

**BRIDGEPORT  
HARBOR  
MANAGEMENT PLAN**

**March 1992  
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## **Acknowledgments**

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## **SECTION 1 INTRODUCTION**

**Bridgeport Harbor, located along the northern shore of Long Island Sound, is one of three deep-water ports in Connecticut. The port area itself consists of two separate harbors, Bridgeport Harbor and Black Rock Harbor (see Map 1, Project Location). Although the port area has experienced major change from its traditional role as a maritime commercial center, it has retained a mix of industrial, commercial, and recreational uses along the waterfront. In the main harbor, land use is predominantly industrial, utility-transportation and recreational. Along the Black Rock waterfront, land use is generally residential along the northwest shore, recreational along the southeast shore and utility transportation and industrial uses along the shores of Cedar Creek.**

**Given the current uncertainty about New England's economy, Bridgeport Harbor contains physical and natural resources that should be enhanced and preserved for it to be competitive economically. Pleasure Beach and Seaside Park represent significant recreational uses and opportunities. Other important harbor activities include recreational boating and support services, commercial fishing, receipt and storage of fuel via tanker traffic, docking of merchants marine vessels for shipment of fruit, dry dock and boat repair, tug boat docking, electric power operation and ferry boat service. However, much of the waterfront infrastructure is in disrepair and the waterfront has experienced sufficient transition to have numerous vacant or underutilized properties.**

**Bridgeport cannot afford to lose opportunities for harbor and waterfront redevelopment and revitalization. In recognition of the need for better management and utilization of the harbor, the City created the Harbor Management Commission to develop the Bridgeport Harbor Management Plan. The Plan, which builds on the 1982 Coastal Plan of Bridgeport, Connecticut, will help to provide the Commission with the blueprint for guiding the use of the harbor and waterfront areas.**



## SECTION II HARBOR CONDITIONS

### INTRODUCTION

#### **Bridgeport Harbor Areas**

As identified by the U.S. Army Corps of Engineers in the Coastal Structures Inventory for Bridgeport Harbor, Bridgeport Harbor is located on the northern shore of Long Island Sound, about 52 nautical miles northeast of New York City and 25 nautical miles southwest of New Haven, Connecticut. The port area of Bridgeport consists of two separate harbors, Bridgeport Harbor and Black Rock Harbor; the harbors are about 2 miles apart and are both located within the city limits of Bridgeport. The harbors have authorized depths of 35' and 15' respectively.

Bridgeport Harbor includes the navigable portions of the Pequonnock River, Yellow Mill Creek Channel and Johnson' Creek, and is divided into outer and inner harbor. The outer harbor is entered from Long Island Sound between two converging breakwaters. It is about three-fourths of a mile wide in an east and west direction from Pleasure Beach on the east and Seaside Park on the west and extends from the opening between the breakwaters North to Tongue Point, a distance of about one mile. The Inner Harbor is separated from the Outer Harbor by Tongue Point on the west and Pleasure Beach on the east. It is generally triangular in shape, about one-mile wide at the lower end, and extends in a northwesterly direction to mouth of the Pequonnock River entering from the north and Yellow Mill Creek Channel and Johnson's Creek from the northeast. Both of the latter have an authorized depth of 18'.

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, 250 feet wide at its head. Cedar Creek extends from the head of Black Rock Harbor in a northwesterly direction for about three-fourths of a mile and divides into East Branch and West Branch. Burr Creek is a small cove extending northward from Black Rock Harbor. A channel 18 feet deep has been dredged from deep water in Long Island Sound through the full length of Black Rock Harbor and Cedar Creek and its two branches. Major industrial and commercial port facilities and structures are listed in Table 3.

**U. S Army Corps of Engineers  
PROJECTS DESCRIPTIONS: BRIDGEPORT, CT.**

**BRIDGEPORT HARBOR, CONNECTICUT**

**CONDITION OF IMPROVEMENT: 30 SEPTEMBER 1976**

**EXISTING PROJECTS:** Adopted 1836, modified 1899, 1907, 1919,1930,1937, 1945, 1946 and provides for:

1. A main channel 35 feet deep at mean low water, 400 feet wide extending from long Island to Tongue Point, widening to approximately 600 feet at the bend opposite Cilco Terminal, and narrowing to 300 feet at the lower end of the Pequonnock River Channel at a point 800 feet below the Stratford Avenue Bridge; and a turning basin 35 feet deep south and southeast of Cilco Terminal.
2. Two riprap breakwaters, one extending 900 feet westerly from a point near Fayerweather Island on the east side of the entrance to Black Rock Harbor, and one extending 650 feet southwesterly on the west side of the entrance; both breakwaters to have a top width of 8 feet at an elevation of 10 feet above mean low water, and side slopes of 1 on 1.5; with such riprap required to prevent erosion of the slopes opposite the inner ends of the breakwaters,
3. The provision of a small-craft anchorage in Burr and Cedar Creeks consisting of a 28 acre anchorage with a depth of 6 feet, in Burr Creek and on each side of Cedar Creel adjacent to Burr Creek.
4. A 2-acre anchorage area with a depth of 6 feet at the head of Johnson's Creek, between the existing Federal channel and Hollister's Dam.
5. A 2.4 acre anchorage area with a depth of 9 feet and a 0.6 acre anchorage with a depth of 6 feet in Johnson's Creek, these areas to be provided partially by dredging and partially by reducing the width of the existing Federal channel opposite and north of the present Miamoque Yacht Club.
6. Two Riprap breakwaters, one 3,823 feet long on the easterly side, and one 2,110 feet long in the westerly side of the entrance to the main harbor.
7. The construction and maintenance of shore protection on Fayerweather Island, including a seawall connecting the northerly and southerly portions of the island.

8. two anchorage basins: One 25 feet deep and 23 acres in area, opposite Tongue Point; one 18 feet deep and 29 acre's in area, adjoining the main channel o the west above Tongue Point.
9. Pequonnock River Channel, 18 feet deep and from 125 to 2000 feet wide from the lower bridge to a point about 500 feet below the dam at Berkshire Avenue, about 1.1 miles.
10. Yellow Mill Creek Channel, 18 feet deep and 150 to 200 feet wide from the 30- foot channel to a point about 370 feet from Crescent Avenue, about one mile.
11. Johnson's Creek Channel, 15 feet deep and generally 200 feet wide from the 25 foot anchorage to a point 1,700 feet below Hollister's Dam, thence 9 feet deep and 100 feet wide to a point about 600 feet Hollister's Dam, about one mile.
12. Black Rock Harbor and Cedar Creek Channel, 18 feet deep and 100 feet to 200 feet wide from the 18 foot contour in Black Rock Harbor to the heads of both branches of Cedar Creek, about 2.4 miles.

**PROGRESS:**

The existing project is 88% complete. To complete the project there remains dredging of the 6-foot anchorage in Burr and Cedar Creek ( a part of Black Rock Harbor), and the construction of two breakwaters at the entrance to Black Rock Harbor. The incomplete work is inactive.

**COST OF NEW WORK**

\$4,260,556 including \$147,887 local cash contributions.

**MEAN RANGE OF TIDE**

6.8 feet in Bridgeport  
6.9 feet at Black Rock Harbor entrance.

**DATUM PLANE**

Mean low water

**Natural and Marine Resources****Introduction**

Natural and marine resources including topography, wetlands, shellfish, finfish, intertidal channel areas, and water quality, are an important component of the harbor management planning process. Knowledge of the location and importance of these resources is essential to developing harbor management policies, which are based on natural resource values, and regulatory and non-regulatory implementation actions, which are well targeted and effective.

**Geologic Setting**

The geology of Bridgeport's coastal areas has played an important role in shaping the character of the harbor and waterfront areas. Glacial drift, composed primarily of outwash and ice-contact, stratified drift, forms most of this portion of Connecticut's shoreline. Bedrock is virtually absent from the area. The erodible nature of these glacial materials led to the development of a semi-regular, curvilinear shore. Bridgeport's coastal area is characterized by glacial drift, beaches, and artificial fill.

Bridgeport's natural shorefront features consists of beaches, modified bluffs and escarpments and one small area of coastal bluff and escarpment. Pleasure Beach in Bridgeport and Long Beach in Stratford form a long barrier beach which extends from the mouth of Bridgeport Harbor's easterly side to Point No Point in Stratford.

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1            **Modified bluffs and escarpments consist of bluffs and escarpments which have been temporarily stabilized by erosion control structures (revetment, bulkhead, or seawall) positioned seaward of the marine cliff or escarpment.**

## BRIDGEPORT HARBOR MANAGEMENT PLAN

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### Section II

### Harbor Conditions

Other beaches are found at Seaside Park, Seabright Avenue, on the southeasterly side of the strip of land that separates Cedar Creek from Long Island Sound, and at the mouth of Ash Creek.

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. The shorefront's one small coastal bluffs and escarpment area is located on the west side of Black Rock Harbor.

Bridgeport's remaining shorefront areas 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 from Tongue Point north, and Cedar Creek.

#### Topography and Slope

The topography and slope of Bridgeport's shoreline areas is generally smooth or gently rolling. As a result of the dominant occurrence and erodibility of glacial outwash, composed primarily of sand and gravel, the onshore topography reflects the more gentle slope of its parent material.

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.

### 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.

The tide of Bridgeport Harbor has a mean range of 6.8 feet and a mean spring range of 7.7 feet. The mean tide level is 3.4 feet above mean low water near the outer harbor breakwaters. The extreme low water level is minus 3.5 feet mean low water. The maximum recorded storm surge level is 9.2 feet 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.

A number of existing conditions pose problems. For example, the eastern breakwater off Pleasure Beach at the entrance to Bridgeport Harbor is too low. Thus, waves overtop it during high, stormy seas. In addition, the exposed harbor conditions at Black Rock Harbor pose an operational constraint for recreational boats.

**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 distal 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.

As a result of the dominant occurrence and erodibility of glacial outwash, composed primarily of sand and gravel, the nearshore bathymetry reflects the more gently slope of its parent outwash plan. Beaches within this coastal area are derived from eroded glacial deposits and the nearshore area is characterized by extensive sandy shoals. In Bridgeport, shoaling has occurred in the Black Rock Harbor - Cedar Creek area.

**Federal Navigation Projects**

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 July 3, 1958. Construction was completed in 1963. The existing Federal project consists of:

- A 35-Foot main channel, 400 feet wide, extending from Long Island Sound to Tongue Point, then widening to approximately 600 feet at the bend opposite Cilco Terminal, and then narrowing to 300 feet at the lower end of the Pequonnock River Channel at a point 800 feet below the Stratford Avenue Bridge.
- Two riprap breakwaters, one extending 900 feet westerly from a point near Fayerweather Island on the east side of the entrance to Black Rock Harbor, and the other one extending 650 feet southeasterly on the west side of the entrance; both breakwaters are classified as inactive.
- A 35-foot anchorage basin, totaling 23 acres, located east of the main channel and opposite Tongue Point.
- An 18-foot anchorage basin, totaling 29 acres, located west of the main channel and south of Tongue Point.
- In Johnson's Creek, a 15-foot channel, generally 250 feet wide, extending from the 35-foot turning basin to a 6-foot anchorage basin. Also, two anchorage areas, 6 and 9 feet deep, located on the west side of the 15-foot channel. These areas are provided partially by dredging and reducing the width of the existing Federal channel opposite and north of the present Miamogue Yacht Club.
- The construction and maintenance of shore protection on Fayerweather Island, including the northerly and southerly portions of the island.
- In Pequonnock River, an 18-foot channel, 125 to 200 feet wide, beginning at the lower bridge to a point about 500 feet below the dam at Berkshire Avenue, a total length of about 1.1 mile.

