

CHARLESTOWN HARBOR MANAGEMENT PLAN



APPROVED PLAN 2018



**The Town of Charlestown, Rhode Island
Coastal Pond Management Commission
Harbors Department
Planning Department
GIS Department
Stormwater/Wastewater Management Office**

CHARLESTOWN HARBOR MANAGEMENT PLAN

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Table of Contents

	Page
I. OVERVIEW	I-1
Introduction.....	I-1
The Charlestown Harbor Management Plan.....	I-3
Goals and Objectives.....	I-5
II. SALT PONDS DESCRIPTION	II-1
History of the Ponds.....	II-1
Physical Setting	II-3
Regulatory Setting	II-7
Natural Resources of the Ponds	II-10
Uses of the Salt Ponds.....	II-13
III.ISSUES, POLICIES AND RECOMMENDED ACTIONS	III-1
Water Quality.....	III-2
Public Access.....	III-20
Mooring Management	III-29
Storm Preparedness	III-38
Boating Safety and Navigation.....	III-52
Recreational Fisheries	III-56
Aquaculture	III-62
Breachway and Channel Management.....	III-77
Barrier Beaches.....	III-84

FIGURES

- Fig II-1** The Salt Ponds of Charlestown
- Fig II-2** Ninigret Pond FEMA Flood Zones
- Fig II-3** Quonochontaug Pond FEMA Flood Zones
- Fig II-4** Salt Ponds CRMC Water Use Categories
- Fig II-5** Salt Ponds Clean Water Act Section 303(d) Listed Waters
- Fig II-6** Salt Ponds Charlestown Zoning Districts
- Fig II-7** Ninigret Pond Submerged Aquatic Vegetation (2016)
- Fig II-8** Quonochontaug Pond Submerged Aquatic Vegetation (2016)
- Fig II-9** Salt Pond Uses: Conservation and Recreation Areas, Marinas and Boat Launches
- Fig III-1** Salt Ponds Watershed with CRMC Land Use Classifications
- Fig III-2** Charlestown Beach Road CRMC Designated Right-of-Way

- Fig III-3** East Beach Road CRMC Designated Right-of-Way
Fig III-4 Overview of Mooring Field Locations
Fig III-5 Ninigret Pond Shellfish Closures and Aquaculture Lease Areas
Fig III-6 Quonochontaug Pond Shellfish Closures and Aquaculture Lease Areas
Fig III-7 Ninigret Pond Dredging and Restoration Efforts
Fig III-8 Quonochontaug Pond Ninigret Avenue Barrier Beach
Fig III-9 Ninigret Pond East Beach Barrier
Fig III-10 Ninigret Pond Charlestown Beach Barriers

APPENDICES

- I** Ninigret Pond Marina Slip Counts
II Salt Ponds Designated Mooring Fields
III Active Mooring Counts by Field, 2017
IV The Saffir-Simpson Hurricane Scale
V Storm Preparedness and Recovery Schedule for Harbor Master and Staff
VI Marina Storm Preparedness and Recovery Plan
VII Individual Boater Storm Preparedness and Recovery Plan
VIII Aquaculture Permit Flowchart
IX MOU between the RI CRMC and the Town of Charlestown, RI on Aquaculture
X Chapter 86 of the Town Code *Boats and Waterways*
XI Chapter 96 of the Town Code *Coastal Ponds and Moorings*

CHAPTER I. OVERVIEW

Introduction

Charlestown's salt ponds, which include parts of Quonochontaug and Green Hill Ponds and the entirety of Ninigret Pond, are both local and regional attractions, with a popularity due to rich fish and shellfish resources, great beauty and long history of both commercial and recreational use. The need to maintain and protect these exceptional natural resources while allowing a balance of uses is of critical importance to the Town of Charlestown as well as to the state and federal agencies which have regulatory authority over uses and developments that impact public waters.



Vic G. Dvorak

Ninigret (Charlestown) Pond and Charlestown Breachway

Green Hill Pond

The authority, and the responsibility, to manage the salt ponds have been delegated by the State of Rhode Island to the Town of Charlestown through a local harbor management program. The Charlestown Harbor Management Plan, enacted under the guidelines of the Rhode Island Coastal Resources Management Council, is a document which establishes a set of goals and policies, and identifies a number of recommended actions, for the management of Charlestown's salt ponds, which serve as the town's harbors.

State Agency Authority

The submerged lands, coastal features and tidal waters of Rhode Island are under state ownership and jurisdiction. The state carries out several different management and regulatory programs to protect the public interest in these areas.

The Rhode Island Coastal Resources Management Council (CRMC) is the state's primary agency for planning and management of coastal resources. The CRMC was granted jurisdiction over all activities taking place in tidal waters and along the coastline by the RI General Assembly in 1971. The enabling legislation that created the CRMC also established the regulatory authority under which it operates; policies, procedures and regulations are laid out in the document entitled *Coastal Resources Management Program*, also known as the "Red Book".

The Rhode Island Department of Environmental Management (DEM) has primary responsibility within the state for implementing the requirements of the federal Clean Water Act. Specific regulations and water quality standards are implemented through the DEM Division of Water Resources. Fin and shell fisheries are managed by the DEM Division of Fish and Wildlife.

Federal Authority

The US Army Corps of Engineers is the federal permitting authority for any work seaward of the mean high water line in all navigable waters of the United States. In Rhode Island, navigable waters include those subject to tidal influence. Under the Clean Water Act, the Army Corps must also approve the discharge of fill material into all federal waters. In coastal areas, this jurisdiction extends landward to the high tide line, or the landward limit of any wetlands, whichever is more extensive.

Authorizing State Legislation

Chapter 4 of Title 46 of the General Laws of Rhode Island (Harbors and Harbor Lines) confers upon the coastal municipalities of the state certain powers concerning the regulation of public waters within their jurisdiction. Under RI General Law 46-4-6.11¹, the Town of Charlestown is specifically authorized, through its Town Council, to appoint a Harbor Master and adopt ordinances, rules and regulations governing the public waters under its jurisdiction. The town is authorized to regulate the following by ordinance:

1. Vessel operation within the ponds;
2. Size, type, location and use of all anchorages and moorings in the ponds;

¹ <http://webserver.rilin.state.ri.us/Statutes/TITLE46/46-4/46-4-6.11.HTM>

3. Activities such as waterskiing, regattas and marine parades; and
4. Removal of wrecks, derelicts or abandoned boats.

Coastal Pond Management Commission

The Charlestown Coastal Pond Management Commission, a seven member board appointed by the Town Council, is the local body authorized to regulate the salt ponds of the town through the implementation of the Harbor Management Plan and subsequent ordinances and other regulations and policies, subject to the approval of the Charlestown Town Council and the CRMC. The Charlestown Harbor Master is an ex-officio member of the commission.

Among other duties, the Coastal Pond Management Commission (CPMC) is responsible for reviewing and updating the Harbor Management Plan, as necessary, including at least once every five years. The CPMC also recommends to the Town Council the adoption of rules, regulations, fees, penalties and other amendments to the Harbor Management Plan and any subsequent ordinances necessary to fulfill the goals and objectives of the plan.

The Charlestown Harbor Management Plan

Planning History

The first Harbor Management Plan for the Town of Charlestown, dated August 1989, was prepared by the Charlestown Conservation Commission, with assistance from the University of Rhode Island Coastal Resources Center. In 2015, the town initiated a major update under the oversight of the CPMC. The current plan, the completion of this effort, replaces and supersedes the original plan.

The updating of the Charlestown Harbor Management Plan was undertaken by a committee consisting of the chair of the Charlestown CPMC, the Harbor Master, the GIS Manager, the Town Planner, and the Wastewater and Stormwater Program Manager. The group also included a Town Council member and a representative from the Salt Ponds Coalition, a regional environmental organization promoting the salt ponds of southern Rhode Island.

The Harbor Management Plan requires administrative approval by the CRMC and the issuance of a Water Quality Certificate (WCQ) from the DEM for those sections of the plan that affect water quality. The plan was adopted following a public hearing held by the Charlestown Town Council. Amendments to the plan also require review and approval by the CRMC and local adoption in the form of a public hearing. The plan is granted approval by the CRMC for a five year period.

Contents of the Harbor Management Plan

The Harbor Management Plan is a comprehensive document which includes the following:

1. A description of the current physical and environmental conditions, and uses, of the salt ponds;
2. An identification of the issues associated with access to and uses of the salt ponds;
3. Goals and policies for guiding public and private use of the salt pond waters and shoreline areas; and
4. Recommended actions for the town to undertake to achieve the goals and policies relating to the following:
 - Water Quality
 - Public Access
 - Mooring Management
 - Storm Preparedness
 - Boating Safety
 - Recreational Fisheries
 - Aquaculture
 - Breachway and Channel Management
 - Barrier Beaches

Local Enforcement and Planning

The Charlestown Harbor Management Plan is supported by two local regulations: *Boats and Waterways* (see Chapter 86 of the Town Code² and Appendix X) and *Coastal Ponds and Mooring* (see Chapter 96³ and Appendix XI), which are adopted by the Town Council and enforced by the Harbor Master. These regulations and many other aspects of the plan, as described in detail in the following pages, are under the guidance of the Coastal Pond Management Commission. As a town planning and policy document, the Charlestown Harbor Management Plan is also to be referenced in, and compatible with, the Charlestown Comprehensive Plan and the Charlestown Hazard Mitigation Plan.

