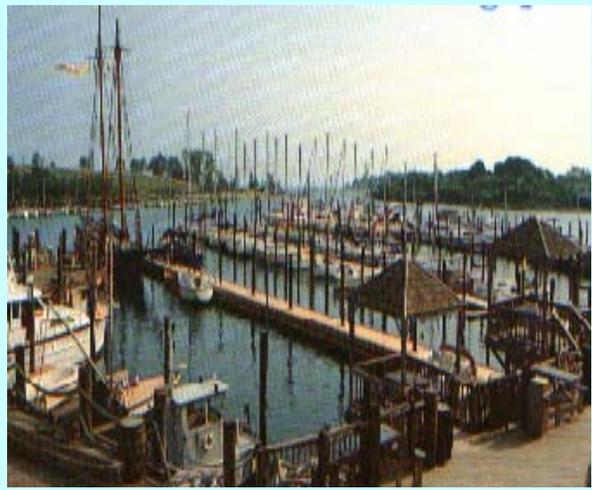


CITY OF BRIDGEPORT, CONNECTICUT HARBOR MANAGEMENT PLAN



“Our Harbor, Our Future...”

January 29, 2006



CITY OF BRIDGEPORT, CONNECTICUT HARBOR MANAGEMENT PLAN



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January 29, 2006



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Peter Holecz, Chairman of the Bridgeport Harbor Management Commission:

The City of Bridgeport is blessed with a vast, bountiful shoreline and two working harbors. These water resources hold the key to the future of the City of Bridgeport as well as of the greater Bridgeport region. Appropriate stewardship of these water resources will be the key to our growth in the years to come.



Joe Savino, Former Harbormaster for the City of Bridgeport:

This revision of the Bridgeport Harbor Management Plan represents the input of many people, including area business leaders, port stakeholders, Bridgeport residents and city officials. The Bridgeport Harbor Management Plan gives a clear and concise outline as to how the City of Bridgeport would like its' harbors and waterfront developed. The plan will also serve as an economic development tool for prospective developers.

I would like to thank everyone who participated in updating the Harbor Management Plan, especially the Connecticut DEP for funding the update and Apex Environmental for working tirelessly in gathering the necessary information for the update in a very limited time and completing the process on time.

***“Our Harbor,
Our Future...”***

Bridgeport Harbor is one of the few deep-water ports along the coast of the State of Connecticut. With a long history of maritime trade, water-dependent industry, conservation, recreation and education, the Port and the Harbor have served the people of Bridgeport for generations. From its beaches and parks, its shellfish beds and aquaculture education facilities, its recreational fishing and boating facilities, to its ferry terminal and active port facilities, the Harbor is a multi-faceted jewel that offers a diverse range of activities for the resident, business-person, and visitor alike. The Harbor and its tributaries form the greatest resource the City has.

This Plan presents our vision of the future. It lays out a framework for future “Smart Growth,” for the revitalization and the redevelopment of our waterside infrastructure, for the expansion of recreational opportunities, for an increase in access to the waterfront, and for an increase in conservation and protection of existing natural resources. Use of the Harbor presents opportunities for growth, but also requires responsible stewardship. It is with a deep appreciation for the important role the Harbor plays in the City of Bridgeport that we look forward to future growth, opportunity, and conservation that will serve the generations to come.



Preface

<u>Regulatory Authority of this Harbor Management Plan</u>	
	<p>In 1984, the Connecticut General Assembly passed legislation authorizing towns with navigable waters to establish harbor management commissions and prepare and enforce local harbor management plans for the most desirable use of the harbor for recreational, commercial, industrial and other purposes. This legislation is codified as Chapter 444a, Sections 22a-113k through 22a-113t, of the Connecticut General Statutes.</p> <p>The City of Bridgeport established its Harbor Management Commission by Section 2.96 of the City of Bridgeport Municipal Code, passed by the City Council in 1987. The Commission prepared its original Harbor Management Plan for adoption in April 1995. That plan was first updated in July 2001; this version represents the second revision to the document. The administrative jurisdiction of the Harbor Management Commission (and Harbormaster) is the navigable waters of the city landward to the mean high water mark.</p>
	<p>In accordance with the statutes (section 22a-113m), the plan will be forwarded to the U.S. Army Corps of Engineers for review and comment, then submitted for approval to the Commissioners of Environmental Protection and Transportation. Upon their approval the plan will be submitted to the Bridgeport City Council for adoption by ordinance.</p>
	<p>The content and recommendations of the Harbor Management Plan cover a range of topics from commercial and recreational navigational and berthing needs to port operations, water quality, natural resource protection, public access, and waterfront land use. The plan serves as the basis for coordinated planning, programming, and decision making within and among municipal, state and federal agencies whose actions affect Bridgeport Harbor. Authority and responsibility for implementation of the plan's policies and recommendations are shared by a number of city, state and federal agencies and commissions. The Bridgeport Harbor Management Commission and the Bridgeport Harbormaster have direct authority for recommendations pertaining to the safe and efficient use of the harbor for recreational and commercial boating, including navigation and placement of moorings. The designation of the recommended mooring areas in Section 3.2.1.14 of the plan is proposed for approval by the Commissioner of the Connecticut Department of Environmental Protection in accordance with Section 22a-340.</p>
	<p>Importantly, the plan serves as the basis for the Commission's review and recommendations on proposals referred to it by other municipal boards and commissions such as the Planning and Zoning Commission, Zoning Board of Appeals, Port Authority, Historic District Commissions, and Redevelopment Agency. Although any of these boards and agencies may submit a proposal directly to the Harbor Management Commission, they typically submit the proposals to the Planning and Zoning Commission, which then forwards appropriate proposals to the Harbor Management Commission's attention. The Planning and Zoning Commission (or the respective boards or agencies) must consider the recommendations of the Commission and, if the proposal does not have the favorable recommendation from the Commission, a two-thirds vote of all the members of the city board, commission or agency having authority to act on the proposal shall be required to approve the proposal.</p>

1.0 Introduction

The City of Bridgeport (the City), located along the northern shore of the Long Island Sound (see Figure 1), contains one of the largest, most sophisticated harbor areas in the State of Connecticut. Harbor areas in the City include miles of coastal lands, which provide access to residential, commercial, recreational, and industrial water-dependent uses.

The harbor of the City of Bridgeport has specific strengths that benefit the citizens of the City as well as the citizens of the State of Connecticut:

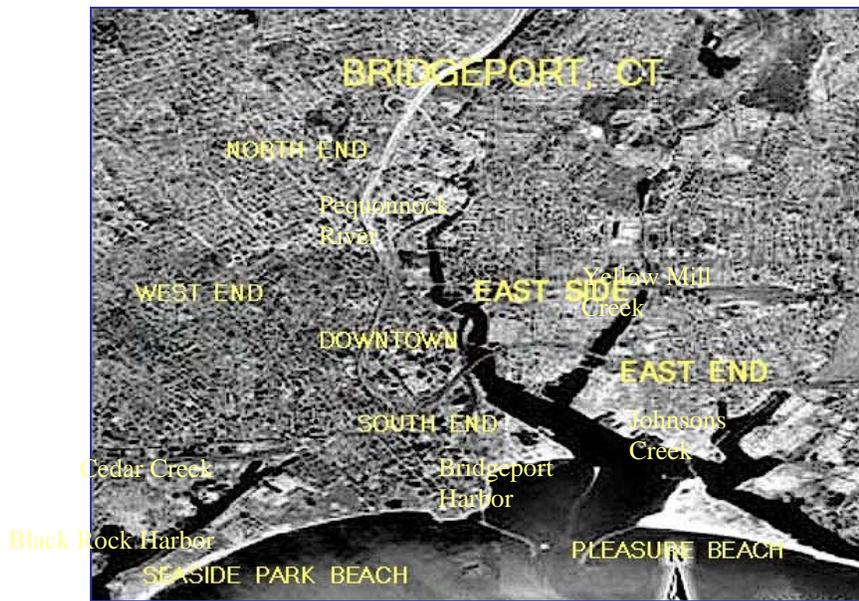
- **Deep Water Port** – Property that is deep-water accessible is of limited supply in the State of Connecticut; Bridgeport is one of three deep-water ports in the state. Thus, it is in the best interests of the citizens of the City of Bridgeport and of the citizens of the State of Connecticut to continue to utilize harbor property that accommodates deep-water uses for deep-water uses;
- **Transportation Center** – Bridgeport lies at the intersection of frequent bus, train and ferry routes. Additionally, Interstate 95 runs through the center of the city. This confluence of transportation lines is a great asset to the city;
- **Shipping** – Already a center for shipping, which provides goods for both the city and the region, Bridgeport has an existing transportation infrastructure to support a robust increase in the industry;
- **Water-Dependent Industry** – Historically an industrial center, Bridgeport still contains several thriving water-dependent industries that are a strength to the city and the region;



- **Water-Dependent and Shoreline Recreation** – Bridgeport contains a large number of marinas and yacht clubs, which house hundreds of boats for citizens of the City and of the State. Bridgeport also contains some of the best harbor-side parkland in the State of Connecticut. Both water-dependent and shoreline recreation provide a benefit to both the citizens of the City of Bridgeport and the State of Connecticut;
- **Shellfishing** - The City of Bridgeport has always had a shellfishing industry that has benefited the City of Bridgeport and the State of Connecticut;
- **Marine Ecosystem** – The territorial waters of Bridgeport and adjacent lands contain a large, although impacted, marine ecosystem that is a part of the greater Long Island Sound ecology. It is in the best interests of the citizens of the City of Bridgeport, the State of Connecticut, and the greater region to protect and restore marine resources in the Harbor.

The Bridgeport Harbor Management Commission (the Commission), believes that the strengths identified above should be fostered and protected; thus, in consultation with the Commissioners of Environmental Protection and Transportation, the Commission has prepared this Harbor Management Plan (the Plan), which provides for the preservation and use of the coastal resources of the area within

its jurisdiction in a manner consistent with the provisions of **Connecticut General Statutes** sections 22a-90 to 22a-112, inclusive, and the Bridgeport Coastal Area Plan adopted pursuant to section 22a-101.



A photo indicating various neighborhoods and water bodies of the City of Bridgeport. Ash Creek and is located to the west of Black Rock Harbor. Penfield Reef is located southwest of Ash Creek.

For the purposes of this Plan, all areas within the territorial limits of the City of Bridgeport below mean high water, including Bridgeport Harbor, the Pequonnock River, Yellow Mill Creek, Johnson’s Creek, Black Rock Harbor, Cedar Creek, Burr Creek, a portion of Ash Creek (authority of Ash Creek is split between the City of Bridgeport and the Town of Fairfield), as well as a portion of Penfield Reef (located southwest of Ash Creek and Black Rock Harbor) are herein collectively referred to as “the Water.” Additionally, all property located on, in or contiguous to the Water are herein referred to as “Waterfront Property.” “The Harbor” will refer herein to both the Water and its associated contiguous Waterfront Property.

In accordance with Chapter 444a, Sections 22a-113k through 22a-113t, of the Connecticut General Statutes, by Sections 2.96.30 and 2.96.40 of the City of Bridgeport Municipal Code, the Commission and the Harbormaster have direct authority for recommendations pertaining to the safe and efficient use of the Water, including recommendations pertaining to recreational and commercial boating, to placement of moorings and to navigation. In addition, the Commission reviews and makes recommendations, consistent with the most recent version of the Plan, on proposals effecting Waterfront Property. Proposals effecting Waterfront Property may come from any agency associated with regulating construction, development, or commerce on Waterfront Property, including but not limited to:

- the Bridgeport Planning and Zoning Commission,
- the Bridgeport Zoning Board of Appeals,
- the Bridgeport Port Authority,
- the Bridgeport Parks Commission,
- the Bridgeport Department of Public Facilities,
- the Bridgeport Redevelopment Agency, or
- the Bridgeport Water Pollution Control Agency.

These boards and agencies must consider the recommendations of the Commission and, if the proposal does not have a favorable recommendation from the Commission, a two-thirds vote of all the members of the city board, commission or agency having authority to act on the proposal shall be required to approve a proposal.

The remainder of this Harbor Management Plan is organized as follows:

- Section 2.0 Existing Harbor Conditions;
- Section 3.0 Harbor Management and Water Use Plan; and
- Section 4.0 References.



2.0 Existing Harbor Conditions

2.1 Existing Natural and Marine Resources

2.1.1 Geologic Setting

Bridgeport's coastal region is directly related to the area's geological setting, which is a result of the interaction between land and water during the area's glacial past.

The most recent glacier, the Wisconsin glacier, reached Connecticut approximately 26,000 years ago and began fading from Long Island approximately 21,000 years ago. As the glacier retreated from the shoreline around Bridgeport, it deposited glacial drift consisting primarily of gray to silvery, medium to coarse-grained schist and granofels (CT Department of Environmental Protection 1990). Along the shore from Norwalk to West Haven, this glacial drift buried the underlying bedrock, encouraging the development of continuous beaches (as opposed to the pocket beaches found in areas dominated by bedrock) and tidal marshes (Long Island Sound Resource Center 2005). The prevalence of glacial drift makes Bridgeport's shoreline vulnerable to erosion.

In addition to sandy beaches and glacial drift, Bridgeport's coastal area also contains artificial fill. Many of Bridgeport's shorefront sections have been highly engineered and developed, resulting in the substantial alteration and/or functional impairment of natural physiographic features. Bridgeport's developed shorefront areas include Johnson's Creek, Yellow Mill Channel, the Pequonnock River, Bridgeport Harbor, parts of Black Rock Creek, parts of Burr Creek, and Cedar Creek.



Picture of bathhouse and beach at Seaside Park.

2.1.2 Topography and Slope

The topography and slope of Bridgeport's shoreline areas is generally smooth or gently rolling. Elevations within the study area generally range between 0 and 30 feet. Grover's Hill, located between Ash Creek and Black Rock Harbor, is the highest elevation within the study area at approximately 70 feet.



Ash Creek shoreline (ACCA, 2005).

2.1.3 Bluffs and Escarpments

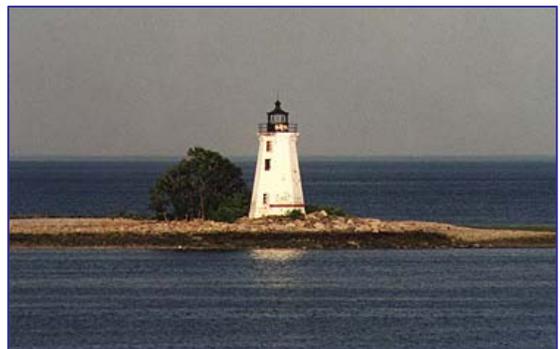
Modified bluffs and escarpments characterize the shoreline at Grover's Hill, a portion of Black Rock Harbor's west shore, the easterly side of Fayerweather Island, and either side of the breakwater off of Seaside Park (see Figure 2).

2.1.4 Dunes, Beaches, and Parks

Two and one-half miles of Bridgeport's shoreline consists of sandy beach (see Figure 2). Much of this is within public parks and open spaces, including Seaside Park, Pleasure Beach, St. Mary's-by-the-Sea, and Money Beach (Bridgeport City, CT 2005). Other waterfront public spaces include Waterview Park, Waterfront Park, and Riverfront Park.

Pleasure Beach in Bridgeport and Long Beach in Stratford meet and form a long barrier beach which extends from the mouth of Bridgeport Harbor's easterly side to Point No Point in Stratford. The Pleasure Beach Swing Bridge, which provides access to this barrier beach from the Bridgeport side, was damaged by fire in 1996 and remains in the open position, limiting access to the beach. The future nature of access to this beach is currently under debate.

Seaside Park, 370 acres of land separating the waters of Black Rock Harbor, Burr Creek, and Cedar Creek from the Long Island Sound, was designed by Fredrick Law Olmstead, the landscape architect responsible for designing Central Park in New York City. The park is home to a variety of city attractions including several monuments and statues, picnic grounds, a bathhouse, a lake, a skate park, a bandstand, and the Fayerweather Lighthouse. Fayerweather Island, a 7.5 acre nature preserve, forms the western tip of Seaside Park and provides habitat for several bird species. The sands of West Beach begin at the breakwater at Fayerweather Island and continue for one mile along the southern shore of the park (City of Bridgeport 2005b).



A small park is located on the west bank of Yellow Mill Creek, just south of Crescent Avenue. The park is known as both Waterview Park and as Riverside Park.

2.1.5 Shoreline Change-Sedimentation/Shoaling

The effects of shore erosion more significantly impact the Long Island Sound shoreline between Norwalk and Milford than any other portion of Connecticut's coast. This is due primarily to the intensity of development located in immediate proximity to the water and the highly erodible nature of beaches and their source glacial deposits. The most evident recent changes in this portion of the Connecticut shoreline have taken place along the major barrier beach features.

Within Bridgeport, Seaside Park is the most significant site of shoreline erosion. Between 1837 and 1950, minor erosional changes occurred here, and major changes resulted from artificial filling and construction in 1957. Between 1959 and 1962, variable erosion (0 to 50 feet) occurred.

Boulder lag deposits offshore of Grover's Hill, Fayerweather Island, and the headland at the East End of Seaside Park indicate that these headlands once extended farther south than at present. Their erosion has provided material for nearby barrier beaches.

Pleasure Beach, a barrier beach, protects a large tidal marsh in neighboring Stratford. A major jetty at the southwest end of Pleasure Beach has significantly altered the natural movement of sediments along the shore resulting in the accretion of as much as 600 feet.



While the unfortified shoreline of Bridgeport is eroding, sediment is being deposited off-shore. A USGS survey identified sand as the dominant surface sediment type along Bridgeport's shoreline. A combination of gravel and gravelly sand comprises the surface substrates off Fayerweather Island and Grover Hill, with patches of gravelly sand found just offshore of West Beach and along the southern shore of Long Beach.

Fishing pier at Pleasure Beach.

The bottom of Yellow Mill Channel and the lower portion of the Pequonnock River both consist of sandy silt, clayey silt, or silt. Much of the seafloor's surface sediment can be explained by the east-to-west tidal current that decreases in velocity as the tide moves further west into Long Island Sound, transporting and depositing fine particles in the western portions of the Sound. The sandy shoals that develop as a result of the sediment transport provide area beaches with a source of sediment.

The accumulation of sediment in the region limits vessel access in some areas, and suggests the need for dredging to accommodate boat traffic.

2.1.6 Wind, Wave and Current Characteristics

Wind velocity, direction, duration, fetch (the unobstructed water surface area over which waves are generated by wind), and tidal current combine to create wave action and determine the quality of harbor areas for anchorage. The fetch is somewhat limited to the south and west along this section of Connecticut's coastline. Thus, this area is sheltered, to a degree, from southwesterly summer winds and waves. The maximum fetch lies to the east, consequently exposing the area to storm winds and waves from the eastern section.

Tidal range in Bridgeport Harbor

Location	Mean Higher High Water	Mean High Water	Mean Low Water	Extreme Low Water
Bridgeport Harbor	7.3 feet	7.0 feet	0.2 feet	--
Black Rock Harbor Entrance	7.5 feet	7.2 feet	0.3 feet	-4.0 feet
Datum: MLLW				

The mean tidal range in Bridgeport Harbor is 6.8 feet and the mean spring range is 7.7 feet. The mean tide level is 3.6 feet above mean low water. Near the outer harbor breakwaters the mean tide level is 3.4 feet above mean low water. The extreme low water level is minus 3.5 feet mean low water. The maximum-recorded storm surge level is 9.2 feet National Geodetic Vertical Datum (NGVD), (11.9 feet above mean low water). The maximum tidal flood current is 0.7 knots between the breakwaters and the minimum ebb current is 0.6 knots.

The tide has a mean range of 6.9 feet at the entrance to Black Rock Harbor. The spring range is 7.9 feet, and the mean tide level is 3.4 feet above mean low water. Tidal currents and flood levels are similar to those at Bridgeport Harbor.

2.1.7 Coastal Flood Hazard Areas

Bridgeport's coastal boundary is almost entirely located within the Federal Emergency Management Agency's 100-year floodplain designation (see Figure 3). The 100-floodplain is "associated with a flood event that has a one 1 percent chance of being equaled or exceeded in any given year" (Federal Emergency Management Agency 2004). As sea level rises, the chance and/or severity of flood events could increase. In Bridgeport, the rate of sea level rise in 2004 was 0.10 inch per year, which surpasses the mean global rate (Environmental Defense 2004). There are several "vulnerable structures" in Bridgeport that could be affected by increased flooding; these structures include "portions of the Amtrak railroad, entrances to Connecticut Turnpike interchanges and bridges, the University of Bridgeport, the Navy Reserve Center, the Heliport, sewage disposal plants and the oil tanks at Johnson Creek" (Environmental Defense 2004).

2.1.8 Intertidal Flats

Intertidal flats are very gentle sloping or flat areas located between high and low tides, and composed of muddy, silty, and fine sandy sediments and generally devoid of vegetation. There are several large concentrations of intertidal flats along Bridgeport's tidally influenced lands (see Figure 4):



- The south side of Seaside Park between Fayerweather Island and Tongue Point (Tongue Point is the land mass located immediately north of the breakwater, presently occupied by PSE&G)
- Between the mouth of Ash Creek and Burr Creek
- The northern end of Pleasure Beach near the mouth of Johnson's Creek
- Along both sides of Johnson's Creek
- Along portions of Yellow Mill Creek, particularly the west shore
- Along the eastern shore of Cedar Creek

2.1.9 Tidal Wetlands

Although there are not many tidal wetlands located within Bridgeport's coastal zone, those few are an important asset to the ecosystem and to the City's community. The largest tidal wetlands are found on Fayerweather Island and at the mouth of Ash Creek (see Figure 4). Several smaller tidal wetland areas are located on the east bank of Ash Creek. There is also an area of tidal wetlands at the mouth of the Housatonic River, in the Town of Stratford, along the eastern edge of Bridgeport Harbor, called Great Meadows (U.S. Fish and Wildlife Service 1991).



Tidal wetlands on Fayerweather Island have been preserved primarily due to the island's historic use as a location for the Fayerweather Island Lighthouse, built in 1808 (not currently functioning). The island is isolated from Seaside Park and is connected solely via a breakwater built between the island and the park. Tidal wetlands are prominent on much of the island.

Ash Creek is a 140-acre embayment. The creek's mouth has several important attributes including tidal wetlands and a system of tidal creeks. These attributes help to support an anadromous fish run in the river, a habitat for the resident populations of waterfowl as well as local populations of oysters and clams. As part of the Long Island Sounds Study, two areas of tidal wetland along Ash Creek, Rooster River and Grover Hill, were proposed as potential restoration sites in 2002 (Long Island Sound Study 2002b).

The Great Meadows is the remnant of a larger wetland area. The wetland area is presently about 680 acres. Roughly 60% of the current wetland is regularly flooded tidal marsh, and the remaining 40% is irregularly flooded (U.S. Fish and Wildlife Service 1991). The marshland is characterized by tidal wetlands, tidal flats, tidal creeks and a tidal embayment called Lewis Gut. This area is one of the most valuable salt marshes in the state, as its productivity and general absence of mosquito ditches. The Great Meadows serves as an anadromous fish run, and high concentrations of shorebirds are present here. The area also contains moderate concentrations of hard clams, soft clams, and oysters.

2.1.10 Marine Sediments

Metals in Bridgeport Harbor's sediments vary in concentration as well as location. However, it is clear that for at least iron and copper, the surface metal concentrations are about 3 to 6 times higher in the harbor than immediately outside the harbor. Possible metal contaminants include: iron, copper, lead, zinc and nickel. There are several sources of these metals to Bridgeport Harbor:

- Pequonnock River
- Industrial discharges
- Municipal wastewater
- Atmospheric deposition (Titus and Breslin 2002)

Metal concentrations in the surface sediments towards the northern portions of Bridgeport Harbor, and in the lower reaches of Yellow Mill Creek, appear to be higher than in other more seaward areas of the harbor. More specifically, fine-grained surface sediment toward the inner harbor areas is reported to have the highest metal concentrations, while coarse-grained surface sediment located outside the harbor's mouth is reported to have the lowest concentrations. Additionally, copper, zinc and lead concentrations correlate with iron and organic carbon in surface sediments (Titus and Breslin 2002).

Bridgeport Harbor has not been dredged for over 40 years, as any dredged materials would be contaminated and unsuitable for open-water disposal (Office of Christopher Dodd 2003). The existing bathymetry of the Harbor, reflecting the accumulation of sediment in the federal channels as well as adjacent to existing marine structures, is shown as Figure 5. An appropriations bill for the fiscal year 2006, however, would provide the city with \$1,350,000 to continue developing a dredging plan for Bridgeport Harbor (Office of Christopher Dodd 2005). This plan addresses disposal and treatment options for contaminated sediment from Bridgeport Harbor in Section 3.2.

2.1.11 Water Quality

The quality of Bridgeport's coastal waters and tidal rivers is impacted by both point and non-point pollutant sources which may include combined sewer overflows (CSOs), sewer outfalls from the East Side and West Side Sewage Treatment Plants, industrial discharges, contaminated sediments in Black Rock Harbor, Cedar Creek, and Yellow Mill Creek, and urban and highway runoff. Water quality within Bridgeport's harbor areas should be improved in order to foster greater use of the city's water resources. There are several existing conditions that merit action:

- Deposits of contaminated sediments,
- Inadequate municipal sewage treatment,
- Incomplete control of non-point source pollution,
- Insufficient storm-water management practices which include the need for installation of additional, and maintenance of existing, sediment traps and catch basins,
- The impact of leachate generated from the former city landfill that discharges into Cedar Creek,
- Problems associated with combined sewage overflow discharged during heavy storms.