- **In Yellow Mill River, an 18- foot channel, 150 to 200 feet wide, from the 30-foot channel to a point about 370 feet from Crescent Avenue, a total length of about one mile.**

#### **Federal Beach Erosion Projects**

**A Federal beach erosion project, authorized on September 3, 1954, is located at Seaside Park on Fayerweather Island. This project provided for Federal participation in the amount of one-third the first cost of widening the beach to a general width of 125 feet, by direct placement of sand material for approximately 8,800 feet along the shoreline. Construction was completed in April 1957.**

#### **Major Obstructions to Navigation**

**Sunken vessels within Bridgeport's waterways pose hazards to navigation. Among them are vessels adjacent to the old railroad station site, some in Johnson's Creek and Burr Creek, and a deteriorating floating dock immediately off the channel in Black Rock Harbor.**

**A number of bridges in the study area have also created navigational obstructions. For example, the Grand Street, East Washington Avenue, Peck's and Congress Street bridges, all of which cross the Pequonnock River, are in disrepair, and some are non-operable as movable bridges.**

**As a result, industrial water-dependent growth on the Pequonnock River is restricted. In addition, the 7-foot vertical clearance (at mean high water) of the Pleasure Beach swing bridge constrains recreational boat traffic when it is in the closed position. There is also no bridge tender at the Yellow Mill bridge over Yellow Mill Creek Channel.**

#### **Coastal Flood Hazard Areas**

**Much of the area located within Bridgeport's coastal boundary is located within the 100-year floodplain. This area, as mapped by the Federal Emergency Management Agency, has a 1 percent chance of flooding each year.**

## **Wetlands**

**There are very few tidal wetlands areas located within Bridgeport's coastal boundary. The largest tidal wetlands are found on Fayerweather Island and at the mouth of Ash Creek. Several smaller tidal wetland areas are located on the east bank of Ash Creek. See map 2**

**The Great Meadows, consisting of tidal wetlands, tidal flats, a tidal embayment (Lewis Gut), and tidal creeks, is located off of Bridgeport Harbor in the City of Bridgeport in the Town of Stratford. This 680 acre area is one of the most valuable salt marshes in the state because of its productivity and general absence of mosquito ditches. The Great Meadows serves as an anadromous fish run and high concentrations of shorebirds occur here. The area also contains moderate concentrations of hard clams, soft clams, and oysters.**

**Ash Creek, a 140 acre embayment, tidal wetland, and tidal creek ecosystem, is located on Long Island Sound between the City of Bridgeport and the Town of Fairfield. There is an anadromous fish run in the river and the area supports moderate waterfowl concentrations. Local population of oysters and clams are present as well.**

## **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. The largest concentrations of intertidal flats are located along the south side of Seaside Park between Fayerweather Island and Tongue Point; along the shore between the mouth of Ash Creek and Burr Creek; at the northern end of Pleasure Beach near the mouth of Johnson's Creek; along both sides of Johnson's Creek; and along portions of Yellow Mill Creek, particularly the west shore. There are also significant intertidal flats in Ash Creek on the north and south side of Fairfield Avenue at the Fairfield border**

**Shellfish Resources**

**Bridgeport's shellfish concentration areas contain eastern oysters (*crassostrea virginica*) and hard clams (*Mercenaria mercenaria*). Eastern oysters can be found at the mouths of Cedar Creek, Black Rock Harbor, Pequonnock River and Yellow Mill Channel; between Tongue Point and the breakwater; in most of Johnson's Creek; halfway between Tongue Point and the mouth of Johnson's Creek; and northwest and south of Pleasure Beach.**

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**2 Shellfish concentration areas are geographic areas believed to support and produce significant concentrations of shellfish, that are of commercial and recreational value. Excluded are historically productive but presently inactive shellfish areas.**

## BRIDGEPORT HARBOR MANAGEMENT PLAN

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### Section II

### Harbor Conditions

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

Hard 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/Bureau of Aquaculture according to the following six categories:

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

All of Bridgeport's coastal waters are classified as prohibited and restricted-relay areas. Prohibited areas are defined as state waters that have been classified by the Department of Agriculture/Bureau of Aquaculture as prohibited for the harvesting of shellfish for any purpose except depuration and aquaculture activities. A prohibited shellfish growing area is a closed area for the harvesting of shellfish at all times except for seed oystering.

The state leases certain oyster grounds for the raising of seed oysters. City-owned oyster beds are located in Black Rock Harbor.

### **Finfish Resources**

According to the State Department of Environmental Protection, the impact of Connecticut's marine recreational finfishery on the finfish resources of 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 finfish resource than commercial fishermen.

According to marine recreational fisheries data collected between 1984 and 1988 by the State's Division of Marine Fisheries, bluefish are the most persistent and dominant species caught, followed by scup, winter flounder, black fish, and summer flounder.

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 total recreational catch from Long Island Sound varied from 11 to 21 million pounds per year between 1981 and 1984, while Long Island Sound commercial landings averaged 265,000 pounds annually during 1979 to 1985.

Summer flounder are an important component of Connecticut's marine fisheries resources as well. 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.

Tautog or blackfish are an important component of Connecticut's recreational fisheries as well as all coastal waters from Massachusetts to New Jersey. Historically, commercial exploitation of tautog has been light. However, since 1980 commercial interest in this species has grown. Consequently, commercial landings have climbed steadily as commercial fishermen have targeted this formerly "underutilized" species. While the tautog population in 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.

**Water Quality**

Water quality classifications for water bodies located within the study area are presented below in Table 1. The table also describes each of the state water quality classification ratings for marine waters. As can be seen in the table, the adopted standards for Bridgeport's coastal water bodies are, in all cases, SB. However, the present SC water quality conditions are lower than this goal. Water quality classifications were not available in the study of Seaside Park Beach and Pleasure Beach.

**Table 1**  
**Study Area Water Quality Classification\***

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

\* SA      Suitable for all sea water 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, Water Compliance Unit

**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 Treatment Plants, industrial discharges, contaminated sediments in Black Rock Harbor, Cedar Creek, and Yellow Mill Creek, and urban and highway runoff. The City does not have, but is currently working on, a comprehensive emergency response plan for oil spills and fires.**

The City's 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. 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. There are also a total of 71 combined sewer overflows (CSOs) which discharge to Bridgeport's water.

The City is currently in the process of implementing a seven-year , \$150 million treatment facilities rehabilitation/upgrade and stormwater separation project. All but 19 of the City's 71 CSO discharge points will be eliminated. The remaining 19 will be controlled discharge points. These points will have computerized tidegates used to prevent water from getting into the system.

The State is in the initial phases of investigating the upgrade of Bridgeport's sewage treatment facilities to more advanced treatment, pending the findings of the Long Island Sound Study. 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 waters and sediments of Black Rock Harbor and Cedar Creek are polluted. 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.

DEP is coordinating a toxic contaminant reduction study in Black Rock Harbor. This work, which began in the Fall of 1988, is funded through the National Estuary Program grant to the Long Island Sound Study. the goal of the project is to reduce the input of toxic contaminants into Black Rock Harbor and thereby reduce the risk to the valuable nearby oyster fishery. Contaminated sediments can also be found in other areas, including Yellow Mill Creek Channel.

**Water quality within Bridgeport's harbor areas should be improved in order to foster greater use of the city's water resources. Specifically, the following conditions exist which merit action:**

- **Deposits of contaminated sediments.**
- **Inadequate municipal sewage treatment system.**
- **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.**
- **Several areas of petroleum trade which require the existence of a spill plan.**
- **The impact of a discharge pipe from the former city landfill that empties into Cedar Creek.**
- **Problems associated with combined sewage overflow discharged during heavy storms.**

**Land and Water Use**

**Introduction**

Existing land and water use patterns have emerged in response to a combination of natural resource constraints and opportunities and economic and demographic trends. In turn, the current use of Bridgeport's harbors and coastal shorefronts will shape future land and water use patterns. The following section briefly describes existing land and water use trends within the study areas.

**Residential and Non-Residential Development Patterns**

Bridgeport's waterfront has experienced major changes from its earlier role as a maritime commercial center. The waterfront has, however, retained a mix of industrial, commercial, residential and recreational uses. Despite this, much of the waterfront infrastructure is in disrepair and there are numerous vacant and underutilized waterfront properties.

Shoreline land uses along the outer harbor portion of Bridgeport Harbor consist primarily of industrial, utility-transportation, and recreational activities. Land use adjacent to the western side of the inner harbor is characterized by wharves, light and heavy industry, and an electrical power generating facility. The same types of uses are found on the eastern side of the inner harbor, with concentrations of residential and commercial uses as well.

Railroads, junkyards, gas storage, and industrial uses are located along the shore of the Pequonnock River. Land uses at Steel Point include wharfs, light industry, recreational boating, and a former electrical power plant. While land use along Yellow Mill Creek channel's shoreline is primarily industrial with recreational boating and junk yards, a small park (Waterview park) is located on the west bank, just south of Crescent avenue. The latter park, also known as Riverside Park, will be referred to as Waterview Park in this plan.

Pleasure Beach Park and Great Meadows, a coastal wetlands area of high ecological value, are found along the mouth of Johnson's Creek. Oil handling facilities, light industry marinas and small craft anchorages are located along the creek's banks.

Land uses adjacent to Black Rock Harbor are primarily residential in character. A variety of recreational, utility-transportation, and industrial uses are interspersed along the harbor's banks. Seaside Park occupies the entire strip of land that separates Long Island Sound from Cedar Creek. A now closed sanitary landfill is located on the shore of Cedar Creek adjacent to Seaside Park. The northernmost reaches of Cedar Creek are occupied by industrial uses.

According to the 1982 Kasper Report<sup>3</sup>, only 21 of 98 industrial waterfront users were water-dependent. This is still an issue today -- residents and officials who attended a recent public meeting on Bridgeport's waterfront, indicated that water-dependent uses should be encouraged along the waterfront. Specifically, they feel that the waterfront area in Bridgeport Harbor, including Steel Point and Cooks Point, should be reserved for water dependent business and industry that require deep water for access and that water dependent commercial use of the harbor should be encouraged. In addition, the report recommends that commercial and industrial use of Bridgeport Harbor's outer harbor, approximately to the Metro North railroad bridges over the Pequonnock River and the Yellow Mill Creek Channel, respectively, should be encouraged. It further recommends that the inner harbor north of Steel Point and the railroad bridges, including the Pequonnock River and Yellow Mill Creek Channel, should be used for recreational purposes.

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<sup>3</sup> Coastal Issues of Bridgeport, Connecticut, Kasper Associates, October, 1982.

**Public Access and Open Space**

Despite the industrialization of Bridgeport's waterfront, the City has a wealth of city-owned waterfront property which provides public access and recreational opportunities. Seaside Park and Pleasure Beach are two of the City's most important recreational resources. Pleasure Beach, which has 3,800 feet of sandy beach, is located on the barrier beach on Long Island Sound east of Bridgeport Harbor. Pleasure Beach connects to Long Beach in neighboring Stratford. Seaside Park and Fayerweather Island occupy almost the entire strip of land that separates Cedar Creek from Long Island Sound to the east of Black Rock Harbor. The 370 acre Seaside Park has approximately 25 acres (7,000 feet) of sandy beach.

The City's other waterfront recreational resources include the scenic Saint Mary's-by-the-Sea walkway which extends from Ash Creek to Black Rock Harbor; Seabright Avenue Beach which is located near the mouth of Cedar Creek; Waterfront Park which is located on the Pequonnock River's west bank, just south of Stratford Avenue; Waterview Park which is located on Waterview Avenue on Yellow Mill Creek Channel's western bank; and Ellsworth Field which is located at the intersection of Ellsworth Street and Brewster Street, on Black Rock Harbor.

The City's public boat ramps are located at the end of Newfield Avenue on Bridgeport Harbor, off of Brewster Street on Cedar Creek, and at Seaside Park (no access during the winter months). In general, these facilities need maintenance and repair.

Other City-owned parcels and street ends also create potential public access opportunities. City-owned waterfront property, including City parks, utilities, and miscellaneous parcels, are listed below in Table 2.