² <http://ecode360.com/8490270>

³ <http://ecode360.com/8490405>



Vic G. Dvorak

Goals and Objectives

The general goals of this Harbor Management Plan are to:

1. Protect and enhance the unique ecological characteristics and natural beauty of the salt ponds;
2. Provide for maximum public access to, and use and enjoyment of the ponds in an equitable and safe manner; and
3. Resolve conflicts among the different pond uses in a manner which provides for the safe, managed and efficient use of the water and shoreline areas, consistent with the goals, policies and standards of the Rhode Island *Coastal Resources Management Program* (Red Book).

The objectives to reach these goals are to:

1. Improve and safeguard the water quality of the ponds to ensure their use for public contact recreation, recreational and commercial fishing, and boating;
2. Achieve a proper balance between the preservation of the living resources of the ponds, and the diversity and intensity of activities they support;
3. Improve public access to the ponds;
4. Establish and maintain defined mooring fields for the equitable and efficient distribution of private and commercial moorings without compromising public health and safety;
5. Ensure that plans and procedures are in place to protect lives and property during severe weather events;
6. Maintain a safe environment for boaters and all other users of the ponds by enacting and vigorously enforcing boating regulations;
7. Take appropriate measures to prevent encroachment on and impairment of the local fin and shellfisheries, which are important historic and economic resources, as well as to manage commercial shellfish aquaculture;
8. Maintain and manage the features which make the salt ponds possible – the breachways and the barrier beaches;
9. Educate the public on the value of the salt ponds and the need for proper stewardship; and
10. Identify action items to implement the goals of the Charlestown Harbor Management Plan.

The intent of this Harbor Management Plan is to provide for access to the salt ponds, to foster a sense of stewardship of the ponds, and to manage their use in a sustainable and balanced manner.

CHAPTER II. SALT PONDS DESCRIPTION

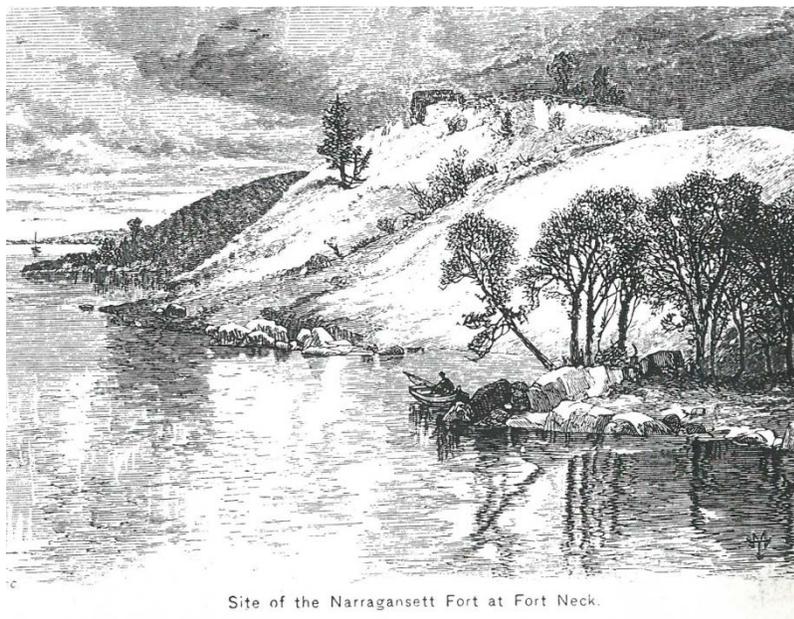
History of the Ponds

Ninigret and Quonochontaug, the salt ponds of Charlestown, have been critical resources for the inhabitants of Charlestown from pre-colonial times to the present.

The archaeological evidence of Native American use of the salt ponds dates back 6,000 years, when the ponds reached their modern configuration. The rich supplies of fish and shellfish drew the Indians to the shoreline, where they established seasonal camps and villages.

By the time of European contact and settlement, the Native Americans were also farming the coastal lands, growing corn, beans and other vegetables.

For the Niantic and Narragansett Indians who lived in the Charlestown area, the salt ponds were an important early place of contact with the Europeans. Fort Ninigret, a fortified trading post used by the Indians and the Dutch, is located on a high bluff on the north shore of Ninigret Pond where it remains one of the town's principal historic sites.



Site of the Narragansett Fort at Fort Neck.

Charlestown Historical Society *1880 Etching of Fort Ninigret*

By the second half of the 17th century, the Native Americans were not only trading with Europeans but were selling land to them as well. In 1660 a company of Newport colonists purchased Misquamicut, an area that encompassed the present towns of Westerly, Charlestown, Hopkinton and Richmond. Charlestown was not established as a separate town until 1738. Jeffrey Champlin and Robert Stanton were two of the Misquamicut purchasers who acquired tracts of land in Charlestown.

After King Philip's War in 1675-6, the Niantic and remnants of the Narragansetts and other Native American people were allotted lands in the Charlestown area where many of their

descendants continue to live today. The perimeter of the salt ponds which contains the archaeological materials from this 6,000-year Indian history is considered to be one of the state's most important archaeological regions.

In the late 17th and 18th centuries, the Champlin and Stanton families and others went on to establish large plantations with extensive herds of beef and dairy cattle along the coastal plain where they could exploit the same environmental resources that first attracted the Native Americans. Though subsequent development around the ponds has removed traces of the plantation era, several of Charlestown's early 18th century houses remain.

Agriculture and fishing remained the dominant activities in Charlestown in the 19th century, at a time when most of Rhode Island was experiencing industrial growth. The twin forces of urbanization and industrialization did begin to have an effect on Charlestown late in the 19th century, as work-weary city dwellers began vacationing on the shores of the salt ponds.

Among the first establishments to cater to the new seasonal visitors was the Ocean House at Cross Mills. Regattas were held on Ninigret Pond beginning in 1876 and by 1880, summer cottages were being built at Quonochontaug Beach. Hotels and shore dinner halls followed and the resort development spread to Charlestown Beach as well. These summer beach colonies marked the beginning of a dramatic transformation of the coastal plain in the 20th century.



Charlestown Historical Society Postcard Circa 1914

The great growth of recreational development in Charlestown in the 20th century was spurred to a large degree by the automobile, which made day trips or short-term visits possible for a large part of the population. In addition to the motels and rental cottages for the short-stay tourists, many "estates", both grand and modest, were established by summer residents. Some of these

estates, most notably the Arnolda summer colony, are architecturally significant for their handsome buildings and landscaped grounds.

World War II introduced a new landmark to the salt ponds area with construction of the Charlestown Naval Auxiliary Landing Field, beginning in 1942. The landing field, used as a major training site for Navy pilots in World War II and the Korean War, was deactivated in 1974 and has passed into conservation and recreation use.

Since World War II, the trend in the salt pond area has been one of continued development characterized by increased year-round residential use. Although this development has obliterated some of the area's historic features and crowds others, the salt pond area remains rich in historical resources significant in Charlestown's and Rhode Island's history.

Physical Setting

Geography

Ninigret and Quonochontaug Ponds, coastal lagoons, lie on the glacial outwash plain of Rhode Island's south shore (see Figure II-1). These salt ponds originally formed when the glacial sediment eroded, forming sandbars offshore that developed into barrier beaches. The ponds are extremely fragile due to limited circulation, sedimentation transport and beach erosion.

Ninigret Pond, sometimes referred to as Charlestown Pond, is the largest salt pond in Rhode Island. It is almost 4 miles long, yet is less than a mile at its widest point; the total area of the pond is 1,647 acres. Quonochontaug Pond is located approximately five miles west of Ninigret, and is located half in Charlestown and half in Westerly. It is 2.5 miles long and also less than a mile wide at its widest point; the total pond area is 745 acres.

Ninigret Pond is connected to South Kingstown's Green Hill Pond by a small inlet at Creek Bridge (along Charlestown Beach Road). The only part of Green Hill Pond which lies within Charlestown is a small portion of Allen Cove, a poorly flushed sheltered area of the pond. Many of the Charlestown property owners along the shore of Allen Cove have dock access.



Jane Weidman

Allen Cove in Green Hill Pond

Breachways

Ninigret Pond is connected to Block Island Sound through the Charlestown Breachway, which is approximately 90 feet wide and 1,200 feet long and between 3 and 6 feet deep. The breachway is accessed from Charlestown Beach Road.

Quonochontaug Pond is also connected to Block Island Sound, through the Quonochontaug Breachway, which is approximately 130 feet wide and 2,600 feet long with an average depth of 5 feet. The breachway is accessed from West Beach Road. Bordering the southern end of this breachway are a number of private homes, some with docks located in the channel.



Vic G. Dvorak

Quonochontaug Pond and Breachway

The two breachways, constructed in the early 1950's, are state maintained navigation channels within the town's jurisdiction; the responsibility for maintenance is shared by the RI Department of Environmental Management (DEM) Division of Fish and Wildlife and the RI Coastal Resources Management Council (CRMC). However, because of the importance of the salt ponds to Charlestown's quality of life and its economy, and the role the breachways play in the health of the ponds, the town has been actively involved in the planning for and funding of breachway related dredging.