Water quality classifications for water bodies located within the study area are presented below; however, water quality classifications were not available for Seaside Park Beach and Pleasure Beach. The present conditions for all of the coastal water bodies in Bridgeport's study area are more degraded than the adopted standards for the same water bodies.

Study Area Water Quality Classification*

	Present Condition	Adopted Standard
Bridgeport Harbor	SC	SB
Black Rock Harbor	SC	SB
Cedar Creek	SC	SB
Burr Creek	SC	SB
Yellow Mill Creek	SC	SB
Ash Creek	SC	SB
Johnson's Creek	SC	SB
Pequonnock River	SC	SB

- * SA Suitable for all seawater uses including shellfish harvesting and swimming.
 SB Suitable for bathing and shellfish harvesting for human consumption after depuration
 SC Suitable for wildlife habitat and recreational boating
 SCc Suitable only for navigation and migration of fish

Source: Connecticut Department of Environmental Protection, Bureau of Water Management
 Specific water quality parameters, used to assess quality of the water, as well as suitable uses for the water, include temperature, salinity, dissolved oxygen and chlorophyll *a*. In 2002, these parameters were monitored throughout the summer months, and the results were reported in the 2002 Long Island Sound Water Quality Report. These results indicated that the water quality was "fair to good" (Save

the Sound 2002). In the past, water quality monitoring buoys have also been deployed in Bridgeport Harbor as part of the Long Island Sound Project. However, these buoys are currently not operational (Environmental Protection Agency 2001). Several water bodies in the Harbor are listed on the Connecticut DEP's Impaired Water Bodies List, including Bridgeport Harbor, the Pequonnock River, and Ash Creek. Potential causes of the impairment include the presence of organic enrichment, including nitrogen (leading to low dissolved oxygen content), oil and grease, indicator bacteria (indicating the presence of pathogenic viruses), and metals.

The City's sewage treatment plant outfalls and combined sewer overflows are noted as potential sources of water pollution in the harbor (Long Island Sound Study 2002a). West Side Treatment Plant, located on Cedar Creek, just north of Burr Creek at Captain's Cove, has a design capacity of 30 million gallons per day. Inputs to Black Rock Harbor from the West Side Treatment Plant are of particular concern due to the harbor's shallowness and poor tidal flushing. The East Side Treatment Plant, located just south of Cook's Point near the Cilco terminal on the inner harbor portion of Bridgeport Harbor, has a design capacity of 16 million gallons per day. Both plants are designed as secondary treatment facilities, but are in the process of upgrades that will include nitrogen removal (Long Island Sound Study 2002a).



The waters and sediments of Black Rock Harbor and Cedar Creek are impacted. The U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers have conducted numerous studies of the harbor's sediments, and the Connecticut Department of Environment Protection (DEP) has conducted intensive surveys of the harbor's water quality.

The **Connecticut Department of Environmental** Protection coordinated a toxic contaminant reduction study in Black Rock Harbor, completed in 1991. This work was funded through a National Estuary Program grant to the Long Island Sound Study. The goal of the project was to reduce the input of toxic contaminants into Black Rock Harbor, thereby reducing risk to the valuable nearby oyster fishery. The study identified sediments as a primary source of toxicity to the Cedar Creek area and found some active toxic contributions associated with combined sewage overflows and urban runoff. Contaminated sediments can also be found in other areas, including Yellow Mill Creek.

2.1.12 Shellfish Resources

Bridgeport's shellfish concentration areas¹ contain eastern oysters (*Crassostrea virginica*) and hard clams (*Mercenaria mercenaria*) (see Figure 4). Eastern oysters can be found in the following areas:

- At the mouths of Black Rock Harbor, the Pequonnock River and Yellow Mill Creek,
- Between Tongue Point and Bridgeport Harbor's western breakwater,
- In most of Johnson's Creek,
- Halfway between Tongue Point and the mouth of Johnson's Creek,
- West and south of Pleasure Beach.

During the 1890s, Bridgeport's oyster beds produced as many as 600,000 bushels of oysters annually. However, due to water pollution, poor natural supplies of seed oysters, and the destruction of shellfish beds, oyster production since has declined significantly. For example, while Ash Creek had been used for seed oyster harvesting in the past, pollutants from the City's combined sewer overflows have negatively impacted this water body.

Hard shell and soft shell clams can be found on either side of the Black Rock Harbor channel north of Fayerweather Island, in Burr Creek, and in the Cedar Creek channel directly southeast of Burr Creek.

Connecticut's shellfish areas are classified by the Department of Agriculture/Aquaculture Division according to the following six categories:

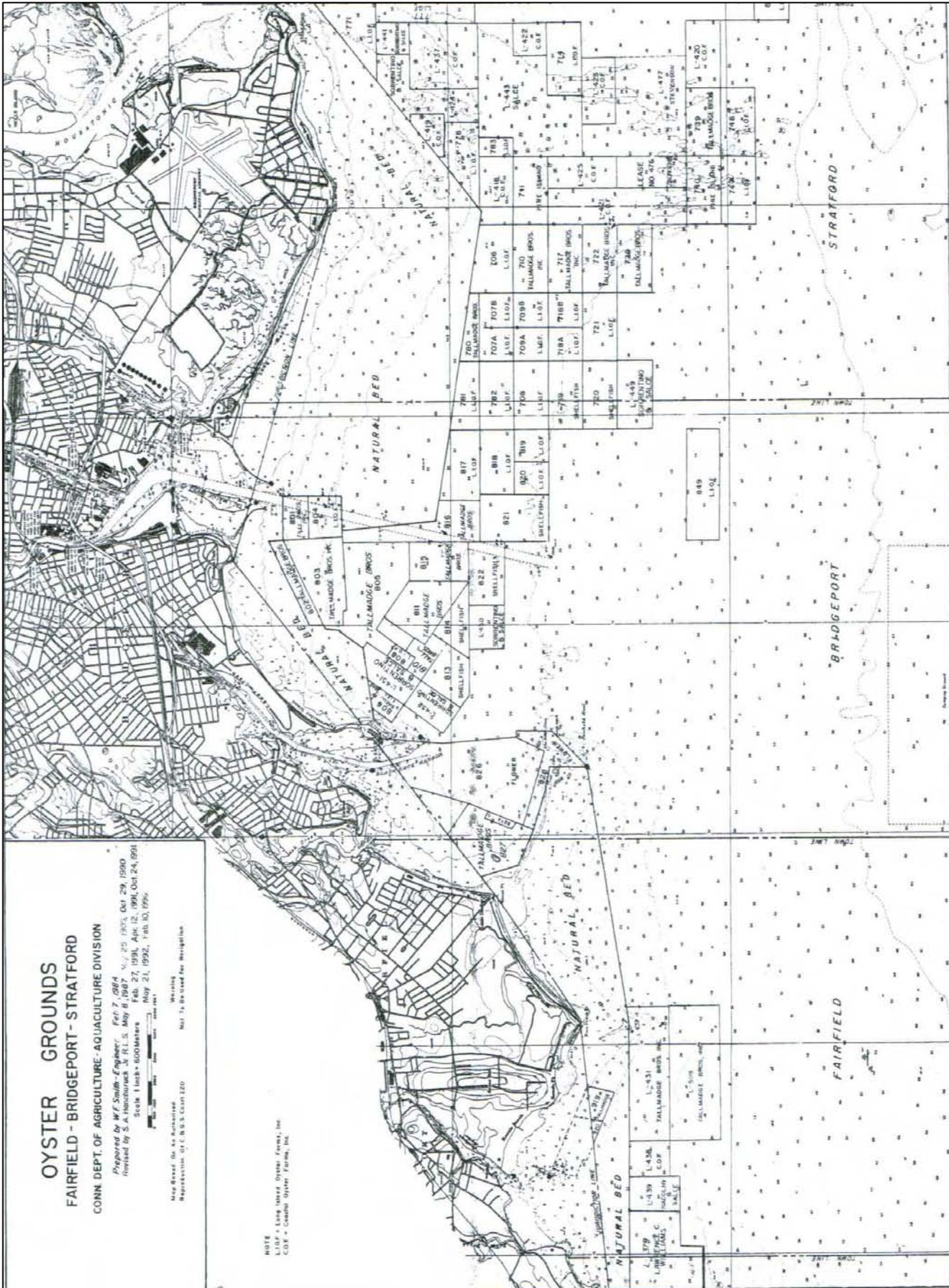
- Approved Area
- Conditionally Approved Area
- Restricted Area
- Conditionally Restricted Area
- Prohibited Area
- Closed Area

Due to impacted sediment and surface water, all of Bridgeport's coastal waters are classified either as prohibited areas or as conditionally restricted (relay) areas (see Figure 6). Prohibited areas are defined as state waters that have been classified by the Aquaculture Division of the Connecticut Department of Agriculture as prohibited for the harvesting of shellfish for any purpose other than depuration and aquaculture activities. A prohibited shellfish growing area is a closed area for the harvesting of shellfish at all times except for aquaculture activities.



¹ Shellfish concentration areas are geographic areas believed to support and produce significant concentrations of shellfish that are of commercial and recreational value.

As shown on Figure 6, a large portion of Bridgeport's coastal waters are classified as restricted/relay.



The following picture shows that the restricted/relay areas are divided into oyster grounds that are managed under rental contracts with the State:

2.1.13 Essential

Fish Habitat

The National Marine Fisheries Service has designated areas in and around Bridgeport Harbor as essential fish habitat (EFH). The Magnuson-Stevens Fisheries Conservation and Management Act (MSFMCA) defines *essential fish habitat* to mean "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" (16U.S.C.1802(10)).

EFHs in the vicinity of Bridgeport include the Atlantic Ocean waters within the Long Island Sound, which are south of Bridgeport, along with the Atlantic waters south of Black Rock Harbor, from the entrance of the Pequonnock River west to Sherwood Point (just east of Sherwood Mill Pond in Westport, Connecticut). Pennfield Reef, the Little Cows, Georges Rock, and Fayerweather Island are also included. In addition, waters within the Long Island Sound which are south of the entrance to the Housatonic River (the western shore just east of Crimbo Point, south of Stratford), west past Stratford Point to Lordship, Point No Point, to the tip of Long Beach south of East Bridgeport, (including Lewis Gut) as well as Stratford Shoal and Middle Ground are also considered EFH (National Oceanic and Atmospheric Administration 1994).



Within these EFHs, the New England Regional Fishery Management Council is required to minimize, to the extent practicable, adverse effects caused by fishing, and to identify actions that will encourage the conservation and enhancement of the habitat. The following is a table of species and age classes for which the EFH has been designated.

Species and Age Class for Essential Fish Habitat

Species	Eggs	Larvae	Juveniles	Adults
Atlantic salmon (<i>Salmo salar</i>)			X	X
Atlantic cod (<i>Gadus morhua</i>)				
haddock (<i>Melanogrammus aeglefinus</i>)				
pollock (<i>Pollachius virens</i>)			X	X
whiting (<i>Merluccius bilinearis</i>)				X
offshore hake (<i>Merluccius albidus</i>)				
red hake (<i>Urophycis chuss</i>)	X	X	X	X
white hake (<i>Urophycis tenuis</i>)				
redfish (<i>Sebastes fasciatus</i>)	n/a			
witch flounder (<i>Glyptocephalus cynoglossus</i>)				
winter flounder (<i>Pleuronectes americanus</i>)	X	X	X	X

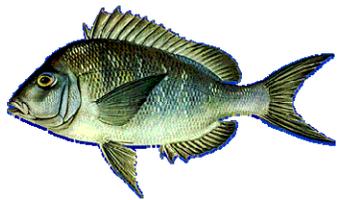
yellowtail flounder (<i>Pleuronectes ferruginea</i>)				
windowpane flounder (<i>Scophthalmus aquosus</i>)	X	X	X	X
American plaice (<i>Hippoglossoides platessoides</i>)			X	X
ocean pout (<i>Macrozoarces americanus</i>)	X	X	X	X
Atlantic halibut (<i>Hippoglossus hippoglossus</i>)				
Atlantic sea scallop (<i>Placopecten magellanicus</i>)				
Atlantic sea herring (<i>Clupea harengus</i>)			X	X
monkfish (<i>Lophius americanus</i>)				
bluefish (<i>Pomatomus saltatrix</i>)			X	X
long finned squid (<i>Loligo pealei</i>)	n/a	n/a		
short finned squid (<i>Illex illecebrosus</i>)	n/a	n/a		
Atlantic butterfish (<i>Peprilus triacanthus</i>)				
Atlantic mackerel (<i>Scomber scombrus</i>)	X	X	X	X
summer flounder (<i>Paralichthys dentatus</i>)			X	
scup (<i>Stenotomus chrysops</i>)	X	X	X	X
black sea bass (<i>Centropristus striata</i>)	n/a		X	
surf clam (<i>Spisula solidissima</i>)	n/a	n/a		
ocean quahog (<i>Artica islandica</i>)	n/a	n/a		
spiny dogfish (<i>Squalus acanthias</i>)	n/a	n/a		
tilefish (<i>Lopholatilus chamaeleonticeps</i>)				
king mackerel (<i>Scomberomorus cavalla</i>)	X	X	X	X
Spanish mackerel (<i>Scomberomorus maculatus</i>)	X	X	X	X
cobia (<i>Rachycentron canadum</i>)	X	X	X	X
sand tiger shark (<i>Odontaspis taurus</i>)		X		

2.1.14 Fish Resources

According to the [Connecticut Department](#) of Environmental Protection, the impact of Connecticut's marine recreational fishery on the fish resources of the Long Island Sound is considerable relative to that of the commercial fisheries. In terms of pounds of fish caught, recreational fishermen harvest as much, and in most cases, more of the Long Island Sound fish resources than commercial fishermen.

Long Island Sound sport catches average 10 percent of all Atlantic Coast recreational landings, while in-Sound commercial catches represent less than 1 percent of Atlantic Coast commercial landings.

The important Long Island Sound recreational species in 2004 included bluefish, scup, striped bass, summer flounder, tautog, weakfish and winter flounder (Connecticut Department of Environmental Protection 2005a). Until 1988, total catches of bluefish were relatively stable. In 1988, the catch dropped by approximately 70 percent. Bluefish is one of the most popular sportfish along the Atlantic Coast; commercial bluefish landings are substantially less than the recreational catch. “The abundance of several recreationally important species remains moderate to high including bluefish, striped bass and summer flounder. The increased abundance of hickory shad in recent years provides an additional recreational fishing opportunity, especially to nearshore anglers” (Connecticut Department of Environmental Protection 2005a). In 2004, both hickory shad and adult bluefish were at record high abundance, and weakfish were at near record high abundance (Connecticut Department of Environmental Protection 2005a).



Adult scup abundance remained high in 2004 relative to their long term mean abundance. Summer flounder and striped bass levels both dropped in 2004. However, summer flounder levels have dropped to their average seen in 2000. In addition, striped bass levels are still above average and have been since 1995 (Connecticut Department of Environmental Protection 2005a).

Historically, commercial exploitation of tautog has been light. However, since 1980, commercial interest in this species has increased. Consequently, commercial landings have climbed steadily as commercial fishermen have targeted this formerly underutilized species. While the tautog population in the Long Island Sound is in excellent condition at present, the future of the tautog fishery appears to be dependent on growth in targeted commercial fishing. In 2002, there was a peak abundance of tautog, but since 2003, when fish caught per tow was cut nearly in half, the level has remained unchanged (Connecticut Department of Environmental Protection 2005a).



Winter flounder appear to be the only major recreational species in the Long Island Sound that dropped to a record low abundance in 2004 (Connecticut Department of Environmental Protection 2005a). In 2005, the regulations for recreational fishing of winter flounder changed, including the daily creel limit as well as the open and closed season. Recreational fishing regulations changed for scup and summer flounder in 2005 as well (Connecticut Department of Environmental Protection 2005d).

2.1.15 Wildlife Habitat



Connecticut has started the process of putting together a Comprehensive Wildlife Conservation Strategy. In July of 2005, a draft version of the strategy identified a list of the “greatest conservation need” (GCN) and a list of twelve of the “key habitats essential to the GCN species” (Connecticut Department of Environmental Protection 2005b). Four habitats found near the coastline are tidal wetlands, freshwater aquatic, estuarine aquatic

and unique or man-made habitats. Unique or man-made habitats include traprock ridges, offshore islands as well as coastal bluffs, headlands, man-made aquatic habitats and urban habitat (Connecticut Department of Environmental Protection 2005b). In addition to general habitat categories, several areas were identified as being “of particular importance to migratory waterbirds” (Connecticut Department of Environmental Protection 2005b). Among the particularly important areas are the Lower Housatonic River and Great Meadow marshland near and along Bridgeport’s coastline (Connecticut Department of Environmental Protection 2005b).

2.1.16 Presence of Migrating Birds

Several birds have been identified in Bridgeport, specifically at Seaside Park. A list of these birds includes the Mallard, Black Duck, Brant, Canadian Goose, Great Egret, Snowy Egret, Greater Yellowlegs and five different gulls: Herring Gull, Laughing Gull, Ring-Billed Gull and Great Black-Backed Gull (Singletary 2005). Recently, Peregrine Falcons, Piping Plovers and Snowy Owls seem to be making a comeback in the area (Connecticut Department of Environmental Protection 2001, 2003 and 2005c).



“Historically, high rocky ledges in towns such as Avon, Meriden, and Guilford served as homes to Peregrine Falcons” (Connecticut Department of Environmental Protection 2005c). In the 1920s and 1930s, the birds began disappearing due to the use of DDT in the area. Currently in the State of Connecticut there are seven pairs of Peregrine Falcons nesting, and since 1999, Peregrine Falcons have nested under the Barnum Bridge (the Interstate 95 Bridge which crosses the Pequonnock River and Yellow Mill Creek) in Bridgeport. For the sixth year in a row, the nesting site has produced two new chicks (Connecticut Department of Environmental Protection 2005c).

The Piping Plover, which is a threatened species according to the federal government and Connecticut state government, has also been making a comeback throughout parts of the state. “The birds nest along seacoasts on isolated sandy beaches with little vegetation and access to mudflats for feeding” (Connecticut Department of Environmental Protection 2003). April through August, designated areas are monitored for Piping Plover nesting sites. Pleasure Beach in Bridgeport is one area that is monitored regularly (Connecticut Department of Environmental Protection 2005c). In 2003, Pleasure Beach was one of “the most successful Connecticut beaches for plovers” (Connecticut Department of Environmental Protection 2003).



2.2 Existing Infrastructure

Existing infrastructure in the City of Bridgeport was created to support existing land and water use, which has been subject to a combination of changing economic, social and demographic trends in the city and region. In addition, the City of Bridgeport's natural resources, and the constraints and opportunities related to those resources, have also played a part in determining the types of infrastructure present in the Harbor. The following sections examine the existing infrastructure currently in place in Bridgeport Harbor.

2.2.1 Channels

The port area of Bridgeport consists of Bridgeport Harbor, the Pequonnock River, Yellow Mill Creek, Johnson's Creek, Black Rock Harbor, Cedar Creek, Burr Creek, and Ash Creek. Bridgeport Harbor and Black Rock Harbor are approximately two miles apart.

The existing federal navigation project in Bridgeport Harbor was adopted on July 4, 1836. The original project was modified a number of times, most recently on July 3, 1958 (see Table 1 for details). The project included construction of the existing federal channels as well as the installation of the three breakwaters present in the Harbor (east and west Bridgeport Harbor breakwaters and the breakwater installed between Fayerweather Island and Seaside Park). In 1963, construction of the channels was complete. Further modification to the project may come with passage of the Water Resources Development Act of 2005 (S.728). Section 6003 (a) proposes deauthorizing the 18 foot channel in Yellow Mill River, originally authorized by the Act of July 3, 1930.



Information regarding the various channels located within these harbor areas is summarized below (see Figure 7).

2.2.1.1 Bridgeport Harbor

The major navigable channel within Bridgeport Harbor is authorized at a depth of 35 feet. This main channel varies in width as it extends upriver through the harbor. The channel is 400 feet wide as it extends from the Long Island Sound to Tongue Point. The channel widens to approximately 600 feet at its bend, which is located opposite the Cilco Terminal. The channel continues up the Pequonnock River, where it narrows to 300 feet at a point approximately 800 feet south of the Stratford Avenue Bridge.



2.2.1.2 Pequonnock River

The Pequonnock River federal channel is approximately 1.1 miles in length and is authorized to a depth of 18 feet. The channel, which varies from 125 to 200 feet wide, begins south of the I-95 Bridge and extends northward to a point located 500 feet south of the Berkshire Avenue Dam.

2.2.1.3 Yellow Mill Creek

The Yellow Mill Creek federal channel, which extends northeasterly from Steel Point up the Yellow Mill Creek, is authorized to a depth of 18 feet. The channel is approximately 200 feet wide in its most southerly portion, but narrows to approximately 150 feet north of the Yellow Mill Bridge.



2.2.1.4 Johnson's Creek

The Johnson's Creek federal channel is authorized to a depth of 15 feet. This channel is on average approximately 250 feet wide, and is located in the body of water that extends from Pleasure Beach northeast towards Bridgeport and Stratford.

2.2.1.5 Black Rock Harbor

Black Rock Harbor is about two miles west of Bridgeport Harbor, between the mainland and Fayerweather Island. The harbor proper is about one-mile long, 2,500 feet wide at its outer end and 250 feet wide at its head. A channel 18 feet deep has been dredged from deep water in the Long Island Sound through the full length of Black Rock Harbor.

2.2.1.6 Burr Creek

As described above, Burr Creek is a cove area located within Black Rock Harbor's northwestern edge. Areas of significant shoaling exist within Burr Creek. Consequently, the Burr Creek cove area is relatively shallow. There is no federal channel in Burr Creek.



2.2.1.7 Cedar Creek

Cedar Creek extends from the mouth of Black Rock Harbor in a northeasterly direction about three-fourths of a mile and divides into an East Branch and a West Branch. The Cedar Creek federal channel begins north of Black Rock Harbor. The channel area of Cedar Creek has been dredged to a depth of 18 feet.

2.2.1.8 Ash Creek

Ash Creek is located between the towns of Fairfield and Bridgeport and is located west of Black Rock Harbor. Only the east bank of Ash Creek is within the City of Bridgeport; the western bank of Ash Creek is within the Town of Fairfield, Connecticut. This creek is comprised of a salt marsh estuary located at the mouth of the Rooster River. There is currently no authorized federal channel within Ash Creek.



Photo of Ash Creek (ACCA, 2005).

2.2.2 Major Obstructions to Navigation

Sunken vessels within the Harbor create hazards to navigation (see Figure 7). There are a number of sunken vessels, including multiple coal barges, in the waters of Bridgeport Harbor. The sunken vessels located in the area near the railroad station in Pequonnock River pose a hazard to navigation and marine safety. Additionally, sunken barges in Burr Creek and Black Rock Harbor pose a hazard to navigation. Finally, bridges continue to obstruct navigation (see the following section for details).

In addition to sunken vessels and deteriorating/inoperable bridges, there is an underground pipeline maintained by Motiva Enterprises, LLC that crosses Johnson's Creek. Finally, Connecticut Light and Power Company is seeking a permit from the U.S. Army Corps of Engineers that would allow them to install an underground cable in Ash Creek. If this permit is granted, the project will likely create temporary obstructions to navigation in that area (US Army Corps of Engineers New England District 2005).

2.2.3 Bridges

As the name Bridgeport suggests, there are many bridges located around the Harbor. Bridges that are of relevance to daily harbor operations include: the Congress Street Bridge, the Stratford Avenue Bridge, the Pleasure Beach Bridge, the East Washington Avenue Bridge, the Barnum Bridge, the Peck Railroad Bridge and the Yellow Mill Bridge (see Figure 7). A major obstruction to navigation in Bridgeport Harbor is the vertical clearance limits imposed by bridge crossings. Several of the bridges have created navigational obstructions, due to the fact that a number of the bridges are inoperable.

- P.T. Barnum Bridge

The Barnum Bridge allows Interstate 95 to pass high over the Pequonnock River and Yellow Mill Creek. The Barnum Bridge is a fixed bridge and is high enough to pose no threat to vessels navigating either body of water. It can be seen in the left side of this photo (the Stratford Avenue Bridge is in the center of the photo).



- Stratford Avenue Bridge

The Stratford Avenue Bridge is located on the portion of Stratford Avenue that crosses the Pequonnock River. This bridge links the area known as Steel Point with downtown Bridgeport. The Stratford Avenue Bridge currently has a full-time state-employed operator to open and close the bridge.

- Peck Railroad Drawbridge

The Peck Railroad Drawbridge is the next bridge encountered by vessel traffic as it moves northward up the Pequonnock River. This bridge is vital to local and regional rail traffic. Over one hundred trains cross this bridge with electrified rails on a daily basis. This 3,500 foot section of bridge serves trains on Amtrak's Northeast Corridor and the Metro-North Commuter Railroad. This bridge is located just to the north of the Bridgeport Train Station.



- Congress Street Bridge

The Congress Street Bridge is also located over the Pequonnock River, north of both the Stratford Avenue Bridge and the Peck Railroad Bridge. Of Bridgeport's remaining historical bridges, the Congress Street Bridge, completed in 1911, is the oldest. This bridge is currently inoperable and permanently in the open position. This allows vessel traffic to access the upper portions of the Pequonnock River; however, motorists on Congress Street must detour their routes in order to cross the Pequonnock River.



