impacts on water quality.

# • To ensure that nonwater-dependent use projects do not unreasonably diminish the capacity of any tidelands to accommodate water-dependent use, as provided in 310 CMR 9.51: Conservation of Capacity for Water-dependent Use

The 2024 Gloucester MHP prioritizes the use of DPA lands for WDI uses, particularly in this critical component of the Commonwealth's port infrastructure. While the MHP does not prohibit nonwater-dependent use projects, it ensures that any such projects proposed will be carefully viewed for consideration as to whether there is any diminishment of the capacity of the port to support ongoing water dependent uses.

• To ensure that nonwater-dependent use projects on any tidelands devote a reasonable portion of such lands to water-dependent use, including public access in the exercise of public rights in said lands, as provided in 310 CMR 9.52: Utilization of Shoreline for Water-dependent Purposes

The 2024 Gloucester MHP artfully encourages the provision of public pedestrian access within the DPA but only where it does not conflict with ongoing WDI uses. The City of Gloucester has been on the forefront of promoting public access on City owned parcels within the DPA and has found that it is a compatible activity where properly configured, with significant public benefits. The MHP encourages further development of public access on a seasonal basis in areas where lobster gear is stored.

• To ensure that nonwater-dependent use projects on Commonwealth tidelands, except in DPAs, promote public use and enjoyment of such lands to a degree that is fully commensurate with the proprietary rights of the Commonwealth therein, and that ensures that private advantages of use are not primary but are merely incidental to the achievement of public purposes, as provided in 310 CMR 9.53: Activation of Commonwealth Tidelands for Public Use

The 2024 Gloucester MHP recognizes the importance public pedestrian access and that public interests in tidelands require the consideration of public benefits in the consideration of an proposed nonwater dependent use project on the Harbor.

# 9.3 Compatibility with State Agency Plans or Planned Activities

The MHP regulations at 301 CMR 23.05(3) state that MHPs must include all feasible measures to achieve compatibility with the plans or planned activities of all state agencies owning real property or otherwise responsible for the implementation of development of plan or projects within the harbor planning area. The table below identifies relevant state agencies and the 2024 Gloucester MHP's compatibility with these agencies' plans or planned activities.

State Agency	Relevant 2024 Gloucester MHP provisions	Notes
Massachusetts Bay Transportation Authority (MBTA)	None	There are no known plans of the MBTA that pertain to the MHP area.
Mass Development	Preservation of DPA lands and WDI uses	The MHP will encourage the continuation of commercial fishing vessel berthing and offloading and seafood processing which currently takes place at the Jodrey State Fish Pier.
Massachusetts Clean Energy Center (CEC)	Preservation of DPA land and WDI uses	The MHP preserves the DPA for future Water Dependent Industrial uses and recognizes that offshore wind energy development may need support facilities in Gloucester in coming years and decades.
Massachusetts Seaport Economic Council	MHP identifies needs for infrastructure investment in waterfront facilities.	The MHP clearly identifies the need for increased public investment in waterfront infrastructure which is made more urgent by the potential for rapidly increasing sea level rise.

Table 14. Gloucester MHP Compliance with Other State Agency Plans or Planned Activities

The 2024 Gloucester MHP and DPA Master Plan addresses regulatory barriers to pursuing Gloucester's economic vision within the purview of Chapter 91 and DPA regulations, but there are other regulatory, organizational, economic, and physical barriers to realizing this vision that must be addressed through continued planning, advocacy, and strategic action by public and private sector stakeholders.

Beyond its regulatory role, this plan is intended to provide a compelling narrative and roadmap for continued action. This plan does not have any inherent link to the resources needed to implement these economic development ideas, so its power lies in the potential that its strategic clarity inspires and supports other initiatives (including the pursuit of grant and low-interest loan resources based on this vision). This is intended to be a flexible strategic framework that allows for continued evolution - none of

the challenges Gloucester Harbor is facing have static solutions since they are all in the midst of rapid evolution based on a shifting climate, economic, and technological context.

The implementation strategies revolve around organizational capacity building, refinement of other regulations, public infrastructure and site investment, and economic development programs and initiatives.

# 10.0 Implementation Strategies

# 10.1 Organizational Capacity Building

Currently, there is a lack of sufficient staff and financial capacity within Gloucester's government and nonprofit sectors to lead, execute, and monitor economic development initiatives such as business development, promoting innovation, driving marketing, and conducting recruitment at the scale necessary to "move the needle." It is therefore critical that Gloucester create a new entity (or expand an existing entity) with substantial increased resources and ability to acquire selected marine infrastructure and properties, drive reinvestment into buildings and facilities, support grant writing, and find sources of capital for refurbishment of the marine infrastructure. Specific obligations would be to:

- Coordinate with the Mayor's staff and the Harbor Plan Committee to develop a time-bound strategic plan that coordinates with and leverages City overall goals and actions, thus supporting an overall strategic vision for Gloucester's future;
- Facilitate the assembly and disposition of larger parcels;
- Execute real estate development and programming;
- Monitor and measure the city's maritime economy against strategic plan goals, supported by regional and national best practices, to inform policies and programs that require changes or increased resources;
- Define, start, and complete prioritized strategic plan initiatives (grant writing, providing seed funding, creating business plans, and technical support);
- Manage and deploy financial capital resources; and
- Marketing and institutional partnership development guided by an overall strategic plan.

This entity could take one of three general forms -(1) City staff supported by an implementation committee, (2) an independent non-profit development corporation or (3) a public port authority or development corporation. The regulatory plan cannot help achieve this objective, but with the plan as documentation of this need, the State can serve as a supportive advocate to assist Gloucester in determining the best organizational structure and attracting the resources needed to build the capacity of the identified lead entity and local government staffing needs.

- 1. Re-establish and fill a permanent, full-time dedicated staff position for harbor planning, development, and coordination within the City of Gloucester Community Development Department.
- 2. Determine what knowledge, skill base, and organizational supports are needed to ensure the continued viability of the working waterfront and what type of entity aligns best with those needs.
- 3. Identify or create point entity to lead, monitor, and implement vision of working waterfront development and consolidate applicable funds and organizations as part of that lead entity.

- 4. Develop a "Harbor Plan Implementation Committee" framework that ensures more continuous coordination and collaborative work amongst the entities involved in planning and development in the harbor (e.g., EDIC, Fisheries Commission, Planning Board, Waterways Board, Conservation Commission, Harbormaster's Office), and includes a mechanism for these entities to support and extend the capacity of a dedicated City staff position. Tie the goals and deliverables of this group to a broader citywide vision for the future of Gloucester.
- 5. Define an administrative structure and funding priorities for the Gloucester Port Maintenance and Improvement Fund.
- 6. Create or appoint a public or non-profit harbor economic development entity to lead, monitor, and implement the vision of working waterfront development and consolidate applicable funds and organizations as part of that lead entity. This entity would be responsible for communicating the vision, assembling the funds, and identifying and managing partner organizations to inform and lead specific components of the time-bound strategic plan.
- 7. Identify a person or committee to create a comprehensive funding pipeline of opportunities. Apply for philanthropic, state, and federal funds to provide a more substantial and sustainable base of resources to support the work of the City staff dedicated to harbor planning, development, and coordination, as well as the identified lead harbor economic development entity.

# **10.2 Refinement of Other Regulations**

# Local Zoning

Over the course of the 2024 harbor planning process, several local zoning ideas came up that could be beneficial to revisit outside of the harbor plan.