A more detailed review of the breachways is contained in the Breachways and Channel Management section of Chapter III.

Water Depth and Channels

Water depth in a salt pond is influenced largely by sediment transport through the breachway inlet or washover deposits from large storms. The mean depths are typically quite shallow – 2 to 3 feet in Ninigret and less than 6 feet in Quononchontaug, which limits navigation to small boats. There are no federally dredged channels in either pond, and no maintained anchorage areas or turning basins.

Ninigret Pond:

One of the earliest known recorded depth charts of the pond was published in 1938 by Civil Engineer Leon Holland, from data compiled in 1908. The only official soundings of the pond are shown on NOAA Chart 13215, which is based on data from a 1983 survey. There are extensive shallow shoals which are constantly shifting and changing water depths.

In 1985, the first maintenance dredging since the construction of the Charlestown Breachway in 1952 was undertaken. At the request of the Town of Charlestown, the RI General Assembly authorized dredging of the breachway and channels within Ninigret Pond in order to increase flushing of the eastern end of the pond as well as Green Hill Pond through its inlet at Creek Bridge. The dredging consisted of removing 17,800 cubic yards from the Stilling Basin, a sedimentation area just north of the hardened breachway structure, and 5,300 cubic yards from two channels within the pond. One channel cut through the tidal delta just north of the breachway channel, and measured 30 feet wide and 3 feet deep. It was shaped like a hockey stick to direct flow of incoming tide to the east.

The second channel was dredged at the very eastern end of Ninigret Pond parallel to Charlestown Beach Road and extending through Shelter Cove easterly to the Creek Bridge at the entrance to Green Hill Pond. The 2,000 foot channel measured 12 feet wide and 2 feet deep when dredged. The purpose of this channel was to provide an alternate flow of water into Green Hill Pond than that from the silted in “Link Channel”, which was an east-west channel dug in the 1960’s to connect the breachway channel with the Green Hill Pond inlet. Today the Link Channel is too narrow to be navigated safely by motorized vessels, but is used by kayakers and paddle boarders.

Dredging efforts since 1985 are described in the Breachway and Channel Management section of Chapter III (see also Figure III-7 which delineates the channels, both historic and present).



Chris Mason

Ninigret Pond Channels

Quonochontaug Pond:

While there are no official depth charts of Quonochontaug Pond, it averages less than 6 feet in depth, with the deepest area being 12 feet.

The Quonochontaug Breachway parallels West Beach Road, which ends at the Quonochontaug state boat launch and parking area. There is one channel in Quonochontaug Pond, extending north into the pond from the boat ramp, marked by buoys providing safe navigation to where adequate water depth is available.



Nate Bousquet

Quonochontaug Breachway

Flood Zones

Most of Ninigret and Quonochontaug Ponds, within Charlestown's jurisdiction, are subject to extreme fetch conditions (V-zones) where coastal flooding and storm surge associated with hurricanes raises the water level 18 to 22 feet above the present high water heights. See Figures II-2 and II-3 which indicate the Federal Emergency Management Agency (FEMA) flood zones associated with each pond, including the A, AE and the Coastal AE and V (velocity) Zones.

Surrounding Land Use

The land surrounding the salt ponds is a mixture of residential development, some open space and park land, and a small amount of commercial, including marinas.

Most of the land around Ninigret Pond is residential, with the exception of three commercial marinas, and several conservation areas described in the following section. The land use around Quonochontaug Pond is residential with the exception of state conservation areas also described below.

As in many coastal regions, development has increased at a rapid rate. In the 1950s, the region began a transformation from an agricultural area with clusters of small summer cottages to the most rapidly developing residential area in the state and to a major summertime recreational resource for southern New England. During the thirty year period from 1950 to 1980, the number of houses in the salt pond watersheds (including Green Hill Pond in South Kingstown) increased sevenfold, from 775 to 5,600. In the ensuing years, most of the coastal development in Charlestown has been the conversion of summer cottages to year round dwellings, the enlargement of existing homes, or tear-downs replaced by much larger homes, some of them only seasonally used.

Regulatory Setting

Salt Pond Boundaries

For the purposes of the Harbor Management Plan, the salt pond boundaries are:

- Quonochontaug Pond from the opening of the Quonochontaug Breachway at Block Island Sound and all open water east of the town boundary with Westerly.
- Ninigret Pond from the opening of the Charlestown Breachway at Block Island Sound and the pond in its entirety.

- Green Hill Pond, only including the portion of Allen Cove west of the town boundary with South Kingstown.



Vic G. Dvorak Allen Cove and Green Hill Pond in South Kingstown

CRMC Water Type Designations

The Coastal Resources Management Council has classified the salt water areas of the Town of Charlestown where only specific activities are permitted (see Figure II-4).

Ninigret Pond:

Foster Cove, and the mid-section of Ninigret Pond, are classified as Type 1 waters. The remainder of Ninigret Pond is classified as Type 2 waters.

Quonochontaug Pond:

Quonochontaug Pond is classified as Type 2 waters.

Green Hill Pond:

Allen Cove in Charlestown, as well as the remainder of Green Hill Pond is classified as Type 2 waters.

Type 1 Waters (conservation)

Included in this category are:

- (1) Water areas that are within the boundaries of designated wildlife refuge areas,
- (2) Water areas that have retained undisturbed natural habitat or maintain scenic values of unique or unusual significance, and
- (3) Water areas that are particularly unsuitable for structures due to their exposure to severe wave action, flooding and erosion.

The CRMC's goal for Type 1 waters is to protect them from activities and uses that have the potential to degrade scenic, wildlife, and plant habitat values, or which may adversely impact water quality or natural shoreline types.

Type 2 Waters (low intensity use)

This category includes waters in areas with high scenic value that support low-intensity recreational and residential uses. These waters include seasonal mooring areas where good water quality and fish and wildlife habitat are maintained.

The CRMC's goal for Type 2 waters is to maintain and, where possible, restore the high scenic value, water quality, and natural habitat values of these areas, while providing for low-intensity uses that will not detract from these values.

DEM Water Quality Classifications

As required by the federal Clean Water Act, the RI Department of Environmental Management has assigned classifications to the surface waters of the state, both freshwater and saltwater, which designate uses of the particular water body. Quonochontaug, Ninigret and Green Hill Ponds, and all of the coastal ponds along Rhode Island's south shore, have been classified as "SA". Class SA is the highest attainable classification for saltwater and is rated as being suitable for the following activities: bathing and contact recreation; shellfish harvesting for human consumption; and fish and wildlife habitats. Any activity which may cause degradation of this classification would be a prohibited activity within these water bodies.

Under Section 303(d) of the Clean Water Act, the state is required to identify areas of impaired waters, which are waters that do not meet established water quality standards based on the Total Maximum Daily Loads (TMDLs)¹ for these waters. The Section 303(d) listed water categories for the salt ponds are shown in Figure II-5. Despite the SA classification, eastern Ninigret Pond (category 4A of the 303(d) listed waters) and Green Hill Pond (category 5 of the 303(d) listed waters) are considered polluted; they are both closed to shellfishing due to excessive bacteria levels, for which DEM has established a TMDL.

¹ A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can receive and still meet water quality standards.

Land Side Zoning

The land around Ninigret Pond (south of Route 1) has a variety of zoning classifications. These include residential, ranging from 20,000 SF to 3 acre minimum lots; commercial; municipal; and open space/recreation, including the Ninigret Wildlife Refuge, most of the barrier beach and the parcels around the breachway. The land around Quonochontaug Pond (south of Route 1) is zoned for 2 and 3 acre residential lots, a small amount of commercial and some open space/recreation, mostly the parcels around the breachway.

The commercial zones are principally associated with the Route 1 corridor. Along the barrier beaches there is a combination of open space/recreation and 2 and 3 acre residential lots. Neither pond has zoning that specifically designates water dependent uses (see Figure II-6).

Natural Resources of the Ponds

The coastal lagoon system, known locally as the salt ponds, is an ecosystem of diverse and beautiful habitats consisting of barrier beaches, salt marshes, intertidal flats, salt ponds and adjacent shorelines with tributary streams and ponds. They are among the most productive ecosystems on earth, and the ponds within the Town of Charlestown – the eastern portion of Quonochontaug, all of Ninigret and westernmost portion of Green Hill (Allen Cove) – are prime examples.



Claire Hodson

Ninigret Pond

These lagoon systems are an interface between land and sea, habitat to plants and animals of both, as well as to estuarine organisms. The relatively shallow salt ponds are fed by freshwater from springs and streams, and by seawater through narrow breachways. This confined area and relatively slow flushing keeps the salt and nutrient concentrations ideal for salt marshes, eelgrass, and phytoplankton, which in turn support the spawning and growth of a variety of fish and shellfish sheltered from being swept out to sea. It also makes the salt ponds vulnerable to water

quality and habitat degradation from human uses, including contamination from sewage, and use of chemicals in the ponds or their watersheds.

The wealth of natural resources has also been essential for human use throughout the ages, and there are many important historic and archeological sites around the ponds, including shell middens, campsites and ceremonial sites of the Narragansett Indians. These are now part of the resource base of the salt ponds to be valued and protected.

The following is a description of the various natural components of Ninigret and Quonochontaug Ponds.

Saltmarshes

Salt marshes are highly valued as wildlife resources and for their role in flood protection and nutrient removal.