**BRIDGEPORT HARBOR MANAGEMENT PLAN**

**Section II**

**Harbor Conditions**

**Table 2  
City-Owned Waterfront Property  
May 1987**

**City Parks**

Ellsworth Field  
Pleasure Beach  
Riverfront Park  
Saint Mary's by the Sea  
Seabright Avenue Beach  
Seaside Park  
Waterfront Park-leased to Sheehan Center  
Waterview Park

**Utilities**

Eastside Treatment Plant  
Fire Department Headquarters  
Public Works Garage  
Railroad Station  
West Side Treatment Plant

**Miscellaneous**

Union Square Dock  
Municipal Landfill

<b><u>Other</u></b>	<b><u>Lot No.</u></b>	<b><u>Present Use</u></b>
21 Arthur Street	240-10	Captain's Cove
31 Arthur Street	240-20	Captain's Cove
41 Arthur Street	240-21	Captain's Cove
10 Ferris Street	240-10	Captain's Cove
22 Arthur Street	239-28	Captain's Cove
144 Yacht Street	239-13D	Captain's Cove
68 St. Stephens Street 238A-01		Captain's Cove
1 Bostwick Avenue	329-01B	Captain's Cove
398 Waterview Avenue	859-03	Vacant- Harbor Pointe
408 Waterview Avenue	859-02	Vacant- Harbor Pointe
220 Waterview Avenue	841-01	Vacant- Harbor Pointe
148 Waterview Avenue	831-01A	Vacant -Harbor Pointe
48 Maiden Lane	831-12	Vacant- Harbor Pointe
68-70 Maiden Lane	831-09	Vacant- Harbor Pointe
49 California	831-08	Leased to Move Yacht Club
70 East Main	829-12B	OceanFish Warehouse
336 Central Avenue	667-02A	Waterfront Area (Truck Storage)
349 Adams	668-02	Waterfront Area (Truck Storage)
364 Adams	699-02	Waterfront Area (Truck Storage)
370 Deforest	670-03	Waterfront Area (Truck Storage)
202 Housatonic Avenue	1531-02	Vacant - Congress Plaza
208 Housatonic Avenue	1531-03	Vacant - Congress Plaza

**BRIDGEPORT HARBOR MANAGEMENT PLAN**

**Table 2 Continued**

<b>590-640 Water Street</b>	<b>962-02B</b>	<b>Vacant - Renaissance Parcel</b>
<b>90 Hackley Street</b>	<b>224-18</b>	<b>Vacant - Corner Lot</b>
<b>562 Canfield Avenue</b>	<b>151-01</b>	<b>Edge of Ash Creek</b>
<b>598 Canfield Avenue</b>	<b>151-02</b>	<b>Edge of Ash Creek</b>
<b>660 Canfield Avenue</b>	<b>152-01</b>	<b>Edge of Ash Creek</b>
<b>126 Livingston Street</b>	<b>136-04</b>	<b>Edge of Ash Creek</b>
<b>118 Livingston Street</b>	<b>136-05</b>	<b>Edge of Ash Creek</b>
<b>302-382 Gilman Street</b>	<b>138-17 to 25</b>	<b>Edge of Ash Creek</b>

**Source: Bridgeport Harbors and Municipal Waterfront Property, Status Report, Office of Development Administration, Planning Division, May 1987, as amended by Philip Hardy, personal communication, 1991.**

**The City's extensive waterfront land holdings provide the potential for excellent public access and recreational opportunities. However, the quality of these resources is negatively impacted by conflicting adjacent land uses, poor maintenance, poor signage, limited parking, and access problems. Consequently, many of these resources are underutilized. For example, there is a lack of sufficient directional signage near the waterfront in such locations as Newfield Avenue. There are also limited opportunities for small boats and hand-powered craft to access the water.**

**Access to Fayerweather Island is limited. Access to Pleasure Beach via the Pleasure Beach bridge over Johnson's Creek is limited because the bridge is subject to vessel damage. Pleasure Beach Bridge also appears to constrain the use of Johnson's Creek by commercial and recreational boat traffic. The need for the rehabilitation of the Pleasure Beach Bridge has been the subject of many studies and is considered to be a short-to long range objective of the City's 1986 Master Plan. The City's landfill site which was closed in 1985 may contain the potential for other uses which can be explored in the future.**

**With the exception of Pleasure Beach, Seaside Park, and Captain's Cove none of the City's waterfront recreational areas have parking lots. Limited on-street parking is available for some recreational areas including Black Rock Harbor and Saint Mary's by-the-Sea, Housatonic, Congress Street, Water Street, Newfield Avenue, and Seaview Avenue.**

**Section II  
Section**

**Harbor**

In order to more fully utilize the City's waterfront, recreational resources, issues such as maintenance, access, signage and parking need to be addressed. The following specific needs exist:

- There is a need for better parking facilities and signage in order to improve public access to Bridgeport's waterfront. .
- The Pleasure Beach Bridge over Johnson's Creek creates difficulties in accessing Pleasure Beach. Operated on the half hour by an attendant, the bridge, at times is subject to repairs making the beach inaccessible to vehicle traffic.
- There is a need to rehabilitate, upgrade, and maintain existing waterfront recreational facilities.
- The Pequonnock River and Yellow Mill Creek Channel area north of Interstate 95 are currently underutilized and should be improved for use by small recreational craft.
- There is a need to improve public access for fishing and small craft access, particularly to Black Rock Harbor from the former city landfill, and the Newfield Avenue and Brewster Street boat ramps.
- Safety and security are important issues affecting public access to the waterfront. There is a need for additional enforcement through marine patrols.
- There is as need to improve access to Fayerweather Island.

**Recreational Marinas/Yacht Clubs**

A number of marinas, yacht clubs, and boat yards provide access, berthing and storage for recreational vessels in the waters of Bridgeport (see Table 4). As shown on Map 3, these facilities are distributed across the waterfront, with a concentration of facilities in three major areas: Black Rock Harbor; Bridgeport Harbor/Yellow Mill Creek and Johnson's Creek.

**BRIDGEPORT HARBOR MANAGEMENT PLAN**

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**Section II**

**Harbor Conditions**

**Table 3  
Inventory of Major Industrial and Commercial Port Facilities and Structures**

<b><u>Operator</u></b>	<b><u>Facility</u></b>
<b><u>Bridgeport Harbor</u></b>	
Car Tech Company	Wharf
United Illuminating Co.	Fuel Oil Dock
United Illuminating Co.	Coal Dock
United Illuminating Co.	Barge Dock
Bridgeport Port Jefferson Steamship Co.	Union Square Dock
United Illuminating Co.	Fuel Dock
Ocean Fish Co.	Pier
Tallmadge Brothers	Pier
Hitchcock Gas Engine Co.	West Pier
Hitchcock Gas Engine Co.	East Pier
Cilco Terminal	Wharf
Shell Oil Company	Bridgeport Terminal Dock
Century Resources	Bridgeport Terminal Dock
<b><u>Johnson's Creek</u></b>	
Connecticut Petroleum Wholesale	Bridgeport Terminal Dock
<b><u>Yellow Mill Channel</u></b>	
Jacob Brothers	Wharf
O&G Industries	Wharf
State of Ct.	Bulk Head- Yellow Mill
<b><u>Pequonnock River</u></b>	
Hoffman Fuel	Wharf
<b><u>Cedar Creek</u></b>	
Martin Marietta	Wharf-Cedar Creek
Hi-Ho Petroleum	Bridgeport Terminal Dock
Inland Fuel Terminal	Bridgeport Dock
Sikorsky Aircraft	Dock
Tilcon-Tomaso	Bulkhead
Ct Resources Recovery Authority	Bulkhead
O&G Industries	Bulkhead

Southern Ct. Gas Co.  
Nutrico

Bulkhead-Cedar Creek  
Bulkhead and Floating Dock

**Table 4**  
**Inventory of Recreational Slips and Moorings in Bridgeport**

<u>Private yacht Clubs</u>	<u>Location</u>	<u>Approximate No. of Slips/Moorings</u>
Black Rock Yacht Club	Black Rock Harbor)	
N.A.N.V. Port 5 Yacht Club	Black Rock Harbor)	210
Fayerweather Yacht Club	Black Rock Harbor)	
East End Yacht Club	Johnson's Creek	22 Slips; 30 moorings
Miamoque Yacht Club	Johnson's Creek	100 Slips
Move Yacht Club	Yellow Mill Creek	40 Slips
Pequonnock Yacht Club	Bridgeport Harbor	193 Slips
<b>Total Private</b>		<b>793</b>
<b><u>Marina/Boat Yards</u></b>		
Captain's Cove Marina	Cedar Creek	325 Slips
Cedar Boat ways Marina	Cedar Creek	70 Slips
Hitchcock Marine	Bridgeport Harbor	103 Slips
Lou's Boat Basin	Bridgeport Harbor	17 Slips
Dolphin's Cove Marina	Bridgeport Harbor	85 Slips
Riverside Marina	Yellow Mill Creek	75 Slips
Speer's Boatyard	Johnson's Creek	0 Slip
Fayerweather Boatyard	Burr Creek	0 Slip
Ryan's Marina	Yellow Mill Creek	65 Slips
Middle Wharf	Cedar Creek	
<b>Total Public</b>		<b>740</b>
<b>TOTAL EXISTING SLIPS/MOORINGS</b>		<b>1,533</b>

Source: Bridgeport Office of Development Administration, 5/87; Updated by IEP, Inc.  
1991

**Mooring Areas**

Of the approximately 1,533 vessels berthed in Bridgeport, roughly 16% are located on moorings. Moorings are found predominantly in two areas: Black Rock Harbor and Johnson's Creek. The greatest concentration of moorings is found within the Black Rock Harbor/Cedar Creek area (on both sides of the Federal Navigation Channel). Approximately 210 moorings are found in this area. These moorings are single swing type and support mainly sailcraft with average lengths of 20 - 40 feet. Approximately 30 moorings have been placed in Johnson's Creek and support a mixture of power craft and sail craft. No moorings have been placed at this time on Yellow Mill Creek, the Pequonnock River, or within the general waters of Bridgeport Harbor.

**Anchorage**

A number of anchorage areas have been authorized and dredged by the U. S. Army Corps of Engineers. The location of these areas are shown on Map 3 and noted below:

- o A two-acre anchorage area with a depth of 6 feet at the head of Johnson's Creek between the existing federal channel and Hollister's Dam.
  
- o A 2.4 acre anchorage area with a depth of 9 feet and a 0.6-acre anchorage with a depth of 6 feet in Johnson's Creek, these areas are provided particularly by dredging and partially by reducing the width of the existing Federal Channel opposite and north of the Miamogue Yacht Club.
  
- o An anchorage basin 25-feet deep and 23 acres in area, opposite Tongue Point.
  
- o An 18-foot deep anchorage west of the main channel between the channel and Tongue Point.
  
- o A 35-foot deep anchorage in front of Cilco Terminal in Bridgeport Harbor.

A 28-acre 6-foot deep anchorage in Burr Creek and on each side of Cedar Creek adjacent to Burr Creek, was previously authorized for dredging. However, the project was deauthorized in November 1986.

## **Turning Basin**

**A 35-foot deep turning basin connects Bridgeport Harbor and Johnson's Creek opposite the Cilco Terminal**

## **Harbor Administration**

### **Introduction**

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

### **Federal**

**National Marine Fisheries Service  
U.S. Army Corps of Engineers  
U.S. Coast Guard  
U.S. Environmental Protection Agency**

### **State**

**Department of Agriculture  
    Aquacultural Division  
Department of Environmental Protection  
    Bureau of Natural Resources  
    Law Enforcement Division  
    Bureau of Water Management  
    Bureau of Outdoor Recreation  
        Office of Boating  
    Office of Long Island Sound Programs  
Department of Health Services  
Department of Transportation  
    Harbormaster  
    Bureau of Aviation and Ports**

**Local**

**Harbor Management Commission  
Port Authority  
City Council  
Planning and Zoning Commission  
Zoning Board of Appeals  
Parks Commission  
Historic District Commission  
Department of Public Facilities/Parks  
Water Pollution Control Authority  
Redevelopment Agency  
Regional Planning Agency**

**The following review boards and commissions may have indirect influence over harbor activities because their approval is necessary for certain public actions to move forward:**

- **Board of Building Appeals**
- **Board of Contract Compliance**
- **Department of Public Facilities**
- **Health Department**

**State law authorizes a number of other boards, agencies and commissions that do not presently exist in Bridgeport but if established, would directly affect the activities on or in the harbor are:**

- **Shellfish Commission**
- **Marine Patrol**
- **Conservation Commission**

A brief description of the planning and regulatory authority of key federal, state and local agencies follows:

**Federal**

**National Marine Fisheries Service**

The National Marine Fisheries Service (NMFS) is responsible for the management of marine species including marine mammals and endangered species and in cooperation with the U. S. Fish and Wildlife Service (FWS), for anadromous fisheries such as Atlantic Salmon.

**U.S. Army Corps of Engineers**

The 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 dredging Bridgeport Harbor, Johnson's Creek, and Black Rock Harbor, as well as Seaside Park beach nourishment.

**U.S. Coast Guard**

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

**U.S. Environmental Protection Agency**

Along with the NMFS and the FWS, the EPA reviews all Section 10 and Section 404 permits before the Army Corp of Engineers. 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. The EPA is also responsible for federal grant money for upgrade of municipal sewer systems.