- Review and update local MI District Zoning to ensure consistency with revised Supporting Use approach.
  - Current language reads "In the MI District, Supporting Designated Port Area (DPA) Uses, as defined in 310 CMR 9.02, shall not in the aggregate occupy more than 50% of the ground level area on filled tidelands on a lot within the DPA."
- Introduce local zoning protections and incentives for water-dependent industrial.
  - Non-Industrial: Implement "right to farm" type legislation to protect water-dependent industrial uses from nuisance complaints and political advocacy of encroaching nonindustrial uses that often result in displacement or severe operational constraints for preexisting industrial uses. This kind of legislation has been used in rural farming communities to protect against encroachment of suburban residential uses. In the Gloucester context, it would be most effective if legislation required new non-industrial uses in marine industrial areas to (1) use quiet design and increased ventilation to reduce adverse impacts of proximity to industrial uses and (2) introduce deed and rental notification to new owners and occupants informing them of the existence and rights of adjacent industrial uses. These two requirements can help to reduce nuisance complaints and political advocacy from non-industrial neighbors that harm water-dependent industrial business operators.
  - Parking: Explore use-based requirements and shared parking regulations that incentivize property owners, developers, and business operators to maximize use of valuable harbor land.

- Revisit local zoning height restrictions to incorporate the relevant design flood elevation (DFE).
  - In the DPA area, revise local zoning height within FEMA floodplain to be measured from the Design Flood Elevation instead of from the ground plane.
  - Develop illustrated floodplain design guidelines that help demonstrate viable options for how to address flood adaptation needs in the context of Gloucester-specific conditions, including reconciling grade between existing infrastructure, site grading, and building configurations, and the water through operational and physical strategies. These guidelines should help working waterfront property owners evaluate alternative ways to integrate the public realm, design of the ground floor, design and placement of building systems, and overall building height and massing.
- Refine local zoning to better reflect dimensional constraints, land use opportunities and urban design priorities of harbor planning sub-areas.
  - Clarify zoning related to building envelope size and public access (physical or visual) to one of its prime tourist attractions, its 350-year-old working fishing port. Consider rezoning harbor based on districts that reflect the parcel size and existing and adjacent uses. This sub-area zoning could include more specific guidelines on things like view corridors, public access, parking and dimensional standards provided these parameters do not conflict with DPA and Chapter 91 regulations. Additionally, this sub-area zoning could address mixed-use transitions at the edges of the DPA. Specifically:
  - View Corridors & Public Access: establish reasonable and achievable public access standards for physical and visual access (sightlines), including setback and buffering, that take into account the small parcel sizes of most of the harbor.
  - Parking and Loading: confirm acceptable site access, parking, loading, and storage configurations and ratios.
  - Dimensional Standards (Height): based on need as well as view corridors and shadow impacts, evaluate if select areas should be allowed to exceed the current 40 ft max height given flood elevation and modern industrial floor-to-floor needs for uses like R&D. Currently height increases in the MI zone require a variance, but a special permit might be a more appropriate and less burdensome tool to allow for height increases. Setbacks, building footprint, lot coverage and other dimensional standards may merit further analysis.

# State Harbor Line and Federal Navigational Channel

The Gloucester Waterways Board and City of Gloucester Community Development Department intend to conduct a cost-benefit analysis of the Federal Navigational Channel boundary and Board of State Harbor Commissioners Line to determine if a change in boundary, for either or both, could support expanded commercial fishing vessel dockage, especially in Harbor Cove without limiting Gloucester's ability to (a) retain critical navigation in the harbor and (b) secure funding for future dredging needs.

# **FEMA** Floodplain

The City of Gloucester intends to complete a technical evaluation of the FEMA Flood Insurance Rate Map (FIRM) for the Inner Harbor, and if warranted, consider applying for a FIRM revision to more accurately account for present day coastal flood risks.

# **10.3 Public Infrastructure Investment**

Investments in public streets and harbor infrastructure can support harbor activity in three primary areas: streetscape and wayfinding, municipal utilities, waterside infrastructure, public dockage, and harbor navigation. The following infrastructure investments have the potential to support increased stability, resilience and economic vitality in Gloucester's harbor and beyond:

- Streetscape and Wayfinding
  - Make targeted streetscape, wayfinding, and pedestrian infrastructure improvements, 0 especially around Rogers Street and Commercial Street where there are the most conflicts between working waterfront and hospitality and tourism uses.
- **Municipal Utilities** 
  - In the upgrading of the Gloucester Wastewater Treatment Facility (WWTF), ensure future 0 treatment options accommodate and reduce economic barriers to Gloucester-based seafood processing operations.
  - Continue City efforts to establish high-speed fiber-optic internet infrastructure around downtown, the harbor, and industrial and commercial districts in Gloucester (to ensure Gloucester is competitive and supports growth of marine research and development uses).
  - Work with National Grid to ensure sufficient energy capacity, reliability, and quality of 0 harbor electrical utility service to meet existing and future marine industry needs.
- Waterside Infrastructure
  - 0 Pursue capital and grant funding to maintain and upgrade publicly owned bulkheads, seawalls, and pile-supported piers and docks to meet modern industrial and climate resilience standards. This includes 65 Rogers Street (I4-C2) and 112 Commercial Street as well as the various City of Gloucester parks and other state and federal sites like the State Fish Pier and US Coast Guard Station. The Harbormaster Office serves as a good example of this.
- Public Dockage
  - Retain and pursue opportunities to expand publicly controlled dockage for commercial 0 fishing vessels.
  - Explore development of shared public loading, unloading, and berthing space that can provide shoreside access for moored vessels and operators with poor landside trucking access.
- Harbor Navigation
  - Continue working with the State and USACE to assess and plan for dredging needs as 0 they arise in the harbor to support the Harbor Plan.

# 10.4 Public Site Investment

Publicly owned sites play an important role in signaling to the private sector what the community's vision and level of commitment is. However, Gloucester Harbor has a very limited number of public assets located on the harbor apart from the State Fish Pier. The City owns less than 10% of shoreside harborfront property. An inventory of important publicly owned sites is included below, grouped thematically to facilitate awareness of the roles each plays in supporting Gloucester's maritime economy. •

- Existing supportive services for water-dependent industrial:
  - USCG Station
  - Jodrey State Fish Pier
  - Harbormaster's Office

- Existing parks and cultural anchors:
  - Gordon Thomas Park
  - St. Peter's Park
  - Captain Solomon Jacob's Park
- Vacant public sites as of 2024:
  - 65 Rogers Street (I4-C2)
  - Parking lot in front of Gloucester House
  - 112 Commercial Street

This poses challenges related to public investment in infrastructure and highlights the importance of proactive, thoughtful planning for the investment and use of the public property located on the harbor, and the need for innovative public/private partnerships to spur economic activity and investment.

The largest parcel of City owned land on the harbor is located at 65 Rogers Street. This 1.82 acre parcel on the city's inner harbor is home to 12 commercial lobster boats and is centrally located near many of the continuously operating commercial fishing vessels and complimentary industries. It is also just one block away from Main Street, the Harbormaster's Office and Visiting Boater Center, and adjacent to several properties that are currently undergoing private redevelopment. The sheet pile bulkhead protecting this land is in disrepair and the site often inundated during extreme high tides and storm surges. The City is currently operating under a temporary Chapter 91 license to allow for parking on this parcel while we continue to plan for its future. This harbor planning effort considers reuse scenarios of publicly owned properties including but not limited to 65 Rogers Street and 112 Commercial Street.