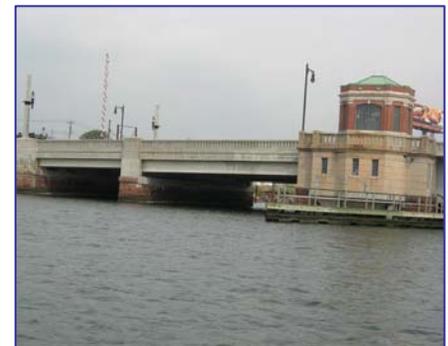
- East Washington Avenue Bridge

The East Washington Avenue Bridge is located north of the Congress Street Bridge on the Pequonnock River. The East Washington Avenue Bridge was recently rebuilt; however, it is has no city-employed operator, and thus is permanently in the closed position. Consequently, vehicular traffic can cross the bridge, but vessels cannot navigate the Pequonnock River north of this bridge.



- Yellow Mill Bridge

The Yellow Mill Bridge is located over Yellow Mill Creek on Stratford Avenue. This bridge links the east end of the City of Bridgeport with the section known as Steel Point. The bridge currently has a part-time, state-employed operator. Vessels are able to navigate the upper portions of Yellow Mill Creek when the bridge is open; however, no vessel traffic can access the upper reaches of Yellow Mill Creek when the bridge is lowered.

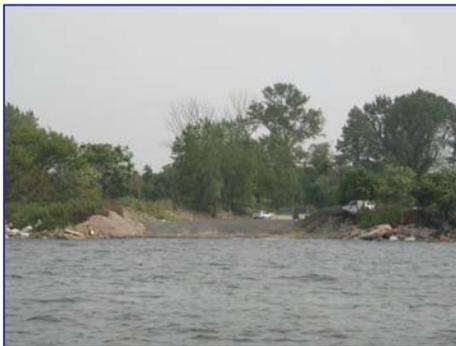


- Pleasure Beach Bridge

The Pleasure Beach Bridge over Johnson’s Creek links the area known as Pleasure Beach with the East End section of Bridgeport. The bridge is currently inoperable as a result of fire damage that occurred in 1996. Wooden sections of the bridge were burned, and the swing bridge is stuck in the open position. Prior to the fire, access to Pleasure Beach via the Pleasure Beach Bridge was limited as the bridge was subject to vessel damage. Discussions about the bridge’s future replacement, destruction, or conversion into a pedestrian fishing pier ought to consider the relevant impacts on boat traffic (Bridgeport Economic Resource Center 2005).



2.2.4 Boat Ramps



The City of Bridgeport has numerous points of public access to its waterfront and harbor areas. The City owns several boat ramps and open space areas that provide for access to harbor areas. There are currently three boat ramps located in the Harbor that are available to the general public. The City's public boat launch ramp access points are located on Newfield Avenue, on Brewster Street, and at Seaside Park.

Photo of Seaside Park boat ramp.

A boat launch ramp is located on Newfield Avenue (see Figure 7). The Newfield Avenue Boat Ramp is located on Bridgeport Harbor between Lou’s Boat Basin and the Dolphin Cove Marina. Limited on-street parking is available for four cars at the Newfield Avenue Boat Ramp. The Newfield Avenue Boat Ramp has recently been damaged by storm activity.

The Brewster Street Boat Ramp, which is also owned and operated by the City, is located on the end of Brewster Street. This boat ramp is located on, and provides direct access to Black Rock Harbor. Limited on-street parking is available for five cars at the Brewster Street Boat Ramp.



A third boat ramp operated by the city of Bridgeport is located at Seaside Park. Parking is available within Seaside Park.

2.2.5 Utilities

The City of Bridgeport has an extensive system of existing infrastructure, including countless utilities. The following section describes some of the utilities and other infrastructure of Bridgeport. Specifically, these sections address infrastructure that directly impacts the Harbor.

2.2.5.1 Combined Sewer Outfalls

Combined sewers, an antiquated design still present in many New England cities, transmit both stormwater and sanitary waste. Before the merits of sanitary waste treatment were widely accepted, combined sewers washed the sanitary waste into public waterways during heavy rainstorms. The process of separating the combined sewers in the City of Bridgeport into separate stormwater and sanitary sewers (reportedly a seven-year, \$150 million treatment facilities rehabilitation/upgrade project) has been proceeding for at least the past decade, but by all reports remains incomplete and thus still presents problems to Harbor water quality.

Separated sewers in the City of Bridgeport do not dump waste directly into the Harbor. Instead, they deliver the waste to either the East Side or West Side Treatment Plants. (Please note that some citizens and business owners have complained that they have noticed what they describe as “raw sewage” floating in Cedar Creek, which may be bypassing the West Side Treatment Plant during storms, or may be coming from remaining combined sewers.)

During heavy rain flow the treatment plants are able to treat the larger volume of wastewater using settling and disinfection. However, the plants must bypass biological treatment of the wastewater since attempting to treat the large volume of water would risk washing away the biological media required to effectively operate the biological treatment system. Instead, the primary treated and disinfected waste is discharged directly into the Harbor.

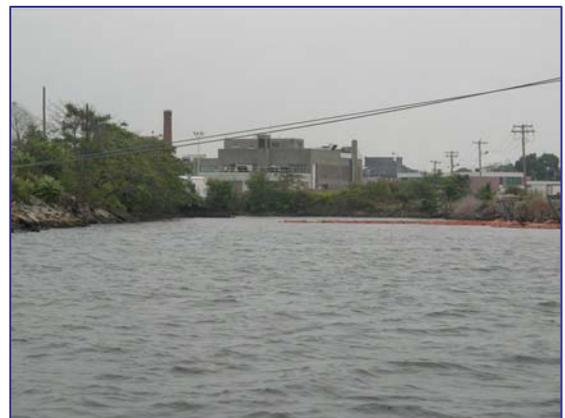
The waste contains a high quantity of organic matter that, when digested by microorganisms in the Harbor, reduces the dissolved oxygen in the water to the extent that there are “dead” zones in which many organisms cannot live. In addition, the waste contains high levels of phosphorous and nitrogen, which cause accelerated growth of algae which are instrumental in the eutrophication of bodies of water.

2.2.5.2 West Side Treatment Plant

The City's West Side Treatment Plant, located on Cedar Creek, just north of Captain's Cove Seaport, has a design capacity of 30 million gallons per day (see Figure 7). The plant discharges its treated effluent into the Harbor. As stated in Section 2.2.5.1, during a rainstorm, the additional volume of water sent to the West Side Treatment Plant threatens to overwhelm the biological treatment of the facility. Thus, the plant must bypass biological treatment of the wastewater resulting in a discharge of wastewater into the Harbor which contains high quantities of organic matter and nutrients.

2.2.5.3 East Side Treatment Plant

The City of Bridgeport's East Side Sewage Treatment Plant has a design capacity of 16 million gallons per day (see Figure 7). The East Side Sewage Treatment Plant is located just south of Cook's Point, immediately north of the Cilco terminal, in Bridgeport Harbor. This plant discharges its treated effluent into the Harbor. As stated in Section 2.2.5.1, during a rainstorm, the additional volume of water sent to the East Side Treatment Plant threatens to overwhelm the biological treatment of the facility. Thus, the plant must bypass biological treatment of the wastewater resulting in a discharge of wastewater into the Harbor, which contains high quantities of organic matter and nutrients.



2.2.5.4 Stormwater Outfalls

The majority of the City of Bridgeport is developed and, consequently, generates large amounts of stormwater runoff. Since nearly all stormwater in the City of Bridgeport ultimately is discharged into Bridgeport Harbor, Black Rock Harbor, or Ash Creek, implementation of “Best Management Practices” (BMPs) is likely to have a significant impact on the water quality in the Harbor. Interstate 95 has extensive stormwater collection systems, as do many of the commercial and retail facilities located in Bridgeport. This runoff enters the Harbor; the runoff is often not treated, or is only minimally treated prior to being introduced to the Harbor.

The Connecticut Department of Environmental Protection is responsible for administering the National Pollution Discharge Elimination System (NPDES) program in the State of Connecticut. The NPDES program encourages the use of BMPs to treat stormwater prior to its discharge to a water body. The BMP guideline is that stormwater systems must be designed to remove 80% of the total suspended solids (TSS) load. In addition, total phosphorous, nitrogen, metals, hydrocarbons, and bacteria in stormwater should be treated to the maximum extent practical.

The NPDES program has been broken up into two phases. The City of Bridgeport, with a population above 100,000 was part of Phase I, as a “medium or large municipal separate storm sewer system (or MS4).” Although the City of Bridgeport has made some strides in the implementation of BMPs, significant work still appears to be needed.

2.2.6 Fire Department Headquarters

The Bridgeport Fire Department Headquarters is located at 30 Congress Street, along the Pequonnock River. The department supplements city fire protection with a Zodiac Fire/Rescue Boat, which is capable of supplying 1,000 gallons of water per minute in as little as 18 inches of water. When in firefighting mode, it can sit stationary, move forward, backward, sideways or spin on its axis 180 degrees.



2.2.7 Industrial Outfalls

As much of Bridgeport’s economy was historically centered around industry, many commercial facilities have been located along Waterfront Property in the Harbor. Many existing industries are discussed in detail in the following sections. However, it is important to consider that some of these facilities have existing or historical permits to discharge effluent from various industrial processes into the Harbor. A suitable survey of existing and historic industrial discharge locations could not be located when preparing this plan.



2.2.8 Municipal Landfill

The City of Bridgeport landfill is located on a strip of land that is bordered by Cedar Creek to the north and west, Sikorsky to the northeast, and Seaside Park to the south and east (see Figure 7). The City's landfill site was covered with a soil and vegetated cap in

1985 and is considered closed. It is believed that there is neither a bottom liner nor a leachate collection system for this landfill. Thus, it is suspected that leachate from the waste is impacting the waters of the Harbor.

2.2.9 Anchorages

Within Bridgeport Harbor, a number of anchorage areas have been authorized and dredged by the U.S. Army Corps of Engineers. The location of these anchorage areas is shown on Figure 7. An anchorage basin that totals 23 acres in area is located in Bridgeport Harbor, between Tongue Point and Pleasure Beach. This anchorage area was authorized to 35- and 25-foot deep. Another anchorage basin, encompassing 29 acres, is located west of the main Bridgeport Harbor federal channel, adjacent to Tongue Point and to the existing Public Service Enterprise Group, Incorporated (PSE&G) property. This anchorage basin is authorized to 18 feet deep. Another anchorage basin, located west of the federal channel near the entrance to Bridgeport Harbor, is authorized to 35 feet deep.



In 1999 and 1996, two anchorage basins in Johnson's Creek, one located west of the federal channel and north of the Miamogue Yacht Club, the second located between the end of the existing federal channel and the head of Johnson's Creek respectively were de-authorized by the federal government.

2.2.10 Mooring Areas

Moorings in Bridgeport are found predominantly in two areas: Black Rock Harbor and Johnson's Creek. The greatest concentration of moorings is found within Black Rock Harbor on both sides of the Federal Navigation Channel (see Figure 7). Approximately 210 moorings are found in this area. These moorings are single swing type and support mainly sail craft with average lengths of 20 to 40 feet. Approximately two moorings have been placed in Johnson's Creek. No moorings have been placed on Yellow Mill Creek and the Pequonnock River. A few moorings exist in Bridgeport Harbor, adjacent to Pleasure Beach, but a full mooring field has yet to be developed at this location.



2.2.11 Turning Basin

Within Bridgeport Harbor, a 35-foot deep turning basin connects the federal channel with Johnson's Creek. The turning basin is roughly triangular, and is located between the Cilco Terminal, Tongue Point, and Pleasure Beach.



2.2.12 Transportation

The City of Bridgeport is currently a regional transportation hub with services for both residents and for interstate and regional travelers. Bridgeport lies on the path of **Interstate 95**. The Connecticut Department of Transportation is in the process of completing extensive highway and stormwater improvements along **Interstate 95**.

The Bridgeport Train Station serves the Metro North Commuter Rail Line and Amtrak's Northeast Corridor services. A bus terminal that provides interstate and local busses is located across the street from the Bridgeport Train Station.

The Water Street Dock houses the Bridgeport and Port Jefferson Steamboat Company. The Steamboat Company operates ferry services between Long Island, New York and mainland Connecticut.

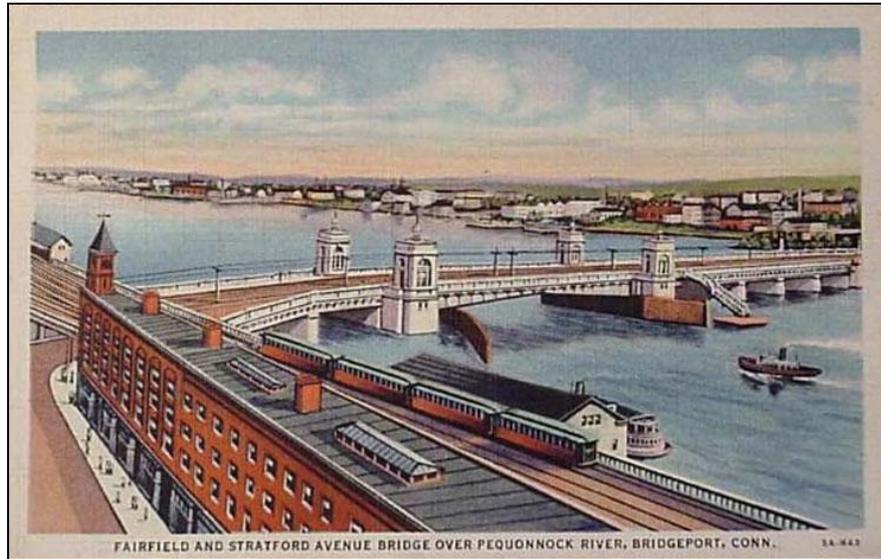
2.2.13 Power Plants

The PSE&G Bridgeport Harbor Generating Station is a three-unit power plant located on the west shore of Bridgeport Harbor at Tongue Point (Block 542, Lot 22, see Figure 9b). A coal-fired (oil backup capability) unit, an oil-fired unit, and an oil-fired combustion turbine comprise the three operating units onsite. A fourth unit at the site is inactive, but sits in deactivated reserve.



2.3 Existing Development and Economic Activity

In the 19th and early 20th centuries, Bridgeport was recognized as a major maritime commercial center in New England. Over time, the waterfront has experienced major change from its traditional role as a maritime commercial center, and currently contains a mix of industrial, commercial, and recreational uses. Bridgeport's developed waterfront areas include Bridgeport Harbor, Johnson's Creek, Yellow Mill Creek, the Pequonnock River, Black Rock Harbor and Cedar Creek.



From the western shore of Black Rock Harbor, south of Ocean Terrace, to the eastern shore of Ash Creek, land use is generally residential with some recreational and commercial uses. Utility, transportation, recreational, and industrial uses are commonplace north of Ocean Terrace in Black Rock Harbor and along both shores of Cedar Creek.

Shoreline land uses located along Bridgeport Harbor consist primarily of industrial, utility-transportation, and recreational activities. The land use along the western side of Bridgeport Harbor is characterized mainly by an electrical power generating facility and some former light and heavy industrial properties. The land use on the eastern side of Bridgeport Harbor is characterized by a shipping terminal, a shipyard, some recreational boating sites, and industrial uses. Much of the land in the Steel Point area, formerly industrial, commercial, and recreational, has been claimed through eminent domain by the City of Bridgeport for a planned re-development of the area. The remaining properties: a shellfishing operation and two yacht clubs, are fighting the eminent domain process.



Railroads, fuel storage, and industrial uses are located along the shores of the Pequonnock River. Land use along Yellow Mill Creek channel's shoreline is primarily industrial and recreational. Oil handling facilities, light industry marinas and small craft anchorages can all be found on the banks of Johnson's Creek.

There are numerous vacant and underutilized waterfront properties along the shoreline of Cedar Creek, the Pequonnock River, and Yellow Mill Creek.

Figure 8 shows the existing zoning of Waterfront Properties. A table summarizing zoning of Waterfront Properties is included as Table 2. A map showing the Block and Lot numbers for each Waterfront Property, based on data obtained from the Bridgeport Assessor's Office is included as Figures 9a and 9b.

2.3.1 Western Black Rock Harbor (west and south of Ocean Terrace) and Ash Creek

Residential development is concentrated in an area of land spanning from the western shore of Black Rock Harbor, south of Ocean Terrace, to the eastern shore of Ash Creek. A few commercial and recreational operations are dispersed throughout this primarily residential area. The following sections describe the major economic water-dependent uses of Waterfront Properties in this portion of the Harbor.



2.3.1.1 Residential

Waterfront properties currently used for residential purposes are concentrated around Black Rock Harbor, west of Ocean Terrace, up to the eastern end of St. Mary's-by-the-Sea. Most of these residences, which include houses and condominium complexes, are located on Gilman Street, Grovers Avenue, Brewster Street, Seabright Avenue, Anchorage Drive, Beachview Avenue, and Hemlock Street. Many of the residential properties in this area have private docks that allow access to Black Rock Harbor.



Additional residential properties are located north of the western end of St. Mary's-by-the-Sea along Ash Creek, up to Fairfield Avenue. North of Fairfield Avenue, much of the Waterfront Property use is either residential or non-water dependent commercial, including a movie theater and retail establishments.

2.3.1.2 Yacht Club: Fayerweather Yacht Club

The Fayerweather Yacht Club facility consists of a clubhouse, dock, and surrounding grounds. The full service dock facility is open to both members and non-members from mid-May to mid-October. The Club uses approximately fifty of the two hundred and ten public moorings in Black Rock Harbor and also contains 245 feet of floating dock and fueling space. (Notable features of the dock include its 15-foot width, two extra-wide ramps, cleats at every 10 feet along the length, and 7-foot depth at low tide to accommodate sailboats.) The Club offers tender service to the mooring fields and to the transient dock located directly across the channel. The restaurant, bar, and recreational facilities within the clubhouse remain in operation throughout the winter. The club also operates a boat yard that offers storage/hoisting for its members. The Fayerweather Yacht Club is located at 51 Brewster Street and occupies Block 224/Lots 19A and 12 on Black Rock Harbor. (see Figure 9a)



2.3.1.3 Yacht Club: Black Rock Yacht Club



Black Rock Yacht Club is open mid-April through mid-September and makes use of approximately fifty of the two hundred and ten public moorings in Black Rock Harbor. In addition to sailing and yacht racing at the club, a swimming pool, tennis courts and an upscale restaurant are available for use by club members. Black Rock Yacht Club is located at 80 Grovers Avenue and occupies Block 145/Lot 12A on Black Rock Harbor. (see Figure 9a)

2.3.1.4 Marina: National Association of Naval Veterans Port 5

The Association is the oldest national naval veterans organization in the U.S. Its members include active-duty officers and retired veterans of the Navy, Coast Guard and Marines as well as other military branches. The Bridgeport facility consists of a clubhouse and dock, and operates approximately one hundred ten of the two hundred ten public moorings in Black Rock Harbor. The five hundred members of the division use the facilities year round. The National Association of Naval Veterans Port 5 is located at 69 Brewster Street and occupies Block 115/Lot 15 on Black Rock Harbor. (see Figure 9a)



2.3.1.5 Boat Yard: Fayerweather Boat Yard

The Fayerweather Boat Yard provides hoisting and storage services for boats, masts, and dinghies owned by members of Fayerweather Yacht Club. The facility consists of a storage warehouse, a storage yard, a dock, and an area dedicated to equipment repair. Marine equipment and supplies are also sold on site. Fayerweather Boat Yard is located at 135 Bywater Lane and occupies Block 224/Lot 35A on Black Rock Harbor. (see Figure 9a)



2.3.2 Northern Black Rock Harbor and Cedar Creek (east of Ocean Terrace)

On waterfront properties east and north of Ocean Terrace in Black Rock Harbor and on both shores of Cedar Creek, commercial, recreational, and industrial operations dominate. Industrial uses include oil terminals, power plants, and non-water dependent industry. Recreational uses include marinas. Additionally, there are numerous vacant and underutilized waterfront properties along the shoreline of Cedar Creek.

2.3.2.1 Marina: Captain's Cove Seaport

Opened in 1982, the Captain's Cove Seaport is a full-service marina. Since then, it has expanded to include slip space for over four hundred boats and offers maintenance and repair services year round. The marina is open to the public and operates fishing and sailing expeditions in addition to harbor tours in the warmer months. Growth of the surrounding seaport complex has been aided by its accessibility to land, sea and air via helicopter. Tourist attractions include historic sites, lighthouses, a boardwalk with gift shops, and a restaurant.



Captain's Cove Restaurant provides a casual dining atmosphere with capacity for over four hundred guests and is open seasonally, April through October. The restaurant offers both indoor and outdoor seating and sponsors musical performances on the boardwalk on Sunday afternoons. Events such as flea markets, motorcycle and car shows, concerts, and events sponsored by local organizations also drew tourists during the 2005 summer season. The Captain's Cove Seaport, located at 1 Bostwick Avenue, occupies Block 329/Lot 1B and Block 328A/Lot 1 in Black Rock Harbor. (see Figure 9a)

2.3.2.2 Education: Bridgeport Regional Vocational Aquaculture School

Since opening in February 1993, the Bridgeport Regional Vocational Aquaculture School has provided high school students an opportunity to take marine-focused courses in a practical and technological environment. A waterfront location allows for operation of a 56-foot research vessel and a 25-foot workboat that provide access to larger boats in the harbor (which operates out of the adjacent Captain's Cove Seaport). The marine-focused curriculum draws students from Bridgeport and neighboring cities such as Fairfield, Milford, Monroe, Shelton, Stratford, and Trumbull. Bridgeport Regional Vocational Aquaculture School is located at 60 St. Stephen's Road (in Black Rock Harbor) and does not occupy waterfront property.



2.3.2.3 Marina: Cedar Marina



Cedar Marina which opened in 1956, has slip space for 150 boats. The marina and service department located on the property are in operation April through November. Cedar Marina is located at 86 Bostwick Avenue and occupies Block 320/Lot 21 on Cedar Creek. (see Figure 9a)

2.3.2.4 Industrial: O&G Industries



O&G Industries is a diversified construction company that offers services such as construction management, design/build, heavy civil construction and environmental remediation. Operations at the company's two Bridgeport locations focus on the supply and transport of construction materials such as ready-mix concrete, bituminous paving materials, and quarried stone aggregates. At the Cedar Creek location, a 12-foot port depth and 400 feet of dock allow cranes to load and unload barges with material such as sand and gravel. The facility also includes a ready-mix concrete plant and two ready-mix asphalt plants. The

Cedar Creek location of O&G Industries is located at 260 Bostwick Avenue and occupies Block 320/Lots 8, 18, 19, 20, and 24. (see Figure 9a)

2.3.2.5 Power: Bridgeport RESCO, Wheelabrator



Wheelabrator owns and operates a waste-to-energy facility that accepts municipal solid waste by truck from more than a dozen communities in southwestern Connecticut. Up to 2,250 tons of waste per day can be used to generate over 60,000 kilowatts of electrical energy for sale to the United Illuminating Company, which is sufficient to supply 50,000 homes. The plant operates twenty-four hours a day, seven days a week. The plant does not make use of its access to Cedar Creek for its operations. Wheelabrator is located at 95 Howard Avenue and occupies Block 320/Lot 22 on Cedar Creek.

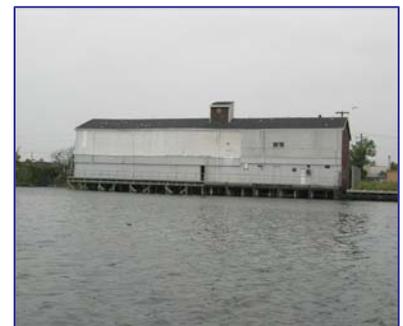
(see Figure 9a)

2.3.2.6 Marina: Nutrico, Inc.

Nutrico operates a plant and fertilizer store on the property and also operates a small, private marina, which consists of approximately thirty slips. Nutrico is located at 92 Howard Avenue and occupies Block 319/Lot 2 on Cedar Creek. (see Figure 9a)

2.3.2.7 Industrial: Martin Marietta Materials

Martin Marietta Materials is a national producer of aggregates, magnesia-based chemical products and polymer products. The company's Bridgeport operation focuses on the manufacturing, storage, and distribution of chemical magnesia that can be used as a fuel additive in a variety of industrial, chemical and environmental applications. The dock at the facility has an 8-foot depth and is 150 feet in length. Martin Marietta **Materials** is located at 524 Wordin Avenue and occupies Block 319/Lot 3 on Cedar Creek. (see Figure 9a)



2.3.2.8 Fuel Supply: Hi-Ho Petroleum

Hi-Ho Petroleum supplies fuel energy service to residents of many southwestern Connecticut communities. The bulk oil terminal in Bridgeport receives petroleum products by barge and has a port depth of 13 feet with 200 feet of dock. Two 6-inch pipelines transport product from the wharf to two steel storage tanks located on the property. Hi-Ho Petroleum is located at 85 Harbor Street and occupies Block 426/Lot 2B on Cedar Creek. (see Figure 9a)



2.3.2.9 Fuel Supply: Santa Fuel

Santa Fuel, an energy company headquartered in Bridgeport, owns and operates an oil terminal on the harbor. Since its inception in 1940, the company has provided energy products, motor fuels, and services for business and industry throughout New England. The company fuels its own tanker trucks at the terminal to supply home heating oil in addition to heating and cooling equipment to residents of many southwestern Connecticut communities. The company receives bulk shipments of oil by barge. Santa Fuel is located at 215 Admiral Street and occupies Block 424/Lot 3A on Cedar Creek. (see Figure 9a)



2.3.2.10 Industrial: Sikorsky Aircraft Corporation



Sikorsky, an international corporation based in Stratford, is involved in the design, production and service of helicopters used for commercial, industrial and military purposes. Its maritime helicopters are used by all five branches of the U.S. Armed Forces and by consumers in forty nations. The Bridgeport facility specializes in aluminum and fiberglass blade repair along with repair of all Sikorsky model helicopters. Sikorsky is located at 1210 South Avenue and occupies Block 424/Lot 2 on Cedar Creek. (see Figure 9a)

2.3.3 Bridgeport Harbor

The following sections describe the major economic water-dependent uses of Waterfront Properties in Bridgeport Harbor.