**STATE****Department of Agriculture****Aquacultural Division**

This agency has responsibility for shellfish mapping and the leasing of shellfish areas under state jurisdiction including promulgating regulations for these areas.

**Department of Environmental Protection****Bureau of Natural Resources****Marine Fisheries Division**

The Marine Fisheries Division is responsible for the management of finfish, lobster, squid, and crab resources living within state waters. The Bureau's main office functions as the administrative and federal aid office for the inland and marine fisheries programs. The Bureau's Marine Fisheries Headquarters in Old Lyme supports field marine fisheries research and management activities and the marine conservation law enforcement program.

**Law Enforcement Division**

The Marine Law Enforcement Division enforces fisheries statutes and regulations. Responsibilities of the marine staff include conservation law enforcement activities such as checking catches for species that are less than prescribed minimum legal size limits or for violations of season, area, and gear restrictions. Ancillary duties include boating safety patrols, investigation of boating violations, and cooperative law enforcement activities with the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, and municipal and state forces within Connecticut and from adjoining states. The Law Enforcement Division, while also located in Old Lyme, is separate from the Fisheries Division and Marine Fisheries.

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**BRIDGEPORT HARBOR MANAGEMENT PLAN**

## **Bureau of Water Management**

### **Planning and Standards Division**

The Planning and Standards Division administers the National Pollution Discharge Elimination System (NPDES) water pollution permit program and sewage control programs. The Division also establishes the state's water quality classifications and is responsible for the marine sanitation discharge law. In addition, the Division issues stormwater management and discharge permits.

### **Boating Safety and Waterways Safety Unit**

The Boating Safety and Waterways services unit is responsible for the issuance of permits for waterway markers and restricted swim areas. This office formulates state boating regulations and reviews all municipal ordinances regarding the operation of vessels and also administers the State's safe boating education program.

### **Office of Long Island Sound Programs**

The Office of Long Island Sound Program (OLISP) is responsible for administration and oversight of the state Coastal Area Management Program, including review of municipal coastal programs, technical assistance to local agencies in conducting coastal site plan reviews, coordination/review of harbor management plans and amendments, and review of proposed amendments to municipal zoning regulation and development plans. The OLISP also administers the state's tidal wetlands, coastal structures, dredging and filling, and marine mining permit programs.

### **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.

**Department of Transportation**

**Harbormaster**

The Bridgeport Harbormaster is responsible for the general care and supervision of the harbors and navigable waterways over which he is given jurisdiction. Harbormasters are employees of the state and as such are subject to the direction and control of the Connecticut Commissioner of Transportation. This includes responsibility for the safe and efficient operation of the harbors and navigable waterways pursuant to the state's laws and regulations relating to boat safety and operations. The harbormaster also works in liaison with the Harbor Management Commission and is an ex-officio member. The harbormaster is appointed by the Governor from a list of three candidates submitted by the commission. The harbor master, in conjunction with the Harbor Management Commission, is responsible for the implementation and enforcement of the Harbor Management Plan.

**Bureau of Aviation and Ports**

This agency is responsible for the supervision of the state's ports and harbors and navigable waterways, and for the liaison with local harbormasters. The Commissioner may delegate his powers and duties to a local municipality through the harbormaster and/or a local harbor management commission. The administrative jurisdiction of the harbormaster and the harbor management commission is the navigable water of the municipality landward to its mean high water mark.

**Section II**

**Harbor Conditions**

**Local**

**Harbor Management Commission**

The Harbor Management Commission is responsible for the preparing, implementing and enforcing the Harbor Management Plan for the harbors of Bridgeport. The plan may establish rules and regulations that are adopted and administered locally. The Commission may also review and make recommendations, consistent with the Plan, on any proposal affecting land in, or contiguous to, the harbor that is received by another by another municipal board such as the Planning and Zoning Commission, or a waterfront historic district commission. Furthermore, the Harbormaster, along with the Harbor Management Commission is also responsible for the preparation, implementation and enforcement of the Harbor Management Plan.

**Port Authority**

In accordance with Chapter 105, Sec. 7-329a to 7-329f of the Connecticut General Statutes, the City of Bridgeport has established the Bridgeport Port Authority. The purpose of the Authority is to foster and stimulate the shipment of freight and commerce through the ports of Bridgeport, Connecticut to develop and promote port facilities within the District in order to create jobs, increase the City's tax base and provide special revenues to the City of Bridgeport; to work with the government of the city of Bridgeport to maximize the usefulness of available public funding by consolidating private efforts to assist the City's waterfront and industrial development program and to cooperate with the State and Federal Agencies in the maintenance, development, improvement and use of district harbors, waterways and industrially zoned properties.

**City Council**

The City Council is responsible for the approval of the City's budget, public investment, and property acquisition that might affect waterfront properties and activities. The Council must ratify all ordinances including those affecting water use and must ratify all contracts. The Council passed the enabling ordinance for the Harbor Management Commission and is responsible for ratifying the Mayor's appointment of Commissioners.

**Planning and Zoning Commission**

The nine member Planning and Zoning Commission reviews the City's Master Plan and revisions to it, subdivisions, re-subdivisions, zone changes, municipal improvements, modifications, leases and sales of city owned property, referrals for grant applications and other activities specified in Chapter 126 of the Connecticut General Statutes. 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 a Coastal Site Plan Reviews for activities within the coastal boundary. The commission may divide the city into districts and may regulate the erection, construction, reconstruction, alterations or use of the land per Chapter 124 of the Connecticut General Statutes. The commission is also charged with carrying out the provisions of Chapter 440 of the Connecticut General Statutes, Wetlands and Watercourses, and is also responsible for inventorying and maintaining current records of all regulated wetland areas in the city.

**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 or area requirements of the applicable zoning regulations and can be granted if there is a demonstrated hardship that runs with the land. Where these activities are located within the coastal boundary, the Board must also conduct a Coastal Site Plan Review. The Zoning Board of Appeals is also charged with approving 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.

**Historic District Commission**

A Historic District Commission may make periodic reports to the Common Council; provide information to property owners and others involving the preservation of the district; suggest pertinent legislation; initiate planning and zoning proposals; cooperate with other regulatory agencies and civic organizations and groups interested in historic preservation; comment on all applications for zoning variances and special exceptions where they affect the historic district; furnish information and assistance in connection with any capital improvement program involving the historic; and consult with groups of experts. The Black Rock Historic District has a commission under the City Charter, and other historic districts that may be formed in Bridgeport may also have an assigned Commission appointed by the Mayor and confirmed by the Common Council. Connecticut statutes also provide that a single commission can be set up to act for all the historic districts in a municipality.

**Parks Commission**

The Parks Commission is a seven-member body appointed by the Mayor and approved by the Common 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, Ellsworth Field on Burr Creek, St. Mary's-by-the-Sea, Waterfront Park Boardwalk, and Waterview Park along the Yellow Mill Creek Channel. 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.

**Department of Public Facilities**

The Department of Public Facilities is subject to the Parks Commission's Review and directives and is responsible for the maintenance of, and upkeep of the City's parks and recreational areas, and is also responsible for the maintenance and operation of the City's bridges among other things.

**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.

### **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.

### **Board of Appraisals of Benefits and Damages**

This three-member board must approve every street abandonment or modification to the City's rights-of-way.

### **Regional Planning Agency**

Bridgeport has five representatives to the Greater Bridgeport Regional Planning Agency which reviews any land use activities within 500 feet of the border with a neighboring town. Since roads (highways), railroads, waterways (ferries), and airports require interaction with other municipalities, the Board focuses much of its energy on transportation issues.

## **SECTION III**

### **GOALS AND OBJECTIVES**

#### **Introduction:**

**This section outlines the goals and objectives for the Bridgeport Harbor Management Plan. These goals and objectives are based upon a variety of issues and concerns that were expressed by numerous individuals through interviews and public meetings. These individuals include waterfront property owners; users of the waterfront and the City's marine waters; local, state, and federal officials; and members of the Bridgeport Harbor Management Commission.**

**These goals and objectives provide a basis for the action recommendations and Water Use Plan that are outlined in subsequent sections of this plan.**

**The goals and objectives address the following six topic areas:**

- 1. Harbor Management and Administration**
- 2. Water Use Management**
- 3. Water Use for Economic Development**
- 4. Natural Resource Protection and Enhancement**
- 5. Water Quality**
- 6. Public Access, Open Space, and Recreation**

**Section III**

**Goals and Objectives**

**1. Harbor Management and Administration**

**Issues**

- **There are numerous City boards and commissions that manage and regulate waterfront and harbor activities. There is a need for improved communication between these boards and commissions to improve the management of the harbor and waterfront.**
- **There are often long delays in gaining approval from various governmental agencies at the local, state and federal level for new or expanded waterfront development. There is a need to better coordinate the decision-making process of these regulators.**
- **In order to implement the provisions of a harbor management plan, adequate funding and personnel are required.**

**Goals**

**Establish and maintain a coordinated program for the equitable management and use of Bridgeport's harbor areas**

**Objectives:**

- 1. Adopt and implement a capitalized harbor management plan for the City's water areas that is comprehensive in scope and in accordance with the Connecticut Harbor Management act.**
- 2. Establish an ongoing system of communication among land use authorities, including relevant City boards and commissions, in order to review, assess, and comment on development opportunities so as to promote the orderly use of the waterfront.**
- 3. Provide a basis for a coordinated decision-making process affecting harbor uses and activities.**
- 4. Promote equitable use of both the harbor waters and adjacent land areas.**
- 5. Direct the Harbor Commission and the Harbormaster to be responsible for the implementation and enforcement of the Harbor Management Plan.**

**6. Establish a Harbor Management Fund to provide for the administrative and maintenance cost of implementing the harbor management plan, and managing the harbor waters.**

**7. Develop an ordinance to implement the recommendations of the Harbor Management Plan in order to govern the management of Bridgeport harbor areas.**

**8. Provide for safe and secure use of all waterfront and harbor areas within the city of Bridgeport through harbor patrols and water-borne fire-rescue capabilities.**

**2. Water Use Management**

**Issues**

- **There are a number of sunken vessels in the waters of Bridgeport Harbor, including those near the railroad station in Pequonnock River and in Johnson's Creek. These pose a hazard to navigation and safety and need to be removed.**
- **There needs to be a program in place for the equitable distribution of moorings.**
- **Ongoing evaluations and adjustments must be performed to control, provide for and nurture competing uses.**
- **The Pleasure Beach Bridge, with continual maintenance problems, seems to constrain the use of Johnson Creek for both commercial and recreational vessels.**
- **Shoaling has occurred in certain harbor areas, especially in the Black Rock Harbor-Cedar Creek area. There is a need to identify dredge need areas and the special handling requirements that may be required should these areas be dredged.**
- **There is a need for improved guidelines for managing public water use of Bridgeport's harbor areas, including water skiing, wind surfing, recreational boating, including the use of personal watercraft and commercial shipping, etc.**

**Goal**

**Establish a comprehensive water use plan that provides policies for the compatible, equitable, and efficient use of Bridgeport's limited harbor areas while maintaining safe navigation for all vessels and opportunities for public use.**

**Objectives:**

- 1. Establish regulatory and non-regulatory guidelines for managing water use in Bridgeport's harbor areas.**
- 2. Establish a Water Use Plan to achieve orderly, safe and efficient use of mooring, dockage, anchorage, and fairway and navigation areas.**
- 3. Establish a mooring allocation procedure that considers:
  - a. equitable use of good mooring waters,**
  - b. sufficient anchorage for private and commercial use, and**
  - c. existing moorings, access location and boat mooring needs.****
- 4. Maintain all Federal Projects to their authorized depth and request deepening as required to sustain future development.**
- 5. Develop a mooring location map to aid in the identification of appropriate water are as for commercial, private and public uses; and establish minimum mooring standards.**
- 6. Provide adequate space for anchorage of transient vessels, and access to shoreside facilities.**
- 7. Identify and, where appropriate , recommend removal of any hazards to navigation.**
- 8. Prohibit encroachment into designated channels, fairways, and anchorages.**
- 9. Review the accuracy of existing navigational charts and aids, and make recommendations for changes where appropriate.**
- 10. Provide open water areas for recreational use; preserve and protect the unique water environment; and balance competing uses of Bridgeport's waters.**
- 11. Provide for safe and secure use of all waterfronts and harbor areas within the City of Bridgeport, establish water-borne harbor patrols and firefighting capabilities.**