Because there is such limited public ownership, there is increased pressure to make the most of those limited public sites to support the harbor's needs. The implementation strategies therefore focus on publicly owned sites like 65 Rogers Street (I4-C2), because they have the most tangible potential for this plan to signal the vision for the harbor and influence harbor-wide outcomes by removing site-specific barriers and setting the stage for future RFPs and development on these sites. The Alternative Site Coverage Ratio for 65 Rogers Street in this Plan is a first step in enabling more productive uses on that site by allowing a greater role for supporting uses. Further specific recommendations for that site and 112 Commercial Street include:

- Explore feasibility of public sector preliminary design and investment in critical harbor infrastructure on 65 Rogers Street.
- Conduct a geotechnical and Phase 1 Environmental study of 65 Rogers Street (I4-C2) to determine baseline development costs.
- Identify funding and development partners to advance plans for 65 Rogers Street (I4-C2), consistent with the community vision established in the 2024 Gloucester Harbor Plan.
- Conduct a community process to develop a vision for how 112 Commercial Street can best support Gloucester's maritime economy.
- Conduct an analysis of public and private harbor parcels beyond 65 Rogers Street and 112 Commercial to determine which are in greatest need of investment based on the condition of pilings, infrastructure, and flood risk. Use this analysis to develop a prioritization of the highest risk parcels for resilient, economic development demonstration projects.
- Pursue grant funding to support resilience retrofits for all public properties and infrastructure, according to prioritization, to model best practices and provide harbor-wide emergency management resources.

- Continue to evaluate all public harbor properties for highest and best uses and programs to support maritime economy, including parks and cultural sites.
- Explore public investment in and/or pursue public private partnerships on strategic underutilized large privately held industrial sites (both inland and on the harbor) with good landside truck access to maximize their benefit to the maritime economy.

# 10.5 Economic Development Programs and Initiatives

To promote economic development, including necessary private resilience adaptation and harbor infrastructure investments, the City of Gloucester and partners will need to attract additional funding and initiate a variety of economic development activities and programs. The detailed recommendations for each of the programs and initiatives mentioned here are included in Appendix F under the relevant strategy.

- <u>Build an integrated technical assistance and capital investment financing system (Strategy 1.3)</u>. This involves attracting new funding and identifying or creating a mechanism to offer grant funding and low-interest financing to private property owners seeking to maintain and upgrade their bulkheads and seawalls; pile-supported piers and docks; localized dredging; and implement climate resilience adaptations.
- <u>Shape the local hospitality and tourism economy to better support and benefit core maritime</u> <u>industries (Strategy 2.3)</u>. Based on the 2021 LRRP, Gloucester is already working towards a more defined and mutually beneficial relationship between Harbor Cove and the downtown tourism and hospitality industry. In addition to the public infrastructure investment in streetscapes and wayfinding mentioned in Section 10.3, this can be accomplished by developing working waterfront visitor program partnerships.
- <u>Continue to pursue a spatially specialized economic development strategy that maximizes</u> <u>economic development potential and strengthens the harbor-upland relationship (Strategy 2.4)</u>. Gloucester will continue to protect and prioritize maximum development of limited large-lot industrial properties for more intensive industrial and marine life science development and invest in public sector site control where needed to ensure maximum utilization of these sites. Likewise, Gloucester will continue to recruit lower intensity and smaller scale water-dependent uses that are able to compete for waterfront land on the private market without DPA protection (like recreational marinas, ocean observation and charter fishing operations, and event venues) to locate in the East Gloucester former DPA area. Finally, Gloucester will continue to encourage and incentivize the relocation of complementary nonwater-dependent tourism and hospitality functions to the adjacent residential, recreational and commercial areas.
- <u>Protect and grow fishing capacity of the harbor in terms of permits, workforce, fleet, dockage, and processing (Strategy 3.1).</u> In addition to the public dockage investment described in Section 10.3, this can be advanced by retain and continuing to invest in the maintenance of the Gloucester fishing permit bank; recruiting, training, and mentoring local talent in living resources and fleet repair careers; and evaluating feasibility of establishing a local seafood processing and wholesale facility (on the harbor or in an accessible inland location) that could be used by local Gloucester operations.
- <u>Help Gloucester fishing and shellfishing operations capture more value (Strategy 3.2)</u>. In order to facilitate increased stability, resilience, and reinvestment in critical waterside infrastructure, it is important that Gloucester promotes mechanisms that enable fishing businesses to capture a

larger percentage of the value added in the seafood value chain through initiatives like implementing a 100% fish strategy, shared ownership models, and scaling up marketing efforts like Gloucester Fresh. This can also be accomplished through more direct partnership on development of innovative seafood products that expand the market and increase the profit margins for Gloucester fish and shellfish.

- Invest in proactively establishing Gloucester as an emerging hub for marine research and innovation (Strategy 4.1). In addition to the high speed fiber optic internet service investment described in Section 10.3, Gloucester can partner to expand the local presence of institutional research, recruit marine biomaterials industry leaders, identify opportunities to attract private sector marine research and development industry investment. Ultimately, Gloucester can also work towards the creation of an ocean innovation and development center in close proximity to the harbor and can explore the feasibility of establishing a dedicated new fishing technology testing area.
- Retain and grow Gloucester's capacity to serve as a deployment center for marine construction and monitoring (Strategy 4.2). Gloucester can begin by partnering with regional offshore wind developments to assess gaps in Gloucester's capacity to support servicing and repair, and then can work towards the eventual establishment of a deployment center for marine construction and monitoring.

# **10.6 Potential Implementation Partners**

As stated in the 2014 Gloucester Harbor Plan, responsibilities of the City of Gloucester Community Development Department with respect to Gloucester Harbor will continue to be:

- Encourage and coordinate investment in and revitalization of the waterfront infrastructure and businesses contributing to the economic vitality of Gloucester.
- Work with other city boards, commissions, and authorities to coordinate the activities related to the harbor and adjacent shorefront.
- Prepare proposals seeking financial support from state and federal sources in support of port development.
- Serve as a source, repository and clearinghouse for information on the harbor and port including: condition of the navigable waterways and port-related infrastructure, investment opportunities, and permitting.
- Serve as liaison with state and federal agencies on harbor programs, and regulatory and funding activities.
- Draft policies and regulations to guide the use and development of Gloucester Harbor and its public waterfront facilities.
- Assist harbor front property owners with regulatory matters, potential funding sources, and business partnerships.
- Foster and support partnerships between private property owners and government to improve and expand appropriate port uses and activities.
- Work with the commercial fishermen's associations and fishing-related businesses to help ensure this industry continues to be a vital part of the Port of Gloucester.

Potential implementation partners in this work include:

- City of Gloucester Economic Development
- City of Gloucester Public Works
- Gloucester Planning Board

- Gloucester Waterways Board
- Gloucester Economic Development & Industrial Corporation
- Gloucester Fisheries Commission
- Gloucester Fishermen's Wives Association
- Gloucester Fishing Community Preservation Fund and Fishing Permit Bank
- Gloucester Harbor Plan Committee
- Gloucester Harbormaster
- Gloucester Marine Genomics Institute
- MA Fishing Partnership
- MassDevelopment State Fish Pier
- Massachusetts Department of Environmental Protection (DEP)
- Massachusetts Office of Coastal Zone Management (CZM)
- Massachusetts Seaport Economic Council (SEC)
- National Working Waterfronts Network
- National Oceanic and Atmospheric Administration (NOAA)
  - National Marine Fisheries Service (NMFS)
  - Marine Debris Program (MDP)
- Ocean Alliance
- UMass Amherst Gloucester Marine Station & North Shore Blue Economy Initiative
- US Coast Guard Station

# Appendices

Appendices will be compiled and drafted by Utile as part of the final draft of this document.

# A. Request for Notice to Proceed

# **B. Notice to Proceed**

# C. 2014 DPA Boundary Review Decision

# **D. Detailed Planning Sub-Area Analysis and Descriptions**

# E. Public Engagement and Process Documentation

# F. Detailed Economic Development Recommendations

While this Municipal Harbor Plan and DPA Master Plan functions primarily as a regulatory plan, it also acts as the foundation for a strategic plan that can be linked to an overall 5-10 year vision for Gloucester's economic development priorities and approaches. The following objectives and strategies are intended to provide the cohesive, strategic guidance needed to support implementation action on the economic development needs of Gloucester's harbor and maritime economy.