2.3.3.1 Ferry: Bridgeport & Port Jefferson Steamship Company

The Company operates a fleet of three steamship ferries that cross the Long Island Sound between Bridgeport, Connecticut and Port Jefferson, New York. Traffic on the ferries consists of passengers, automobiles, buses, trucks and motorcycles. Recent improvements to the Bridgeport facility include the installation of a new terminal, parking garage,



boardwalk and truck access road in addition to dock repair. The terminal's proximity to the municipal bus and train stations provides a considerable advantage. Ferries departing from Bridgeport also offer service to and tours of numerous ports-of-call throughout New England. The Bridgeport & Port Jefferson Steamship Company is located at the Water Street dock, 330 Water Street and occupies Block 963/Lot 15A on Bridgeport Harbor. (see Figure 9b)

2.3.3.2 Shellfishing: Tallmadge Brothers, Inc.

Tallmadge Brothers, one of the largest shellfish operations in the region, has been in operation in Bridgeport for almost half a century. The company operates city-owned shellfish beds in Black Rock Harbor and Long Island Sound that are leased to raise seed oysters. The facility consists of one floating drydock moored to a pier that allows for receipt of seafood and dockside shucking of oysters. The company also completes some repair of small vessels on site. Tallmadge Brothers is located at 59 Pembroke Street and occupies Block 829/Lot 4 on Bridgeport Harbor. (see Figure 9b)



2.3.3.3 Yacht Club: Pequonnock Yacht Club

Pequonnock Yacht Club has a long history in the Steel Point area of Bridgeport Harbor. The yacht club has slip space for 193 boats. Members of the Yacht Club monitor marine channels for distress signals and provide aid to the general public in emergency situations. Additionally, the club plans to update their facilities to include pump-out services in the near future. Pequonnock Yacht Club is located within the anticipated footprint of the Steel Point Development planned by the City of Bridgeport, and is currently fighting an eminent domain process initiated by the City of Bridgeport. The yacht club is located at 66 California Street and occupies Block 830/Lots 7 and 8 on Bridgeport Harbor. (see Figure 9b)



2.3.3.4 Shipyard: Derecktor Shipyards



Derecktor Shipyards' Bridgeport location is devoted to new construction and service of large commercial and private vessels. Year round repair and fabrication occur at two bays that have capacity for crafts up to 300 feet long. The facility's dock has 570 feet of berthing space with a depth of 18 feet. Steel floats moored to steel piles at the mouth of Yellow Mill Creek provide an additional 300 feet of dock space for smaller vessels. Derecktor Shipyards is located on Port

Authority-owned land at 837 Seaview Avenue and occupies Block 600/Lot 16C on Bridgeport Harbor. (see Figure 9b)

2.3.3.5 Shipping: Cilco Terminal/Logistec USA, Inc.

Logistec provides year-round cargo-handling services to the marine and industrial sectors. Specialized equipment and features of the Cilco Terminal, such as a dockside crane and 1,100 feet of dock with a 33 foot draft, make it ideal for the



loading and unloading of ships. The facility supports transfer of cargo between trucks, vessels and barges. Cargo such as fruit, lumber and dry bulk materials are warehoused in transit at several covered storage areas, many of which are heated or refrigerated to support perishable goods. Logistec is located at 567 Seaview Avenue and occupies Block 664/Lot 5A on Bridgeport Harbor. (see Figure 9b)

2.3.3.6 Marina: Lou's Boat Basin



Lou's Boat Basin is a complex that includes a marina with seventeen slips, a bait-and-tackle shop and a seafood store. The property owner, who is involved in the fishing industry, lives onsite and is involved in all operations that occur at the facility. Lou's Boat Basin is located at 365 Seaview Avenue and occupies Block 663/Lots 1, 2 and 3 on Bridgeport Harbor. (see Figure 9b)

2.3.3.7 Marina: Dolphin's Cove Marina

Dolphin's Cove Marina has slip space for eighty-five boats and a restaurant on the property. Dolphin's Cove Marina is located at 421 Seaview Avenue and occupies Block 664/Lots 13, 14, 15, and 16 on Bridgeport Harbor. (see Figure 9b)



2.3.4 Pequonnock River

The following sections describe the major economic water-dependent uses of Waterfront Properties on the Pequonnock River. Please note that much of Waterfront Properties on the Pequonnock River are either vacant or contain non-water dependent industry.

2.3.4.1 Fuel Supply: Hoffman Fuel

Hoffman Fuel is an energy company that provides residential and commercial customers in Connecticut and New York with materials and equipment for heating, cooling and related services. The facility offers a port depth of 10 to 14 feet and 330 feet of berthing space for tankers. Three 8-inch and two 6-inch pipelines extend from the wharf to nine steel storage tanks located on the premises. Hoffman Fuel is located at 156 East Washington Avenue and occupies Block 1531/Lot 1 on the Pequonnock River. (see Figure 9b)



2.3.5 Yellow Mill Creek

The following sections describe the major economic water-dependent uses of Waterfront Properties on Yellow Mill Creek. Please note that much of Waterfront Properties on Yellow Mill Creek are either vacant or contain non-water dependent industry.

2.3.5.1 Marina: Ryan's Marine Services

Subsequent to the eminent domain seizure of its 62 Waterview Avenue property by the City of Bridgeport, Ryan's Marina has moved to another property located further north along Yellow Mill Creek. If its plans are approved by the City, the marina intends to make up to 200 new slips available. Ryan's Marina is now located at 530 Waterview Avenue and occupies Block 862/Lots 1 and 2 on Yellow Mill Creek. (see Figure 9b)

2.3.5.2 Industrial: O&G Industries

At its Yellow Mill Creek location, O&G Industries receives construction debris from its facility in Stamford, Connecticut. After crushing the debris into aggregate, O&G Industries transports the aggregate back to Stamford. The Yellow Mill Creek location of O&G Industries is located at 1023 Seaview Avenue which is Block 741/Lot 1D. (see Figure 9b)

2.3.6 Johnson's Creek

The following sections describe the major economic water-dependent uses of Waterfront Properties on Johnson's Creek.

2.3.6.1 Fuel Supply: Harborview Terminals

Peckham Materials Corporation, the owner of Harborview Terminals, is a supplier of highway building materials. The company's Bridgeport facility acquires and distributes liquid asphalt to a wide range of customers as well as company-owned hot mix asphalt plants. Asphalt received

at the wharf is stored in two tanks along Seaview Avenue. Harborview Terminals is located at 1 Seaview Avenue and occupies Block 662/Lot 4B on Johnson's Creek. (see Figure 9b)



2.3.6.2 Fuel Recycling: Bridgeport United Recycling

Bridgeport United Recycling is a fuel recycling operation involved in the treatment, storage, and transport of hazardous and non-hazardous Resource Conservation and Recovery Act (RCRA) regulated materials. Waste fuel operations include used fuel oil recovery, liquid/solid separation, wastewater treatment, oil filter shredding, and

non-hazardous solid bulking for energy recovery or land disposal. Marketable used oil fuel products obtained from treatment processes are sold at the facility while generated hazardous wastes are shipped offsite. The company operates a similar recycling facility in Meriden, Connecticut, but the Bridgeport terminal is unique in that it is a marine terminal capable of shipping used oil products via barge. Bridgeport United Recycling is located at 22-40 Seaview Avenue and occupies Block 662/Lot 4A on Johnson's Creek. (see Figure 9b)

2.3.6.3 Yacht Club: Miamogue Yacht Club

Miamogue Yacht Club has been in operation for over fifty years and has slip space for 171 vessels and two moorings. The banquet hall, restaurant, and bar are open year round. Members of the club monitor marine channels for distress signals and provide aid to the general public in emergency situations. Additionally, the club plans to update their facilities to include pump-out services in the near future. Miamogue Yacht Club is located at 144 Seaview Avenue and occupies Block 632/Lot 2A on Johnson's Creek. (see Figure 9b)



2.3.6.4 Yacht Club: East End Yacht Club

The East End Yacht Club, which operates seasonally, has approximately 193 slips. Members of the Yacht Club monitor marine channels for distress signals and provide aid to the general public in emergency situations. It is located at 104 Bay Street and occupies Block 659/Lot 4A on Johnson's Creek. (see Figure 9b)



2.3.6.5 Fuel Supply: Motiva Enterprises

Motiva Enterprises is an oil refining, lubricant and retail business owned by Shell Oil Company. Motiva operates three refineries in the southern United States that ship their products to storage and distribution terminals in the Northeast, Southeast and Gulf Coast. At the Bridgeport terminal, gas and diesel fuel products received in the wharf (located on property in Bridgeport Harbor) are pumped through four 12-inch pipelines to thirteen steel storage tanks property. Fuel is then transferred to tank trucks for transport to Shell and Texaco gas stations and to other commercial customers in the Northeast. Motiva Enterprises is located at 250 Eagle's Nest Road and occupies Block 661/Lot 3 on Johnson's Creek. (see Figure 9b)



2.3.6.6 Fuel Supply: Global Terminal

Global Terminal is involved in the manufacturing and distribution of gasoline. Global operates a gasoline storage terminal consisting of four above-ground storage tanks. The Global Terminal is located at 400 Eagle's Nest Road and occupies a portion of Block 661/Lot 4 on Bridgeport Harbor. (see Figure 9b)

2.4 Harbor Administration

Numerous local, state, and federal agencies have authority for planning and regulating activities in Bridgeport's harbor areas. The key authorities with administrative jurisdiction include:

2.4.1 Local Harbor Administration

The following local authorities have jurisdiction within the Harbor.

2.4.1.1 City Council

The twenty-member City Council is the City's legislative body. The City Council has the authority to pass a broad range of ordinances for the governance of the City, management of its business, preservation of health, safety and welfare, as long as it is consistent with law and the City Charter. The Council can regulate by ordinance such matters as environmental quality, buildings and uses, and prescribe penalties for violations. The Council creates agencies, departments and commissions by ordinance, as it did in establishing the Harbor Management Commission by passing Section 2.96 of the City of Bridgeport Municipal Code in 1987.

2.4.1.2 Harbor Management Commission

The Section 2.96.10 of the City of Bridgeport Municipal Code requires that the Bridgeport Harbor Management Commission be comprised of seven members and two alternate members. Of the seven members, one member shall represent commercial, industrial, recreational and educational interests. One member of the Commission is required to be a representative of the planning and zoning commission. The Bridgeport Harbormaster works with and serves as a non-voting ex-officio member of the Commission. The Mayor of the City is an ex-officio member of the Commission, and may vote in the event of a tie.



All members of the Commission are appointed by the Mayor and ratified by the City Council and are responsible for preparing, implementing and enforcing the Harbor Management Plan. The Harbor Management Plan contains goals and policies for use and protection of the harbor waters and adjacent land, makes recommendations for improvements and future development and use of the harbors, and recommends rules and regulations for the safe and efficient use of the Harbor for recreational and commercial boating, including placement of moorings. The Commission has authority to review and make recommendations, consistent with the Plan, on any proposal affecting land in, or contiguous to, the Harbor that is received by another municipal board such as the Planning and Zoning Commission, Zoning Board of Appeals, or Port Authority.

2.4.1.3 Port Authority

The City of Bridgeport established the Bridgeport Port Authority in 1993 in accordance with **Sec. 7-329a to 7-329f** of the Connecticut General Statutes. The general purposes of the Port Authority are to foster and stimulate the shipment of freight and commerce through the port of Bridgeport, to develop and promote port facilities within the District in order to create jobs, to increase the City's tax base and provide special revenues to the City and to work with the government of the City to maximize the usefulness of available public funding by consolidating private efforts to assist the City's waterfront and industrial development program. Further, the Port Authority cooperates with the State and Federal Agencies in the maintenance, development, improvement and use of district harbors, waterways and industrially zoned properties.



The Port Authority owns the Water Street dock from which the Bridgeport-Port Jefferson Steamship Company operates a year-round vehicle and passenger ferry service between Bridgeport and the Village of Port Jefferson on Long Island. The Port Authority recently made significant improvements to the dock and ferry terminal and has been awarded federal funding to make additional improvements for port security. The Port Authority has the right to claim property by eminent domain, contingent upon the approval of the City of Bridgeport. Future projects include a barge feeder service between Bridgeport and the Port Authority of New York and New Jersey, and potentially a high-speed ferry between Bridgeport, Stamford, and New York.

2.4.1.4 Planning and Zoning Commission

The nine member Planning and Zoning Commission is responsible for preparing, adopting, and implementing the Master Plan of Development for the City, reviewing and recommending municipal improvements, adopting and amending subdivision regulations, reviewing and recommending the City's capital improvement program, and reviewing and acting upon referrals from federal, state, and regional agencies. The Commission formulates zoning regulations and reviews applications for zoning permits, special permits and special exceptions and is authorized to regulate the height, number of stories, and size of buildings, structures, and land for commercial, industrial, residential, or other purposes. It also conducts Coastal Site Plan Reviews for activities within the Coastal Boundary in accordance with section 14-3 of the Bridgeport Zoning Regulations and Sections 22a-105 through 22a-109 of the Connecticut General Statutes.

The Zoning Regulations of the City of Bridgeport are adopted by the Planning and Zoning Commission. These regulations establish permitted and prohibited uses of land and buildings and set out standards for the density and dimensions of new development of land and structures. For purposes of the Zoning Regulations, the City is divided into eighteen districts (and one overlay zone) depicted on the Zoning Map. Each district has a purpose, allowable uses, and standards for development.

The Planning and Zoning Commission is also the inland wetlands agency for the City, fulfilling the responsibilities under **Section 22a-42(c) of the Connecticut General Statutes**. The Commission has the authority to define boundaries of inland wetland areas as defined by the inland wetlands and water

courses act and promulgate local regulations in conformity with **Connecticut Department of Environmental** regulations to protect the wetlands and water courses within the territorial limits of the City.

2.4.1.5 Zoning Board of Appeals

The five-member Zoning Board of Appeals has the authority to vary the application of the zoning regulations in individual cases. These variances refer to changes to the setback, height, or area requirements of the regulations for the applicable district and can be granted if there is a demonstrated hardship intrinsic to the parcel of land. Under the current rules, if a waiver is granted by the Zoning Board of Appeals, site plan review by the Planning and Zoning Commission must follow. Where the above activities are located within the Coastal Boundary, the Board must also conduct a Coastal Site Plan Review. The Zoning Board of Appeals also has authority to review applications for variances from the elevation and construction standards of the National Flood Insurance Program for flood-prone areas shown on the Federal Emergency Management Agency (FEMA) maps.

2.4.1.6 Parks Commission

The Parks Commission is a seven-member body appointed by the Mayor and approved by the City Council which oversees city-owned park property and city-sponsored recreation programs. The Parks Commission in Bridgeport operates the City's waterfront parks including Seaside Park, Pleasure Beach, Seabright Avenue Beach and Ellsworth Field on Burr Creek, St. Mary's-by-the-Sea, Waterfront Park Boardwalk, and Waterview Park along the Yellow Mill Creek. The Parks Commission reviews and approves the budget of the City's Department of Parks and Recreation. The Parks Commission also oversees and reviews the activities of the City's Department of Parks and Recreation.



(St. Mary's-by-the-Sea (ACCA, 2005))

2.4.1.7 Department of Public Facilities

The Department of Public Facilities is responsible for all engineering and maintenance necessary to maintain the condition of public buildings and infrastructure (including public utilities, streets, and bridges) for the City of Bridgeport. In conjunction with the Parks Commission, the Department of Public Facilities oversees the Department of Parks and Recreation.

2.4.1.8 Water Pollution Control Authority

The Water Pollution Control Authority manages the two sewage treatment plants in Bridgeport and is in charge of the maintenance of the municipal storm and sanitary sewers. The authority can operate/control its own property.

The two treatment plants and some pumping stations are located on or near the waterfront. The nine-member authority can collect user fees and works with a salaried general manager.

2.4.1.9 Redevelopment Agency

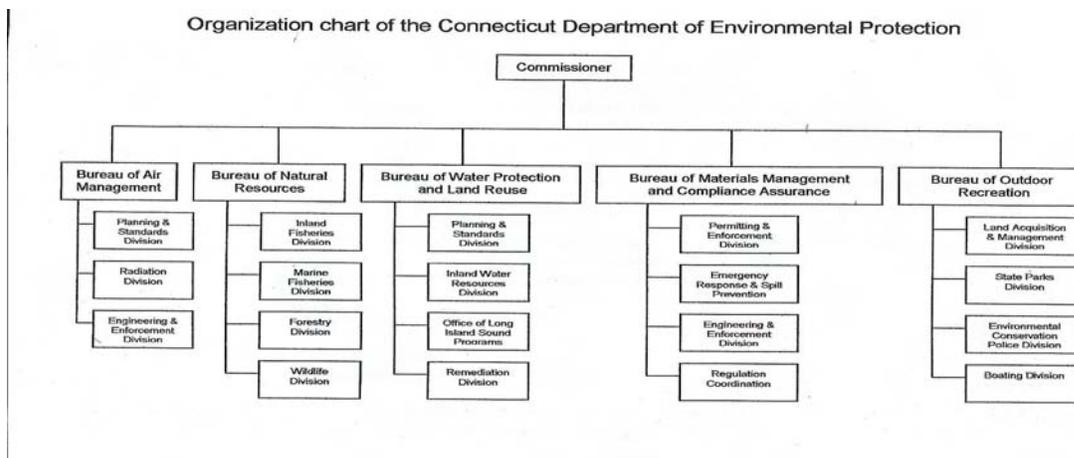
The Redevelopment Agency has the eminent domain authority to designate urban renewal areas and oversees the redevelopment of those areas. The Redevelopment Agency can acquire land or assist in off-site improvements in an urban renewal area. The agency also plays a role in the relocation of people or property affected by the redevelopment. The Redevelopment Agency works with other divisions of the Bridgeport Office of Planning and Economic Development including the Planning Department and the Housing Authority.

2.4.2 State Harbor Administration

The following state authorities have jurisdiction within the Harbor.

2.4.2.1 Connecticut Department of Environmental Protection (DEP)

The Connecticut Department of Environmental Protection manages nearly all aspects of the state's natural resources and the quality of the environment through various programs and regulatory authorities. The breadth of the agency is depicted in its organizational chart (see below). A brief description of the offices and programs in DEP most relevant to Bridgeport Harbor follows.



Bureau of Water Protection and Land Reuse *Office of Long Island Sound Programs (OLISP)*

The Office of Long Island Sound Programs administers and coordinates programs within the DEP that have an impact on the Long Island Sound and related coastal lands and waters. OLISP undertakes long-range planning for the Long Island Sound and is directly responsible for the implementation, oversight and enforcement of the state's coastal management and coastal permit authorities including tidal wetlands, coastal structures, dredging and filling.

OLISP is responsible for overall implementation of Connecticut's federally-approved coastal zone management program. OLISP works closely with the state's coastal municipalities providing them with assistance in implementing and updating municipal coastal programs (portions of municipal plans of development and zoning regulations affecting the municipality's coastal area), preparing and amending harbor management plans, and conducting special coastal management studies and projects. OLISP also assists coastal municipalities with evaluating Coastal Site Plan Review applications upon request or when a project is determined to be of statewide concern.

In addition, the OLISP also:

- Manages programs to protect and restore coastal resources and habitat,
- Works to improve waterfront public access;
- Provides grant funds through the long Island Sound License Plate Fund for coastal wetlands restoration, Long Island Sound management and research, coastal access projects, and public education;
- Develops and implements plans to improve water quality in the Long Island Sound and its harbors through elimination of coastal non-point source pollution and establishment of federally (EPA) approved No Discharge Areas for sewage from boats;
- Provides grant funds through the federal Clean Vessel Act Grant Program for the installation, operation and maintenance of boat holding tank pump-out and dump stations at public and private boating access facilities; and
- Jointly manages Connecticut's Clean Marina Program with the DEP's Boating Division,

Bureau of Water Management and Land Reuse

Planning Standards Division

The Planning and Standards Division establishes the state's water quality classifications and administers the water quality criteria and Total Maximum Daily Load programs.

Bureau of Materials Management

Permitting and Enforcement Division

The Permitting and Enforcement Division administers the National Pollution Discharge Elimination System (NPDES) water pollution permit program and the subsurface sewage control programs. The Division also administers the stormwater permit program.

Bureau of Outdoor Recreation

Boating Division

The Bureau of Outdoor Recreation's Boating Division develops public boating access areas, promotes preservation of the environment by encouraging boaters to take the Clean Boater Pledge to use statewide pump-out stations and eliminating direct discharge from marine toilets, offers boater safety instruction through a statewide volunteer instructor program and certifies boaters on completion of basic boating and personal watercraft operation courses. **The Boating Division also permits all regulatory markers, including speed zones and swim areas, as well as the state of Connecticut's private aids to navigation and approves local ordinances.**



Bureau of Outdoor Recreation

Environmental Conservation (EnCon) Police Division

The Environmental Conservation Police Division enforces fish, wildlife, shellfish, boating, park and forest laws and regulations and promotes participation in enforcement of conservation laws.

Enforcing the State's fish and game laws enforcing Connecticut's laws and regulations pertaining to the commercial harvesting of fish and shellfish. Deputy Special Agents of the U.S. Fish and Wildlife Service and National Marine Fisheries Service and as such may also enforce U.S. Federal Codes concerning the taking of fish and wildlife. Enforce Federal Codes concerning the commercial harvesting of marine fish and shellfish. EnCon Police Officers routinely inspect commercial fishing vessels to ensure compliance with species limitations, licensing, and permit requirements and other laws pertaining to the commercial fishing industry. Their duties in fish and game enforcement include a wide range of activities from checking fishing licenses to undercover assignments investigating suspected violations of fish and game laws. Help to maintain stable populations of fish and wildlife species. Duties now include the enforcement of the laws and regulations that concern boating, motor vehicle, criminal and public safety. Connecticut EnCon Police Officers now assist and act as back up for State and Municipal Police Departments in narcotics enforcement, domestic disputes, assaults and many other law enforcement functions and are the primary response units to assist the United States Coast Guard.

Patrolling all waters within the State and Long Island Sound for recreational boating safety enforcement. EnCon Police Officers enforce state boating laws and regulations to ensure a safe and enjoyable boating experience for the many recreational boaters that enjoy Connecticut's waterways each year. To enhance the safety of boaters, EnCon Police Officers inspect boats for compliance with safety equipment requirements and check boat operators for compliance with boat operator certification requirements

Homeland Security Officers also conduct waterborne security patrols of the major harbor areas of the state to augment U.S. Coast Guard resources to protect the infrastructure that is vital to Connecticut's economy.

Bureau of Natural Resources

Marine Fisheries Division

The Marine Fisheries Division manages marine fish and crustacean resources to provide optimum sustained benefit to user groups while assuring the diversity, abundance and conservation of populations commensurate with habitat capability and relevant ecological, social, and economic considerations. It also conducts monitoring and research programs, develops fishery management plans and regulations consistent with coast-wide management plans, protects and conserves marine living resources and habitat by commenting on permit applications for development and habitat alteration, and conducts public awareness and outreach activities to promote an understanding of fishery management programs and marine aquatic resources.

2.4.2.2 Department of Agriculture

CGS Section 26-192a designates the Department of Agriculture as the state's lead agency responsible for shellfish and aquaculture. The Department chairs an interagency planning and steering committee, which includes the Departments of Environmental Protection, Consumer Protection and Economic Development. The committee is developing a comprehensive strategy for the planned development of aquaculture in Connecticut.

Bureau of Aquaculture and Laboratory Services



The Bureau of Aquaculture and Laboratory Services administers the Shellfish Sanitation Program which seeks to assure safe shellfishing areas for commercial and recreational harvesting, protection of public health and compliance with the U.S. Food and Drug Administration's National Shellfish Sanitation Program. It is also responsible for the sanitary inspection and licensing of shellfish dealers involved in harvesting, shucking, depuration, repacking and reshipping of fresh and frozen oysters, clams, mussels and scallops. Further, the Bureau

performs coastal sanitary surveys along Connecticut's shoreline and monitors shellfish growing areas in the Long Island Sound for the protection of public health.

2.4.2.3 Department of Health Services

This is the implementing agency for the State of Connecticut Public Health Code. The Department reviews permits for sewage disposal and water supply facilities and works cooperatively with the Aquaculture Division to establish water quality standards for taking of shellfish.