In Ninigret Pond, fringing saltmarsh is located in Mud Cove, along the eastern shore of the pond, around the perimeter of Fort Neck Pond, and along the southeastern shore of the pond. Extensive salt and freshwater wetlands cover the tidal delta on both sides of the Charlestown Breachway.

In Quonochontaug Pond there are saltmarshes on the east tidal delta and west sides of the breachway, and in the northeastern corner of the pond. Patches of fringing saltmarsh occur along most of the shore.

Barrier Beaches

Without the barrier beaches, the salt ponds, marshes, tidal flats and their ecosystems would not exist – they would be destroyed by daily ocean waves and tides as well as ocean storm events. The barrier beaches which form the coastal lagoon system also protect the mainland side of the ponds from ocean swells and other storm events.



Nate Bousquet

*Quonochontaug Barrier Beach
Charlestown and Westerly*

Barrier beaches protect essential habitats for finfish, shellfish and nesting and migratory birds. The Quonochontaug and Ninigret Pond barrier beaches and their use and management are described in more detail in the Barrier Beaches section of Chapter III.

Freshwater Tributaries

Tributary freshwater streams and ponds provide critical habitat for spawning baitfish such as alewives, for the life cycle of eels, and as a source of freshwater for a variety of birds, amphibians and mammals that live around the salt ponds.

Coastal Buffer Vegetation

The vegetation buffering the shoreline of the ponds provides critical habitat for wildlife, including essential forage and shelter areas for migrating birds and butterflies, and for unique plant species. It also serves to limit run-off into the ponds, particularly important considering the large flocks of Canada Geese that inhabit the area.

Coastal Pond Habitat Areas

The various characteristics of the salt ponds provide a variety of habitats:

- Eel grass beds are highly valued finfish and shellfish habitat areas (see Figures II-7 and II-8 indicating locations of submerged aquatic vegetation in each salt pond).
- Intertidal flats (next to the breachway flood tide deltas) are very important for feeding shorebirds, both resident summer populations and huge numbers of migratory birds. They are also important shellfish habitat areas.



Jane Weidman

Ninigret Pond Breachway Channel and Saltmarsh

- Muddy bottoms are important habitats for worms, crustaceans and shellfish (and the birds and mammals that prey on them). These are the prime habitat for the “cinder worms” that hatch in May and June which are an important food source for finfish.

- Gravel islands and bottoms are important oyster settlements and winter flounder spawning habitats.
- Subtidal overwash and pond beaches are important habitats for shellfish (quahogs and steamers).

Uses of the Salt Ponds

The natural diversity of the salt ponds provides for a wide range of human uses, both recreational and commercial. Safeguarding the quality and diversity of the natural resources of the salt ponds has benefits for both the animal and plant species that depend on the ponds for their survival and for the people who rely on the ponds for their recreation, for their livelihoods and for their simple enjoyment.

The uses of Ninigret and Quonochontaug Ponds and their surrounding lands include conservation areas and parks; recreational and commercial fishing and shellfishing; recreational power boating and sailing; water sports such as windsurfing and waterskiing; and swimming.

Conservation and Recreation Areas

As a combination of salt pond, barrier beach, marshy border and wooded upland, Ninigret and Quonochontaug Ponds provide shelter and feeding grounds to an abundant and diverse fauna. The salt ponds support an unusually rich assemblage of wildlife, in part because of extensive, relatively undeveloped public lands in the watershed. They provide habitat to large numbers of resident bird species as well as migratory waterfowl. The ponds are important as a link in the chain of resting areas for the fall and spring migration of birds along the Atlantic Flyway.



Vic G. Dvorak

There are a number of conservation, wildlife refuges and recreation areas (see Figure II-9), as follows:

- Ninigret National Wildlife Refuge. This federally owned wildlife and conservation area consists of 380 acres on the north shore of Ninigret Pond on land that was once a naval air base. Its habitat areas include grasslands, shrub lands, wooded swamps and freshwater ponds. It has over four miles of hiking trails, excellent views of the pond and opportunities

for bird watching. The refuge also includes a small portion of Ninigret Pond's undeveloped barrier beach.

- Ninigret Park. This 230 acre town-owned park abuts the National Wildlife Refuge on the northern shore of the pond. It has many active recreational facilities, including ball fields, tennis and basketball courts, a bicycle course and a freshwater swimming area, as well as playgrounds, picnic areas and hiking trails. It also includes the Charlestown Community Center and the Frosty Drew Nature Center and Observatory. Frosty Drew is the only private marine environmental education center in Rhode Island.
- East Beach Conservation Area. Ninigret Pond's long expanse of undeveloped barrier beach (also known as Ninigret Conservation Area) is principally owned by RI DEM. It is accessed from East Beach Road which leads to a large public parking area (with seasonal port-o-johns), providing direct access to both the pond and the ocean. Vehicle access (4 wheel drive) beyond the parking area leading to the west side of Charlestown Breachway is allowed by state permit only.
- Charlestown Breachway State Park. Also owned and managed by RI DEM, this 79 acre site on the east side of the Charlestown Breachway is accessed from Charlestown Beach Road. It is a very popular summer recreational area with public parking for 150 vehicles, access for fishing from the stone jetties, a public boat launching ramp, a camping site for recreational vehicles and public restrooms. It fronts on the ocean, along the breachway channel, and the tidal delta area of the pond.
- Charlestown Town Beach. This 13 acre town-owned parcel, also accessed from Charlestown Beach Road, is located right off the bridge over the Green Hill Pond inlet. It provides parking for 300 vehicles, direct access to the pond and a public right-of-way to the ocean beach. Amenities include restrooms and outdoor showers.
- Pawaget Park. This 27 acre park (previously known as Mud Cove) is owned both by the Town of Charlestown and the RI DEM. It is located on the northern shore of Ninigret Pond with direct access off of Route 1. It has a picnic area and a walking trail leading to a boardwalk and viewing area of the pond and saltmarsh, all handicapped accessible.
- Blue Shutters Beach. This 3 acre town-owned parcel, accessed from East Beach Road with frontage along the ocean, provides parking for about 120 cars, with restrooms and outdoor showers.
- Quonochontaug Breachway State Park. The RI DEM owns this recreation and conservation area on both the west side (adjoining Westerly) and east side of the breachway, as well as a

small land-locked parcel at the mouth of the channel, totaling 31 acres. It is accessed from West Beach Road, and includes a public boat launch ramp and parking for 97 vehicles. It is a very popular summer recreational area.

Shoreline Access Areas

Public access to the salt pond waters and the barrier beaches along Block Island Sound, including CRMC designated rights-of-ways, is discussed in detail in the Public Access section of Chapter III. Below is a summary of the access sites to each pond:

Ninigret Pond:

Ninigret Pond has both public and private public access areas. In addition to the areas listed above, public access includes the end of Town Dock Road (next to Ocean House Marina) which is an area used primarily for launching canoes and kayaks.

Private access includes 3 commercial marinas, 17 private associations, 117 homes that own shorefront, 704 homes with deeded use of rights-of-way to the tidal waters of the pond and several community docks for private associations (used by over 100 boats).

Quonochontaug Pond:

The only public right-of-way access to Quonochontaug Pond is the breachway. Private access to the pond includes 111 homes located on the pond, and 750 homes with deeded use of rights of way to the tidal waters of the pond. There are 5 private community association docks, and private rights of way at Shady Harbor (7), Sunset Drive (2) and West Beach Road (1).

Finfish and Shellfish Resources

A description of recreational fisheries is contained in Chapter III. Ninigret and Quonochontaug Ponds have both been designated as Shellfish Management Areas by the Marine Fisheries Council, an advisory board to the RI DEM Division of Fish and Wildlife. Research and restoration programs are frequently done within the ponds. A description of aquaculture in the ponds, including its history, regulation and associated issues, is also contained in Chapter III. Current lease areas are indicated (see Figures III-5 and III-6).

Recreational Boating

The types of recreational vessels making use of the ponds are of varying size, with a mix of motorized and non-motorized boats. Because of the shallow average depths (2-3 feet)

throughout Ninigret Pond, smaller vessels navigate most areas of the pond, particularly the eastern half. Quonochontaug Pond has more area with deeper water depths (5 feet). Boating safety is discussed in more detail in Chapter III.

Marinas/Boat Yards

Ninigret Pond has three, privately owned and operated commercial marinas (see Figure II-9):

- Ocean House Marina located on Town Dock Road which has 85 slips available, as well as a boat launch ramp. It includes a pump-out station.
- Ninigret Landing Marina located on Meadow Lane which has 62 slips available, as well as a boat launch ramp.
- Shelter Cove Marina located on Charlestown Beach Road which has 66 slips, as well as a boat launch ramp.

An aerial depiction of these marinas and their slip count is contained in Appendix I. There are no marinas or boatyards located on Quonochontaug Pond. Neither pond supports any commercial fishing operations.

Public and Private Use Docks

Public Docks:

In Ninigret Pond, the Charlestown town dock is located at the end of Town Dock Road. The Harbor Master's boat and other town vessels are kept on the dock, with space provided for limited use by the public. These uses include a pickup and drop off location for recreational boating activities, and nearby launching area for kayaks and other paddle sports. Vehicle parking is limited.