# Objective 1. Strengthen organizational capacity and regulatory foundation to support harbor economic development.

Gloucester will need additional staff and financial capacity within Gloucester's government and nonprofit sectors to lead, execute, and monitor economic development initiatives such as business development, promoting innovation, driving marketing, and conducting recruitment at the scale necessary to "move the needle." Additionally, through this harbor planning process, several local and federal regulatory issues (such as the state harbor line and Federal Navigational Channel Boundary, FEMA Flood Insurance Rate Map variation, and local zoning) have been raised that should be addressed in the next five years according to the prioritization indicated in Strategy 1.2 and 1.4 to promote alignment and clarity, especially around issues of harbor infrastructure investment, climate resilience, and property investments.

#### Strategy 1.1 - Build organizational capacity to support harbor economic development.

At the time of the 2014 Harbor Plan, the Director of Harbor Planning position was filled within the City of Gloucester Community Development Department, and a Harbor Plan Committee was formed to guide the planning process. However, following the completion of the plan, the committee disbanded, and the Director of Harbor Planning position was vacated and never refilled. A Harbor Development Corporation was also created following the 2014 plan, but it was never resourced appropriately, and its status is uncertain at this time. A Gloucester Port Maintenance and Improvement Fund was also created but it was never seeded with sufficient funds to support project priorities and administrative mechanisms for its use were never clearly laid out.

To this end, Gloucester needs to consider the creation of a new entity (or expand an existing entity) with substantially increased resources and ability to acquire selected marine infrastructure and properties, drive reinvestment into buildings and facilities, support grant writing, and find sources of capital for renewal and utilization of the marine infrastructure. Specific obligations would be to:

- Coordinate with the Mayor's staff and the Harbor Plan Committee to develop a time-bound strategic plan that coordinates with and leverages City overall goals and actions, thus supporting an overall strategic vision for Gloucester's future;
- Facilitate the assembly and disposition of larger parcels;
- Execute real estate development and programming;
- Monitor and measure the city's maritime economy against strategic plan goals, supported by regional and national best practices, to inform policies and programs that require changes or increased resources;
- Define, start, and complete prioritized strategic plan initiatives (grant writing, providing seed funding, creating business plans, and identifying and providing needed technical support);
- Manage and deploy financial capital resources; and
- Marketing and institutional partnership development guided by an overall strategic plan.

This entity could take one of three general forms listed below. The City of Gloucester, stakeholders, and partners will need to invest in evaluating which alternative is the best fit for Gloucester, and then will need to invest in the legal and financial formation and/or expansion of one of these alternatives.

 <u>City Staff + Implementation Committee</u>: This is the most minimal alternative and would involve the City of Gloucester staff advancing the recommendations of this plan within its current departmental frameworks and abilities, with the support of and regular coordination with a Harbor Plan Implementation Committee composed of key stakeholders, experts, and actors in the harbor economy. The benefit of this alternative is its minimal startup demands and simplicity, but its downside is that it might not be able to guarantee sufficient time and resources due to an overreliance on volunteer labor.

- Independent Non-profit Development Corporation: A good example of the non-profit development corporation model is the <u>Greenpoint Manufacturing & Design Center</u>, which is an industrial development corporation. The benefit of this alternative is its funding flexibility and ability to connect public and private sector actors, but its downside is that that very same funding flexibility can also lead to instability when funding sources dry up or change rapidly.
- 3. Public Port Authority or Development Corporation: Good examples of the public port authority or Economic Development and Industrial Corporation (EDIC) model include <u>New Bedford Port</u> <u>Authority</u>, the <u>Department of Ports and Harbors</u> in Unalaska, Alaska, and the <u>Boston EDIC</u> and <u>Massport</u>. The benefit of this alternative is its increased redevelopment powers and reliable, stable funding sources, but its downside is its perception of being heavy-handed and its lack of flexibility in pursuing alternative funding streams beyond its own real estate revenue and public operational budget allocations.

The regulatory plan cannot help achieve this objective, but with the plan as documentation of this need, the State can serve as a supportive advocate to assist Gloucester in determining the best organizational structure and attracting the resources needed to build the capacity of the identified lead entity and local government staffing needs.

- 1. Re-establish and fill a permanent, full-time dedicated staff position for harbor planning, development, and coordination within the City of Gloucester Community Development Department.
- 2. Determine what knowledge, skill base, and organizational supports are needed to ensure the continued viability of the working waterfront and what type of entity aligns best with those needs.
- 3. Develop a "Harbor Plan Implementation Committee" framework that ensures more continuous coordination and collaborative work amongst the entities involved in planning and development in the harbor (e.g., <u>EDIC</u>, <u>Fisheries Commission</u>, <u>Planning Board</u>, <u>Waterways Board</u>, <u>Conservation Commission</u>, <u>Harbormaster's Office</u>), and includes a mechanism for these entities to support and extend the capacity of a dedicated city staff position. Tie the goals and deliverables of this group to a broader citywide vision for the future of Gloucester.
- 4. Define an administrative structure and funding priorities for the Gloucester Port Maintenance and Improvement Fund.
- 5. Create or appoint a public or non-profit harbor economic development entity to lead, monitor, and implement the vision of working waterfront development and consolidate applicable funds and organizations as part of that lead entity. This entity would be responsible for communicating the vision, assembling the funds, and identifying and managing partner organizations to inform and lead specific components of the time-bound strategic plan referenced in Strategy 1.1.
- 6. Identify a person or committee to create a comprehensive funding pipeline of opportunities. Apply for philanthropic, state, and federal funds to provide a more substantial and sustainable base of resources to support the work of the city staff dedicated to harbor planning, development and coordination, as well as the identified lead harbor economic development entity.

#### Strategy 1.2 - Pursue aligned, supportive regulations at state and federal levels of government.

Like all waterfronts, Gloucester has many layers of regulations governing development - including but not limited to state-level DPA and Chapter 91 regulations, state Harbor Line, and federal FEMA floodplain and Navigational Channel regulations.

#### Specific implementation recommendations include:

In addition to the updated supporting use guidance, and other substitutions, offsets and amplifications and direct regulatory permitting guidance on site-specific vision for 65 Rogers Street (I4-C2) provided in Sections 7.6 and 8.7 of the 2024 Gloucester Harbor Plan, several other actions can address regulatory alignment and technical assistance needs:

- Conduct a cost-benefit analysis of the Federal Navigational Channel boundary and Board of State Harbor Commissioners Line to determine if a change in boundary, for either or both, could support expanded commercial vessel dockage, especially in Harbor Cove without limiting Gloucester's ability to (a) retain critical navigation in the harbor and (b) secure funding for future dredging needs.
- 2. Complete a technical evaluation of the FEMA Flood Insurance Rate Map (FIRM) for the Inner Harbor, and if warranted, consider applying for a FIRM revision to more accurately account for present day coastal flood risks.

#### Strategy 1.3 - Build an integrated technical assistance and capital investment financing system.

While no individual regulation is inappropriate or insurmountable, the combined effect is complex, especially for local small business owners and entrepreneurs and property owners in Harbor Cove where the traditional small-parcel, pier-style development pattern leaves a very narrow path to approval. In this environment, there is a need to provide strategic guidance and technical assistance to aid property owners in navigating this multi-level regulatory environment.

Infrastructure investment and economic development strategies need to evolve to address the waterfront infrastructure maintenance and incorporate climate change, sea level rise and flood risk into both the physical and operational aspects of the harbor. Incorporating resilience considerations can, among other things, help make Gloucester's public and private landowners' infrastructure needs competitive for funding that is designed for the kind of reinvestment for adaptation that is needed within Gloucester's historic harbor.