2.4.2.4 Department of Transportation (DOT)

Harbormaster

Connecticut Harbormasters and Deputy Harbormasters are nominated by the local Harbor Management Commission (three names are submitted to the Governor for consideration) and are appointed by the Governor in accordance with CGS Section 15-1. Harbormasters and Deputy Harbormasters report to the Commissioner of Transportation. The powers and duties of the Harbormasters and Deputy Harbormasters are established in the Connecticut General Statutes, including Sections 15-1 through 15-9. Harbormasters are responsible for the general care, supervision and safe and efficient operation of the harbors and navigable waterways, the removal of abandoned and derelict vessels, enforcement of State boating laws, assignment of boat mooring locations and administration of mooring permits within their jurisdictions, and keeping navigation channels and established fairways clear of obstructions.



The jurisdiction, powers and duties of the Bridgeport Harbormaster are defined in [Connecticut General Statutes](#) Section 15-7. This section of the statutes specifies that the Harbormaster shall have the general care and supervision of Bridgeport Harbor, its tidewaters, its rivers and of all the flats and flowed areas within the

city limits. The Bridgeport Harbormaster works with and is an ex-officio member of the Harbor Management Commission. Section 15-1 of the Connecticut General Statutes requires the Harbormaster to exercise his or her duties in a manner consistent with the approved and adopted Harbor Management Plan. Upon adoption of a harbor management plan, the Harbormaster has sole authority for permitting all moorings which must be placed in a manner consistent with the policies and provisions of the plan. The Harbormaster collects any fee (CGS Section 22a-113s) established by the City for annual mooring permits and deposits the money into a special fund to be used for maintenance and improvement of the Harbor for the public and for personnel and equipment directly related to the function of the Harbor Management Commission and the Harbormaster.

Additional responsibilities include limiting, preventing, and abating sources of water pollution, preventing or removing unauthorized encroachment and other obstruction likely to interfere with navigation, impact its channels, or cause any reduction in its tidewaters, and preventing, abating or removing any unauthorized landfills upon or affecting the tidewaters located within the city limits.

Further, written notice of and plans for any proposal to build a structure, dredge, or place fill in the Harbor and its tidewaters must be provided to the Harbormaster and to the Commissioner of Transportation and no such work can be started until approval in writing is issued by the Commissioner. The project will be conducted under the supervision of the Commissioner and the Harbormaster.

Bureau of Aviation and Ports

This agency is responsible for the supervision of the state's ports, harbors, and navigable waterways, and for liaisons with local harbormasters. The Commissioner may delegate his powers and duties to a local municipality through the Harbormaster and/or the local Harbor Management Commission.



2.4.3 Federal Harbor Administration

The following federal authorities have jurisdiction within the Harbor.

2.4.3.1 U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (Corps) regulates work in, or affecting, navigable waters under Section 10 of the Rivers and Harbors Act of 1899. It also regulates activities in wetlands and shorelands under Section 404 of the Clean Water Act. It plans, designs, and contracts harbor improvements including navigation channels, erosion control, flood protection, and beach restoration. The Corps is responsible for maintaining federal navigation channels in Bridgeport, which include maintenance dredging of federal channels in the Harbor.

A permit from the Corps is required for all structures and work in navigable waters of the United States shoreward to the mean high water line under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). For purposes of Section 10, navigable waters of the U.S. are those subject to the ebb and flow of the tide and a few of the major waterways used to transport interstate or foreign commerce. 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.



Permits are also required under Section 404 of the Clean Water Act (33 U.S.C. 1344) for those activities involving the discharge of dredged or fill material into all waters of the U.S., including not only navigable waters of the U.S., but also inland rivers, lakes, streams, and wetlands. On the coastline, the Corps' jurisdiction under the Clean Water Act extends landward to the high tide line (i.e., the highest practical tide) or the landward limit of any wetlands, whichever is more extensive. Regulated activities include the placement of fill for construction, site-development fill, riprap, seawalls, and beach nourishment.

The New England District has a comprehensive Programmatic General Permit, GP-41, (PGPs) in place in Connecticut to expedite review of minimal impact work in coastal and inland waters and wetlands. Up to 98 percent of all permits issued in New England are PGPs. The PGPs are based on the state thresholds for most categories of environmental impacts, and applicants generally need only file with the state.

The Corps' 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 Corps' decision to undertake a project is that its benefits exceed the cost.

2.4.3.2 U.S. Environmental Protection Agency

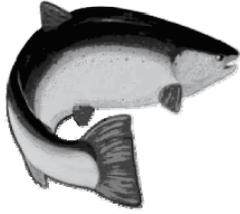
The U.S. Environmental Protection Agency (EPA), the National Marine Fisheries Service, and the Fish and Wildlife Service serve as principal advisory agencies to the Corps on Section 10 and Section 404 permits. The EPA plays a significant role in the review of any proposal for mitigation of wetland filling and designation of open water dredge material disposal areas. For activities under Section 404 of the Clean Water Act, the Corps also evaluates the project's compliance with the 404(b)(1) guidelines. The 404(b)(1) guidelines, prepared by the EPA in consultation with the Corps, are the federal environmental regulations for evaluating the filling of waters and wetlands.

The EPA's Superfund program was established to locate, investigate, and clean up hazardous waste sites. The EPA New England's Superfund program oversees long-term cleanups at National Priorities List (NPL) sites, oversees short-term cleanups ("removal actions") and responds to chemical and oil spill emergencies.

The EPA's Brownfields Program provides funds and technical assistance to states, communities, and other stakeholders in economic redevelopment to work together to assess, safely clean up, and sustainably reuse brownfields. Brownfields are defined as real properties, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

The EPA is also responsible for federal grant money for upgrade of municipal sewer systems.

2.4.3.3 National Marine Fisheries Service



In addition to the responsibilities described above to advise the Corps on Section 10 and Section 404 permitting, the National Marine Fisheries Service (NMFS) is responsible for the research and management of marine species including marine mammals and endangered species in cooperation with the U. S. Fish and Wildlife Service (FWS), for anadromous fisheries such as Atlantic Salmon.

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act contained a number of new mandates for the National Marine Fisheries Service (NMFS) and others to identify and protect important marine and anadromous fish habitat. NMFS assists the regional fisheries' management councils with delineating "essential fish habitat" (EFH) for all managed species. The area of the Long Island Sound south of Bridgeport from the entrance to the Pequonnock River west to the Town of Westport, Connecticut is designated as EFH. Federal agencies, which fund, permit, or carry out activities that may adversely impact EFH are required to consult with NMFS regarding the potential effects of their actions on EFH, and to respond in writing to the NMFS's recommendations. In addition, NMFS is required to comment on any state agency's activities, which would impact EFH.

2.4.3.4 U.S. Coast Guard

The U.S. Coast Guard is responsible for navigational safety within the City of Bridgeport through the placement and maintenance of aids to navigation such as buoys and markers. This agency provides navigation assistance and some rescue services directly to boaters. The U.S. Coast Guard also reviews applications for bridges and structures with respect to navigation under Section 9 of the Rivers and Harbors Act of 1899.



3.0 Harbor Management and Water Use Plan

The Commission has prepared this section of the Plan in accordance with Connecticut General Statutes, Volume 8, Title 22a, Chapter 444a (Harbor Management Commissions), Section 22a-113n(a) (Content of Plan) in order to “identify existing and potential harbor problems, establish goals and make recommendations for the use, development and preservation of the harbor.”

Strengths - As stated in the introduction, and outlined in the previous sections of this Plan, the Commission recognizes and prizes the Harbor’s strengths:

- **Deep Water Port** –Bridgeport is one of three deep-water ports in the State of Connecticut;
- **Transportation Center** –The confluence of transportation lines in the city, including busses, trains, highways, and ferries, is a great asset;
- **Shipping** – A center for shipping, Bridgeport has an existing transportation infrastructure to support a robust increase in the industry;
- **Water-Dependent Industry** –Bridgeport contains several thriving water-dependent industries that are a strength to the city and the region;
- **Water-Dependent and Shoreline Recreation** –Existing water-dependent and shoreline recreation provide a benefit to both the citizens of the City of Bridgeport and the citizens of the State of Connecticut;
- **Shellfishing** - Bridgeport’s shellfishing industry benefits the City of Bridgeport and the State of Connecticut;
- **Marine Ecosystem** –It is in the best interests of the citizens of the City of Bridgeport, the State of Connecticut, and the greater region to protect and restore the marine resources in the Harbor.

Problems - The Commission feels that the following problems either currently threaten the Harbor’s strengths or are anticipated to threaten the Harbor’s strengths in the future:

- The Commission anticipates that some harbor property that accommodates deep-water uses may be utilized for non-deep-water uses in the future;
- The Commission believes that the City’s transportation infrastructure could be improved;
- The Commission believes that the Harbor’s existing infrastructure needs to be adequately maintained in order to support and encourage the growth of water-dependent uses in the harbor;
- The Commission recognizes that, from 2001 to 2005, the number of slips and/or moorings in the Harbor has decreased by approximately 2% (a net loss of approximately 24 slips). The decrease in the number of slips and/or moorings has been caused primarily by the loss of three public marinas (Ryan’s Marina, Hitchcock Marine, and Riverside Marina), and has mostly been offset by the expansion of two private yacht clubs and two public marinas. As a result, approximately 148 public slips have been lost and replaced by approximately 124 private slips. The Commission feels that a loss of public slips (even if replaced by an equal number of private slips) is undesirable, and that a net loss of slips or moorings is unacceptable. A continued loss of slips or moorings endangers the future of water-dependent recreation in the Harbor, and is a loss to both the citizens of the City of Bridgeport and the citizens of the State of Connecticut;
- The Commission is concerned that some Waterfront Property is used in non-water-dependent ways, as Harbor accessible property is a limited resource and its use should be optimized;

- The Commission believes that the shellfishing industry in the Harbor needs to be preserved and cultivated in new and innovative ways;
- The Commission believes that the existing marine ecosystem requires significant environmental protection and environmental restoration in order to restore its health.

Goals - In accordance with CGS Section 22a-113n(a), the Commission’s goal in preparing this Plan is to preserve and foster the growth of the existing strengths of the Harbor, while accommodating reform and redevelopment of the Harbor.

This section of the Plan is intended to guide the Commission’s future actions and decisions such that the above-listed goal will be achieved. This section is presented in the following way:

Section 3.1 provides an assessment of available resources for waterfront properties and suggests guidelines for appropriate future re-use of those properties;

Section 3.2 provides a list of planned harbor improvement projects;

Section 3.3 provides a suggested list of land-side improvement projects;

Section 3.4 presents the Commission’s future vision for the Harbor;

Section 3.5 provides guidance for implementation of this Plan.

3.1 Assessment of Available Resources for Waterfront Property and Guidelines for Future Waterfront Property Re-Use

As stated earlier, the Commission is concerned that Waterfront Property currently used for deep-water uses, may be utilized for non-deep-water uses in the future. In addition, the Commission is concerned that Waterfront Property is used in non-water-dependent ways. The Commission refers to these two conditions as “inappropriate Waterfront Property re-use.” The Commission has identified the following unfavorable conditions that could result from inappropriate Waterfront Property re-use:

- **Loss of Industry** - Industries that require deep-water access or access to the Harbor, and are important to the economy of the City of Bridgeport, the greater Bridgeport region, and the State of Connecticut could be inadvertently lost;
- **Loss of Deep-Water Access** – Waterfront Property that accommodates deep-water access could be permanently used for a non-deep-water use, resulting in a net loss of access to deep-water in the State of Connecticut;
- **Loss of Harbor Access** – Waterfront Property that accommodates access to the Harbor could be permanently used for a non-water dependent use, resulting in a net loss of access to the Harbor for the City of Bridgeport; or
- **Loss or Damage to Natural Resources** - The net loss of deep-water access or Harbor access, may result in pressure to develop new sites that can accommodate deep-water access; new sites could result in damage or elimination of a natural resource to the citizens of the City of Bridgeport and the State of Connecticut.

In order to avoid these unfavorable conditions, the Commission proposes to guide future reform and redevelopment of Waterfront Properties to activities that will make full use of the available water depth and existing marine structures (“resources”) available at that property. The following two sections provide an assessment of available resources for waterfront property in the Harbor and guidelines for future waterfront property re-use, based on the presence of available resources.

3.1.1 Assessment of Available Resources for Waterfront Property

The Commission has collected existing available information regarding properties located adjacent to the Harbor, has summarized the information in Table 2, and has posted the information in Figure 10. As shown in Figure 10, each property contains certain marine structures that allow access to a particular depth of water, necessary for efficient use of the property. The depth of water accessible from the property can best be expressed by the maximum draft vessel that can be accommodated by the property, which is shown by the color-coding of each property.

3.1.2 Guidelines for Future Waterfront Property Re-Use

Based on the resources (maximum draft vessel accommodated at the property as well as existing marine structures) available for each property, the Commission has placed properties into the following categories, summarized in Table 2 and shown on Figure 11:

- **Deep-Water Accessible** – These properties have adjacent water depths of between 16 and 35 feet. These properties can accommodate vessels that require deep-water access (such as vessels that service the shipping, manufacturing, cruise ship, ferry-boat, power generation, shipbuilding and repairing industries).
- **Mid- to Deep-Water Accessible** - These properties have adjacent water depths of between 7 and 15 feet. These properties can accommodate vessels that require mid- to deep-water access (such as shallower-draft vessels that service the shipping and manufacturing industries, as well as marinas or yacht clubs that service deep-draft vessels).
- **Mid- to Shallow-Water Accessible** - These properties have adjacent water depths that are between 2 and 6 feet. These properties can accommodate vessels that require mid- to shallow-water access (such as recreational boats or very shallow-draft barges).
- **Natural Resource** – These properties have adjacent water depths that are between 0 and 1 foot. These properties contain or are adjacent to either a natural resource or a public recreational resource that is considered valuable to the City of Bridgeport and the State of Connecticut. Future commercial or industrial development of these properties will be discouraged by the Commission. Nevertheless, the Commission continues to support the riparian rights of residential land owners to make minor improvements to their properties for water-dependent recreational uses. Additionally, City of Bridgeport improvements (such as walkways or educational kiosks) made in order to enhance the recreational value of these areas are also supported.

The Commission proposes to use the categories listed above to guide future investment in and redevelopment of waterfront properties in the Harbor. The Commission will attempt to ensure that each new proposal makes full and appropriate use of the available resources at the property, as listed above. Consistent with state policies, this guidance reflects a preference for improvement and continued maritime use of areas previously dredged and altered for water-dependent activities and discourage significant alteration of areas whose natural resources have not been previously disturbed. Additionally, this guidance is not intended to restrict additional improvements for properties that have been previously dredged and altered for water-dependent activities; such improvements will be reviewed by the Commission on a case-by-case basis.

3.1.3 Proposed “Deep Water Access Zone”

Based on the categories outlined above, the Commission has recognized that some waterfront properties located in the Harbor accommodate deep-water access (or mid- to deep-water access) that is of limited supply in the Harbor and in the State of Connecticut. Due to its limited supply, the Commission recommends that these areas be deemed a “Deep Water Access Zone.” The recommended Deep Water Access Zone will be primarily reserved for future water-dependent uses that make full use of the available water depth and existing marine structures available at that property. The Commission has shown the Deep Water Access Zone properties in Table 2 and shown these properties on Figure 12.

3.2 Planned Harbor Improvement Projects

In response to the existing and potential problems listed in Section 3.0, the Commission proposes the following planned harbor improvement projects. The projects supplement the recognized strengths of the Harbor, while addressing the “Factors [to be] considered in preparation of a [Harbor Management] plan,” as prescribed in Section 22a-113o of [Connecticut General Statutes](#).

Although the Commission would like to see all of these projects completed, this Plan is not a guarantee that the Commission will conduct any or all of these projects. These planned harbor improvement projects may be completed by the federal government, the State of Connecticut, the City of Bridgeport, local businesses, residents of the City of Bridgeport, local environmental agencies, or by the Commission. The sequencing of project completion is also undetermined at this time. The Commission supports these projects, but may or may not be able to complete them, either due to a lack of regulatory approval, a lack of appropriate timing, or a lack of sufficient funding.

All of the proposed projects listed below will require approvals and permitting in accordance with state, local and federal regulations and policies after formulation of more detailed designs or plans. This Plan provides only the conceptual future plans of the Commission.

Planned harbor improvement projects are separated into three categories: infrastructure improvement projects, environmental preservation/restoration projects, and developmental/economic improvement projects. A summary of all planned harbor improvement projects is included as Table 3 and the locations of some of the projects are shown on Figure 13.

3.2.1 Infrastructure Improvement Projects

The following projects involve improvements to channels, harbor structures, moorings, signs, buoys, markers, the initiation of new services, or the addition of new transportation options. The Commission believes that these projects would have a positive effect on the use of the Harbor.

Due to the communal benefit of many of these projects, the Harbor Management Commission believes that these



projects will have an indirect developmental and economic impact on the Harbor and the City of Bridgeport.

3.2.1.1 Removal of Obstructions to Navigation

This project involves the periodic removal of debris, rocks, and shoals within navigable portions of the Harbor, or the removal of other potential obstructions. Removing obstructions is an ongoing process that is implemented as necessary in the Harbor to protect the safety of those operating vessels, as well as to prevent damage to vessels operating in the Harbor. In addition to providing a safe environment, removing obstructions could prevent an accidental grounding or an accidental ship rupture that could leak fuel or the contents of a shipping vessel's cargo into the Harbor. Thus, maintenance of the Harbor by removing obstructions to navigation helps to protect the environment as well.

A full bathymetric survey of the Harbor would need to be conducted in order to determine the location of any existing obstructions to navigation. Obstructions could be removed by a barge and clamshell bucket, or could require significant dredging (as in the case of a shoal interfering with navigation).

This project addresses the following "factors" from Section 22a-113o: (1) Recreational and commercial boating, (2) Recreational and commercial fisheries and shellfisheries, (7) Commercial and industrial uses that are water-dependent and (8) Water quality and human health.

3.2.1.2 Maintenance Dredging

The following projects involve "maintenance" dredging. Maintenance dredging removes only material that is located above the elevation that has been "approved" by the U.S. Army Corps of Engineers (the approved depth for Bridgeport Harbor is -35 feet below Mean Low Water).



Maintenance dredging removes sediment that gradually fills the Harbor over time. Without maintenance dredging, the Harbor would slowly fill with sediment brought into the Harbor by streams, tidal fluctuations, stormwater, natural erosion and wind. As the Harbor slowly fills, the draft of vessels that could safely be brought into the Harbor would decrease, limiting the range of possible uses for the Harbor. In addition, a shallower harbor risks deep-draft vessels timing their entrances and exits into the harbor based on tidal fluctuations. It is conceivable that a vessel could ground if its trips were improperly timed.

Bridgeport Harbor has not been dredged for over forty years because any dredged materials would be contaminated and unsuitable for open-water disposal (Office of Christopher Dodd 2003). Before any potential method for disposing of contaminated dredge materials could be implemented, a Dredge Materials Management Plan (DMMP) would have to be completed. A DMMP for the federal channel of Bridgeport Harbor is currently being produced by the U.S. Army Corps of Engineers.

Possible methods for disposal of dredge spoils include stabilization and off-site disposal as well as onsite disposal of dredge spoils within one or more Confined Aquatic Disposal cells (CAD cells), which could be constructed at an elevation below that of the existing floor of the Harbor.

One benefit of maintenance dredging is that it would remove sediment impacted by pollutants, which act as a source of water pollution to the Harbor. As improving the water quality of the Harbor is another priority of the Harbor Management Commission, maintenance dredging would be an infrastructure improvement project as well as an environmental restoration project.

All maintenance dredging projects address the following “factors” from Section 22a-113o: (1) Recreational and commercial boating, (2) Recreational and commercial fisheries and shellfisheries, (7) Commercial and industrial uses that are water-dependent and (8) Water quality and public health.

The Commission has separated maintenance dredging into multiple projects that can be approached separately and are discussed below:

- Maintenance Dredging of Federal Channel (Bridgeport Harbor, including Entry Channel and Turning Basin)
This project involves maintenance dredging of the Federal Channel in Bridgeport Harbor, and also includes the entry channel from the Long Island Sound and the turning basin. This project is important to the City of Bridgeport since problems with the entry channel could restrict vessels that may enter Bridgeport Harbor. This project would necessitate the involvement of the U.S. Army Corps of Engineers, since the Federal Channel is the property of the U.S. Government. This project is designated HI1 on Figure 13.
- Maintenance Dredging of Federal Channel (Pequonnock River)
This project involves maintenance dredging of the Federal Channel in the Pequonnock River. The depth of the channel in the Pequonnock River could limit vessels that could dock at properties adjacent to the river. This project would necessitate the involvement of the U.S. Army Corps of Engineers, since the federal channel is the property of the U.S. Government. This project is designated HI2 on Figure 13.
- Maintenance Dredging of Federal Channel (Yellow Mill Creek)
This project involves maintenance dredging of the federal channel in Yellow Mill Creek. The depth of the channel in Yellow Mill Creek could limit vessels that could dock at properties adjacent to the river. This project would necessitate the involvement of the U.S. Army Corps of Engineers, since the federal channel is the property of the U.S. Government. This project is designated HI3 on Figure 13.
- Maintenance Dredging of Federal Channel (Johnson's Creek)
This project involves maintenance dredging of the federal channel in Johnson’s Creek. The depth of the channel in Johnson’s Creek could limit vessels that could dock at properties adjacent to the river. This project would necessitate the involvement of the U.S. Army Corps of Engineers, since the federal channel is the property of the U.S. Government. This project is designated HI4 on Figure 13.
- Maintenance Dredging of Federal Channel (Black Rock Harbor, including Entry Channel)
This project involves maintenance dredging of the federal channel in Black Rock Harbor, and also includes the entry channel from the Long Island Sound. Problems with the entry channel could restrict vessels that may enter Black Rock Harbor. This project would necessitate the involvement of the U.S. Army Corps of Engineers, since the federal channel is the property of the U.S. Government. This project is designated HI5 on Figure 13.

- Maintenance Dredging of Federal Channel (Cedar Creek)

This project involves maintenance dredging of the federal channel in Cedar Creek. The depth of the channel in Cedar Creek could limit vessels that could dock at properties adjacent to the river. This project would necessitate the involvement of the U.S. Army Corps of Engineers, since the federal channel is the property of the U.S. Government. This project is designated HI6 on Figure 13.

3.2.1.3 Maintenance Dredging for Existing Marine Structures

Although the federal channel restricts entry and exit into the Harbor, the route from the federal channel to existing shoreside structures as well as the berthing areas alongside these structures also requires maintenance dredging to allow the continued use of the structures over time. Structures that provide berthing space for vessels which require maintenance dredging include: bulkheads, docks, wharves and piers.



Without maintenance dredging of the berthing areas adjoining these structures, each property's ability to be used in a water-dependent manner would be restricted over time, resulting in a gradual loss of water-dependent uses in the Harbor. As it is important to the Commission that the Harbor retain its deep-water port character, as well as maintain or increase the number of usable slips and moorings, maintenance dredging for existing marine structures is also important.

- Maintenance Dredging for Existing Marine Structures (Bridgeport Harbor)

Existing marine structures that could require maintenance dredging in the future in Bridgeport Harbor include piers at Dolphin's Cove Marina, Lou's Boat Basin, Pequonnock Yacht Club, or Move Yacht Club. Docks that could require maintenance dredging include the Motiva Terminal dock, the PSE&G coal dock and fuel oil dock, the Tallmadge Brothers dock, and the Water Street dock. The wharf and the bulkheads at the Cilco Terminal and the bulkhead at Derecktor Shipyards could also require maintenance dredging. This project is designated HI7 on Figure 13.

- Maintenance Dredging for Existing Marine Structures (Pequonnock River)

Existing marine structures that could require maintenance dredging in the future on the Pequonnock River include the dock at Hoffman Fuel. This project is designated HI8 on Figure 13.

- Maintenance Dredging for Existing Marine Structures (Yellow Mill Creek)

Existing marine structures that could require maintenance dredging in the future on Yellow Mill Creek include the piers at Ryan's Marina and the docks at O&G Industries and at Norwalk Fire Boats. This project is designated HI9 on Figure 13.

- Maintenance Dredging for Existing Marine Structures (Johnson's Creek)

Existing marine structures that could require maintenance dredging in the future on Johnson's Creek include the piers at Miamogue Yacht Club and East End Yacht Club. Docks that could require maintenance dredging include the dock at Bridgeport United Recycling and the dock at CPW. This project is designated HI10 on Figure 13.

- Maintenance Dredging for Existing Marine Structures (Black Rock Harbor)

Existing marine structures that could require maintenance dredging in the future in Black Rock Harbor include the docks and moorings used by the Black Rock Yacht Club, the Fayerweather Yacht Club, Port 5 Naval Veterans, and the piers used by the Captain’s Cove Seaport. In addition, the channel used by the Captain’s Cove Seaport to access its travel lift could require maintenance dredging. Bulkheads that could require maintenance dredging in the future include the bulkhead at the Fayerweather Boat Yard. This project is designated HI11 on Figure 13.



- Maintenance Dredging for Existing Marine Structures (Cedar Creek)

Existing marine structures that could require maintenance dredging in the future in Cedar Creek include the piers and moorings at the Cedar Marina and Nutrico. Bulkheads that could require maintenance dredging in the future include the bulkhead at O&G Industries, the bulkhead at HiHo Petroleum, and the dock at Santa Energy. This project is designated HI12 on Figure 13.