**3. Waterfront Use for Economic Development**

**Issues**

- **The Waterfront area has a number of vacant and/or underutilized parcels. There is a need to re-develop portions of the waterfront with appropriate uses where priority is given to those activities that are water-dependent. Such uses might include marinas, cargo terminals, and commercial fishing facilities.**
- **Development of the waterfront could provide opportunities for enhanced public enjoyment of the harbor. Waterfront parks and walkways, and water-dependent commerce that supports recreational activities, as appropriate, need to be encouraged.**
- **There are several bridges over the Pequonnock River that are not operating properly, restricting large vessel traffic on the river. The situation impedes industrial/commercial water-dependent growth along some portions of the waterfront.**

**Goals**

**Encourage the balanced use of the waterfront in order to provide water-dependent industry and business and ensure opportunities for increased public recreation, compatible with existing waterfront development and consistent with Bridgeport's Municipal Coastal Plan.**

**Objectives**

- 1. Identify the needs of, and recommend provisions for, water-dependent uses consistent with the maritime character of Bridgeport's waterfront.**
- 2. Encourage future waterfront development to be consistent with a Coastal Plan for Bridgeport, Connecticut, 1982, as amended.**
- 3. Promote, where appropriate, expansion of the commercial fishing industry.**
- 4. Promote, where appropriate, and provide for, additional cargo terminal facilities along Bridgeport's waterfront.**
- 5. Encourage regulatory and non-regulatory initiatives that are designed to protect and expand Bridgeport Harbor's water dependent land uses.**
- 6. Develop an improved physical linkage between the downtown business district and the waterfront.**
- 7. Investigate the feasibility of improved ferry service to and from Bridgeport Harbor at its current location.**
- 8. Support the development of an economic development strategy consistent with Harbor Management Plan and with A Coastal Plan for Bridgeport Connecticut, 1982, as amended.**

**4. Natural Resource Protection**

**Issues**

- o Bridgeport needs to maintain and protect its tidal wetlands, beaches, and other critical resource environment, including wildlife habitat.**
- o Littering along portions of Bridgeport's waterfront is a major problem and needs to be controlled.**
- o Waterfront industrial and commercial uses need to be balanced with natural resource protection.**

**Goals**

**To preserve, protect, and enhance the significant natural resources and features of Bridgeport's coastal zone within a framework that allows for the orderly and balanced use of the waterfront.**

**Objectives**

- 1. Preserve and enhance significant natural resource areas, especially tidal wetlands and intertidal areas; areas containing rare, endangered, and threatened wildlife or plant species; and critical marine habitats.**
- 2. Encourage the protection and proper utilization of significant shellfish and fin fish resources.**
- 3. Establish a policy for mooring use within significant shellfish resource areas that minimizes significant impact.**
- 4. Establish a process to coordinate with other City boards and commissions to minimize the environmental and/or scenic impacts of new or expanded development.**

**5. Establish a program to improve and maintain booming plans and procedures for off-loading of hazardous materials, including petroleum products, to ensure the maintenance and enhancement of the harbor's environmental quality.**

**5. Water Quality**

**Issues.**

- **The current municipal sewage treatment facilities East Side (Bridgeport Harbor) and West Side (Black Rock Harbor) discharge into harbor areas and represent potential point sources of pollution.**
- **Certain waters and sediments of Bridgeport's harbor areas, e.g. Black Rock, are polluted and need to be improved to encourage opportunities for public use.**
- **There is a need to improve the control of non-point source pollution from new and existing waterfront development through implementation of more effective stormwater management guidelines and practices.**
- **A program to separate storm and sanitary sewers would improve the water quality of Bridgeport's harbor areas.**
- **The City and State need to better maintain the stormwater outfalls, within their respective jurisdictions, that discharge into Bridgeport's harbor.**

**Goals**

**Protect and enhance the water quality of Bridgeport's harbors in order to meet, or where possible exceed, state water quality standards in order to allow for a diversity of public and private uses.**

**Objectives**

- 1. Protect and enhance water quality through promotion of sound land use practices and proper infrastructure maintenance and improvements.**

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**BRIDGEPORT HARBOR MANAGEMENT PLAN**

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2. **Require construction practices which minimize runoff, soil erosion, and sedimentation.**
3. **Encourage measures that would improve water quality in order to minimize the impact of overboard discharges and waste disposal from pleasure boats and other waterfront activities.**
4. **Work towards implementation of non-point source pollution controls and pretreatment of discharges.**

## **6. Public Access, Open Space, and Recreation**

### **Issues**

- **Bridgeport is fortunate to have so much of its waterfront dedicated to parks and open spaces, include Seaside Park, Pleasure Beach, Waterview Park, Waterfront Park, Riverfront Park and St. Mary's-by-the- Sea.**
- **The highway system and the Metro North line adjacent to the waterfront create a barrier between Bridgeport Harbor and the downtown business district, which hinders physical and visual access to and from the harbor.**
- **Access to Pleasure beach via the Pleasure Beach Bridge is problematic, because the bridge is subject to damage from vessel traffic.**
- **The lack of adequate parking and proper signage near the waterfront, in such locations as Seaview Avenue, deters public access to the harbor. There is also limited opportunity for access for small boats and hand powered craft.**
- **The existing City-owned waterfront boat ramp access points, such as Newfield Avenue and Brewster Street, need to be improved.**

### **Goals**

**Promote public access to, and recreational opportunities along, Bridgeport's waterfront while protecting the quality of the resources and the safety and enjoyment of different user groups.**

**Section III**

**Goals and Objectives**

**Objectives**

- 1. Encourage, through liaison with City regulatory boards and commissions, future development of the waterfront to provide for public and visual access to the waterfront and harbor.**
- 2. Identify and improve, where appropriate, existing public access points and other facilities along the waterfront, such as boat ramps.**
- 3. Acquire public access points along the waterfront as the opportunities arise.**
- 4. Expand the opportunities for passive recreation along the waterfront.**
- 5. Protect and enhance selected open space, scenic areas, and visual access to marine waters through regulatory and non-regulatory mechanisms.**
- 6. Provide for boat-launching access to Bridgeport's harbor areas for a variety of vessels, including hand-powered craft and trailered boats.**
- 7. Provide for additional points of access along the waterfront.**
- 8. Improve the management and maintenance of existing City-owned waterfront public facilities, open space, City-owned street ends and access points.**

## **SECTION IV**

### **HARBOR MANAGEMENT AND WATER USE PLAN**

#### **Introduction**

**Section IV, the Harbor Management and Water Use Plan, provides specific recommendations designed to implement the goals and objectives presented in Section III. The recommendations presented below, many of which are graphically presented on Map 4 - the Water Use Plan Map, are based on the issues identified and discussed during the Bridgeport Harbor planning process and the information contained in Section II, Harbor Conditions. The Bridgeport Harbor Management Commission, The City Planning staff and various city departments and commissions, The Bridgeport Harbor Master, the Connecticut Coastal Resource Management staff, The U.S. Corps of Engineers, and numerous Bridgeport citizens, property owners, harbor users and members of the business community have all provided significant input to these recommendations. Recommendations are presented for the following six topic areas:**

- **Harbor Management and Administration**
- **Navigation and Water Use**
- **Water Use for Economic Development**
- **Natural Resource Protection and Enhancement**
- **Water Quality**
- **Public Access, Open Space and Recreation**

**Harbor Management and Administration**

Connecticut's Harbor Management Act gives municipalities an opportunity to take the lead role in the improved management of their harbors by providing broad authority to control and actively manage these areas. Bridgeport has already established a Harbor Management Commission and provided for a position of harbormaster. The City has budgeted for operating expenses for the Commission and Harbormaster activities, has provided two vessels through the Harbor Management Commission, and is considering staffing positions to augment the execution of the responsibilities of the Harbormaster and H.M.C. Further actions should include update the harbor management ordinance, refining the role of the Harbormaster and establishing a dedicated Harbor Management Fund.

**Recommendation #1: Role of the Harbormaster**

The City of Bridgeport should establish a full-time position of Harbormaster whose appointment is consistent with the process adopted by the State of Connecticut. A City-Charter revision should be proposed to ensure consistency between the City and State relative to such an appointment. Finally, the City should adopt a set of duties and responsibilities for the Harbormaster, based on existing state law (CGS Section II2a-113k-t), that identify the Harbormaster as the individual responsible for the implementation and enforcement of this plan, in concert with the Harbor Management Commission.

**Financing Harbor Administration, Maintenance and Improvements**

At present, there is an inadequate level of funding for the administration of harbor activities as well as for the cost associated with the repair and maintenance of City-owned or maintained waterfront and harbor facilities. Given the reduction of state and federal funding for such programs, the City needs to establish a means for obtaining the funds necessary to implement a Harbor Management Plan.

With the recent acquisition of a 42-foot former Coast Guard vessel, the city now has the capability to perform search and rescue, engage in water-based firefighting, and launch dive teams. The acquisition of this vessel provides an enhanced capability for better managing harbor activities. In addition to that craft, the city also has a 21-foot Chris Craft which can be used for search and rescue and for marine enforcement.

The 42-foot craft was acquired by the Harbor Management Commission with additional equipment being procured through harbor management funds and through the harbormaster's budget. The Bridgeport Fire Department has a 15-foot outboard boat.

**Recommendation #2 Harbor Fund Ordinance**

Establish a dedicated Harbor Management Fund in accordance with CGS Section II2a-113s earmarked specifically for harbor-related administration, physical improvements, legal fees, and required maintenance of such harbor infrastructure as piers, ramps, and aids to navigation. A proposed outline of such a fund is located in Appendix A.

**Recommendation #3: Additional Funds**

Continue to pursue, and , make application for state and federal funds for the development and improvement of harbor and waterfront facilities and public access.

**Recommendation #4: Water-Based Fire Fighting Capabilities**

It is recommended that the City of Bridgeport initiate a study to investigate the feasibility of establishing and maintaining a water-based fire fighting capability within the harbor. This investigation should review the adequacy of existing facilities and equipment; and explore the opportunities for shared, or mutual agreements with other cities, towns, and state and federal agencies.

**Navigation and Water Use**

The following recommendations and guidelines address the issue of competing demands on limited harbor resources, as well as the allocation of the City's waters to various uses. These include navigational issues, mooring allocation, safety and dredging activities. As described in Section II, the U.S. Army Corps of Engineers (ACEO) maintains several components of the authorized federal project within Bridgeport and Black Rock Harbors. At this time, there are no recommendations to alter or change the configuration of the federal project within either Bridgeport or Black Rock Harbor, except as noted below.

**Channel, Turning Basin, Anchorages**

Because of the relatively narrow width of the federal channel at certain locations within Bridgeport and Black Rock Harbors, and the large size of commercial and industrial vessels using the channel there is a potential conflict between commercial vessel traffic and recreational safety.

**Recommendation #5: Turning Basin**

At present, the federal turning basin which serve Bridgeport Harbor is operationally adequate given the number and size of vessels utilizing the harbor. If vessel traffic characteristics change significantly ( in terms of vessel size or volume of traffic), it is recommended that the Harbor Commission request the Army Corps of Engineers to undertake a study which would evaluate the need for expanding the turning basin.

**Recommendation #6: Maintain Clear and Free Navigation**

It is the policy of the Bridgeport Harbor Management Commission to maintain free and clear access within the federal project area. No docks, structures (fixed or floating), moorings, or any vessel attached to such, will be allowed to encroach upon any federal project area. The Commission and the Harbormaster will use reasonable efforts to identify and report existing structures, sunken vessels, fill, dredging and other work performed apparently within the area under state or federal jurisdiction. The Commission will transmit its findings to the State Department of Environmental Protection for appropriate enforcement action pursuant to Connecticut General Statutes (GCS), Sec. 22a-362 and for the imposition of civil penalties pursuant to CGS, Sec. 22a-361a, as appropriate, as well as any other relevant statutes, regulations, and laws. Additionally, the information will also be forwarded to the Corps of Engineers Regulatory Division Enforcement Section.

**Mooring and Mooring Allocation**

At present, Bridgeport has limited capacity for additional moorings, both permanent and transient. There may be a further need to increase the number of mooring areas in the harbor and to establish guidelines for mooring tackle. Furthermore, the City supports a small but healthy commercial fishing fleet made up of lobster boats and seed oyster boats. Currently, the commercial fishing vessels are moored at docks under private ownership or short-term public lease arrangements in relatively underutilized locations. As revitalization of the harbor occurs, the potential exists for displacement of the commercial fishing fleet from its current locations.