Many of Gloucester's traditional water-dependent industrial businesses, particularly those in the living resources sector and the ship and boat repair sector, alongside the fueling and ice supply businesses that support them, do not have sufficient profit margins to support the infrastructure investments required to be resilient to increasing flood risk and storm damage, and likewise do not have the training and access to capital to retrofit their buildings and equipment to compete with the advance technologies being introduced in these sectors.

- 1. Grow technical expertise within the lead organization identified in Strategy 1.1 to support adaptation of Gloucester's harbor and fishing fleet to increasing flood risk, emerging technologies, and industry changes.
- 2. Identify, attract, and develop grant and loan products to incentivize adaptation of private infrastructure to meet the needs and evolving nature of catch, seafood processing, technologies, and flood risk.

- 3. Explore an administrative and financial mechanism that can facilitate distribution of public and philanthropic grant and loan products to private applicants.
- 4. Explore funding sources to establish an integrated local technical assistance and financing program within the lead organization identified in Strategy 1.1 that incentivizes private capital investment in projects that address the infrastructure, resilience, and modernization needs of Gloucester businesses, particularly those in the living resources sector and related support businesses (like fleet repair and fueling, bait and ice supply, and storage and shipping).
- 5. Advocate for Harbor Cove to be given special consideration and technical assistance support due to unique small-parcel condition.

<u>Strategy 1.4 - Pursue local zoning updates that enhance strategic clarity and alignment with state and federal regulations.</u>

Over the course of the 2024 harbor planning process, several local zoning ideas emerged that could be beneficial to revisit outside of the harbor plan.

- 1. Review and update local MI District Zoning to ensure consistency with revised Supporting Use approach.
  - a. Current language reads "In the MI District, Supporting Designated Port Area (DPA) Uses, as defined in 310 CMR 9.02, shall not in the aggregate occupy more than 50% of the ground level area on filled tidelands on a lot within the DPA."
- 2. Introduce local zoning protections and incentives for water-dependent industrial uses.
  - a. Non-Industrial: Implement "right to farm" type legislation to protect water-dependent industrial uses from nuisance complaints and political advocacy of encroaching non-industrial uses that often result in displacement or severe operational constraints for pre-existing industrial uses. This kind of legislation has been used in rural farming communities to protect against encroachment of suburban residential uses. In the Gloucester context, it would be most effective if legislation required new non-industrial uses in marine industrial areas to (1) use quiet design and increased ventilation to reduce adverse impacts of proximity to industrial uses and (2) introduce deed and rental notification to new owners and occupants informing them of the existence and rights of adjacent industrial uses. These two requirements can help to reduce nuisance complaints and political advocacy from non-industrial neighbors that harm water-dependent industrial business operators.
  - b. *Parking:* Explore use-based requirements and shared parking regulations that incentivize property owners, developers, and business operators to maximize use of valuable harbor land.
- 3. Revisit local zoning height restrictions to incorporate the relevant design flood elevation (DFE).
  - a. In the DPA area, revise local zoning height within FEMA floodplain to be measured from the Design Flood Elevation instead of from the ground plane.
  - b. Develop illustrated floodplain design guidelines that help demonstrate viable options for how to address flood adaptation needs in the context of Gloucester-specific conditions, including reconciling grade between existing infrastructure, site grading, and building configurations, and the water through operational and physical strategies. These guidelines should help working waterfront property owners evaluate alternative ways to

integrate the public realm, design of the ground floor, design and placement of building systems, and overall building height and massing.

- 4. Refine local zoning to better reflect the distinctive constraints and priorities for different harbor planning sub-areas and to establish more effective mixed-use transitions at the edges of the DPA and MI zoning district. This could help set more realistic expectations and create more predictability for property owners by acknowledging dimensional constraints, parcel sizes, existing land use, future land use opportunities, and urban design priorities of the different harbor planning sub-areas. This sub-area zoning could help to set transparent, reasonable, and simple expectations on key topics that create uncertainty and risk for property owners currently, such as:
  - a. *View Corridors and Public Access:* establish reasonable and achievable public access standards for physical and visual access (sightlines), including setback and buffering, that take into account the small parcel sizes of most of the Harbor.
  - b. *Parking and Loading*: confirm acceptable site access, parking, loading, and storage configurations and ratios.
  - c. *Dimensional Standards (Height):* based on need as well as view corridors and shadow impacts, evaluate if select areas should be allowed to exceed the current 40 ft max height given flood elevation and modern industrial floor-to-floor needs for uses like R&D. Currently height increases in the MI zone require a variance, but a special permit might be a more appropriate and less burdensome tool to allow for height increases. Setbacks, building footprint, lot coverage and other dimensional standards may merit further analysis.

Objective 2. Diversify and invest in Gloucester's harbor holistically to create a stronger and more resilient harbor economically and environmentally.

The strategies and recommendations nested under this objective convey the community and public sector intent in a consistent, clear and unified way across physical investment, and economic development programs and initiatives. This will be most effective if action is grounded in and supportive of a time-bound strategic plan, as described in Strategy 1.1.

# <u>Strategy 2.1 - Invest in publicly owned sites to serve as supportive infrastructure for Gloucester's maritime economy.</u>

Publicly owned sites can play an important role in exemplifying the community's vision and level of commitment to the private sector. Public sites, in contrast to privately held sites, are able to leverage state and federal funds for resilience upgrades and other public policy priorities, serving as a demonstration of best practices and guidance to neighboring property owners. An inventory of important publicly owned sites is included below, grouped thematically to facilitate awareness of the roles each plays in supporting Gloucester's maritime economy.

- Existing supportive services for water-dependent industrial:
  - USCG Station
  - State Fishing Pier
  - Harbormaster's Property
- Existing parks and cultural anchors:
  - Gordon Thomas Park
  - St. Peter's Park
  - Captain Solomon Jacob's Park on Harbor Loop
- Vacant public sites as of 2024:
  - 65 Rogers Street (I4-C2)

#### • 112 Commercial Street

Because they are vacant and underutilized, have degraded harbor infrastructure, and high flood risk the top priority for the City of Gloucester in the near term is to facilitate investment in and activation of 65 Rogers Street (I4-C2) and 112 Commercial Street. Beyond these two sites, prioritization of public investment should be guided by an assessment of greatest risk, need, and economic potential.

#### Specific implementation recommendations include:

- 1. Explore feasibility of public sector preliminary design and investment in critical harbor infrastructure on 65 Rogers Street.
- 2. Conduct a geotechnical, harbor infrastructure, and Phase 1 Environmental study of 65 Rogers Street (I4-C2) to determine baseline development costs.
- 3. Identify funding and development partners to advance plans for 65 Rogers Street (I4-C2), consistent with the community vision established in the 2024 Gloucester Harbor Plan.
- 4. Conduct a community process to develop a vision for how 112 Commercial Street can best support Gloucester's maritime economy.
- 5. Conduct an analysis of public and private harbor parcels beyond 65 Rogers Street and 112 Commercial to determine which are in greatest need of investment based on the condition of pilings, infrastructure, and flood risk. Use this analysis to develop a prioritization of the highest risk parcels for resilient, economic development demonstration projects.
- 6. Pursue grant funding to support resilience retrofits for all public properties and infrastructure, according to prioritization, to model best practices and provide harbor-wide emergency management resources.
- 7. Continue to evaluate all public harbor properties for highest and best uses and programs to support maritime economy, including parks and cultural sites.
- 8. Explore public investment in and/or pursue public private partnerships on strategic underutilized large privately held industrial sites (both inland and on the harbor) with good landside truck access and dockage potential to maximize their benefit to the maritime economy.