3.2.1.4 Replacement or Repair of Existing Marine Structures

Although maintenance dredging of the federal channel and existing marine structures will allow vessels to travel into Bridgeport Harbor and dock, existing marine structures will need to be repaired and replaced over time as they meet their anticipated useful design life. Structures that will likely require maintenance or replacement include: bulkheads, docks, wharves and piers.

Without maintenance, marine structures will become unusable and potentially unsafe. Debris from degrading marine structures can be swept into existing waterways, presenting a hazard for navigation. Although maintenance will most often be employed to keep marine structures operable, the structures will also need to be replaced occasionally.

Without maintenance or replacement of marine structures, each property’s ability to be used in a water-dependent manner would be restricted over time, resulting in a gradual loss of water-dependent uses in the Harbor. As it is important to the Commission that the Harbor retains its deep-water port character, as well as maintain or increase the number of usable slips and moorings and maintain or expand its shellfish industry, maintenance and/or replacement of existing marine structures is also important.

All maintenance projects address the following “factors” from Section 22a-113o: (1) Recreational and commercial boating, (2) Recreational and commercial fisheries and shellfisheries, and (7) Commercial and industrial uses that are water-dependent.

- Replacement or Repair of Existing Marine Structures (Bridgeport Harbor)

Existing marine structures that could require maintenance or replacement in the future in Bridgeport Harbor include piers at Dolphin’s Cove Marina, Lou’s Boat Basin, Pequonnock Yacht Club, and Move Yacht Club. Docks that could require maintenance or replacement include the Motiva Terminal dock, the PSE&G coal dock and fuel oil dock, the Tallmadge Brothers dock, and the Water Street dock. The wharf and the bulkheads at the Cilco Terminal and the bulkhead at Derektor Shipyards could also require



maintenance or replacement. This project is designated HI13 on Figure 13.



- Replacement or Repair of Existing Marine Structures (Pequonnock River)
Existing marine structures that could require maintenance or replacement in the future on the Pequonnock River include the dock at Hoffman Fuel. This project is designated HI14 on Figure 13.
- Replacement or Repair of Existing Marine Structures (Yellow Mill Creek)
Existing marine structures that could require maintenance or replacement in the future on Yellow Mill Creek include the piers at Ryan's Marina, the dock at O&G Industries, and the dock at Norwalk Fire Boats. This project is designated HI15 on Figure 13.
- Replacement or Repair of Existing Marine Structures (Johnson's Creek)
Existing marine structures that could require maintenance or replacement in the future on Johnson's Creek include the piers at Miamogue Yacht Club and East End Yacht Club. Docks that could require maintenance or replacement include the dock at Bridgeport United Recycling and the dock at CPW. This project is designated HI16 on Figure 13.
- Replacement or Repair of Existing Marine Structures (Black Rock Harbor)
Existing marine structures that could require maintenance or replacement in the future in Black Rock Harbor include the docks and moorings used by the Black Rock Yacht Club, the Fayerweather Yacht Club, Port 5 Naval Veterans, and the piers used by the Captain's Cove Seaport. Bulkheads that could require maintenance or replacement in the future include the bulkhead at the Fayerweather Boat Yard. This project is designated HI17 on Figure 13.
- Replacement or Repair of Existing Marine Structures (Cedar Creek)
Existing marine structures that could require maintenance or replacement in the future in Cedar Creek include the piers and moorings at the Cedar Marina and Nutrico, and the dock at Santa Energy. Bulkheads that could require maintenance or replacement in the future include the bulkheads at O&G Industries and at HiHo Petroleum. This project is designated HI18 on Figure 13.

3.2.1.5 New Bulkhead For Future Site of New Barge-Feeder Service

This project involves the development of the property located on Seaview Avenue between the existing Derecktor Shipyards property and Stratford Avenue. The Port Authority of the City of Bridgeport is working with the Port Authority of New York and New Jersey to establish a barge-feeder service on this property. The barge-feeder service would allow roll-off container shipping from barges to be loaded onto trucks. Currently, the containers arrive via ship at the Port of New York and New Jersey where they are transferred to trucks and travel the interstate highways to destinations throughout New England. With the barge-feeder service, the containers would be transferred to barges and travel by water from New York to Bridgeport, where they would be transferred to trucks to reach their destinations throughout Connecticut and New England.

The barge-feeder service would provide benefits to the City of Bridgeport as well as to the citizens of the State of Connecticut. The service would reduce the traffic on Interstate 95 between New York and

Bridgeport, thereby reducing air pollution. A requirement of this project is the installation of a new bulkhead along the property boundary in order to stabilize the shoreline, such that efficient container transfer can take place. This project addresses the following “factor” from Section 22a-113o: (7) Commercial and industrial uses that are water-dependent. This project is designated HI19 on Figure 13.

3.2.1.6 Placement of Safety Markers for Swimmers

This project involves the placement of safety markers in designated swimming areas at Seaside Park and Pleasure Beach, in order to protect swimmers from any errant watercraft in the area. It also involves coordination with other City agencies to ensure that signs stating "No Swimming Allowed" be placed in restricted areas, including the shoreline adjacent to Saint Mary's-by-the-Sea on Ash Creek. Appropriate permits for markers and signage will be obtained from the [Connecticut Department of Environmental Protection, Bureau of Outdoor Recreation, Boating Division](#). This project addresses the following “factor” from Section 22a-113o: (9) Recreational uses other than boating and fisheries. This project is designated HI20 on Figure 13.



3.2.1.7 Repair of Newfield Avenue Boat Ramp

This project involves the repair of damage inflicted on the Newfield Avenue boat ramp during recent storm activity. The project only involves repair of the boat ramp to its condition prior to the storm activity. As this project involves public access to water-dependent activities, it is a priority of the Commission. This project addresses the following “factor” from Section 22a-113o: (1) Recreational and commercial boating. This project is designated HI21 on Figure 13.

3.2.1.8 Boat Ramp and Parking Study

There is concern on behalf of the Commission, citizens of the City of Bridgeport, and the State of Connecticut that the number and location of existing boat ramps, as well as parking available at existing boat ramps, is insufficient to support the demand for such public services. Thus, this project is to commission a study to determine the proper size and location for additional boat ramps, as well as additional parking to supplement existing space for citizens who wish to use the facilities. Increased access to the Harbor is a priority of the Commission, thus this task is an important one. This project addresses the following “factor” from Section 22a-113o: (1) Recreational and commercial boating.

3.2.1.9 Rehabilitation of Bridgeport Harbor Breakwater

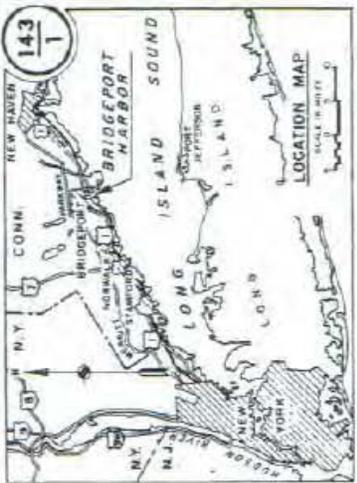
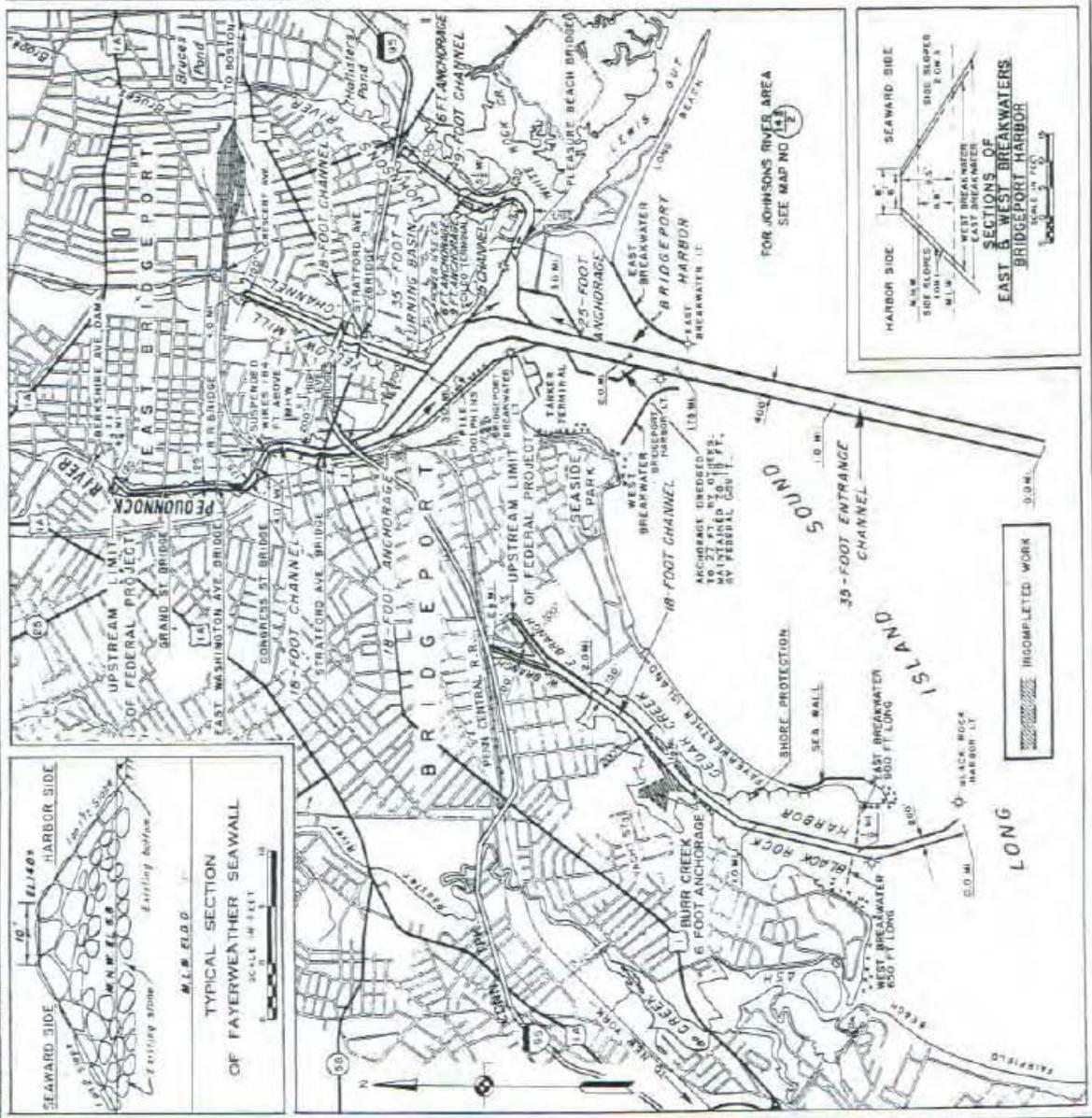
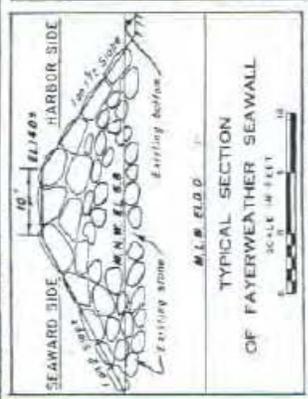
The existing breakwater for Bridgeport Harbor has settled significantly in the past decades, resulting in a breakwater that is almost submerged at high tide. A significant storm, with associated storm surge, would likely surpass the height of the breakwater. Although the storm surge would likely be attenuated by the submerged breakwater, the resulting waves could still significantly impact harbor structures in the City of Bridgeport, and could result in flooding.



This project proposes to rehabilitate the breakwater by raising its elevation to a height sufficient to break the waves of a tropical storm hitting the City at high tide. This project addresses the following “factors” from Section 22a-113o: (5) Areas subject to high velocity waters and (6) Exposed areas subject to flooding and erosion. This project is designated HI22 on Figure 13.

3.2.1.10 New Breakwater for Black Rock Harbor

According to the U.S. Army Corps of Engineers, a breakwater for Black Rock Harbor was planned and never installed. The following is a U.S. Army Corp of Engineers schematic showing the proposed location of the planned breakwater for Black Rock Harbor:



- BRIDGE CLEARANCES**
- PEQUONOCK RIVER
 - GRAND ST. BRIDGE (BAScule) Hgt. 71ft. Vnt. 19 FT. M.H.W.
 - EAST WASHINGTON AVE BRIDGE (BAScule) Hgt. 69 FT. Vnt. 4 FT. M.H.W.
 - CONGRESS BRIDGE (BAScule) Hgt. 87 FT. Vnt. 9 FT. M.H.W.
 - R.R. BRIDGE (BAScule) Hgt. 101ft. Vnt. 19 FT. M.H.W.
 - STRATFORD AVE BRIDGE (BAScule) Hgt. 101ft. Vnt. 19 FT. M.H.W.
 - HIGH LEVEL BRIDGE (BAScule) Hgt. 101ft. Vnt. 19 FT. M.H.W.
 - YELLOW MILL CHANNEL Hgt. 101ft. Vnt. 19 FT. M.H.W.
 - STRATFORD AVE BRIDGE (BAScule) Hgt. 82 FT. Vnt. 11 FT. M.H.W.
 - HIGH LEVEL BRIDGE Hgt. 101ft. Vnt. 40 FT. M.H.W.
 - JOHNSONS RIVER BRIDGE (SING.) Hgt. 70 FT. Vnt. 7 FT. M.H.W.
 - PLEASURE BOAT BRIDGE (SING.) Hgt. 70 FT. Vnt. 7 FT. M.H.W.



SECTIONS OF
EAST B. WEST BREAKWATERS,
BLACK ROCK HARBOR

EXISTING PROJECT
BRIDGEPORT HARBOR, CONN.

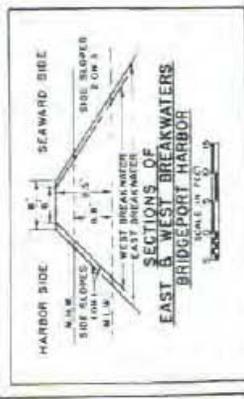
30 SEPTEMBER 1978

SCALE IN FEET

0 1000 2000 3000

1" = 3 SHEETS

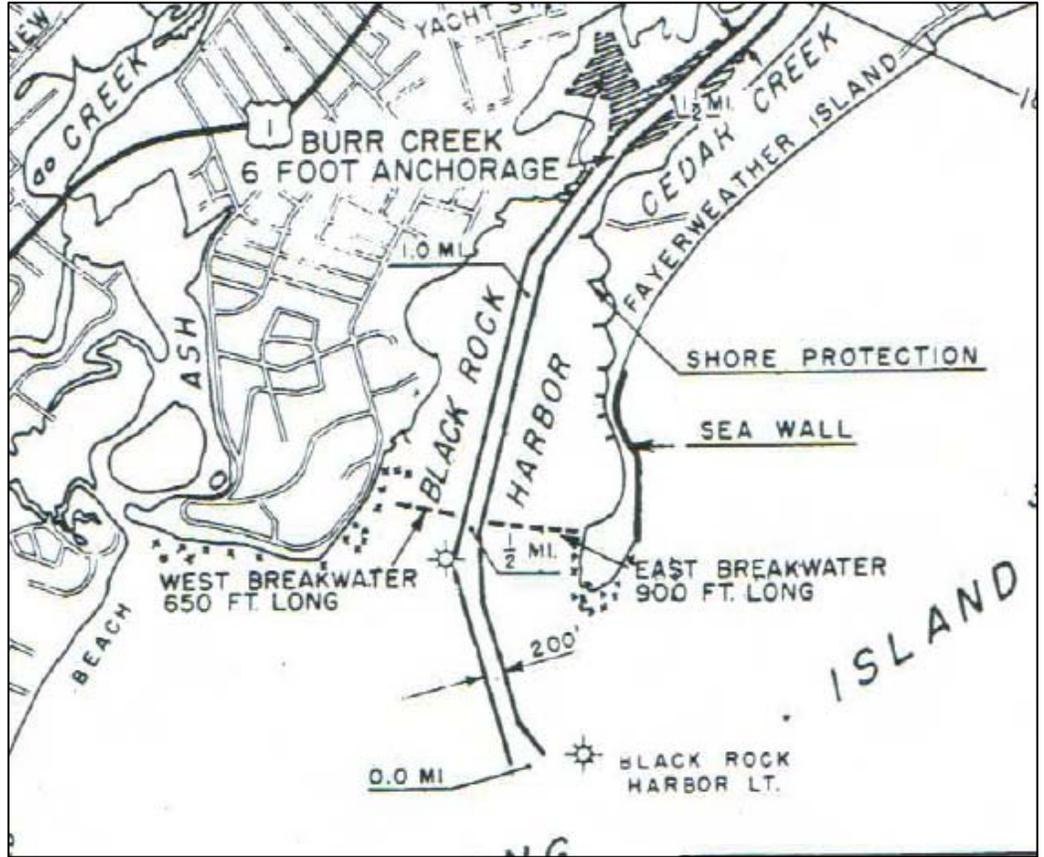
DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
WALTHAM, MASS.



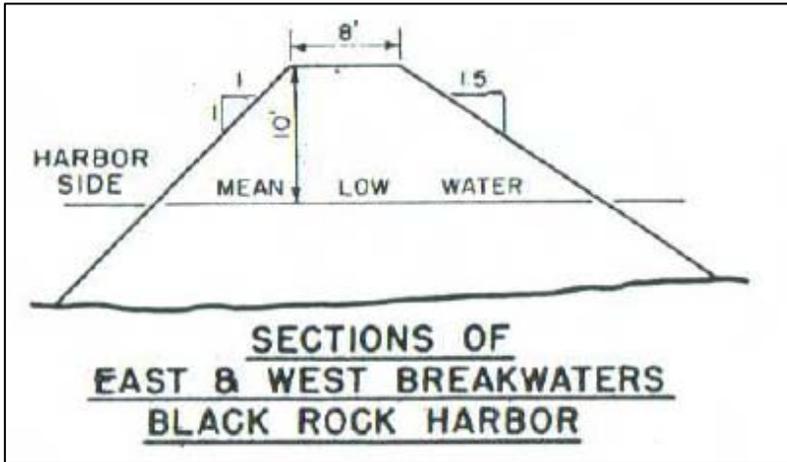
FOR JOHNSONS RIVER AREA
SEE MAP NO. 143

The following enlargements of the schematic clearly show a west and east breakwater planned for the mouth of Black Rock Harbor, surrounding the federal channel. A cross-section of the proposed breakwater is shown below:

A seawall between Fayerweather Island and Seaside Park provides some protection to the Harbor from storm surges. Nevertheless, a new breakwater would provide significantly more protection to Black Rock Harbor during major storms, and could help to protect the neighboring residences and businesses against flooding. The Commission proposes to install a breakwater as originally envisioned by the U.S. Army Corps of Engineers.



This project addresses the following “factors” from Section 22a-113o: (5) Areas subject to high velocity waters and (6) Exposed areas subject to flooding and erosion. This project is designated HI23 on Figure 13.



3.2.1.11 Posting of Speed Limit Signs and Enforcement of "Slow Zone"

Citizens and businesses of the City of Bridgeport have expressed concern that high-speed boat traffic creates wakes that cause damage to private boats and marine structures. This project involves the posting of speed limit signs and enforcement of a “slow-zone” for vessels where appropriate to abate the problem. This project addresses the following “factors” from Section 22a-113o: (1) Recreational

and commercial boating, (2) Recreational and commercial fisheries and shellfisheries, and (7) Commercial and industrial uses that are water-dependent.

3.2.1.12 Icebreaker Service



Businesses located on Cedar Creek have expressed concern regarding the risks of navigation on Cedar Creek during the winter due to ice buildup in Cedar Creek and the absence of an icebreaking service in the City. This project would evaluate the feasibility of providing icebreaking service to Cedar Creek as well as other areas of the City where necessary, in order to facilitate boat traffic during the winter season. This project addresses the following “factors” from Section 22a-113o: (1) Recreational and commercial boating, (2) Recreational and commercial fisheries and shellfisheries, and (7) Commercial and industrial uses that are water-

dependent.

3.2.1.13 Channel Markers

This project would request that the Bridgeport Harbormaster conduct a survey of existing federal channel markers along the edge of the federal channel in Bridgeport Harbor, the Pequonnock River, Yellow Mill Creek, Johnson’s Creek, Cedar Creek, and Black Rock Harbor. The purpose of these channel markers is to provide a visual guide for vessels moving up and down these watercourses to ensure that they remain within the federal channel. If these federal channel makers are missing or in need of repair or replacement, or if additional channel markers would be helpful for navigation, the Harbormaster will contact the U.S. Coast Guard with an appropriate request for service. This project addresses the following “factors” from Section 22a-113o: (1) Recreational and commercial boating, (2) Recreational and commercial fisheries and shellfisheries, and (7) Commercial and industrial uses that are water-dependent. This project is designated HI24 on Figure 13.



3.2.1.14 New Mooring Fields

The Commission recognizes that recreational boating is a strength of the Harbor, and would like to see the number of slips and/or moorings increased. **Section 22a-113(b)(2) CGS** authorizes harbor management plans to recommend locations of new boat basins and channels in coastal waters to be officially designated by the Commissioner of Environmental Protection in accordance with **Section 22a-340 CGS**. Thus, the following are two areas of Bridgeport Harbor in which multiple potential new mooring areas are planned. All mooring projects would address the following “factors” from Section 22a-113o: (1) Recreational and commercial boating, (2) Recreational and commercial fisheries and shellfisheries, and (7) Commercial and industrial uses that are water-dependent. **The color and shape of mooring buoys must comply with section 15-121-A3 of the Regulations of Connecticut State Agencies.**

- New Mooring Fields (Johnson's Creek)
Two small areas, located adjacent to the western arm of Johnson's Creek and along the eastern bank of Johnson's Creek adjacent to the Motiva property, could accommodate up to 20 ten-foot-long shallow-draft vessels. Additionally, the southeastern portion of Johnson's Creek, located southeast of the federal channel, south of the Motiva Property, and north of Pleasure Beach, could accommodate between 10-15 ten-foot-long shallow-draft vessels. This project is designated HI25 on Figure 13.
- New Mooring Fields (Bridgeport Harbor)
A new mooring area, located in the southeast portion of Bridgeport Harbor, adjacent to Pleasure Beach and the breakwater theoretically could accommodate up to 120 thirty foot-long vessels. Another mooring area, located in the southwestern portion of Bridgeport Harbor, adjacent to Seaside Park and the breakwater could accommodate up to 60 thirty foot-long vessels. This project is designated HI26 on Figure 13.

3.2.1.15 Ferry Service to Pleasure Beach

Until the bridge to Pleasure Beach is repaired, this harbor resource is isolated from the City and is largely unused. This project, first proposed in 1997, would institute a ferry service to Pleasure Beach from either the Water Street Dock or from Captain's Cove Seaport. The ferry would allow citizens to once again make use of this valuable resource and would be a benefit not only to the citizens of the City, but also to citizens from other parts of the state. This project addresses the following "factors" from Section 22a-113o: (9) Recreational uses other than boating and fisheries and (11) Public access.



3.2.2 Environmental Preservation/Restoration Projects

The following projects involve preservation of existing natural resources or restoration of the former natural resources of the Harbor. Environmental restoration holds an intrinsic value as it restores resources for the enjoyment of future generations, and also has public health benefits. Finally, the restoration projects will help to replenish the natural aesthetics of the Harbor.

3.2.2.1 No-Discharge Zone and "Clean Marina" Certification

This project recommends and supports the state's efforts to have the waters of the Harbor be designated as a "No-Discharge Zone," (NDA) by the EPA under Section 312 of the Clean Water Act (333U.S.C. 1322). An NDA is a designated body of water that prohibits the discharge of untreated and treated boat sewage from marine sanitation devices. Federal law already prohibits the discharge of untreated sewage from vessels within the navigable waters of the U.S., which include territorial seas within three miles of shore.

Several federally approved NDAs have been established in Connecticut waters:

August 12, 2003- the Connecticut portions of the Pawcatuck River and Little Narragansett Bay, Stonington Harbor and portions of Fishers Island Sound;

September 27, 2004_ the coastal water from Wamphassuc Point in Stonington to Eastern Point in Groton; and

July 12, 2006_ Long Island Sound waters from Eastern Point in Groton to Hoadley Point in Guilford.

It is anticipated the by the start of the 2007 boating season, the coast from Branford to Greenwich will be added, and that all of Connecticut's coastal waters will be designated a No Discharge Area.



Designation of a No Discharge Area is predicated in part on the existence of an adequate number of vessel pump-out facilities. There are four such facilities in the City now: Captain's Cove Seaport, Cedar Marina, and Fayerweather Yacht Club as well as a City of Bridgeport pump-out boat.

Marina or yacht club pump-out facilities or dump stations should provide at a minimum one pump-out facility or dump station for every 100 vessels or fraction thereof, including vessels at docks or on moorings that use Type III Marine Sanitation Devices (MSD). Facilities with less than 25 vessels shall be

exempt.

A vessel with a Type III MSD fitted with a “Y” valve will have the “Y” valve wire-tied in the position that does not permit discharge into the water. This project addresses the following “factor” from Section 22a-113o: (8) Water quality and public health.

The Commission will also encourage all new and existing marinas to obtain certification from the Connecticut DEP as a “Certified Clean Marina”. Connecticut’s Clean Marina Program is a voluntary program that encourages inland and coastal marina operators to minimize pollution. The program recognizes Connecticut’s marinas, boatyards, and yacht clubs that go above and beyond basic regulatory compliance and implement practices to control pollution associated with mechanical activities, painting and fiberglass repair, hauling and storing boats, fueling, facility management, emergency planning and boater education. (Currently only Captain’s Cove Seaport is pledged to become certified as a Clean Marina).