There are currently no docks for public use in Quonochontaug Pond.

Private Docks:

As of 2017, there are about 106 permitted private docks on Ninigret Pond and 60 on Quonochontaug Pond.



Salt Ponds Coalition

Public Boat Launches

Charlestown has four boat launch locations available for use by the public (see Figure II-9):

- Charlestown town boat launch located on Charlestown Beach Road, adjacent to the Town Beach parking lot. This launch is primarily used for launching of kayaks, canoes, row boats, and other non-motorized vessels into Ninigret Pond. It is maintained by the Town of Charlestown and does not have a developed boat ramp. The water at this area is very shallow, so launching of motorized vessels is not advised. Limited parking is available at the launch site.
- Ninigret boat launch located in Ninigret National Wildlife Refuge, access from Park Lane in Ninigret Park. This launch is available for kayaks and canoes only and is maintained by Federal Fish & Wildlife. Limited parking is available at this launch site.
- Charlestown Breachway boat ramp, located in the state recreational vehicle camping area at the north end of the breachway. This launch is a developed concrete ramp maintained and monitored by the RI Department of Environmental Management. Both motorized and non-motorized vessels can be launched at this ramp providing access to Block Island Sound by way of the Charlestown Breachway, or to Ninigret Pond by way of the connecting channel. Parking for vehicles with trailers is available at this location.



Jane Weidman

Charlestown Breachway DEM Boat Ramp

- Quonochontaug Breachway boat ramp, located off the parking area at the north end of the breachway. This launch area has a developed concrete launch ramp also maintained and monitored by the RI DEM. Both motorized and non-motorized vessels can be launched at this ramp providing access to Block Island Sound by way of the Quonochontaug Breachway, or directly to Quonochontaug Pond as the launch area is adjacent to the pond.

Mooring Areas

As of 2017 Charlestown has 300 moorings in Ninigret and Quonochontaug Ponds assigned to both residents and non-residents, and 130 additional waterfront (riparian) moorings. The 300 moorings are shared between the two ponds. Because the number of moorings that the town may permit is limited, moorings are issued as they become available to the next applicant on the mooring wait list. Vessels that utilize these moorings vary in size from 12 to 32 feet in length. All permits for moorings are issued by the Harbor Master, however all mooring gear is privately owned and maintained by the permit holder.

Mooring management is a major consideration of this Harbor Management Plan. A complete description, including regulations, issues and a description of the mooring areas in both ponds are provided in Chapter III. There are no designated anchorage areas in either pond.

Watersports

Both motorized and non-motorized watersports can be found on Ninigret and Quonochontaug Ponds. These include water skiing and tubing, paddle sports, and wind and kite surfing.

Due to the shallow water depths in Ninigret Pond, most waterskiing and tubing can be found on the western side of the pond where more open area and deeper waters are available, as well as the deeper coves in the northern locations. These same activities in Quonochontaug Pond are found east of where the navigation channel leading from the state boat launch ramp ends inside the pond.

Kayaking, canoeing and other paddle sports occur throughout the ponds along the more shallow waters of the shorelines. In Ninigret Pond the more popular areas are along the barrier beach and within the shallow link channel that runs between the Charlestown Breachway and the Charlestown Beach Road Bridge (Green Hill Pond inlet). Kayaking and canoeing on the ponds has become an increasingly popular activity, including at night, with growing numbers each year.

Wind surfing and kite surfing are very popular on the west side of Ninigret Pond. Access is easily provided from East Beach Road and draws a lot of these sport enthusiasts to the area; the open area on this side of the pond and wind conditions make it a nationally recognized area for wind surfing.

Chapter III. ISSUES, POLICIES AND RECOMMENDED ACTIONS



Jane Weidman

Ninigret Pond

All municipal harbor management plans must address four major subjects: public access, water quality, mooring management, and storm preparedness. The Charlestown Harbor Management Plan provides a detailed analysis of these and several more considered to be of importance to the town and/or unique to the characteristics and uses of the salt ponds. These include: boating safety, recreational fisheries, aquaculture, breachway and channel management and barrier beaches. This chapter includes a background description, an identification of the issues, a stated goal, and policies and specific actions for the town to undertake for each of these nine subjects.

Many of the recommended actions involve the maintenance of current programs, some will require additional plans and studies, while others will require adoption of or amendments to ordinances, which would be drafted and considered separate from this document. Most of the responsibilities for carrying out the specific actions will lie with the Charlestown Harbor Master and with other town staff, and with the Charlestown Coastal Pond Management Commission. However, partnership with the Rhode Island Coastal Resources Management Council and other state agencies, and with federal agencies and private organizations, will also be critical to achieving many of the stated goals, policies and actions.

WATER QUALITY

Background

The value of Charlestown's salt ponds lies in their natural beauty, as habitats for saltwater plants and fin and shellfish, and as locations for a variety of marine recreational activities. Maintaining the high water quality of the ponds is critical to all of these.

The Salt Ponds Watershed

The watershed of the salt ponds as mapped has been used for policy development and regulation by the Rhode Island Coastal Resources Management Council (CRMC) as the Salt Ponds Region Special Area Management Plan (SAMP), and by the Rhode Island Department of Environmental Management (DEM) as the South Shore Salt Ponds Critical Resource Area.

Within the watershed are three CRMC land use classifications, as described in the 2004 SAMP (see Figure III-1):

- Self-Sustaining Lands (green) – lands which were undeveloped or developed at a density of not more than 1 residential unit per 2 acres. This low density is expected to keep nutrients released to the groundwater sufficiently diluted to maintain potable drinking water.
- Lands of Critical Concern (yellow) – lands which were undeveloped or developed at a density of not more than 1 residential unit per 2 acres and abut sensitive salt pond areas or aquifer recharge areas and are susceptible to impacts of pollution (eutrophication or contamination, respectively).
- Lands Developed Beyond Carrying Capacity (red) – lands which are developed at densities above carrying capacity, typically at 1 residential or commercial unit per 1/8 to 1/2 acre. These densely developed areas are the major source of contamination to groundwater and the salt ponds.

Although the salt ponds watershed comprises only 28% of Charlestown's land area, it contains over 63% of all developed parcels, and includes the town's most densely developed areas. There are 3.7 square miles of lands classified as Developed Beyond Carrying Capacity in Charlestown, most of which are south of Route 1. The largest such area is the Charlestown Beach area along the border with South Kingstown, and adjoining Green Hill Pond and the easterly portion of Ninigret Pond.

Factors Impacting Water Quality of the Salt Ponds

Water quality of the salt ponds is impacted by nutrients and other pollutants entering the ponds through both groundwater and surface water run-off; these pollutants originate from a variety of sources associated with development and use of land around the ponds, including on-site wastewater treatment systems, fertilizer use, stormwater runoff and animal waste. Excess nutrients promote algae and plant growth, which in turn depletes the water of oxygen when they decay, a condition known as eutrophication.

On-Site Wastewater Treatment Systems:

Charlestown relies exclusively on local groundwater for drinking water through private individual and small public wells. In addition, all households and businesses rely solely on local soils for dispersal and treatment of wastewater through the use of on-site wastewater treatment systems (OWTS).

In Charlestown, OWTS are the largest contributor of nitrogen to the watershed, which is the limiting nutrient in coastal environments and which has significant water quality and health implications. As a result, RI DEM mandates the use of nitrogen (N)-reducing septic systems in the salt ponds watershed for all new OWTS installations or for systems that require an upgrade.



Vic G. Dvorak

Quonochontaug Peninsula

As of 2016, there are just over three thousand (3,008) OWTS located within the watershed in Charlestown, 84% (2,509) of which are located within the CRMC lands developed beyond

carrying capacity¹. Of those systems, 76% (1,907) are conventional OWTS, and just 18.5% (464) use N-reducing technology, while 5.5% (138) are classified as unpermitted and/or substandard, mostly the latter and installed before 1968. Over the last eight years (starting in 2008), the town's data indicate that approximately 35 OWTS per year have been upgraded to N-reducing technology in the salt ponds watershed.

Fertilizer and Pesticide Use:

The balance of nitrogen loading to the watershed originates mainly from fertilizer use. Similar to the nitrogen from septic systems, nitrogen and other nutrients from fertilizers enter the groundwater, surface water bodies and the salt ponds. This can occur by both stormwater runoff directly into surface water bodies, and by infiltration into the groundwater.

Within the salt ponds watershed, any application of over two pounds per 1,000 square feet of lawn per year is considered overuse of lawn fertilizer. Such over use of fertilizers, and pesticides, and their application at certain times of the year, particularly early in the spring, results in nutrients and pesticides running off into the salt ponds, other surface water bodies and drinking water supplies.

Stormwater:

Stormwater runoff also has a direct impact on water quality, particularly run-off from large areas of impervious cover, including roadways, parking lots, driveways, rooftops and other impervious surfaces within the densely developed areas surrounding the salt ponds and in the salt ponds watershed. This stormwater discharges to the salt ponds either by direct run-off (non-point source) or storm drains (point sources), and can be the source of a variety of contaminants including nutrients, pathogens, organic matter, road salt, oil and even heavy metals.