Numerous obstacles must be overcome or circumvented to facilitate the creation of new mooring fields in certain areas. Dredging and dredge disposal, existing shellfish beds, and proximity to a federal project are all considerations in new mooring field development

**Recommendation #7: Location of New Mooring Fields**

Several areas for additional mooring fields have been identified, although no formal analysis of mooring demand was undertaken. These areas are depicted on the Water Use Plan Map. It should be noted that additional new moorings noted in Johnson's Creek and Bridgeport Harbor are presently conceptual with development of specifics to be performed at a later date.

- **Black Rock Harbor - A small area to accommodate 3-5 vessels could be placed on the south side of Burr Creek, utilizing a bow-stern mooring configuration.**
- **Johnson's Creek - Additional moorings could be placed in the western arm of Johnson's Creek, if the area were to be dredged. In particular, a small area to accommodate approximately 20 shallow-draft vessels could be placed adjacent to Central Avenue**
- **Bridgeport Harbor - Two large mooring fields have been identified for inner Bridgeport Harbor. These areas lie north of the breakwaters on either side of the channel towards Pleasure Beach to the East, and Seaside Park to the west. Each mooring area could accommodate in the range of 180 to 240 vessels placed on single-swing moorings placed 100 feet to 150 feet off-center. See Figure 1. The exact number of new moorings will be contingent upon bathymetric conditions, wind and wave characteristics, and the location of any leased shellfish beds.**

**Recommendation #8: Placement of New Moorings**

Any new mooring located within the City of Bridgeport should be placed only in those areas identified on the Bridgeport Water Use Plan Map as existing or potential mooring areas. Moorings shall be placed in accordance with City of Bridgeport Mooring Rules and Regulations under the direction of the Bridgeport Harbormaster. Moorings proposed for leased shellfish areas shall be allowed at the discretion of the Harbormaster only after consultation with, and concurrence from, the leaseholder. See Appendix D, City of Bridgeport Mooring Rules and Regulations.

**Recommendation #9: Mooring Tackle Guidelines**

It is recommended that Bridgeport adopt a set of mooring tackle guidelines to aid the Harbormaster and mooring users in the placement of safe and adequate moorings. A proposed set of guidelines is provided in Appendix B.

**Recommendation #10: Transient Moorings**

Although existing transient mooring provisions are available at Captain's Cove Marina, it is recommended that public transient moorings be placed within Black Rock Harbor and Bridgeport Harbor. Specific locations of transient moorings are noted on the Water Use Map as follows:

\* **Black Rock Harbor** - Provide 5 to 6 transient moorings on the east side of the channel in an area approximately south of the City boat ramp and Red Nun "10". The placement of transient moorings in this area would allow for direct public access via the City of Bridgeport ramp at Fayerweather Island.

\* **Bridgeport Harbor** - The Water Use Plan notes two potential mooring fields inside of the breakwaters in Bridgeport Harbor. If these moorings are placed, it is recommended that up to 10% be allocated as transient moorings. Access to these moorings could be provided by a vessel launch service potentially located at either Pleasure Beach or at Seaside Park.

\* **Johnson's Creek** - The removal of derelict vessels and maintenance dredging would create opportunities for new moorings, including the establishment of a limited number of transient moorings in the creek area.

**Recommendation #11: Priority for Commercial Fishing Vessels**

It is recommended that the Harbor Commission monitor the needs of the commercial fishing fleet, particularly dockage and moorage needs. If commercial vessels become displaced, priority for new moorings should be given to commercial vessels within the closest practical vicinity of shoreside support facilities. In order to carry out this recommendation, it is recommended that Section II3 of the City of Bridgeport Harbor Master Mooring Rules and Regulations be amended to add: "If it is determined by the Harbor Commission that a commercial fishing vessel at landside dockage has been displaced, and the owner of such vessel is not able to secure a replacement dockage berth, the Harbor Commission at their discretion shall instruct the harbormaster to place the name of the individual on a priority list for assignment of a mooring within the City."

The development of upland support facilities for commercial fishing, such as dockage and maintaining buildings, etc., in private industry is encouraged.

**Recommendation #12: Increasing Mooring Capacity**

Currently most of the moorings within Bridgeport's waters are placed on single-swing type moorings, where vessels are attached to a single mooring anchor and allowed to swing free 360 degrees. This type of mooring configuration may be the least expensive to install and maintain and provide the greatest flexibility and ease of use by the individual boater. However, this type of mooring does not always provide for the most efficient use of the water surface. Assuming that sufficient land-based facilities exist to support increased mooring capacity (such as adequate on-shore parking and means of access to vessels by passengers and their gear), it is recommended that the following types of moorings be used, where practical, to augment existing fields:

- \* Double-swing type moorings;
- \* Bow and stern moorings;

**Hazards to Navigation**

Navigation hazards exist in several forms in Bridgeport's Harbor areas. These include:

\* An obstruction, usually sunken, that presents sufficient danger to navigation so as to require expeditious, affirmative action such as marking, removal or redefinition of a designated waterway to provide for navigational safety. Obstruction means anything that restricts, endangers or interferes with navigation.

\* Some obstructions that are exemplified in Bridgeport's harbor are abandoned or sunken vessels, shallow or shoaled waters, low vertical bridge clearances and designated swimming areas.

**Recommendation #13: Removal of Abandoned and Sunken Vessels**

It is recommended that, wherever possible, hazards to navigation be removed or situations corrected, including the following:

- \* Removal of sunken barges within the Pequonnock River
- \* Removal of sunken and abandoned vessels in Black Rock Harbor
- \* Removal of abandoned vessels in Johnson's Creek

It is recommended that harbor management funds be made available to facilitate removal of abandoned vessels through the Harbormaster's authority or a case by case basis, in accordance with Connecticut State General Statutes 15-140c.

**Recommendation #14: Floating Structures**

Any floating structure (i.e. a structure not attached to land), existing or proposed, within Bridgeport's Harbor area should be placed in such a manner so as not to impede harbor traffic and to allow for safe navigation. Any application for permit to the Connecticut DEP or the Corps of Engineers should be consistent with the goals, objectives, and recommendations of the Harbor Management Plan and meet all state and federal regulations. The current "Guidelines for the Placement of Fixed and Floating Structures in Navigable Waters of the United States Regulated by the New England Division of the U.S. Corps of Engineers" will be utilized as a guidance tool in the consideration of any applications. See Appendix C.

**Recommendation #15: Safety Markers in Designated Swimming Areas**

It is recommended that safety markers be placed in designated swimming areas at Seaside Park and Pleasure Beach, in order to protect swimmers from any errant watercraft in the area. It is also recommended that the Commission coordinate 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 Ask Creek. Appropriate permits for markers and signage should be obtained from the Division of State Parks, Boating Safety and Waterways Services Unit of the State D.E.P.

**Recommendation # 16 Safety Markes in Shallow Water Areas**

When notified of shallow water conditions, the Harbor Management Commission as a courtesy and in coordination with DEP, will consider the need for the placement of an appropriate marker for "shallow waters" to warn boaters.

**Recommendation #17: Bridge Repair/Replacement**

It is the policy of the Bridgeport Harbor Management Plan to support current and future access to all of the Federal navigation project components within the City's harbor areas in order to encourage economic development opportunities throughout the City. A major constraint to water access is the vertical clearance limits imposed by bridge crossings. It is recommended that bridges which limit navigational access, due to damage or lack of maintenance, be repaired or replaced, as appropriate, in a manner that relieves such limits to navigation.

Bridges that are in need of repair or replacement include:

- \* Pleasure Beach Bridge over Johnson's Creek
- \* Grand Street Bridge over the Pequonnock River (not operable)
- \* East Washington Avenue Bridge over the Pequonnock River (not operable)
- \* Congress Street Bridge over the Pequonnock River (operable, but needs upgrading)
- \* Peck railroad Bridge (not operable, currently being replaced) and
- \* Yellow Mill Bridge (operable, but needs upgrading)

**Water skiing and Use of Personal Watercraft**

The State of Connecticut Boating Statutes and Regulations prohibit water-skiing within 100 feet of any shoreline or moored vessel. In addition, the six (6) mph speed limit for watercraft within Bridgeport Harbor and Black Rock Harbor (Bridgeport City Code Chapter 31 Sec. 31-13 (b)) also applies to use of personal watercraft.

**Recommendation #18: Speed Limits**

The operation of any vessel including personal watercraft at a speed in excess of six miles per hour and water skiing shall be prohibited in the following locations within Bridgeport Harbor including Johnson's Creek, Yellow Mill Creek Channel, Pequonnock River, Cedar Creek, Burr Creek, Ash Creek, or upon waters adjacent to the City which lie within a line bounded and described as follows: Beginning at a point on the Bridgeport-Stratford town line bearing approximately SW 1/2W and extending three hundred yards from the Pleasure Beach shoreline; thence on a line bearing approximately W 1/2S to the flasher on the outer end of the east breakwater; thence on a line bearing approximately SW 3/4W to a point extending three hundred yards south of the flasher at the entrance channel of Black Rock Harbor; and thence on a line bearing approximately WNW 1/4W to a point 700 yards south of the shoreline at the entrance channel to Ash Creek, this prohibition area is consistent with the 6 MPH speed limit designated area.

**Dredging**

Currently, there are areas within Bridgeport and Black Rock Harbors, such as the area at the head of Yellow Mill Creek Channel, that have insufficient depth for the safe movement of vessels. A maintenance dredging program needs to be adopted to ensure that these areas are maintained to safe depths. Any dredged materials will require sediment quality analysis and may require special handling as part of the disposal process.

**Recommendation #19: Maintenance Dredging**

It is recommended that the full extent of the areas within the Federal Project be kept open and fully navigable through periodic maintenance dredging, and that the dredge spoils be tested to determine the existing sediment quality.

**Recommendation #20: New Dredging**

There are subtidal areas which are in need of dredging to accommodate improved vessel movement and to provide increased mooring capacity. It is recommended that the following areas be among those considered for new dredging upon demonstration of need and consistency with all applicable state and federal laws and regulations:

- Shoaled areas within Burr Creek
- Western arm of Johnson's Creek
- Yellow Mill Creek Channel, upper portion north of the I-95 bridge, and
- Deepening the main channel in Bridgeport Harbor to maximize its attractiveness for future port development. Additionally, the turning basin should be widened if a demonstrated economic benefit will result. This would enhance the competitive edge of the harbor being able to accommodate larger vessels.

All future dredging in these or other areas shall be consistent with the goals and objectives of the Harbor Management Plan, including protection of environmentally significant resources as well as with Connecticut Coastal Management Act and other relevant state laws, including CGS Sections 22a-359 through 363 (Structures, Dredging and Fill in Tidal, Coastal or Navigable Waters, and C.G.S. Sections 22a-28 through 22a-35 (Tidal Wetlands Act). and must not have an environmental impact in excess of acceptable standards.

**Waterfront Use for Economic Development**

**Bridgeport's waterfront is a mix of activities including receipt and storage of fuel via tankers, docking and merchant marine vessels for shipment of fruit, commercial fishing, dry dock and boat repair, tugboat docking, electric power operation, ferry boat service, non-water-dependent commercial activities, and a variety of recreational activities from public parks and beaches to marinas.**

**The waterfront area holds great potential for further development into a mix of appropriate uses that can contribute both vitality and a strong economic base. The waterfront has a number of vacant and/or underutilized parcels, such as the Carpenter Steel Site and the Union Dock area. Waterfront infrastructure associated with these parcels may need repair and maintenance. These areas could supports such activities as marinas, cargo terminals, and public access walkways. Repairs to several bridges over the Pequonnock River would also encourage larger vessel traffic, stimulating water-dependent commercial and industrial growth along the waterfront. Recommendation #17 addresses this issue.**

**Recommendation #21: Water-Dependent Use Policy**

**It is recommended that the Harbor Commission maintain a vigorous policy of encouraging water-dependent uses as defined by C.S.G.S. Section II2a-93(6),along the waterfront and coordinate with the City's Planning and Zoning Commission for all Coastal Site Plan review activities**

**Recommendation #22: Reservation of Deep Water Access**

Much of Bridgeport's economic history as well as its future economic development opportunities are tied to the City's heritage as a deep water industrial port. In order for Bridgeport to openly maintain its options for future expansion of terminal and commercial shipping, it is recommended that the City adopt a policy of reserving its remaining waterfront adjacent to deep water (excess of 15 feet at Mean Low Water) for appropriate uses which may require deep water access. This could include cargo ships, industrial barges, commercial passenger ferries, and shipment of goods and materials over water. The Water Use Plan Map 4 designates the waterfront zones most appropriate to be reserved for deep water access needs. These locations include:

- The portion of Bridgeport Harbor from the southwesterly end of Johnson's Creek (Harborview terminals) extending northwesterly to include the Cilco terminal to the Southern portion of the former Carpenter Steel Property;
- Both sides of the Yellow Mill Creek Channel north to approximately Deacon Street;
- Both sides of the Pequonnock River north to Grand Street Bridge
- The portion of Bridgeport Harbor extending from the foot of Main Street adjacent to the United Illuminating (UI) property, excluding tidal flats, in an easterly, and then northwesterly direction to the Union Square Dock, including all of the UI harbor frontage. The portion of Bridgeport Harbor known as Steel Point from the frontage of the former UI facility to California Street; and
- The portion of Black Rock Harbor that includes the upper portion of Cedar Creek generally north of Bostwick Avenue.