3.2.2.2 Environmental Cleanup of Impacted Sediment

The Commission has noted that a continuing source of water pollution in the Harbor is the result of impacted sediments. Dredging and removal of impacted sediment, along with other measures, would help to improve the water quality of the Harbor. Maintenance dredging, although an infrastructure improvement project, should have the added benefit of removing impacted sediment. This project addresses the following “factor” from Section 22a-113o: (8) Water quality and public health.

3.2.2.3 Outfall Study

This project involves the commission of a study to locate and evaluate the existing outfalls along the shore within the territorial limits of the City. The outfalls should be traced and categorized (e.g. stormwater, sanitary sewer, industrial, etc.). Each stormwater and sanitary outfall should be checked with the City of Bridgeport Department of Public Facilities. Each industrial outfall should be researched with the Connecticut Department of Environmental Protection to determine whether a valid permit exists. As appropriate, outfalls should be sampled and analyzed



for pollutants. Any unpermitted or unauthorized outfalls should be shut down and removed. This project addresses the following “factor” from Section 22a-113o: (8) Water quality and public health.

3.2.2.4 Preservation of Tidal Flat/Tidal Marsh (Burr Creek)

The tidal flat/tidal marsh located in the Burr Creek area is a natural resource for the City, and will be preserved by the Commission. Future commercial or industrial development of these properties will be discouraged by the Commission. Nevertheless, the Commission continues to support the riparian rights of residential land owners to make minor improvements to their properties for water-dependent recreational uses. Additionally, municipal improvements made in order to enhance the recreational value of this area (such as walkways or educational kiosks) are also supported. This project addresses the following “factors” from Section 22a-113o: (4) Conservation of natural resources and (12) Tidal wetlands, beaches and dunes, bluffs and escarpments and intertidal flats. This project is designated HE1 on Figure 13.

3.2.2.5 Preservation of Tidal Flat/Tidal Marsh (Yellow Mill Creek)

The tidal marsh located north of the federal channel in Yellow Mill Creek is a natural resource for the City of Bridgeport, and will be preserved by the Commission. Future commercial or industrial development of these properties will be discouraged by the Commission. Nevertheless, the Commission continues to support the riparian rights of residential landowners to make minor improvements to their properties for water-dependent recreational uses. Additionally, municipal improvements made in order to enhance the recreational value of this area (such as walkways or educational kiosks) are also supported. This project addresses the following “factors” from Section 22a-113o: (4) Conservation of natural resources and (12) Tidal wetlands, beaches and dunes, bluffs and escarpments and intertidal flats. This project is designated HE2 on Figure 13.

3.2.2.6 Preservation of Tidal Flat/Tidal Marsh (Johnson's Creek)

The tidal flat/tidal marsh located in the western arm of Johnson’s Creek is a natural resource for the City of Bridgeport, and will be preserved by the Commission. Future commercial or industrial development of these properties will be discouraged by the Commission. Nevertheless, the Commission continues to support the riparian rights of residential landowners to make minor improvements to their properties for water-dependent recreational uses. Additionally, municipal improvements made in order to enhance the recreational value of this area (such as walkways or educational kiosks) are also supported. Business owners on Johnson’s Creek have indicated the

possibility that scrap metal from an adjacent operation has been dropped in this tidal flat/tidal marsh; the Commission will investigate this information. This project addresses the following “factors” from Section 22a-113o: (4) Conservation of natural resources and (12) Tidal wetlands, beaches and dunes, bluffs and escarpments and intertidal flats. This project is designated HE3 on Figure 13.

3.2.2.7 Preservation of Tidal Flat/Tidal Marsh (Ash Creek)

The tidal flat/tidal marsh located at Ash Creek is a natural resource for the City of Bridgeport, and will be preserved by the Commission. Future commercial or industrial development of these properties will be discouraged by the Commission. Nevertheless, the Commission continues to support the riparian rights of residential landowners to make minor improvements to their properties for water-dependent recreational uses. Additionally, municipal improvements made in order to enhance the recreational value of this area (such as walkways or educational kiosks) are also supported. This project addresses the following “factors” from Section 22a-113o: (4) Conservation of natural resources and (12) Tidal wetlands, beaches and dunes, bluffs and escarpments and intertidal flats. This project is designated HE4 on Figure 13.



3.2.2.8 Prioritize Environmental Restoration Locations

As part of the Long Island Sound Study, two areas of tidal wetland along Ash Creek, Rooster River, and Grover Hill, were proposed as potential restoration sites in 2002 (Long Island Sound Study 2002b). This project is to commission a study to locate, evaluate, and prioritize additional locations where environmental restoration would have the most beneficial impact to the overall ecosystem of the Harbor. The study will be instrumental in determining the appropriate use of funds for environmental restoration in the future. This project addresses the following “factors” from Section 22a-113o: (4) Conservation of natural resources and (12) Tidal wetlands, beaches and dunes, bluffs and escarpments and intertidal flats.



Ash Creek (ACCA, 2005)

3.2.3 Developmental/Economic Improvement Projects

Few developmental/economic improvement projects are suggested in this portion of the Plan since the Commission solely has direct authority over the Water. However, please note that the guidelines for re-use of waterfront property as well as many of the infrastructure improvement projects, mentioned earlier, are aimed at stimulating appropriate new water-dependent commercial and industrial growth.

3.2.3.1 Expand Shellfishing Industry

The shellfishing industry in the Harbor is beneficial to both the citizens of the City of Bridgeport, as well as the citizens of the State of Connecticut. Thus, the Commission has prioritized maintaining the existing shellfishing industry and expanding it where possible.



This project would encourage innovative ideas by which small businesses could expand the existing shellfishing industry. One idea, supplied by the Aquaculture School, would involve sponsoring small businesses to partner with marinas to install “upwellers” to grow shellfish beneath existing slips. This project addresses the following “factors” from Section 22a-113o: (2) Recreational and commercial fisheries and shellfisheries, (3) Fish and shellfish resources, and (10) Water dependent educational uses.

3.2.3.2 Shellfish Commission

This project would create a shellfish commission, whose job would be to act in the best interests of protecting the future of the shellfishing industry, while shepherding new ideas (such as those of the Aquaculture School) to expand the shellfishing industry in the Harbor. This project addresses the following “factors” from Section 22a-113o: (2) Recreational and commercial fisheries and shellfisheries, (3) Fish and shellfish resources, and (10) Water dependent educational uses.

3.3 Suggested Land-Side Improvement Projects

In response to the existing and potential problems listed in Section 3.0, the Commission suggests the land-side improvement projects listed below. The projects supplement the recognized strengths of the Harbor, while addressing the “Factors [to be] considered in preparation of a [Harbor Management] plan,” as determined in Section 22a-113o of [the Connecticut General Statutes](#).

These suggested projects are to serve as guidelines for the Commission when reviewing proposed land-side improvement projects that are associated with property on or adjacent to the Harbor for compliance with the Plan. The suggested projects are also listed here to help guide those involved in proposing or implementing land-side improvement projects which the Commission will be required to review.

Suggested land-side improvement projects are separated into three categories: infrastructure improvement projects, environmental preservation/restoration projects, and developmental/economic improvement projects. A summary of all suggested land-side improvement projects is included as Table 4. The locations of some of these projects are shown of Figure 14.

3.3.1 Infrastructure Improvement Projects

The following projects involve improvements to land-side infrastructure that would have a positive effect on the use of the Harbor. Due to the communal benefit of many of these projects, the Commission believes that these projects will have an indirect development/economic impact on the Harbor, as well.

3.3.1.1 Repair/Replace Pleasure Beach Bridge

Pleasure Beach is a precious resource to the City of Bridgeport that has remained isolated for too long due to the inoperability of the Pleasure Beach Bridge. It is in the best interests of the citizens of the City of Bridgeport as well as the citizens of the



State of Connecticut to repair or replace this bridge in order to restore access to Pleasure Beach.

While evaluating alternatives for replacing the bridge, it is a priority of the Commission to maintain the easements that currently run under the Seaview Avenue side of the bridge for the pipelines owned by Motiva. These pipelines serve three businesses on Johnson’s Creek, and are important for continued water-dependent industrial use of these properties. This project addresses the following “factors” from Section 22a-113o: (7) Commercial and industrial uses that are water-dependent, (9) Recreational uses other than boating and fisheries and (11) Public access. This project is designated LI1 on Figure 14.

3.3.1.2 Repair Congress Street Bridge

The inoperability of the Congress Street Bridge on the Pequonnock River presents a physical barrier separating the eastern and western portions of the City. Additionally, should the bridge be closed, it would prevent vessels from traveling upriver. It is in the best interests of the City of Bridgeport to repair this bridge. This project addresses the following “factors” from Section 22a-113o: (7) Commercial and industrial uses that are water-dependent and (11) Public access. This project is designated LI2 on Figure 14.



3.3.1.3 Provide Operator for East Washington Bridge



The inoperability of the East Washington Street Bridge on the Pequonnock River prevents vessels from traveling upriver. Until an operator is provided for this bridge, it prevents water-dependent use of upstream properties. It is in the best interest of the City of Bridgeport to provide an operator for this bridge. This project addresses the following “factors” from Section 22a-113o: (1) Recreational and commercial boating, (7) Commercial and industrial uses that are water-dependent, and (11) Public access. This project is designated LI3 on Figure 14.

3.3.1.4 Full-Time Operator for Yellow Mill Bridge

The lack of full-time operation of the Yellow Mill Bridge on Yellow Mill Creek prevents vessels from traveling upriver, unless twenty-four-hour notice is given to the part-time operator. Until this bridge has a full-time operator, it is unlikely that water-dependent businesses will prefer to move into the upper-reaches of Yellow Mill Creek. It is in the best interests of the City of Bridgeport and the State of Connecticut to solicit funds to provide a full time operator for this bridge. This project addresses the following “factors” from Section 22a-113o: (1) Recreational and commercial boating, (7) Commercial and industrial uses that are water-dependent, and (11) Public access. This project is designated LI4 on Figure 14.

3.3.2 Environmental Preservation/Restoration Projects

The following land-side projects involve actions that when implemented, would preserve existing natural resources or restore former natural resources of the Harbor. Environmental restoration has an intrinsic value in that it restores resources for use by future generations, and also has public health benefits. Finally, the restoration projects will help to replenish the natural aesthetics of the Harbor.

3.3.2.1 Implementation of Guidelines for Future Waterfront Property Re-Use

The guidelines for re-use of waterfront property, provided in Section 3.2, are an important land-side environmental preservation measure for the Harbor. Re-use of existing deep-water accessible land for future deep-water uses prevents environmental impacts from spreading to more pristine sites. Proper waterfront property re-use will be beneficial to both the citizens of the City of Bridgeport and the citizens of the State of Connecticut. This project addresses the following “factors” from Section 22a-113o: (1) Recreational and commercial boating, (2) Recreational and commercial fisheries and shellfisheries, and (7) Commercial and industrial uses that are water-dependent.

3.3.2.2 Linear Park on Johnson's Creek

This project involves the creation of a walkway along the shoreline adjacent to the existing salt marsh and/or tidal flat located along the western shore of the western arm of Johnson’s Creek. The lands stretch north from the Miamogue Yacht Club. Most parcels of land are owned by the City; however, a right-of-way along the shore would have to be obtained from at least one property owner before it would be possible to move forward with the project. This project would help to preserve existing natural resources located in Johnson’s Creek, and would allow public access to Johnson’s Creek. This project addresses the following “factor” from Section 22a-113o: (11) Public access. This project is designated LE1 on Figure 14.

3.3.2.3 Complete Separation of Combined Sewers

Stor

Completing the separation of the combined sewers in the City of Bridgeport will be a major step to improving the water quality in the Harbor. The project will likely result in some restoration of impacted fish and shellfish resources, as well as some restoration of impacted tidal wetlands and intertidal flats, and is, therefore, in the best interests of the citizens of the City of Bridgeport, as well as the citizens of the State of Connecticut.

This project involves working with the City of Bridgeport, including the Department of Public Facilities and the Water Pollution Control Authority, to separate out the combined sewers, and confirm that all sewers lead to the wastewater treatment plants.

This project addresses the following “factors” from Section 22a-113o: (8) Water quality and public health and (12) tidal wetlands, beaches and dunes, bluffs and escarpments and intertidal flats.

3.3.2.4 Apply Stormwater Best Management Practices (BMPs)

Since nearly all stormwater in the City of Bridgeport is ultimately discharged to Bridgeport Harbor, Black Rock Harbor, or Ash Creek, implementation of BMPs is likely to have a significant impact on the water quality in the Harbor. Each of these BMP implementation projects addresses the following

“factors” from Section 22a-113o: (8) Water quality and public health and (12) tidal wetlands, beaches and dunes, bluffs and escarpments and intertidal flats:

- Apply Stormwater BMPs to I-95 Stormwater

This project involves implementing BMPs for stormwater runoff collected from Interstate 95. There is a significant quantity of daily automobile and truck traffic on Interstate 95 through the City of Bridgeport. Hydrocarbons, trash, and impacted sediments are primary components of stormwater runoff from the highway. Thus, BMPs are necessary to prevent these contaminants from reaching Bridgeport’s waterways. Although some BMPs have been implemented for Interstate 95 runoff, at least one business owner on Cedar Creek has seen a sheen coming from the vicinity of the new Interstate 95 stormwater discharge pipe. Additionally, business owners attribute the deposition of sediment in the northern end of the Johnson’s Creek to a large quantity of sediment flowing from Interstate 95 during storm events. Thus, additional work in implementing BMPs appears to be necessary. This project is designated LE2 on Figure 14.

- Apply Stormwater BMPs to Properties Adjacent to Harbor

This project involves implementing BMPs for stormwater runoff collected from properties located adjacent to the Harbor, prior to discharge. Implementation of BMPs on individual properties adjacent to the Harbor will eliminate a large source of non-point source pollution to the Harbor. Thus, when reviewing proposals effecting property adjacent to the Harbor, the Commission will recommend implementation of BMPs at that property prior to approving the property owner’s proposal.

The Commission will refer the owner of the properties affected by the proposal to the Connecticut **Department of Environmental Protection’s** Stormwater Quality Manual for guidelines on how to implement appropriate BMPs. The Commission does not wish to recommend an unreasonable expenditure of funds by the effected land owner, and thus will use the following guideline: the effected land owner will not be required to spend any more than 10% of the value of the proposal on BMPs. Appropriateness of chosen BMPs will be reviewed and approved by the Commission.

- Apply Stormwater BMPs to City of Bridgeport

This project involves implementing BMPs for stormwater runoff collected from properties located throughout the City of Bridgeport. Implementation of BMPs on individual properties in the City will eliminate the majority of non-point source pollution to the Harbor. Thus, the Commission will lobby the City of Bridgeport to work to implement BMPs throughout the city.

3.3.2.5 Power Plant Investigation

This project involves investigating impacts to air and water quality from coal dust generated in transportation, storage and usage of coal at the PSE&G plant located in Bridgeport Harbor (Block 542, Lot 22, see Figure 9b). Marina owners in the Harbor have complained that coal dust lands on their recreational boats and boat covers, causing damage. They are concerned about the quality of the air in the vicinity of the plant, and the impacts to the quality of the water in the Harbor. The Commission will lobby the Connecticut



Department of Environmental Protection to investigate this matter. This project addresses the following “factors” from Section 22a-113o: (1) Recreational and commercial boating and (8) Water quality and public health.

3.3.3 Developmental/Economic Improvement Projects

The following suggested land-side projects involve actions that, in the opinion of the Commission, when implemented, would result in new development or stimulate economic activity in the Harbor. As stated before, please note that the guidelines for re-use of waterfront property as well as many of the infrastructure improvement projects, mentioned earlier, are aimed at stimulating new water-dependent commercial and industrial growth.

3.3.3.1 Implementation of Guidelines for Future Waterfront Property Re-Use

The guidelines for re-use of waterfront property, provided in Section 3.2, are an important land-side measure that should promote development as well as future economic activity in the Harbor. Re-use of existing deep-water accessible waterfront property by deep-water industries prevents permanent loss of that industry as well as its associated jobs and tax base. Proper waterfront property re-use will be a benefit to both the citizens of the City of Bridgeport and the citizens of the State of Connecticut. This project addresses the following “factors” from Section 22a-113o: (1) Recreational and commercial boating, (2) Recreational and commercial fisheries and shellfisheries, and (7) Commercial and industrial uses that are water-dependent.

3.3.3.2 Guidance for New Businesses

The Harbor Management Commission will provide guidance where possible to new businesses considering new activities or expansion of existing activities in the Harbor. Using the guidelines for future waterfront property re-use, provided in Section 3.2, the Commission will help new or expanding water-dependent businesses find suitable waterfront properties, based upon the need and availability of harbor resources. Proper waterfront property re-use will be a benefit to both the citizens of the City of Bridgeport and the citizens of the State of Connecticut. This project addresses the following “factors” from Section 22a-113o: (1) Recreational and commercial boating, (2) Recreational and commercial fisheries and shellfisheries, and (7) Commercial and industrial uses that are water-dependent.

3.3.3.3 High Speed Ferry



This project involves implementation of a high speed ferry service between the City of Bridgeport and New York City. The ferry terminal is currently planned to be created in the former location of the Remington property (Block 542, Lot 19, see Figure 9b), adjacent to PSE&G and Seaside Park. The ferry service should stimulate the local economy by allowing commuters from the City of Bridgeport and surrounding communities to move quickly back and forth from another major center of commerce. Easy access to New York City may also stimulate the residential housing market and increase associated commercial activity in the City of Bridgeport. Finally, the decrease of commuter traffic on Interstate 95 will result in a decrease in air emissions from automobiles, resulting in a decrease in air pollution for the City of Bridgeport and eastern Connecticut. This project addresses the following

“factor” from Section 22a-113o: (7) Commercial and industrial uses that are water-dependent. This project is designated LD1 on Figure 14.

3.3.3.4 Barge Feeder Service

This project would build a barge-feeder service adjacent to Stratford Avenue and Derecktor Shipyards on Yellow Mill Creek (Block 600, Lot 16C, see Figure 9b). Barges would bring roll-on/roll-off shipping containers to the site, which would be transferred to trucks. This project would increase the shipping capabilities of the City of Bridgeport. Additionally, the project would decrease traffic on Interstate 95, which would result in a decrease in traffic and in air emissions from trucks that would normally transport the cargo from New York City or New Jersey to areas north of the City of Bridgeport. The project would be a benefit to the citizens of the City of Bridgeport and the citizens of the State of Connecticut. This project addresses the following “factor” from Section 22a-113o: (7) Commercial and industrial uses that are water-dependent. This project is designated LD2 on Figure 14.



3.3.3.5 Steel Point Project

This project would build a mixed-use development at Steel Point, located south of Interstate 95 at the juncture of Pequonnock River and Yellow Mill Creek in Bridgeport Harbor. The project would incorporate multiple plots of land, and would include commercial and residential development, a boardwalk, and new marinas. The project would install a bulkhead from the northwestern end of the property to the southern tip, at which point a rip-rap shoreline would continue to the northeastern corner. The project would remove the shoaled area located off of the southeastern tip of Steel Point.

The project is anticipated to result in a net decrease in the number of available slips in Bridgeport Harbor, due to the fact that the Pequonnock Yacht Club (193 slips lost), Move Yacht Club (40 slips lost), Hitchcock Marine (103 slips lost), Ryan’s Marina (65 slips lost) and Riverside Marina (75 slips lost) have either already been seized by eminent domain, or are planned to be seized by eminent domain by the City of Bridgeport; the planned marina will service a smaller number of larger yachts. The project is anticipated to provide public access to the waterfront by means of a picturesque harbor walk in the vicinity of shops and residential units.



The Commission is concerned that the western portion of the Steel Point area (the former United Illuminating property), which is deep-water accessible, may be utilized for non-deep water uses. Additionally, the Commission is concerned with the loss of number of available slips in the Harbor. Although it is unclear how many vessels the new marina will accommodate, the Commission doubts that the Steel Point project will replace all 476 slips lost during the creation of this project, and access to recreational boating in the City of Bridgeport and the State of Connecticut will be harmed as a result.

The Commission is optimistic about the project, due to the fact that the project is anticipated to stimulate new economic activity in the City, and to provide a benefit to both the citizens of Bridgeport and the citizens of the State of Connecticut; however, the Commission urges the City of Bridgeport to take steps to alleviate some of these concerns.

This project addresses the following “factors” from Section 22a-113o: (1) Recreational and commercial boating, (9) Recreational uses other than boating and fisheries and (11) Public access. This project is designated LD3 on Figure 14.

3.3.3.6 Festivals at Seaside Park

This project would hold art festivals, cultural days, and/or a "harbor day" at Seaside Park. The project would be designed to stimulate economic activity and promote social activity within the City of Bridgeport. This project would fall under the jurisdiction of the Parks Commission of the City of Bridgeport. This project addresses the following “factor” from Section 22a-113o: (9) Recreational uses other than boating and fisheries. This project is designated LD4 on Figure 14.

3.3.3.7 Seasonal Entertainment at Pleasure Beach

This project would hold art festivals, cultural days, and/or a "harbor day," as well as seasonal entertainment at Pleasure Beach. The project would be designed to stimulate economic growth and promote community activities within the City of Bridgeport. The project would be dependent upon a new method of transportation to Pleasure Beach (such as the proposed ferry to Pleasure Beach or the repair/replacement of the Pleasure Beach Bridge). This project would fall under the jurisdiction of the Parks Commission of the City of Bridgeport. This project addresses the following “factor” from Section 22a-113o: (9) Recreational uses other than boating and fisheries. This project is designated LD5 on Figure 14.

3.4 Future Vision of the Commission

The Commission has prepared this section of the Plan to communicate its future vision of development of Waterfront Property for the City of Bridgeport. The following items outline the preferences of the Commission:

- **Future Water-Dependent Industrial Redevelopment** - The Commission would prefer redevelopment of properties along the western bank of the Pequonnock River, the northern portion of Cedar Creek, the eastern bank of the Yellow Mill Creek, and between the Cilco Terminal and the Motiva dock in Bridgeport Harbor (currently Lou's Boat Basin and the Dolphin Cove Marina) to be water-dependent industrial. The Commission supports the creation of a solid bulkhead line between the proposed location of the Barge Feeder Service and the Motiva Dock. Fill material from dredging operations in the Harbor could be used as fill to aid this proposal's development.
- **Future Water-Dependent Recreational Redevelopment** - The Commission would prefer redevelopment of properties along the western bank of Yellow Mill Creek (north of the Yellow Mill Bridge) to be water-dependent recreational (preferably public marinas). Additionally, the Commission would prefer that a Harbor Walk and public marina be installed along the Pequonnock River between the Water Street dock and the train station. Finally, the Commission would prefer to see a new public marina adjacent to the north side of Pleasure Beach and to Lewis Gut.
- **Future Mixed-Use Redevelopment** - The Commission would prefer redevelopment of properties along the eastern bank of the Pequonnock River and Steel Point to be water-dependent mixed use.

These items are illustrated on Figure 15.



3.5 Implementation of Harbor Management and Water Use Plan

The Harbor Management Plan will be implemented on a day-to-day and on a long-term basis. Enforcement of mooring regulations, speed limits, and no-dumping areas will require the full-time vigilance of the Bridgeport Harbormaster. Implementation of the long-range plans will require coordination of the Commission and Harbormaster as well as allocation of proper resources.

The following is a description of the anticipated steps for implementation of the Plan and an assessment of the resources that will be required.

3.5.1 Day-To-Day Harbor Operations

The Bridgeport Harbormaster provides day-to-day general care and supervision of the Harbor, which include responsibility for the safe and efficient operation of the harbors and navigable waterways pursuant to the State's laws and regulations relating to boating safety and operations. The Harbormaster collects fees from users of City-owned moorings and submits the fees to the Harbor Management Fund (per Section 22a-113s of the Connecticut General Statutes). The Harbormaster, in conjunction with the Harbor Management Commission, is also responsible for the day-to-day implementation and enforcement of the Harbor Management Plan. The following guidance documents have been established to help guide the Harbormaster's day-to-day efforts:

- Specifications for Mooring Tackle (Appendix A)
- Guidelines for the Placement of Fixed and Floating Structures (Appendix B)
- City of Bridgeport Mooring Rules and Regulations (Appendix C)

3.5.2 Long-Term Plans

Long-term plans of the Commission include review of proposals that affect Waterfront Property in the Harbor, implementation of planned harbor improvement projects, and lobbying for implementation of suggested land-side improvements. These long-term plans will be implemented in three ways:

1. Implementation of Guidelines for Future Waterfront Property Re-Use

In accordance with, Sections 22a-113k through 22a-113t, of the Connecticut General Statutes, as well as Section 2.96.050 of the City of Bridgeport Municipal Code, the commission shall review and make recommendations, consistent with the adopted harbor management plan, on any proposal affecting the real property on, in or contiguous to the coastal waters (i.e. Waterfront Property). Proposals affecting Waterfront Property may come from any agency associated with regulating construction, development, or commerce on Waterfront Property including but not limited to:

- the Bridgeport Planning and Zoning Commission,
- the Bridgeport Zoning Board of Appeals,
- the Bridgeport Office of Planning and Economic Development,
- the Bridgeport Port Authority,
- the Bridgeport Parks Commission,
- the Bridgeport Department of Public Facilities,
- the Bridgeport Redevelopment Agency, or
- the Bridgeport Water Pollution Control Agency.