#### Strategy 2.2 - Invest in public infrastructure and utilities to support Gloucester's maritime economy.

Like publicly owned sites, public infrastructure plays an important role in conveying to the private sector what the community's vision and level of commitment is. Infrastructure also provides critical shared economic benefits that are not possible at the scale of an individual property or business.

- 1. In the upgrading of the Gloucester Waste Water Treatment Facility (WWTF), ensure future treatment options accommodate and reduce economic barriers to Gloucester-based seafood processing operations.
- 2. Continue City efforts to establish high-speed fiber optic internet infrastructure around downtown, the harbor, and industrial and commercial districts in Gloucester.
- 3. Work with National Grid to ensure sufficient energy capacity, reliability, and quality of harbor electrical utility service to meet existing and future marine industry needs.
- 4. Continue working with the State and USACE to assess and plan for dredging needs as they arise in the harbor to support the Harbor Plan.

# <u>Strategy 2.3 - Shape the local hospitality and tourism economy to better support, and benefit core</u> <u>maritime industries.</u>

Tourism is an important part of the local economy and harbor tourism plays an important role in distinguishing Gloucester from regional peer cities. Harbor tourism helps to boost the visibility and market for Gloucester's fish and shellfish. Gloucester has taken small steps along the Harbor to increase its value as a tourism asset, but there continues to be tension between downtown and harbor development priorities. Since 2014 there have been several developments that have underscored this:

- Growth in charter fishing, particularly for tuna, has created demand for dock space.
- The Beauport Hotel (which opened as a full-service hotel, event and conference center in 2016) serves as a new anchor for harbor and downtown tourism.
- Discover Gloucester, Gloucester's destination marketing organization, was formalized.
- Gloucester's Local Rapid Recovery Program Plan, completed in 2021, focused on the downtown area and its connections to the industrial waterfront.

Going forward, Gloucester should focus tourism economic development initiatives on distinctive, mutually beneficial tourism itineraries and experiences that provide direct benefits to the water-dependent industries, including but not limited to helping to expand the market for Gloucester-based seafood products.

Gloucester can improve the visitor experience by investing in interpretive signage, wayfinding, sidewalk and crosswalk improvements, and beautification along dedicated loops, especially between Downtown, Stacey Boulevard, and Harbor Cove. By clarifying wayfinding and urban design queues, Gloucester can focus tourist and visitor interaction with the harbor in ways that minimize adverse impact on water-dependent industrial businesses while providing visual access and distinctive experiences that help local residents and visitors to connect with the working waterfront. These kinds of investments could help to make the fishing port more sight-seeing friendly, increase opportunities for eco/ocean-related tourism, and enhance the visitor experience of the existing harbor and downtown sites and attractions without interfering with the working waterfront.

Integrating seafood processing and wholesaling operations into unique visitor programs that support and celebrate the working waterfront (e.g. fish pier, fish and seafood festivals, how-to workshops, shadowing, and factory tours) could also help distinguish Gloucester from other tourism and visitor destinations. These kinds of working waterfront program partnerships could also help to support efforts to diversify and develop innovative products in the tourism industry. Events like the September Working Waterfront Festival in New Bedford have been successful at highlighting the working waterfront in ways that help to generate marketing and business development benefits for the waterfront industries it highlights.

#### Specific implementation recommendations include:

Each of these recommendations work towards a more defined and mutually beneficial relationship between Harbor Cove and the downtown tourism and hospitality industry through clearer spatial and operational delineations of use, especially along Rogers Street and Commercial Street.

- 1. Conduct an observational study of trucking operations along Rogers Street and Commercial Street to identify operational needs and conflict and congestion points with other users.
- 2. Make targeted streetscape, wayfinding, and pedestrian infrastructure improvements, especially around Rogers Street and Commercial Street where there are the most conflicts between working waterfront and hospitality and tourism uses.
- 3. Develop a Harbor and Downtown district parking plan that takes into account both working waterfront and hospitality and tourism parking demands.

- 4. Encourage expanded transient boating and charter fishing operations to locate in Smith Cove and the East Gloucester former DPA area to support increased tourism and visitor economy while ensuring that DPA protection is prioritized for businesses that need it most.
- 5. Encourage local hotels and restaurants to introduce educational materials explaining where and how their local seafood was harvested and how consumers can support these businesses in coordination with Gloucester Fresh.
- 6. Encourage development of a Gloucester Working Waterfront Visitor Program organization and coordination of partnerships to support programming that focus on immersive experiences and education of participants on the activities, businesses and workforce of Gloucester's working waterfront so that participants want to give back to Gloucester's working waterfront.

<u>Strategy 2.4 - Continue to pursue a spatially specialized economic development strategy that maximizes</u> economic development potential and strengthens the harbor-upland relationship.

In order to hone economic development activities, Gloucester needs to cultivate a physical development strategy that defines desired relationships between different portions of the harbor and upland uses, addresses locally-specific parking and loading needs and flood and storm damage risks, encourages optimal use of limited large parcels with good landside truck access and deep harbor access, and aligns expectations with the limited capacity of predominantly narrow and shallow-depth waterfront parcels. This strategy should build off the harbor planning sub-areas identified at the outset of the 2024 Gloucester Harbor Plan process, see Figure 13 below.



Figure 13. 2024 Gloucester Harbor Planning Sub-Areas

This spatially specialized economic development strategy needs to differentiate between traditional pierstyle small lot areas of the harbor (Harbor Cove/East Gloucester) versus large lot industrial areas in terms of industry, use, and relationship to tourism and hospitality.

#### Specific implementation recommendations include:

- 1. Protect and prioritize maximum development of limited large-lot industrial properties for more intensive industrial and marine life science development, and invest in public sector site control where needed to ensure maximum utilization of these sites.
- 2. Continue to recruit lower intensity and smaller scale water-dependent uses in the East Gloucester former DPA area to ensure DPA protection is prioritized for businesses that need it most.
- 3. Encourage and incentivize the relocation of complementary non-water-dependent tourism and hospitality functions to the adjacent residential and commercial areas.

# Objective 3. Cultivate a high-profile, unified, supported, and well-resourced fishing and shellfishing network in Gloucester.

The slim margins and unpredictability of catch volume, particularly in fin fishing, is limiting critical capital investments in resilience, fleet modernization, dock and bulkhead maintenance and repair, and modern seafood processing. The strategies nested under this objective are designed to grow and maintain the existing culture of independent private operators while creating stronger support infrastructure for those operators.

To this end, Gloucester's civic leadership – both the City and the network of local non-profit organizations, institutions and agencies that serve the harbor – should continue to invest in building a supportive foundation that grows the capacity of a network of individual operators in the fishing and shellfishing industry. This civic leadership should invest in shared infrastructure, technical assistance, seafood processing and wholesale distribution, marketing and recruitment, workforce development and related hospitality and tourism initiatives.

# Strategy 3.1 - Protect and grow fishing capacity of the harbor in terms of permits, workforce, fleet, dockage, and processing.

Following the introduction of catch quotas, Gloucester, as a harbor that is dominated by a network of smaller private operators, has incrementally developed shared resources to ensure that Gloucester's fishing industry can remain competitive within the constraints of regulations that are often developed with larger corporate operations and economies of scale in mind.