Those areas of deep water access should be maintained and set aside for water-dependent, economic developmental types of projects. The expansion and development of other water-dependent, recreational and/or commercial proposals are be encouraged.

**Recommendation #23: Commercial Fishing**

Coordinate with the commercial fishing industry to identify its needs, and, if appropriate, develop a program aimed at retaining and encouraging commercial fishing in Bridgeport Harbor. Specifically, the Commission should investigate the potential for City-owned and -managed waterfront support facilities.

**Recommendation #24: Coastal Site Plan Review**

Coordinate with the City Planning and Zoning Commission, and Zoning Board of Appeals to incorporate the referral of waterfront development proposals to the Harbor Management Commission, to ensure that such development is consistent with the goals, objectives, and recommendations of this plan.

**Natural Resource Protection and Enhancement**

Tidal wetlands, intertidal areas, shellfish resources, and wildlife habitat located in Bridgeport's harbor areas are subjected to continual stress from poor water quality and contaminated sediments from storm water runoff due to the impacts of adjacent land uses. The City needs to work towards improving the water quality of the harbor and minimizing the impact of runoff of sedimentation.

**Sandy Beaches, Tidal and Intertidal Resources**

Although much of Bridgeport's Harbor areas are developed, there remain a number of natural resource areas that provide: 1) substantial value for marine life in the coastal waters in and around the City, and 2) valuable recreational assets. Tidal wetlands in Ash Creek, Fayerweather Island, and Great Meadows provide habitats for shorebirds and finfish. Pleasure Beach offers both recreational opportunities and a natural barrier from coastal storms. It is important to continue to protect these areas, and where they have become degraded, provide opportunities for enhancement.

**Recommendation #25: Natural Resource Protection**

The Bridgeport Harbor Management Commission should coordinate with other City boards and Commissions to actively support enforcement of local zoning, subdivision and Coastal Site Plan Review regulations and to assess, and where necessary mitigate, development impacts on Bridgeport's natural resources including beaches, tidal wetlands, intertidal areas and wildlife habitat. Any development or redevelopment project involving shoreline stabilization should encourage non-structural approaches (such as re-seeding or vegetative buffering) over structural approaches.

**Recommendation #26: Tidal Wetland Enhancement**

The Bridgeport Harbor Management Commission supports tidal wetlands enhancement and should coordinate with relevant City agencies and the CT. DEP to manage tidal wetlands to protect, and where appropriate, enhance the City's significant tidal wetland areas, including Ash Creek, the Lewis Gut/Pleasure Beach area, and the western shore of Black Rock Harbor.

**Shellfish Resources**

The City's intertidal areas and near shore waters, including the harbor areas, contain concentrations of shellfish. A priority policy of the City should be to encourage the protection, proper utilization and re-establishment, in appropriate areas, of Bridgeport's shellfish resources. Such a policy will provide greater opportunities for both commercial and recreational users. As part of this policy, the City should greatly restrict, and where possible eliminate, sewage discharges into marine waters.

**Recommendation #27: Shellfish Management**

The Harbor Management Commission should coordinate with the City Health Department and the State Division of Aquaculture to protect and manage Bridgeport's significant shellfish resources, especially the leased oyster beds.

**Recommendation #28: Shellfish Commission**

As the quality of the water in Bridgeport's harbor area improves, the City should consider the establishment of a Shellfish Commission to manage shellfish resources within the jurisdictional waters of the City.

**Water Quality**

Water quality is affected by both direct and indirect sources of pollution. Indirect sources of water pollution may include salt piles, landfills, salted road, agricultural runoff, and storm water runoff from waterfront areas such as waterfront industries, marinas, and streets. The primary direct source within the City's harbor areas is the treated effluent discharged from the East Side and West Side Wastewater Treatment Facilities. At present, the City is working with the State to upgrade both of these facilities and to separate the storm and sanitary sewers. The City is also working to reduce and better manage the stormwater outfalls which discharge into the harbor areas.

**Recommendation #29: Upgrade Wastewater Treatment Plants**

The Harbor Management Commission should coordinate with the Bridgeport Water Pollution Control Authority to ensure that the program for upgrading the East and West Side Wastewater Treatment Facilities proceeds according to schedule. The Commission should monitor the results of the Long Island Sound Study on water quality to determine if there is a need to implement advanced treatment technology at the City's facilities.

**Recommendation #30: Indirect Discharges - BMPs**

The City of Bridgeport should minimize stormwater runoff and other direct discharges to City waters from new and existing upland development by requiring "Best Management Practices" (BMPs) such as the interception and diversion of stormwater to detention basins, and vegetative buffers to allow for natural assimilation of stormwater.

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**BRIDGEPORT HARBOR MANAGEMENT PLAN**

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**Recommendation #31: Eliminate Combined Sewer Overflows**

The City of Bridgeport Harbor Management Commission should monitor the current Combined Sewer Overflow (CSO) and stormwater outfall reduction programs and encourage the Water Pollution Control Authority (WPCA) to install sediment and grease traps on the remaining outfalls that discharge to Bridgeport's harbor areas. The Commission should encourage and support the continued separation of storm and sanitary sewage.

**Recommendation #32: Discharges from Vessels**

It is recommended that the water of the City of Bridgeport be established as a "No-Discharge Zone", thus prohibiting the discharge of wastes from boat toilets or holding tanks.

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). Such facilities with less than 25 vessels shall be exempt.

The Commission recommends that any vessel with a Type III MSD be fitted in such a way that a "Y" valve is connected to a holding tank and a through-the-hull fitting.

In addition, all marinas and yacht clubs providing boat dockage or moorage shall provide adequate on-shore restroom facilities for the use of their patrons.

**Recommendation #33: Oversee Former Landfill Discharge Monitoring**

The commission should coordinate with appropriate city agencies and boards to oversee the monitoring of the effluent from the former city landfill at Seaside Park.

**Recommendation #34: Emergency Response Operations**

All marinas and yacht club operations with 25 vessels or more should be required to develop response procedures in the event of a fuel/oil spill; sewage spill; fire; or hurricane or severe weather. Such a provision could be accomplished through an amendment to the City Charter, Chapter 31 Wharves and vessels or through the establishment of a new City ordinance, which would need approval by the State DEP before adoption.

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**BRIDGEPORT HARBOR MANAGEMENT PLAN**

### **Recommendation #35: Hazardous Waste/Material Spill Planning**

It is recommended that the City of Bridgeport prepare a City-wide Hazardous Material Spill Emergency Response Plan which would establish the response protocol for local police, fire, Board of Health, DPW, Harbormaster, and other appropriate City and State Agencies in the event of an emergency.

All marinas and yacht clubs with 25 or more vessels should be required to develop their own Emergency Spill Contingency Plan. Basic elements of such a plan include:

- 1) Posting of Notification procedures in the event of a spill, including State, EPA, and Coast Guard emergency telephone numbers.
- 2) Description of the spill, including location, source, time, volume, nature of spill material, movement of the spill, responsible party(s), actions already taken and planned, and weather conditions at spill site.
- 3) Immediate on-site availability (less than 1/4 hour) of some type of containment equipment, i.e. booms, absorbent material, or skimmers. Marina personnel should be trained and drilled in the use of such equipment.
- 4) Plan for the disposal of the collected fuel or other pollutant or contaminated material.

### **Public Access, Open Space and Recreation**

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. Seaside Park, Pleasure Beach, and ramps at Newfield Avenue and Brewster Street provide significant opportunities for recreational activities and public access. Some of these areas could be upgraded through capital improvements, proper maintenance and improved signage.

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## **BRIDGEPORT HARBOR MANAGEMENT PLAN**

**Recommendation #36: Improving Public Access**

Coordinate with the Parks Commission and Planning and Zoning Commission to inventory all points of public access to Bridgeport's harbor areas and prepare a plan for maintenance and improvements. In addition, locate and prioritize, as appropriate, locations along the waterfront to be acquired by the City to improve the opportunity for public access.

**Recommendation #37: Linkage of Downtown to Harbor**

Encourage the linkage of Bridgeport's downtown business district to the harbor and waterfront area, through a public works improvement program that upgrades the Waterfront Park and Union Square Dock areas to encourage public use and that improves physical access and proper signage. Work with Metronorth to study the feasibility of relocating the rail line and station that are adjacent to the waterfront.

**Recommendation #38: Improve Boat Ramps**

Upgrade the City's public boat launch ramp access points through construction of improved ramp facilities, including the placement of proper signage, and the addition of parking facilities as appropriate.

**Recommendation #39: Public Right-of-Way (Street Ends)**

It is recommended that the City preserve existing public street ends which terminate at the waters edge. Where ownership status is unclear, research should be conducted to determine whether or not such areas can be legally designated as public access points. Where public ownership is clear, signage should be installed, as appropriate, notifying the public of their right to access. Public easements that exist over private land should be marked and posted.

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**BRIDGEPORT HARBOR MANAGEMENT PLAN**

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**Recommendation #40: Signage Program**

Coordinate with appropriate City agencies to identify points of public access as well as to develop a program to design, construct and install such signs in appropriate locations. Department of Environmental Protection's Office of Long Island Sound Programs should be contacted to determine the availability of state funding for a signage program.

**Recommendation #41 Union Square Dock**

Work with other City and State agencies to revitalize Union Square Dock by upgrading the roadway surface, restoring the bulkhead and dock, and providing facilities for public recreation and transient vessel dockage

**Recommendation #42: Pleasure Beach**

Work with the City's Department of Public Facilities to properly manage and maintain Pleasure Beach as a key recreational asset for Bridgeport. Investigate the option of providing a launch service to future mooring fields or creating a public marina on the inner harbor adjacent to Pleasure Beach. Finally, work to upgrade the Pleasure Beach Bridge and to investigate additional means of access.

**Recommendation #43: Expanded Waterfront Recreation Opportunities**

There are several City-owned parcels adjacent to the harbor that are currently under-utilized including parcels on the Pequonnock River, Yellow Mill Channel and Johnson's Creek. These parcels, identified on the Water Use Plan Map, should be improved and upgraded to provide for additional recreational opportunities and public access. These sites are well-suited for launching hand-powered craft, such as kayaks and canoes.

**Recommendation #44: Harbor Pride Day/Week**

Sponsor a Harbor Pride Day (or week) in order to focus attention on the opportunities that Bridgeport Harbor can afford its citizens. Numerous events and activities can be scheduled such as historic boat visits, rowing contest, visits to U.S. Coast Guard/Naval vessels, blessing of the fishing fleet, etc.

**REFERENCES**

**A Coastal Plan for Bridgeport, Connecticut, Revisions to the Master Plan, Prepared for the City of Bridgeport by Kasper Associates, Inc., November, 1982.**

**A Study of Marine Recreational fisheries in Connecticut, 1984-1988**, State of Connecticut, Department of Environmental Protection, Branch of Environmental conservation, Bureau of Fisheries and Wildlife, Division of Marine Fisheries, 1990.

**Bridgeport Harbors and Municipal Waterfront Property**, Status Report, Office of Development Administration, Planning Division, May 1987.