Water Quality Mitigation Efforts

There are a multitude of state and local programs and regulations that serve to protect the water quality of the salt ponds. Foremost among these are DEM regulations that require N-reducing OWTS in the DEM delineated Salt Ponds Critical Resource Area (the watershed). In addition, Rhode Island has become a “no-discharge” state, prohibiting direct discharge of sewage into state waters and requiring all vessels that have marine sanitation devices capable of discharging sewage overboard have all means of intentional or accidental discharge closed and locked when operating or mooring in state waters.

¹ Charlestown Coastal Watershed Protection and Restoration Program, US EPA Grant Application, 2016.

On-Site Waste Water Management Program:

Since 2002, the Town of Charlestown has maintained an on-site wastewater management program, enforced by ordinance (authorized by Chapter 45-24.5 Wastewater Management Districts of the RI General Laws), to ensure that OWTS are properly operated, regularly inspected and routinely maintained to prevent malfunctioning systems, and to operate as an alternative to municipal sewer systems. The Wastewater Management District (WWMD), which encompasses the entire town, serves to protect groundwater, the source of all drinking water in Charlestown, as well as surface water bodies, including the salt ponds.

The program has been extremely successful in preventing septic systems from malfunctioning and failing by requiring regular inspection and maintenance. The ordinance requires the removal of all cesspools and the upgrade of failing or malfunctioning OWTS. As of 2016 all but eight of the original cesspools, which numbered more than 1,000 throughout Charlestown, have been upgraded to modern OWTS, and most of these to N-reducing technology.

As part of the program, the town maintains a comprehensive database of the design, usage, solids accumulation rate, and inspection and pumping history of every OWTS in town. All inspections must be conducted by a town approved septic service provider.

Again, N-reducing OWTS are required for all new and upgraded systems within the watershed, which in Charlestown consists of the town's portion of the drainage basin for all three of the salt ponds. The upgrades are triggered by a number of RI DEM regulatory thresholds such as changes in building use or building expansion, certain interior renovations, increases in wastewater flow or evidence of a failed system.

Other Local Programs:

Charlestown has also implemented many programs and policies to quantify and mitigate the impact of other sources of nutrient loading to the watershed and the salt ponds.

- The town funds a nutrient and bacteria monitoring program for private wells in the watershed, and maintains monitoring wells to observe nutrient loading of groundwater outwelling into all three salt ponds.
- The town has a program of active management of the Canada Goose population in the watershed of all three salt ponds, in order to limit production of their nitrogen rich waste.



Virginia Lee

- The town has committed to upgrading its storm-water outfall in Allen Cove of Green Hill Pond in order to mitigate pollutant inputs to both Green Hill and Ninigret Ponds.
- In 2009, the Town Council passed a resolution in support of voluntary non-use of pesticides, herbicides and fertilizers on lawns and gardens. In 2014, a fertilizer use guide in pamphlet form (“*Beautiful Lawns, Healthy Salt Ponds*”) was mailed to over 3,000 residents in the watershed and is still actively distributed.
- In 2016, the town enacted a “Recommended Landscaper Program”, a voluntary sign-up program for businesses who agree to conduct and promote best management practices in lawn care, fertilizer use and landscaping.

Maintaining the Breachways and Channels:

The free flow of water through the breachways is critical to the flushing of the salt ponds (the transfer of nutrient and pollutant-laden surface water with that from Block Island Sound), which maintains overall surface water quality. The town has supported the dredging of the breachway channels and tidal deltas to remove trapped sediments to increase seawater flushing and flow directionality. This includes providing matching funds for maintenance dredging in its annual budget. A more complete discussion of the breachways and their dredging history is contained in the Channel and Breachway Management section of this chapter.

Prevention of the Discharge of Sewage from Boats:

RI General Laws §46-12-39 makes it unlawful to discharge any sewage from a boat into the waters of the state that have been declared to be a no discharge zone, which includes Narragansett Bay and all harbors, all of the south shore salt ponds and all of Block Island Sound. In addition, for any boat equipped with a marine sanitation device, it is unlawful to operate or moor in the waters of the state unless all means of discharging sewage overboard are in a closed and locked position, and if the boat is to operate for more than 30 days in state waters, it must

prominently display a “no discharge certificate” decal”. Chapter 12 of the General Laws (Water Pollution) also provides for enforcement of the no discharge restriction by DEM and by local harbor masters and police, which includes the authority to stop and board any vessel subject to this chapter. The Charlestown Harbor Master is responsible for enforcing the no discharge rule in the salt ponds.



Ken Lopardo Ocean House Marina and Ninigret Oyster Farmer

Clean Marina Operations:

The Clean Marina Program is a voluntary program that was developed by CRMC, in cooperation with the RI Marine Trades Association, DEM and the environmental organization Save The Bay. It recognizes marinas that go beyond regulatory requirements and utilize Best Management Practices (BMPs) to protect water quality. All marinas in Charlestown are encouraged to participate. A guidebook prepared by CRMC in 2006 identifies an extensive list of BMPs relating to the following:

- Vessel maintenance, including mechanical activities, use and handling of hazardous materials, disposal of liquid waste, boat repair activities and hauling and storage of boats;
- Petroleum control, including procedures for storage, fueling, spill management and cleaning of oily bilge water;
- Sewage handling, including operating and maintaining pump-out systems and providing shoreside facilities;
- Stormwater management, including site design and maintenance;

- Facilities management, including procedures for reducing and handling solid and organic waste, disposal of abandoned vessels, facility cleaning and maintenance, landscaping, and energy, fuel and water conservation; and
- Public relations and boater and contractor education.

RI Pollutant Discharge Elimination System (RIPDES) Permits:

The Rhode Island Pollutant Discharge Elimination System (RIPDES) Multi-Sector General Permit (MSGP) for Storm Water Discharge Associated with Industrial Activity is a program that is applicable to marinas identified by Standard Industrial Classification (SIC) 4493. Facilities with this classification include marinas, boating and yacht clubs with marinas, and boatyards that provide storage and incidental repair.

Marine facilities covered under the MSGP must prepare and execute a Storm Water Pollution Prevention Plan (SWPPP) which includes requirements to implement Best Management Practices, preventive maintenance procedures, monthly inspections, employee training and annual comprehensive site compliance evaluations. Such facilities must also conduct benchmark stormwater monitoring of aluminum, iron, lead and zinc as dictated by the approved plan.

In addition to the MSGP, marinas that discharge “process water” to surface waters are required to obtain a separate RIPDES individual permit. Process waters include pressure wash water, bilge and ballast water, sanitary waste, and cooling water originating from vessels.

The RIPDES Program also includes a General Permit for Stormwater Discharge from Small Municipal Separate Storm Sewer System, which is referred to as a MS4 Permit. This permit is required for stormwater-only discharges into a water body from a facility which is owned and operated by a public body. The Town of Charlestown has one stormwater outfall regulated under its MS4 Permit, the outfall that discharges run-off from Charlestown Beach Road into Allen Cove of Green Hill Pond.

Marina Fuel Oil Regulations:

Federal regulations (40 CFR 112) require a Spill Prevention, Control, and Countermeasure (SPCC) Plan for any marina that has an aggregate above ground storage capacity greater than 1,320 gallons. The plans are required to address operating procedures to prevent oil spills, control measures installed to prevent a spill from entering navigable waters or adjoining shorelines, and countermeasures to contain, cleanup and mitigate the effects of an oil spill that impacts navigable waters or adjoining shorelines.

At the three marinas located in Charlestown, all of which are on Ninigret Pond, only gasoline is sold. Two of the three marinas are required by state law to have a SPCC Plan in place. This plan is required to be stamped by a professional engineer. All spills are to be reported to the US Coast Guard and RI DEM. The Charlestown Harbor Master must also be notified.

Oil Pollution Control Regulations:

The state's oil pollution control regulations are intended to prevent the discharge, escape or release of oil into the waters of the state and to preserve and protect the quality of these waters. The regulations govern, among other things, above ground storage facilities, spill response, storage and removal of oil spill cleanup debris, and spill prevention and emergency plans.

All above ground storage tanks with a combined storage capacity of over 500 gallons must be designed and managed to include overfill protection and secondary containment. They are also subject to regular inspections including monthly exterior inspections and for tanks with a capacity of ten thousand gallons or more, a comprehensive ten year inspection. All underground storage tanks (USTs) must be registered with DEM and meet rigorous standards for operation and maintenance.

Current Water Quality Monitoring Efforts

Salt Ponds Coalition Pond Watchers:

For the past 30 years the “Pond Watcher” program of the Salt Ponds Coalition (see description under Public Education below) has monitored surface water quality by collecting weekly to monthly surface water samples from all three salt ponds in Charlestown, from May through October. Samples are collected by trained volunteers for analysis of nutrients, dissolved oxygen, chlorophyll and bacteria (both Coliform and Enterococcus) along with field collection of water temperature data and weather observations.



Salt Ponds Coalition

The results are analyzed by University of Rhode Island “Watershed Watch” laboratories and are EPA certified. Laboratory and field analytical results are tabulated, summarized and posted on the Salt Ponds Coalition website www.saltpondscoalition.org. The Salt Ponds Coalition has also published a “Trends Analysis” which is available both on-line and in hard copy.