One example that has been particularly impactful is the community fishing permit bank. The Gloucester Fishing Community Preservation Fund ("the Fund") was incorporated in 2007 as a 501c3 non-profit corporation after a \$10 million in mitigation capital from one of the Liquified Natural Gas (LNG) companies became available. The Fund then used that funding to establish a community permit bank and has incrementally acquired nearly 60 federal permits. In consultation with the fishermen's sector management, the annual allocations of valuable sector fishing quota attributed to the Fund's permit portfolio is distributed to Gloucester's sector fishermen through annual leasing programs. The goal of the permit bank is to not only benefit all active, qualified fishermen currently working in Gloucester, but also ensure the same benefits for future generations of Gloucester fishermen. The permit bank is managed by

the Fund's Board of Directors and shares office space with the fishermen's sector management so that there is effective coordination and communication among the entities and the fishermen. Every qualifying member of the sector is given equal opportunity to access the Fund's quota.<sup>19</sup>

Going forward, the Gloucester fishing community needs to contend with an increasingly complex and rapidly changing regulatory, economic, technological, and environmental context. This kind of shared solution and supportive infrastructure will become critical to sustaining the success of Gloucester's fishing community.

The barriers to Gloucester's fishing capacity that came up repeatedly in the harbor planning process were the lack of commercial dockage and seafood processing capacity. While both are conventionally privately developed and controlled parts of the fishing industry, Gloucester should explore the potential role of public and shared ownership models to promote solutions in these areas that can help retain fishing capacity and competitiveness. All of these concepts rely on the implementation of capacity building strategies under Objective 1 to be feasible and sustainable.

#### Potential implementation actions include:

- 1. Conduct an economic feasibility study to establish or grow an existing local seafood processing and wholesale facility (on the harbor or in an accessible inland location) that could be used by local Gloucester operations, structured either as a fee-for-service or a co-op based model.
- 2. Retain and continue to invest in the maintenance of the Gloucester fishing permit bank.
- 3. Retain and pursue opportunities to expand publicly controlled dockage and associated loading, unloading, and berthing space for commercial fishing vessels.
- 4. Explore development of shared public loading, unloading, and berthing space that can provide shoreside access for moored vessels and operators with poor landside trucking access.
- 5. Partner with regional institutions and living resources leaders to conduct a seafood supply chain workforce assessment of current and projected future gaps in the local workforce needed to support a thriving living resources sector in Gloucester.
- 6. Pursue regional partnerships with organizations like MassHire North Shore Workforce Board, Mass Maritime, Maine Maritime, and regional trade schools to recruit, train, and mentor local talent in living resources and fleet repair careers to meet current and future workforce needs.

#### Strategy 3.2 - Help Gloucester fishing and shellfishing operations capture more value.

In order to facilitate increased stability, resilience, and reinvestment in critical waterside infrastructure, it is important that Gloucester promotes mechanisms that enable fishing businesses to capture a larger percentage of the value added in the seafood supply chain through initiatives like implementing a 100% fish strategy, shared ownership models, and scaling up or reimagining marketing efforts like Gloucester Fresh.

Shared ownership models are an important way to organize networks of small-scale private businesses in a way that enables them to share infrastructure, supply chain, and marketing resources that otherwise have a high barrier to entry. Vertically integrated product co-ops enable a coalition of small operators to collectively purchase, process, market, and distribute the products of individual producers and operators. This could be combined with a shared seafood processing and wholesale market that primarily serves

<sup>&</sup>lt;sup>19</sup> Gloucester Daily Times Online, "Ebb & Flow: New bank a big help for fisherman", March 8, 2008
Gloucester fishing and shellfishing operations. Examples include <u>Martha's Vineyard Seafood</u> <u>Collaborative</u> and the <u>Seafood Producers Cooperative</u> in Washington.

Another strategy to capture more value which has been successful in other settings is the establishment of products and programs that promote use of all elements of the fish and shellfish being harvested. The <u>New England Ocean Cluster</u> located in Portland, Maine is a good example of this. This could be a subprogram of a seafood co-op and can be supplemented through marketing training programs that teach home cooks and commercial chefs how to use less well known parts of the fish and shellfish. Similar and complimentary efforts through Gulf of Maine Research Institute also exist.

Gloucester Fresh was launched in 2016 by the City of Gloucester, sponsored by Gloucester EDIC and a grant from the Commonwealth of Massachusetts' Seaport Economic Council. However, the penetration of Gloucester Fresh into the market has slowed considerably. While Gloucester Fresh has had some success, in order to penetrate the market it would need a larger program that supports branding and positioning, product development, distribution channel development, and demonstrated sustainability including food-mile carbon footprint impacts. This could also be a subprogram of the seafood co-op and could help facilitate the identification and creation of innovative seafood products like tinned or canned fish that could help to expand the market for and increase the profit margins for Gloucester fish and shellfish.

### Potential implementation actions include:

- 1. Develop innovative seafood products that expand the market and increase the profit margins for Gloucester fish and shellfish.
- 2. Invest in deepening the market influence and reach of Gloucester Fresh.
- 3. Pursue opportunities to expand direct-to-consumer seafood retail and wholesale as part of existing fishing, shellfishing, and seafood processing operations on Gloucester harbor, particularly in Harbor Cove.
- 4. Develop marketing and training programs to promote broad use of less-popular parts of the fish and shellfish harvested by Gloucester fishing operators.
- 5. Explore creation of a seafood co-op.
- 6. Explore feasibility of implementing a 100% fish strategy.

Objective 4. Advance relevant innovation in blue tech, marine life science, and offshore wind industries within and beyond Gloucester's working harbor.

Technological change is taking place in a variety of sectors that impact the direction and norms in the living resources sector, including fishing, seafood markets, seafood processing, and aquaculture: e.g. electrification of engines and powertrains, deploying "smart tech", tracking, cold chain requirements, among others. The living resources sector would benefit from increased local capacity for collaborative research and management innovation that can support catch diversification, management, and economic stability planning and implementation.

Research and development in marine life science and marine technology (both innovation in electronics/engineering and life science) already has a strong foothold and is making steady progress in Gloucester. Gloucester has a robust existing network of institutional anchors like the UMass Amherst Gloucester Marine Station as well as state and federal resources including local offices of the Massachusetts Division of Marine Fisheries (DMF), the Massachusetts Office of Coastal Zone Management (CZM), and the National Oceanic and Atmospheric Administration (NOAA)'s Greater

Atlantic Regional Fisheries Office. This foundation is reinforced by the more recent arrival of non-profits and private sector businesses like Ocean Alliance, Gloucester Marine Genomics Institute (GMGI), and LifeMine Gloucester along with others that are already well established in Gloucester, on Cape Ann, on the North Shore. The organizations and individuals that are part of this existing network already have farreaching connections to <u>Greentown Labs</u>, <u>SeaAhead</u>, the <u>Gulf of Main Research Institute</u>, and incubator programs like the <u>New Bedford Ocean Cluster</u> that are within the Commonwealth of Massachusetts and New England.

With the clarifications established as part of the 2014 plan, and the subsequent changes to the DPA regulations, there are no regulatory adjustments or provisions that are inherently necessary to pursue these opportunities. However, the physical footprint and employment needs of marine life science and marine tech are very different from the traditional fishing sector.

Gloucester's civic leadership can capitalize on the city's potential in these areas by investing in recruiting 21<sup>st</sup> century marine life science and blue tech partners that can signal Gloucester's leadership potential in life sciences, marine electronics, and fleet repair and modernization. This recruitment work should be focused close to the Commuter Rail station, in inland industrial parks, and along Main Street and Rogers Street, and in underutilized inland sites in close proximity to the harbor.

Going forward, Gloucester needs to navigate economic change in a way that balances preservation of the traditional fishing industry with emerging opportunities in the blue economy and marine life sciences. Finding the right balance of preservation and economic change through comprehensive analysis, communication, and coordination across industry sectors will help create a more robust and resilient economy.