**Coastal Structures Inventory, Planning Assistance Report, Bridgeport Harbor and Vicinity**, Bridgeport, Connecticut, U.S. Army Corps of Engineers, December 1985.

**Condition of Improvement as of 30 September 1988, Bridgeport Harbor**, Supplemental Sheet No. 143, Supplemental Sheet No. 143.1, New England Division, U.S. Army Corps of Engineers, Waltham, M.A.

**Managing the shoreline for Water Dependent Uses, A Handbook of Legal Tools, Marine Law Institute**, December, 1988.

**Master Plan**, City of Bridgeport, Connecticut, January 1986.

**Mooring Rules and Regulations**, Department of the Harbormaster, City of Bridgeport.

**Municipal Marina Fees in Selected Connecticut Communities**, Connecticut Conference of Municipalities, June 1989.

Personal communication with Larry Keane, Water Pollution Control Authority.

Personal communication with Christopher Mocciae, Planning and Standards Division, Water Management Bureau, State of Connecticut, May 1, 1991.

Personal communication with Malcolm Shute, Aquaculture Division, State of Connecticut.

**Zoning Regulations of the City of Bridgeport, Connecticut**

**1985 Land Use Map**, Prepared by the Office of Development Administration, Planning Division, January 1986.

## Appendix A

**Ordinance for Establishment of a Municipal Harbor Management Fund  
Bridgeport, Connecticut**

**WHEREAS, The City of Bridgeport, Connecticut has developed a Harbor Management Plan pursuant to State requirements as outlined in C.G.S. Sections 22a-113k through 22a-113t and other related legislation, and**

**WHEREAS, The City of Bridgeport wishes to manage its harbor and associated waters to increase the use of the harbor by its residents, provide adequate maintenance for, and preserve and enhance the beauty and value of the harbor as a recreational and economic resource, and manage it as a valuable environmental resource, and**

**WHEREAS, The City believes that the most fiscally responsible way to ensure that funds are available for the required maintenance and management of Bridgeport Harbor is to establish a separate and distinct Harbor Management Fund,**

**THEREFORE, the Mayor and City Council hereby enact the Harbor Management Fund to be used hereinafter set forth.**

#### **SECTION 1: Creation of a Harbor Management Fund**

**The City of Bridgeport Harbor Management Fund is hereby created. This fund is created for the purpose of accruing and disbursing funds to be used by the Harbor Management Commission. The Finance Director is hereby directed to establish a Harbor Management Fund in the accounts of the City. The sources of monies for this fund shall be as described herein.**

#### **SECTION 2: Sources of Monies**

**All monies collected from the following sources shall be deposited into the Harbor Management Fund.**

- 1. Fines or other monies collected from violators of Harbor Rules and Regulations or enforcement**
- 2. State Boat Registration Funds Returned by the State**
- 3. Municipal Boat Launching Ramp Permit Fees**
- 4. Municipal Mooring and Docking Fees**
- 5. Maintenance Dredging Fund**
- 6. Special Grants from State or Federal Agencies**

7. **Private Donations**
8. **Other sources of funds that relate directly to Bridgeport Harbor**

### **SECTION III: Investment and Management of Harbor Funds**

**Monies for the above mentioned sources shall be deposited into the Harbor Management Fund no later than the first business day following the day on which the monies were collected. Monies in the Harbor Management fund shall be invested by the Commission in a manner consistent with established City idle investment policy with all investment income added to the assets of the fund, less fees, if any, incurred in the investment of those funds; provided, however, that the amount of fees paid be in proportion to the amount invested by the fund.**

### **SECTION 4: Expenditure from Harbor Management Fund**

**Harbor Management Fund monies shall only be spent for purposes related to capital improvements to, or planning and operations of, Bridgeport Harbor and its associated waterfront as delineated in the City ordinance creating the Harbor Management Commission. Each year the Harbor Management Commission shall establish a budget for the expenditure of monies from the Harbor Management Fund. This budget shall describe projects to be funded with monies from the Harbor Management fund. The Harbor Management Commission may hold public hearings on their proposed income and expenditure budget recommendations, in a manner consistent with the City Charter.**

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## Appendix B

## 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.

Diameter Registered Boat Length Steel Wire (Feet)	Mushroom Anchor (Pounds)	Bottom		Pennant	
		Chain (in)	Chain(in)	Nylon Top (in) Double Bridle	Stainless Dacron Line* (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 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 in 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.**

**No representation of adequacy is made by this section or by the Harbormaster's acceptance of proposed tackle.**

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## Appendix C

**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 land owners. 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. which 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 which**

**If abutting property owners ..... 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 D**

**CITY OF BRIDGEPORT**

**DEPARTMENT OF THE  
HARBORMASTER**

**MOORING RULES AND REGULATIONS**

**CITY OF BRIDGEPORT HARBORMASTER  
MOORING RULES AND REGULATIONS**

The following rules and regulations are established by the Harbormaster of the City of Bridgeport, Connecticut, pursuant to Bridgeport's Code of Ordinances Section III1-27(f).

1. No mooring in the waters of the City of Bridgeport is permitted without first paying the required fee and obtaining a valid permit issued by the City's Harbormaster.
2. Applications for mooring permits in a form approved by the Harbor Commission of the City of Bridgeport (including applications for renewal or relocation) will be received the Harbormaster annually commencing February 1 for the following permit year.
3. Any person, association, corporation, or other group may apply for one (1) mooring permit by completing in full the application provided for that purpose and submitting the completed application to the Harbormaster. In the case of a corporation, association, or other group however organized, disclosure of the principals of the corporation, and evidence of corporate organization must be submitted by producing current articles of incorporation or a similar instrument registered with, approved and issued by the State of Connecticut. Boating clubs may apply for additional moorings to be used for guest or transient moorings.
4. Commencing on or about March 1 of each permit year the Harbormaster will issue mooring permits for the successor permit year first to renewal applicants, including those relocating to different moorings, and then in the order of the Harbormaster's receipt of the permit application.
5. Mooring permits are valid for a period of one (1) year from April first through March thirty-first of each permit year unless renewed in accordance with provisions of this ordinance.
6. Permits issued during a permit year for the same permit year will be issued for the remainder of the permit year, without reduction of the annual permit fee.
7. A permit holder shall have the opportunity to renew the same mooring, if the Harbormaster has received the renewal application on or before the last day of February of the then current permit year.
8. A permit holder shall have the opportunity to relocate to a different mooring in a successor permit year so long as the mooring sought is or will become vacant for the renewal year and so long as the Harbormaster has received an appropriate relocation request on or before the last day of February of the then current year.

9. Moorings will be issued in the order of the Harbormaster's receipt of permit applications, subject to the renewal (including those relocating to different moorings) rights set forth herein, upon payment of fees established by the Harbor Commission.
10. A valid mooring permit issued to a person who dies during the permit year may be retained by the spouse, parent or child (at least eighteen (18) years of age) of the permit holder, together with renewal and relocation rights set forth herein.
11. Mooring permits issued to a permit holder for a single vessel only to which the applicant holds the title or has an interest in, or a replacement vessel approved by the Harbormaster. The mooring permit may not be loaned, leased, sold or otherwise transferred without the approval of the Harbormaster.
12. Mooring permits are subject to immediate forfeiture by the Harbormaster upon his determination of a violation of Connecticut General Statutes or City laws relating to moorings or State or City mooring rules or regulations.
13. Permit holders who do not utilize their mooring on or before July 10 in a permit year shall be notified by the Harbormaster that the permit is in jeopardy. Owners must respond within ten (10) days of the notification or forfeit the mooring.
14. All moorings are to be located according to assignment by the Harbormaster.
15. The Harbormaster shall issue annually a valid identification sticker for each mooring permit, such sticker to be placed on the upper right side of the transom.
16. No vessel moored in Bridgeport waters will be so moored as to extend beyond the mooring area into any designated navigable area within the waters of the City of Bridgeport, subject to the provisions of Connecticut General Statutes, Section 15-8 "Power to station vessels. Penalty for restricting" (Copy attached) and as amended from time to time.
17. No person shall moor any vessel in the waters of the City of Bridgeport at a mooring assigned to any other person, without permission of the mooring owner. Transient boaters shall receive mooring assignments from the Harbormaster, or from the Dockmaster in the event the mooring is permitted to a boat club or marina.
18. No person shall make fast or secure any vessel except a tender or dinghy used to transport crew or cargo to or from shore, to any mooring already occupied by another vessel already moored.

19. The Harbormaster and/or police shall remove or cause to be removed and stored at the expense of the permit holder or owner, any vessel moored in violation of these rules and regulations.

20. The Harbormaster shall keep a detailed list of each mooring, its location, and the owners name, home and business address, telephone number, date of receipt of application, date mooring was set, and name, length, draft, registration number or documentation number, and type of vessel to be attached thereto. The list shall be available for public inspection.

21. The Harbormaster will maintain a waiting list from which he may assign moorings which become available during the permit year or in a successor year. The list shall be available for public inspection.

22. Available moorings shall be offered to the senior applicant on the mooring waiting list, subject to the constraints contained in these rules and regulations. If the available mooring is not suitable to accommodate the senior applicant's vessel or specific needs, it shall be offered to the next senior qualified applicant. The senior applicant shall retain his place on the waiting list in this case. The Harbormaster shall continue efforts to provide a suitable mooring for the senior applicant. If the senior applicant refuses a mooring which is suitable for his or her vessel in the opinion of the Harbormaster, they shall be removed from the waiting list.

23. Whenever the holder of a mooring permit transfers the title or interest in or otherwise parts with possession of the vessel identified in the mooring permit to another person by any arrangement whatsoever, the mooring permit shall be forfeited except as otherwise provided herein. The new possessor, transferee or owner shall have no right to use the mooring space covered by the mooring permit. The original holder of the mooring permit may, upon written application to and approval by the Harbormaster, retain the mooring permit provided that another vessel owned by the permit holder is moved onto the mooring within thirty (30) days and provided that the vessel is the proper size for the mooring space covered by the mooring permit (unless the period is extended by the Harbormaster because of special circumstances). If the replacement vessel is significantly smaller, larger or of different draft or type, the Harbormaster shall have the right to relocate the vessel to another, more suitable mooring if available.

24. Vessels may be moored in the waters of the City of Bridgeport with a grid system or otherwise as established by the Harbor Commission. Moorings shall be assigned to an applicant by the Harbormaster with due consideration of vessel size, draft, navigation safety, on-land access requirements and other relevant factors. The Harbormaster shall determine the necessity of bow and stern vessel moorings.

25. The Harbormaster shall provide, as he deems appropriate and necessary, moorings, as directed by the Harbor Commission for transient vessels upon payment of fees established by City ordinance or by the Harbor Commission.

26. No mooring tackle shall be placed in the waters of the City of Bridgeport without inspection and approval by the Harbormaster. The Harbormaster must direct placement of all moorings. Each mooring tackle shall be raised or removed for periodic inspection by the Harbormaster as he deems necessary. Further, each permit holder shall once every two (2) years make arrangements for the inspection of mooring tackle by the Harbormaster. All inspections shall be at the sole expense of the permit holder.

27. The Harbormaster will maintain a record of the inspection and his report for a period of four (4) years or as required by law. If, as the result of such inspection it shall be determined that any chain, shackle, swivel or other piece of mooring tackle has become unsafe or otherwise inadequate, all such chain, shackle, swivel or other piece of mooring tackle shall be replaced accordingly at the sole expense of the owner. Failure to make such replacement shall result in a forfeiture of the mooring permit.

28. The owner of any vessel moored within the waters of the City of Bridgeport shall be responsible for causing such vessel to be moored in accordance with the directive of the Harbormaster and with proper care and equipment and in such manner as may be required to prevent breakaway and resulting damage. Utilization of proper mooring tackle is necessary to secure vessels adequately at their moorings. Storms, wind, waves, tides, currents and wash must be considered when selecting appropriate hardware. Each person mooring a vessel is responsible for any damage to that vessel or to any other vessel or any other property caused by that vessel. The City of Bridgeport assumes no liability for personal injury or property damage which may result from the utilization of unsafe or otherwise inadequate mooring tackle.

29. The Harbormaster shall approve all applications for moorings from holders thereof for more than one (1) year preceding the adoption of these rules and regulations upon the payment of appropriate fees.

30. No appeals will be heard on the decision of the Harbormaster of the forfeiture of a permit.

31. The term Harbormaster as used herein shall include the Harbormaster, Deputy Harbormaster and any lawful designee.