The water quality results obtained under the Pond Watcher program are indicative of the aquatic health (based on a method which combines the averages of several water quality parameters) for the three ponds in Charlestown, as well as all the south shore salt ponds. Referring to the data available on the website, bacteriological detections of E. coli, Fecal Coliform and Enterococci have decreased in all three ponds over the past two decades, likely the result of the town required removal of cesspools and failing septic systems in the watershed. However, trends of increasing nutrient concentrations are prominent in all of Charlestown's salt ponds, which may be correlative to the increased development and conversion of seasonal use properties to full time occupancy in the coastal areas. Green Hill Pond continues to represent the most impacted of the salt ponds with the lowest aquatic health scores, while Quonochontaug Pond exhibits the best aquatic health.

Town Efforts:

The town conducts water quality monitoring of its stormwater outfall located at Allen Cove, and samples water influent up to six times per year as part of its MS4 Permit under DEM and EPA regulations. Samples are collected by town staff and submitted for laboratory analysis of nutrients, bacteria (both Coliform and Enterococcus) as well as pH, dissolved oxygen, temperature, conductivity and salinity.

Based on the evidence that the untreated stormwater effluent from this outfall has exacerbated poor water quality in Allen Cove and Green Hill Pond in general, the town has completed engineering design and designated local funding to upgrade this stormwater outfall. The design will divert the first flush of polluted runoff that enters a single catch basin at the lowest point of Charlestown Beach Road, to a bioswale before being discharged into a separate isolated freshwater wetland. The existing outfall would then discharge only emergency overflow into Allen Cove. All permits have been obtained and the project is expected to be completed in 2018. Outfall monitoring and sampling will continue until the system is upgraded.



Jane Weidman

Allen Cove Outfall

RI DEM Efforts:

In addition, surface water quality monitoring is undertaken by RI DEM Division of Water Resources as required by the US Food and Drug Administration as part of the certification of

shellfish grounds. However, only Coliform bacteria is measured. DEM has inventoried all direct discharges into the ponds and they are checked periodically.

Public Education

The Salt Ponds Coalition is a private non-profit advocacy group whose purpose is to protect and enhance the health of the salt ponds – from Watch Hill to Point Judith – for the benefit of wildlife and people. The Salt Ponds Coalition (SPC) has been designated as the Watershed Council for the Salt Ponds Region by the RI General Assembly as a recognized advocate and participant in the local regulatory process. The SPC conducts ongoing water-quality surveys and public outreach programs and works to focus legislative and regulatory attention on protecting the salt ponds. It spearheads land preservation and habitat restoration projects and partners with other groups to achieve results. The SPC also conducts educational events and seminars for all who are interested in the salt pond environment. It publishes a newsletter four times a year.

The SPC has a list of several reports and videos addressing issues affecting the ponds on its website. In addition, it provides public information seminars each summer and speakers upon request for community organizations, and holds several educational programs for youth, both in classroom and in the field. Narrated guided kayak trips are provided each summer or on request.

The town, under its Stormwater Management Program, also undertakes numerous mailings and disseminates fact sheets relating to water quality and its programs. Brochures include:

“Charlestown’s On-Site Wastewater Management Program”

“Beautiful Lawns, Healthy Ponds” (fertilizer use guidelines)

“Do You Scoop the Poop?” (pet waste management guide)

The Wastewater Management Department page on the Town of Charlestown website also includes links for designing residential rain gardens, planting with native species and other useful information for homeowners wishing to live in an ecologically sensitive manner, particularly within the salt ponds watershed.

Issues

Nitrogen in the Salt Pond Watershed

As presented in this section, reducing nitrogen concentrations in the ground and surface waters in the salt pond watershed is critical to the aquatic health of the ponds. This requires addressing all of the factors impacting nitrogen levels – OWTS, stormwater run-off and fertilizer use – in a comprehensive and cost-effective manner and with a reliance on scientific data.

Development in the Salt Ponds Watershed

The water quality of the salt ponds is directly related to the type and density of development and land use activities which take place within the watershed boundaries. Residential and commercial development is the main source of nutrient loading into the ponds from OWTS and fertilizer use, as well as the direct discharge of bacteria, contaminants and nutrients in stormwater runoff from impervious surfaces.

Empirical data collected by the town and others indicate that as development densities increase within the salt ponds watershed, both surface water and groundwater quality decreases. Additional development results in greater water use, more on-site wastewater discharge, greater use of fertilizers for lawn care, more animal waste, and more stormwater run-off from increased areas of paved and impervious surfaces, as well as increased population. These impacts also compound when seasonal homes are converted to year-round occupancy.



Chris Mason

All of these development impacts have a direct effect on the water quality of the salt ponds. Even properly maintained on-site wastewater treatment systems can contribute nitrate to the groundwater, which makes its way into the salt ponds. Nitrate from both OWTS and lawn fertilizers contributes to eutrophication, when the water body is excessively loaded with nutrients, promoting algae growth, which in turn depletes the water of oxygen. In particular, the cumulative effect of increases in site imperviousness throughout a watershed can drastically change the hydrology and overall ecological health of the whole system.

Other Water Quality Concerns

Underground Storage Tanks:

One potential impact on water quality is the likely existence of heating oil underground storage tanks (USTs). There are no known USTs at any of the town's three marinas because they have all been removed under the RI DEM Clean Marina Program. However, many of the dwellings and businesses located in the coastal zone were constructed when the use of USTs were common. Although the number of these is unknown, there has been only one documented release of petroleum to the salt ponds from a UST.

Accumulation of Detached Vegetation and Debris:

Another water quality concern is the large amounts of aquatic vegetation that collects and decays in backwater areas of the ponds. The accumulation of detached floating vegetation, particularly eel grass, within the coves and inlets of the salt ponds occurs every year starting in mid-summer. This vegetation is removed from the stem by the propeller action of motor boats and also by natural processes. The severed vegetation, coupled with floating algal mats, collects in coves through wind action typically along the northern portions of the salt ponds. This material then decomposes and creates odor and aesthetic issues for nearby residents and recreational visitors. As the material continues to decompose, it contributes to impaired water quality that is also associated with nutrient loading and bacteria from other sources.



Virginia Lee

In 2010, the Charlestown Town Council authorized town staff to implement methods of gathering, collecting and removing this material from the four coves within Ninigret Pond as a pilot study. The targeted coves include (from west to east): Foster's Cove, Fort Neck Cove, Tockwotten Cove and Arches (Pond Street) Cove. A program was developed to facilitate voluntary collection of detached floating vegetation which the town staff would transport to Earth Care Farm for composting. A CRMC Assent Permit was submitted and approved in September 2010, but it has subsequently expired. This program can be reinstated with public support.

Another concern, which is unsightly and harmful to marine life, is the plastics and other floatables and debris that arrive in the ponds from boaters or through the storm drains. The Town of Charlestown implemented a program to raise awareness about single use bags and other plastics finding their way into the salt ponds and ocean waters. The program included the design and production of two styles of reusable bags marked with a unique Charlestown logo.

Oil Spills:

In 1996, the North Cape Barge ran aground off Matunuck spilling 828,000 gallons of home heating oil. Some of this oil made its way into the salt ponds along Rhode Island's south shore. Ninigret Pond was directly affected. Although there exists an Oil Spill Contingency Plan (prepared by Coastal Resource Center for DEM in the late 1970's) a viable up-to-date plan does not exist. This was proven during the North Cape Spill when several unsuccessful attempts to contain the oil failed. Although much attention was given to the problem, no evident plans were formed to prevent future spills from threatening either salt pond of Charlestown.

The salt ponds are also vulnerable to lesser oil spills from fueling at marinas or ruptured gasoline storage tanks at marinas, and from engine oil leaks. The most common oil spills occur when individual boaters use portable tanks and improperly fill these tanks. As stated above, any marina that has an aggregate above ground storage capacity greater than 1,320 gallons must have a spill prevention and control plan. In addition, fuel tanks are required to be routinely inspected. Current double wall tank requirements have minimized the risk of spills and ruptures.

Goal: Maintain the high water quality of the salt ponds, and a healthy ecosystem while allowing full public use and enjoyment of the ponds.

Policies

Additional density within the watershed of the salt ponds is limited by local zoning, which mandates a minimum of two or three acres for new lots, as well as the lack of much available land for future subdivision. Considerable acreage is protected through public ownership, particularly around Ninigret Pond, including the Ninigret National Wildlife Refuge and the adjoining town-owned Ninigret Park, and the East Beach Conservation Area along the barrier beach. Efforts to protect the water quality of the salt ponds has as much or more to do with managing the impacts of existing development, as it does with ways to regulate future growth.

1. The town will maintain the lower density zoning regulations in the salt ponds watershed, as well as acquire land for open space or conservation when funding is available.
2. The town will continue to monitor the water quality of the salt ponds, and to support the efforts of other agencies and organizations to monitor water quality.

3. The town will maintain its successful On-Site Wastewater Management Program, including regular inspection, pumping and upgrading of OWTS, in accordance with DEM regulations.
4. The town will undertake efforts to manage the use of fertilizers and other landscaping practices within the watershed, relying primarily on public education and outreach and voluntary programs.
5. The town will make use of best stormwater management practices for handling road run-off and site drainage on all publicly owned projects, and mandate best management practices for all new private stormwater facilities in the watershed.
6. The town will work to ensure ecological safe operations at the local marinas.
7. The town will provide trash storage and removal at all town parks and docks to reduce garbage in the ponds, particularly from boats.