In accordance with the above referenced sections of the Bridgeport Municipal Code, any municipal board, commission or agency receiving such a proposal shall notify the Harbor Management Commission in writing within three days of receipt of the proposal. A copy of any proposal shall be submitted to the Harbor Management Commission within five days of the receipt thereof. In no case shall the written notification be submitted less than thirty-five (35)

days prior to the commencement of the hearing thereon or where no hearing is held, at least thirty-five (35) days prior to the taking of any final action on the proposal.

To ensure that all proposals are brought to the Commission's attention, the Commission will provide annual written notices to each applicable board, commission, and agency requesting to receive written notification. This process is required by city code of all proposed projects on or adjacent to the shoreline. Further, the Commission will petition the City Council and Mayor to ensure that a representative from the Planning and Zoning Commission sits on the Harbor Management Commission.

If the proposal involves a new operation, new zoning, or a change in operation or zoning of a property, the Commission will evaluate the proposal with respect to the guidelines for future waterfront property re-use. If the proposal is found to be inconsistent with the guidelines for future waterfront property re-use, if a proposal fails to make full use of available water depth and existing marine structures available to that property, or if a proposal results in a net loss of deep-water access, the Commission shall make an unfavorable recommendation of the proposal, at which time a two-thirds vote of the agency will be required to approve the proposal.

In addition to the above items, the Commission shall encourage the City of Bridgeport and the Port Authority to obtain available Waterfront Properties when they become available, in order to assure that they are redeveloped in accordance with the guidelines and future vision contained within this Plan.

2. Implementation of Planned Harbor Improvement Projects

In accordance with, Sections 22a-113k through 22a-113t, of the Connecticut General Statutes, as well as Bridgeport city ordinance, the Commission has jurisdiction over the Water. Thus, the Commission will henceforth work with the City of Bridgeport, the Port Authority of the City of Bridgeport, the State of Connecticut and the U.S. Army Corps of Engineers in order to complete the planned harbor improvement projects. The primary impediments to implementation of these projects are necessary funding and regulatory approvals. Thus, the Commission will work with the City of Bridgeport and the State of Connecticut to obtain funding and regulatory approvals necessary to complete the planned harbor improvement projects.

3. Implementation of Suggested Land-Side Improvement Projects

In accordance with, Sections 22a-113k through 22a-113t, of the Connecticut General Statutes, as well as Bridgeport City ordinance, the Commission will review and makes recommendations, consistent with the most recent version of the Plan, on proposals effecting Waterfront Property. Proposals effecting Waterfront Property may come from any agency associated with regulating construction, development, or commerce on Waterfront Property, including, but not limited to:

- the Bridgeport Planning and Zoning Commission,
- the Bridgeport Zoning Board of Appeals,
- the Bridgeport Port Authority,
- the Bridgeport Office of Planning and Economic Development,
- the Bridgeport Parks Commission,
- the Bridgeport Department of Public Facilities,

- the Bridgeport Redevelopment Agency, or
- the Bridgeport Water Pollution Control Agency.

To facilitate that these proposals are brought to the Commission's attention, the Commission will petition the City Council and Mayor to ensure that a representative from the Planning and Zoning Commission sits on the Harbor Management Commission.

If the proposal involves the implementation of a suggested land-side improvement project, the Commission shall make a favorable recommendation of the proposal. In addition, the Commission will lobby the City of Bridgeport to undertake or accelerate suggested land-side improvement projects.

3.5.1 Staffing and Resources

The following sections discuss the present distribution of resources for harbor management, and discuss what additional resources are needed:

- Harbormaster
Bridgeport has established the office of the Harbormaster to manage day-to-day operations in the Harbor. The Harbormaster is a full-time employee of the City of Bridgeport, and is the only staff member of the office of the Harbormaster. There is no official office space for the Office of the Harbormaster. The Harbormaster currently has an office in the Port Authority building located at 330 Water Street.

Funds for equipment used by the Bridgeport Harbormaster, as well as funds for items necessary for day-to-day implementation of the Harbor Management Plan are produced from the Harbor Management Fund.
- Harbor Management Commission
The Harbor Management Commission is authorized to have seven commissioners and two alternates, but currently has five commissioners, all of which are volunteers. There is currently no representation on the Commission from the Planning and Zoning Commission. The Commissioners are appointed by the Mayor, and then ratified by the City Council. The Harbormaster for the City of Bridgeport is an ex-officio (non-voting) member of the Harbor Management Commission. The Commission meets on the first and third Tuesdays of each month, generally at the Sikorsky Airport in Stratford, Connecticut.
- Harbor Management Fund
The City has established a dedicated Harbor Management Fund in accordance with [Connecticut General Statutes](#) Section 22a-113s, earmarked specifically for required equipment and maintenance of such harbor infrastructure as piers, ramps, and aids to navigation. The Harbor Management Fund collects funds from three sources: fees generated by use of Harbor moorings (Mooring Fees), fees charged to barges and ships that come into the Harbor (Harbor Fees), and by reimbursements from the State of Connecticut for boater registration fees (Registration Fees).
- Staffing and Resource Requirements
The Bridgeport Harbormaster and the Harbor Management Commission are satisfied that sufficient funds for day-to-day implementation of the Harbor Management Plan, other than

salaries, are generated by the Harbor Management Fund. Additionally, the Commission is prepared to seek out local, state, and federal funding to implement the Planned Harbor Improvement Projects, as required. However, for appropriate implementation of this Plan, the Commission requests the following additional resources from the City of Bridgeport:

- At least one member of the Planning and Zoning Commission to sit on the Harbor Management Commission;
- Funding to fill the full-time position of Deputy Harbormaster;
- Funding to fill a full-time administrative assistant position that would serve both the Harbormaster and the Commission;
- Sufficient one-time funds to supply appropriate computer equipment for the Deputy Harbormaster and the new administrative assistant; and
- Office space for the Office of the Harbormaster.

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APPENDIX A

Specifications for Mooring Tackle

The following mooring tackle specifications are minimum guidelines to be followed when applying for a permit for a mooring under the jurisdiction of the City of Bridgeport Harbor Management Commission. No representation of adequacy is made by the promulgation of these standards. The Commission recognizes that particular conditions may necessitate a stricter requirement or allow a relaxation of these standards on a case-by-case basis.

The applicant may request, or the Harbormaster may require, a variance from these minimum standards on consideration of the following factors: location of the proposed mooring, including factors such as exposure, water depth, proximity to shore or structures or other moorings; type of vessel to be moored, including factors such as bulk, windage, and draft; and type of mooring tackle, including adequate substitutions of mooring type and chain weight. Variations of length of mooring tackle are not to be allowed in grid areas.

The applicant may appeal the Harbormaster decisions concerning mooring tackle requirements to the Harbor Management Commission in writing and such appeal shall be heard at its next regular meeting.

No standards can assure adequate protection from severe coastal storms with associated winds and waters.

Mooring tackle shall meet the following minimum requirements.

Registered Boat Length (Feet)	Mushroom AnchorBottom (Pounds)	Top Chain (in)	Nylon Dacron Line* Chain (in)	Pennant Diameter	
				Stainless Steel Wire Double Bridle	(in)
Under 16	75	3/8	5/16	1/2	1/4
16-19	150	3/8	5/16	1/2	1/4
20-22	200	3/8	5/16	1/2	1/4
23-25	250	3/8	5/16	1/2	1/4
26-30	300	1/2	3/8	5/8	1/4
31-35	500	5/8	3/8	5/8	3/8
36-40	500	3/4	3/8	3/4	3/8
41-50	600	3/4	3/8	3/4	1/2
51-65	750	3/4	3/8	3/4	1/2

* Minimum 3 - Strand

Additional Specifications

1. For single swing moorings the total of scope of the chain shall be two and one-half times the depth of water at high tide. The bottom and top chain shall each consist of approximately 50 percent of the scope.
2. The maximum length of the pennant shall be two and one-half times the distance from the bow chock to the water plus the distance from the bow chock to the mooring cleat or post.
3. All shackles shall be properly seized. Seizing shall not promote electrolysis.
4. All shackles, swivels and other hardware used in the mooring hookup shall be one size larger than the chain used.
5. All pennant lines running through a chock or any other object where chafing may occur shall have adequate chafe guards.
6. Adequate and properly secured chocks are required.
7. It is recommended that pennants be spliced or shackled to the chain below the buoy. The use of a second pennant in heavy weather is encouraged.
8. Only mushroom anchors will be acceptable as permanent moorings.
9. Mid-chain weights or anchors shall not be used as regular tackle, but are encouraged during storm conditions. They shall be removed promptly afterward so as to ensure proper grid swing.
10. Winter sticks (spars) shall be used only in winter and shall attach directly to the chain so the other end is clearly visible above the water at all times.
11. Regular inspection of moorings is required. As a prerequisite for mooring permit renewal, one must certify that their mooring tackle meets or exceeds the minimum standards. Moorings may be inspected by the Harbormaster at any time.
12. The proposed ground tackle, as a whole must be acceptable to the Harbormaster.
13. Mooring buoys shall comply with Section 15-121-A3(a) of the Regulations of Connecticut State Agencies. This regulation states in part that “White buoys with a clearly visible horizontal blue band around the circumference of the buoy centered midway between the top of the buoy and the waterline shall be used to mark individual moorings within an anchorage or mooring area.”

This section makes no representation of adequacy by the Harbormaster's acceptance of proposed tackle.

APPENDIX B

GUIDELINES
FOR THE PLACEMENT OF FIXED AND FLOATING STRUCTURES
IN NAVIGABLE WATERS OF THE UNITED STATES REGULATED
BY THE NEW ENGLAND DIVISION U.S. ARMY CORPS OF ENGINEERS

(2 April 1991, discard previous edition)

1. These guidelines have been developed due to the intense pressures of development in our coastal waters and on the adjacent land, which have led to increasing conflict between users of these resources. They attempt to provide common sense guidance in allocating space for structures in navigable waters, recognizing reasonable use expectations of the general public and waterfront landowners. They will be recognized by the Corps in its review of permit applications and in administering its responsibilities in navigable waters for the purpose or reducing conflict in such waters.
2. In general no structures will be permitted in Federal Navigable Projects. (see sketch no. 1)
3. In those cases where a project is proposed within two hundred feet (200') of a Federal Navigable Project (FNP) the applicant shall determine and show the state plane coordinates for the extreme lateral limits of his project, the point on structures furthest beyond mean high water (NHW), and the point of closest approach of any structure to the FNP. (see sketch no. 1)
4. Similarly no structures, which may reasonably be expected to facilitate intrusion into Federal Navigable Projects, will be permitted. FNP's are channels and anchorages created at public expense. Examples of intrusions are moored vessels, fish harvesting devices, etc.
5. To preclude intrusions in to FNP's appropriate setbacks for structures from the project limits may be established on a case-by-case basis. The setbacks can be determined using appropriate criteria, such as:
 - A. Project maintenance requirements. The typical setback shall be a horizontal distance three (3) times the authorized project depth since Corps projects often specify side slopes of 3H:IV. This would over the long term minimize the need, expense and inconvenience of forcing people to remove structures to dredge. (See sketch No. 1)
 - B. Traditional navigation patterns where because of type and size of vessel, channel conditions, fishing or recreational activities etc. closer approach of structures to FNP is not in the public interest.
 - C. The configuration and capacity of structures proposed adjacent to FNP's to facilitate intrusion into it. An example would be a pier capable of mooring vessels longer than itself, which would extend into the FNP. Such structures would require a greater setback than noted above.
 - D. The presence of adjacent authorized structures where it would be reasonable for new facilities to conform to their length to provide safe access to the new structure. In some instances this might authorize a smaller setback than noted.
6. An exception to the no structure in FNP's policy may be considered where the permittee would be a state or local government who would place such structures in a Federal Anchorage to provide greater

or more effective use to the public, with the condition that such facilities would be available on an equal access basis to all citizens of the U.S.

7. In a linear waterway, i.e. river, canal, narrow estuary etc., a reasonable area of public water should be maintained in the public interest to sustain activities not specifically related to simply transiting the area in safety. Such activities are cruising, fishing, sailboarding, swimming, water skiing etc. that require open unobstructed water and should not be eliminated for private interest.

8. A maximum intrusion into a waterway in areas where there is not as physical width constriction is also desirable to preclude excessive loss of public water usage. In general, new structures should conform in length to adjacent structures and customary usage of the surrounding area. In areas where existing structures and usage do not seem applicable, a reasonable maximum authorized distance beyond mean low water of 600 feet (the traditional cable length) will be used. This may be modified if necessary for site specific conditions or public benefit. (see sketch no. 3)

9. Numerous conflicts between neighboring waterfront property owners have arisen during our permit review process concerning the spacing of projects relative to riparian lines (demarcations property). These conflicts are generally concerned with access to piers and floats for mooring vessels. We shall require a minimum setback from the reasonable riparian boundary of 25 feet. This is based on the fact that a median sized recreational vessel length is in the range of 32 feet. A minimum turning distance for such a vessel is 1.5 times it's own length, or 48 feet.

If abutting property owners reach a mutual agreement regarding structures which has a lesser setback, that setback may be authorized, if the applicant agrees to record any ensuing Corps Permit which will have that agreement as a condition and the abuttor's letters of no objection, with the Registrar of Deeds, or other appropriate official charged with the responsibility for maintaining records of title to or interest in real property.

10. Fields of individual single point moorings shall be defined by a polygonal area whose angle points are defined by coordinates, to within 10 feet, in the applicable state plane coordinate system and by a maximum number of moorings authorized within it. A rule of thumb for the area needed by a vessel on a single point mooring is a circle with a radius equal to vessel length plus five times the depth of water at high tide. This can be reduced but the minimum should be length plus three times water depth.

These mooring fields should be in reasonable close proximity to the applicants property and if not encompassed by his riparian lines for enough offshore to keep noise disturbance to other shore owners in reasonable limits and not restrict reasonable future development by these owners. (see sketch no. 5).

DEFINITION OF OPEN-TO-ALL ON EQUAL TERMS

Federal navigation projects must be managed in the general public interest and must be accessible and available to all on equal terms. Any number of approaches may be used to assure that all citizens desiring mooring or other access to the projects are treated impartially; it is not the Federal Government's intention to prescribe specific procedures.

A management system shall be considered acceptable provided that it:

- Makes no arbitrary distinction or requirement of any kind in allocating use of the project and ancillary facilities and services to the public except as may be consistent with the purpose for which the project was constructed.

- Does not impose arbitrary fees or arbitrary variations in fees among users. The cost of providing necessary management and ancillary facilities and services may be offset through equitable user fees based on the actual costs incurred.

Information pertinent to harbor management - including but not limited to rules and regulations, lists of mooring holders, waiting lists and fees schedules - shall be readily available to the public at all times.

APPENDIX C

CITY OF BRIDGEPORT

**DEPARTMENT OF THE
HARBORMASTER**

MOORING RULES AND REGULATIONS

The following Rules and Regulations have been adopted by the Harbor Commission and shall replace in their entirety the existing Rules and Regulations **effective April 1, 1998.**

1. **Permit Required for Use of Municipal Moorings.** No person shall make any vessel fast, or cause or permit any vessel to be made fast, to any municipal wharf or mooring or cause or permit any vessel to occupy an outside berth at a municipal wharf without a permit obtained from the city's harbor master or his designee and the payment of the fees provided in Section 12.40.160 of the Municipal Code.

2. **Application for Permit.**

(a) **Application Process.** Applications for mooring permits shall be made on an approved form provided by the Harbor Master commencing February 1 during each permit year. Such application form must be used for renewal or relocation of mooring permits. No mooring permit will be issued to a person or entity that is in violation of law or these rules and regulations relating to mooring of vessels or who has unpaid fees or charges remaining from a prior permit year. A mooring application may be made for a single vessel only. The applicant must show (i) proof of Ownership or (ii) a controlling interest in the subject vessel or (iii) registration in one's name for tax purposes or (iv) the demonstrable right of exclusive use of such vessel (the "Owner"). In addition, the Owner must demonstrate to the satisfaction of the Harbor Master that the vessel for which the permit is sought possesses a valid state registration and that it is seaworthy and operable. For all applicants other than an individual person, such applicant must submit an affidavit of its corporate secretary, managing member, partner or other duly-authorized person disclosing the names, addresses and telephone numbers of its then-current principals and all persons authorized to use such mooring location, together with such other evidence of lawful organization and other relevant information as the Harbor Master may determine in his sole discretion.

(b) **Issuance of Permit.** Upon the finding by the Harbor Master that an application is complete and not be contrary to applicable law or these rules and regulations, a mooring permit shall be issued to the applicant. The permit is personal to the permit holder and may only be used in accordance with these rules and regulations. No permit may be leased, subleased, rented or assigned to any other person or entity or used for any other vessel than approved by the permit. A mooring permit may be transferred to a replacement vessel upon written approval of the Harbor Master given in advance of mooring such replacement vessel. At the Harbor Master's discretion, he may relocate the mooring if necessary based upon the size or type of vessel and other relevant factors or otherwise in the interests of public health and safety. No vessel may be moored at any location other than the assigned location.

3. **Fees.** A fee of \$200.00 per calendar year is required for the use of any permanent mooring in a municipal mooring field designated by the Harbor Master or his designee. A fee of twenty-five dollars (\$25.00) per overnight period is required for any other use of a municipal mooring at a municipal mooring field designated by the Harbor Master.

4. **Duration of Permit.** A permit year is the period commencing April 1 of a calendar year in which a permit is approved and ending no later than March 31 of the following calendar year. Permits issued during a permit year will be valid for the remainder of the permit year without reduction in the annual permit fee.

5. Limitation on Number of Permits. Any one person, or any one association, corporation, limited liability company, partnership or other identifiable group may apply for one (1) mooring permit during a calendar year.

6. Priority of Applications.

(a) Permit Applications. Until March 1 of a calendar year, the Harbor Master will give priority to renewal applications before considering other applications so long as such applications are received by the Harbor Master by the last day in February. After March 1 of a calendar year, applications will be considered in the order in which they are received. Only complete applications will be considered.

(b) Relocation Applications. Until March 1 of a calendar year, the Harbor Master will give priority to renewal applications that include a request for a new mooring location so long as the new mooring location is or will become vacant during such calendar year, is suitable to accommodate the vessel to be moored and is otherwise in accordance with these rules and regulations. If an available, appropriate mooring location determined by the Harbor Master is offered to the applicant, the applicant shall accept such location by notifying the Harbor Master by telephone or in writing within five (5) days. If the Owner refuses to accept the available mooring or does not respond to the Harbor Master within such 5-day period, the Owner will have a right of first refusal on the next available mooring determined by the Harbor Master. An Owner shall be permitted no more than 2 such refusals in a permit year. If an Owner refuses an available mooring more than twice, the Owner's name shall be placed at the bottom of the waiting list.

(c) Waiting List. The Harbor Master shall maintain a list of applicants containing a list of those applicants having priority under 6(a) or (b) above and a list of other applications in order in accordance with the dates on which their applications are received. This waiting list shall incorporate any waiting list that exists on the effective date of these Rules and Regulations. The Harbor Master shall use this list in considering applications and issuing permits in accordance with these rules and regulations. The waiting list shall be available for public inspection.

(d) Transient or Guest Moorings. Notwithstanding anything contained in subparagraphs (a) through (c) of this paragraph 6, the Harbor Commission has the right to allocate a number of transient or guest moorings on a year-to-year basis. The assignment of such transient moorings, if any, shall be at the sole discretion of the Harbor Master and on such terms and conditions as he may establish from time to time.

7. Establishing Mooring Fields Assignment of Mooring Locations. The mooring of vessels within the waters of the City of Bridgeport will be established in a manner deemed suitable by the Harbor Commission. The Harbor Master shall assign mooring locations after giving due consideration to such factors as vessel size, draft, navigation safety, on-land access requirements, public health and safety, and other relevant factors. The Harbor Master shall determine the necessity of bow and stern vessel moorings.

8. Assignment of Certain Mooring Permits. A permit issued to a person who dies during the permit year may be retained for the balance of the permit year by the spouse, parent, child or other specific person designated by will or testamentary trust satisfactorily proven to the Harbor Master or his designee. No other assignment or transfer of a mooring permit or use of a mooring location is permitted.

9. Revocation of Permit. A mooring permit is subject to immediate revocation by the Harbor Master upon a determination, in his sole discretion, that the terms of such permit or applicable law, rule or regulation relating to mooring of vessels has been violated, that the vessel no longer possesses a valid state registration, or that the vessel is no longer operable(if motorized) or no longer seaworthy.

10. **Requirement to Use Mooring.** The holder of a permit is required to use the assigned mooring location on or before July 10 in a permit year and to continue reasonable use of such mooring location during the permit year. No mooring permit can be used to warehouse or otherwise reserve the mooring location in the absence of use thereof during the permit year. An Owner is required to inform the Harbor Master if the Owner expects not to use the mooring for longer than 14 consecutive days and advise the Harbor Master of the anticipated date of return. If the mooring appears to be unused in the determination of the Harbor Master and the Owner has not communicated to the Harbor Master of an intended absence, a written notice will be sent to the permit holder that the mooring permit is in jeopardy of revocation. The holder must respond in writing to the Harbor Master within ten (10) days after the date of such notice. Based upon the contents of any such response, the Harbor Master will make a determination, in his sole discretion, whether such permit shall continue in effect or be revoked.

11. **Identification Sticker.** The Harbor Master will issue to each permit holder an identification sticker which the holder shall place on the upper right side of the transom of the vessel for which such mooring has been issued and shall visibly stencil the permit number on the mooring ball in a manner required by the Harbor Master. Unidentified moorings will be removed at the Owner's expense.

12. **Moorings Not to Extend Into Navigable Areas.** No vessel for which a permit has been issued shall be so moored as to extend beyond the mooring area into any designated navigable area within the waters of the City of Bridgeport pursuant to Section 15-8 of the General Statutes (copy attached), as amended from time to time.

13. **Limitations on Making Fast to Another Mooring or Vessel.** Except for a tender or dinghy used to transport crew or cargo to and from the shore, no person shall make fast or secure any vessel to a mooring already occupied by another vessel or to a moored vessel.

14. **Power to Remove and Store Vessels.** The Harbor Master or police shall remove or cause to be removed and stored at the expense of the permit holder any vessel moored in violation of law or these rules and regulations. A written notice of such violation will be sent to the permit holder of such removal and shall inform the holder that the mooring permit is in jeopardy of revocation. Action may be taken by the Harbor Master without notice or reply from the permit holder only if, in the determination of the Harbor Master, the permit holder cannot be contacted within seventy-two (72) hours or if emergency conditions require immediate action. The permit holder must respond to the notice from the Harbor Master within five (5) days. Based upon the contents of any response from the permit holder, the Harbor Master will make a determination, in his sole discretion, whether such permit shall continue in effect or be revoked and the amount of the removal and storage expenses, including the costs and expenses incident to such removal, including court costs and reasonable attorneys' fees, to be paid. The permit holder must make payment of such costs and expenses within ten (10) days of the date of written notice from the Harbor Master.

15. **Approved Mooring.**

(a) **Approved Tackle.** No mooring tackle shall be placed in the waters of the City of Bridgeport without inspection and approval by the Harbor Master. The Harbor Master shall direct the placement of all moorings. Each permit holder shall raise or remove all mooring tackle for periodic inspection at the Harbor Master's request, as he deems necessary. If, as a result of such inspection, the Harbor Master determines that any chain, shackle, swivel or other mooring tackle is unsafe or otherwise inadequate, such tackle shall be replaced within five (5) days. No mooring shall be used until such changes have been made to the Harbor Master's Satisfaction. Inspections and corrective action by the Harbor Master shall be at the sole expense of the permit holder. Failure to follow the requirements of the Harbor Master within the required time period shall subject the permit holder to revocation of its permit. For transient vessels desiring a mooring in the waters of the City of Bridgeport, the Harbor Master shall provide as he deems necessary and appropriate moorings for such vessels upon the payment of fees established by City Ordinance or by the Harbor Commission.

- b) **Method of Mooring.** The Harbor Master shall direct the permit holder to moor its vessel in such a manner using proper care and equipment to prevent breakaway and damage to the person and property of others as the Harbor Master shall determine. The Harbor Master shall consider factors such as proper mooring tackle and mooring methods, storm, wind, waves, tides, currents and wash. Each permit holder is responsible for the proper mooring of its vessel and for damage to the persons and property of others caused by improper mooring of its vessel.
- c) **Inspection Records.** The Harbor Master will maintain a record of the inspections conducted on mooring tackle and shall retain such records for a period of four (4) years or for such shorter or longer period as required by law.

16. Appeals A decision by the Harbor Master concerning permit issuance, denial or revocation, or the removal and storage of a vessel and costs attendant thereto, may be appealed to the Bureau of Aviation and Ports at the Department of Transportation.

17. Limitation of Liability Notwithstanding anything contained in these Rules and Regulations to the contrary, due to the nature of water and a coastal environment, weather conditions, unforeseeable circumstances, Acts of God and other factors beyond the exclusive control of the Harbor Master, neither the Harbor Master, the Harbor Commission, nor the City of Bridgeport assumes any liability for personal injury or property damage which may result from actions, including but not limited to, the assignment of moorings, proper, or improper use of mooring tackle or mooring methods, and the like.

Approved by the Harbor Commission
On **February 17, 1998**

Amended Rules and Regulations
Effective April 1, 1998