## <u>Strategy 4.1 - Invest in proactively establishing Gloucester as an emerging hub for marine research and innovation.</u>

Gloucester has proven magnetism for marine research and innovation but in order to capitalize on this early success, the region needs to continue to recruit and expand existing institutional research anchors and develop a support system to foster local entrepreneurial and research activity in marine life sciences, search and navigation technologies, and fishing technologies. Many of these uses can take place close to but not directly on the harbor with limited shared access points for water-dependent research activities. This will ensure maximum retention of valuable water-dependent industrial properties for their traditional uses while infusing the marine economy with renewed energy and innovation capacity.

Gloucester should target growth in the marine biomaterials, unmanned undersea vehicles, and ocean observation sectors. There currently exists interest and investment by the private sector in this space. It is also a point differentiation from most existing marine science in Massachusetts. The development and construction of the GMGI facility has provided space to support two research and tech companies locating to Gloucester and has helped to generate interest in Gloucester from other businesses in this sector.

Gloucester can expand the presence of institutional research in a variety of ways - by recruiting institutional and university research partners to create a new harborside marine research campus in Gloucester, by developing a satellite for a pre-existing observation center located elsewhere in the region, and/or by partnering with The National Marine Fisheries Service to create a new fisheries observation center.

Gloucester can also support increased private sector entrepreneurship and investment by facilitating increased interaction among existing stakeholders, strengthening its connections with workforce partnerships (like MassHire North Shore Workforce Board, Mass Maritime, Maine Maritime, and regional trade schools) and partnering to leverage regional startup accelerator and support organizations focused on entrepreneurship and innovation (like the New Bedford Ocean Cluster) as well as research anchors (like Greentown Labs, SeaAhead, Woods Hole Oceanographic Institute, and the Gulf of Main Research Institute). This kind of activity can be funded through a blend of public, institutional, private, and philanthropic funding sources with a small staff focused on facilitating connections, hosting events, and connecting members of their network to appropriate resources to grow their businesses locally. These efforts will be most effective if they are established through strong partnerships with local public sector leadership, research and educational institutions, and established larger businesses with a vested interest in growing local entrepreneurship in their sector.

Finally, Gloucester can also help to establish some shared infrastructure like high-speed broadband internet access and shared direct water access facilities that will support the regional expansion of marine research and development activities.

### Potential implementation actions include:

- Invest City of Gloucester and Harbor Plan Implementation Committee time and resources in strengthening Gloucester's connections with regional research anchors, established larger businesses with a vested interest in growing local entrepreneurship in their sector, business incubators, and workforce development organizations to establish a more robust marine research and development network in Gloucester.
- 2. Facilitate increased interaction within Gloucester's marine research and development network.
- 3. Partner with regional institutions and marine research and innovation leaders to assess current and projected gaps in the local workforce needed to support a thriving marine life sciences and technology ecosystem in Gloucester.
- 4. Pursue regional partnerships with organizations like MassHire North Shore Workforce Board, Mass Maritime, Maine Maritime, and regional trade schools to recruit, train, and mentor local talent in marine life sciences and technology careers.
- Help to establish a shared collective water access resource for marine research and development entities that do not require dedicated full-time water access but may require occasional access. This could make use of an existing facility or involve creation of a new facility.
- 6. Partner to raise awareness and visibility of existing institutional research with a local Gloucester presence, and partner to expand the local presence of institutional research.
- 7. Recruit marine biomaterials industry leaders and identify opportunities to attract private sector marine research and development industry investment.

# Strategy 4.2 - Retain and grow Gloucester's capacity to serve as a deployment center for marine construction and monitoring.

Gloucester Harbor does not have the physical features and property ownership patterns needed to support large-scale offshore wind construction staging areas like Salem and New Bedford. This has been demonstrated in two MassCEC reports:

1. <u>Port and Infrastructure Analysis for Offshore Wind Energy Development</u> Summary Report (2010) which identified Boston and New Bedford as the two best locations to support offshore wind.

 Massachusetts Offshore Wind Ports and Infrastructure Assessment 2022: North Shore (2022) which evaluated the Jodrey State Fish Pier and Americold, Gorton's and North Atlantic Pacific Seafood properties in Gloucester among other sites throughout the North Shore, and ultimately concluded that the Footprint Power Site in Salem was the only site that was well-suited to the current needs of offshore wind.

However, despite the findings of these recent studies, Gloucester can capitalize on growth in offshore marine renewable energy and fisheries monitoring in the Greater Boston Area (and Salem in particular) by advocating for the location of fleet deployment, fueling, maintenance, and repair operations in Gloucester.

### Potential implementation actions include:

- 1. Partner with regional offshore wind developments to assess gaps in Gloucester's capacity to support servicing and repair in terms of workforce, infrastructure, fleet, and services.
- 2. Pursue regional partnerships with organizations like MassHire North Shore Workforce Board, Mass Maritime, Maine Maritime, and regional trade schools to recruit, train, and mentor local talent in offshore wind careers.
- 3. Explore feasibility of establishing a Gloucester deployment center for marine construction and monitoring.

### G. Land Use Table

Table 15. Land Use Table

Address	Use	Total Acres in DPA	Existing non- water dependent commercial uses within DPA	Acres within jurisdiction, including filled tidelands and pile supported piers
1 FLANNAGAN SQ	СОМ	0.19	0.19	0
1 HARBOR LP	COM	2.43	2.43	1.66
1 ROWE SQ	WDIU	3.57	0	1.2
128 ROGERS ST	COM	3.19	3.19	0.64
17 ROGERS ST	СОМ	0.12	0.12	0.12
25 ROGERS ST	COM	0.37	0.37	0.37
289 MAIN ST	COM	0.05	0.05	0
311 MAIN ST	СОМ	0.08	0.08	0
45 ROGERS ST	COM	0.86	0.86	0.67
63 ROGERS ST	COM + WDIU	1.05	0.84	1.05
9 ROGERS ST	COM	0.39	0.39	0.39
104 COMMERCIAL ST	WDIU	0.68	0	0.6
109 ROGERS ST	Industrial, Substation	2.64	0	0.77
11 HARBOR LP	WDIU	1.22	0	1.03
11 PARKER ST	WDIU	1.16	0	1.08
127 ROGERS ST	WDIU	2.82	0	0.74

69 ROGERS ST	license WDIU. Americold	4.65	0	3.37
65 ROGERS ST	license	1.89	0	1.78
	WDIU + Temporary	2.02	1.49	0.53
		0.85	U	0.85
52 COMMERCIAL ST	WDIU	0.37	0	0.35
5 EAST MAIN ST	Gordon Thomas Park	0.62	0	0.62
46 COMMERCIAL ST	WDIU	0.33	0	0.33
44 COMMERCIAL ST	WDIU	0.5	0	0.48
431 MAIN ST	WDIU	1.58	0	1.58
		1.06	0	1.06
393R MAIN ST	WDIU	2.32	0	1.72
39 ROGERS ST	WDIU	0.19	0	0.19
37R ROGERS ST	WDIU	0.65	0	0.65
377 MAIN ST	WDIU	1.52	0	0.9
33 HARBOR LP	WDIU	1.45	0	1.17
3 STATE PIER	WDIU, Fish Pier	8.76	0	7.62
3 PARKER ST	WDIU	0.61	0	0.56
27 HARBOR LP	WDIU	0.99	0	0.93
25 HARBOR LP	WDIU	0.55	0	0.37
23, 23A, 23B HARBOR LP	WDIU	0.57	0	0.25
2 COMMERCIAL ST	WDIU (City parking)	1.05	0	0.98
19, 19A, 19R HARBOR LP	WDIU, Harbormaster	0.8	0	0.49
17+17R HARBOR LP	WDIU, Coast Guard	1.97	0	1.24
159 EAST MAIN ST	WDIU	5.39	0	2.28