Recommended Actions

1. Continue to Undertake and Support Water Quality Monitoring Programs

Continued monitoring and further study of the salt pond water quality and ecology is necessary. Support of the SPC Pond Watchers Program and other efforts is strongly recommended, including consideration of financial assistance from the state and coastal towns affected. Timely distribution of the program's data and analysis for its use in planning and decision making is also needed.

2. Continue and Strengthen Wastewater Management Program

The reduction of nutrient inputs from OWTS, especially nitrogen, which is the limiting nutrient in coastal environments and has significant health implications, is of critical importance to the town's public health and water quality objectives. Local groundwater is the sole source of potable water for all town residents and nutrient laded groundwater outwells into the salt ponds. Healthy clean salt ponds are integral to Charlestown's vital tourism industry. Charlestown is the only coastal municipality in Rhode Island facing this unique combination of water quality and utility issues.

The priority of the town's On-Site Wastewater Management Program is to manage these critical resources through careful and stringent OWTS oversight. Significant progress has been made regarding the replacement of outdated and failed systems and ensuring proper functionality

through required OWTS inspections and maintenance. However, substantial challenges remain, especially in the densely developed neighborhoods surrounding the salt ponds. In an effort to mitigate and manage impacts to the groundwater resource and the salt ponds, the town could consider the following:

- Manage all N-Reducing OWTS to maximize efficiency of these complex systems. The University of Rhode Island and the Town of Charlestown are currently conducting a study under a US EPA grant to identify low cost field monitoring parameters of effluent that would allow service providers to quickly optimize N-reducing OWTS efficiency in the field. Once identified, the methodology could be implemented throughout the watershed.
- Ensure the efficiency of new and replacement systems. The town can work with RI DEM to identify and encourage alternative treatment system or system components that serve to further reduce Nitrogen, as evidenced by scientific research and analysis. These can be related to overall system design or, for example, the type of drainfield (conventional as opposed to pressurized). Systems with higher performance levels of N reduction can then be utilized in critically impacted portions of the watershed when a new or replacement system is mandated by DEM.

3. Continue and Expand Management of Stormwater and Non-Point Sources

The town has incorporated low impact design (LID) and updated stormwater design standards in its Subdivision and Land Development Regulations. Under the RI DEM 2010 Stormwater Design Manual, updated in 2015, there is a focus on limiting paved surfaces, by means of narrow roads and pervious surface driveways, and requirements to keep and treat stormwater on-site. For new subdivisions and developments that undergo review by the Planning Commission, these standards are applied. For development in residential areas that is outside of town board review, public education is key (see below).

4. Undertake a Point Discharge Annual Survey

In an effort to reduce stormwater run-off directly entering the salt ponds, the Coastal Pond Management Commission proposes to undertake an annual survey to identify and map (using the town GIS) point discharges into the ponds, and seek remedies through the appropriate agencies.

Roadways are significant sources of stormwater impacting the salt ponds through direct run-off. Therefore, part of the survey work will be to coordinate directly with the Charlestown Department of Public Works regarding stormwater systems for town owned roads and rights-of-way adjoining the ponds, and with the RI DOT regarding the same for state roads. Pursuit of

funding for design solutions to correct these “end of the road” point discharges will be part of the effort.

Private rights-of-way, especially those owned by waterfront or neighborhood associations, can also be a source of stormwater run-off into the ponds. Communication is needed with representatives of these associations regarding the importance of maintaining or improving these rights-of-way in a low impact manner. One suggestion can be to store all kayaks and dinghys on racks rather than along the shore so as to protect the natural vegetation which serves as a buffer. Ideally all paths to the water should have means of filtering run-off by use of vegetation or other means to prevent erosion. Waterfront property owners should be educated on point sources of pollution from their lots.



Justin Vail

5. Re-establish the Program for Removal of Detached Vegetation

It is a recommendation of this plan that the efforts to collect decaying vegetation in the coves of the salt ponds with their distribution to appropriate composting facilities be re-established. Because of the limits on town staff time, this would require the involvement of a volunteer committee or an organization such as the Salt Ponds Coalition which would coordinate with the town through the Coastal Pond Management Commission. It would also require that the CRMC Assent for this activity be reissued. A boat for use in gathering and transporting the vegetation is needed. The problem of cut eelgrass can also be addressed by limiting boating in the shallow areas of the ponds where most of the beds are located (see Boating Safety and Navigation section).

6. Continue and Enhance Public Education Efforts

Public educational efforts that relate to the preservation and protection of the ecology of the salt ponds are critical. Such efforts not only help to make people more aware of their surroundings and the direct impact their activities can have on the ponds, but they also help to foster feelings of ownership and pride. These efforts need to be consistent and the message often repeated.

The town, through its Office of Wastewater Management, distributes a brochure for residents in the salt pond neighborhoods regarding the need to balance the desire for green lawns with keeping the ponds healthy (and protecting drinking water). It describes the impacts that excess nitrogen can have on the water quality, with many tips for keeping lawns green while minimizing use of fertilizers.

More can be done to promote use of land in the watershed in a way that minimizes or eliminates fertilizer use and reduces the volume of pollutant carrying run-off entering the ponds.

Campaigns such as “Natural is the New Green” that recommend use of natural plant materials rather than large lawns and pervious surfaces rather than paved driveways and parking areas, can be targeted to property owners in the salt pond neighborhoods off of Charlestown Beach Road and in the Quonochontaug peninsula. The town can coordinate with the RI Nursery and Landscape Association which promotes programs such as the voluntary Sustainable Turf Management for Landscaping Certification Program established by RI DEM.

A summer flyer in the local newspapers titled “Protect our Ponds” can serve to educate or remind the summer residents every year of how their actions – relating to trash disposal, boat maintenance, landscaping, septic system maintenance, handling pet waste, etc. – can help or harm the ecology of the salt ponds, including the freshwater streams and ponds in the salt pond watershed.

7. Develop a Fuel Spill Containment Program

While oil spills are rare, their impact on the salt ponds can be devastating. It is a final recommendation of this section of the Harbor Management Plan that an updated Oil Spill Contingency Plan be in place that provides for town, state and federal cooperation and coordination on the methods and procedures to both contain oil spills, and to recover from the contamination resulting from oil entering the ponds through the breachways.

Water Quality Recommended Actions

Action	Responsible Party	Time Frame	Funding Source
1. Continue to Undertake and Support Water Quality Monitoring Programs	Salt Ponds Coalition, URI, Town Departments	On-going	Private Public
2. Continue and Strengthen Wastewater Management Program	Wastewater Management Department, DEM, URI	On-going	User Fees Town
3. Continue and Expand Management of Stormwater and Non-Point Sources	Stormwater Management Department, DEM	On-going	Town
4. Undertake a Point Discharge Annual Survey	CPMC, Town Departments	One to Two Years, On-going	Town
5. Re-establish the Program for Removal of Detached Vegetation	CPMC, Town Departments, CRMC	One to Two Years, On-going	Private (volunteers) Town
6. Continue and Enhance Public Education Efforts	Town Departments, Professional Associations	On-going	Town Private
7. Develop a Fuel Spill Containment Program	State, Town, Federal	Two to Five Years	Public

PUBLIC ACCESS

Background

Under the centuries old public trust doctrine originating in England, the ownership of the sea, as well as access to the sea from along its shore, is considered a public resource which cannot be appropriated for private use. The public trust applies to both tidal waters and navigable waters.

In Rhode Island the state holds all such waters, land and submerged land below the mean high water mark, in trust for the public.

Public access is the way the public legally reaches the shore and coastal areas which are held in public trust. Most often this is assumed to be physical access, which is the ability to reach the shore from upland areas by means of rights-of-ways, boat launches and fishing piers. Once at the shore, the RI Constitution allows any person the ability to pass and repass along that shoreline below the high water mark.

“The people shall continue to enjoy and freely exercise all the rights of fishing and privileges of the shore, to which they have been heretofore entitled under the charter and usages of the state, including but not limited to fishing from the shore, the gathering of seaweed, leaving the shore to swim in the sea and passage along the shore”

RI Constitution, Article 1 Section 17



Virginia Lee

CRMC Designated Rights-of-Ways

Much of the waterfront property in Rhode Island is privately owned. Despite this, there are a wide variety of coastal access sites around the bay and salt ponds available to the public, including beaches and parks, municipal waterfront areas, bike paths, fishing areas, boat launches, marinas and mooring areas. There are also specific pathways, or rights-of-ways to the shore, although to be legally open to the public they must be publicly owned, maintained and/ or used

in some manner openly by the public, as opposed to being owned by members of a private association or the owners of a subdivision plat.

As the state agency responsible for the management of the coast, including for the maximum benefit of the public, CRMC has identified and designated public rights-of-ways to the shore. A CRMC public right-of-way (ROW) is one in which the agency has determined already exists and on which they have placed an official designation. Once a ROW has been so designated, the CRMC prohibits any activities that would interfere with or obstruct the public's use; the agency has statutory authority to order the removal of physical barriers on a CRMC ROW and to impose penalties on individuals attempting to deny the public its right to use a ROW. If there is litigation relating to any such conflict, the state will bear the expense in order to permanently protect the public's access to the shore along the ROW. A CRMC ROW, including a municipally owned street, also cannot be abandoned without prior approval by the CRMC².

Upgrading a public access site to a CRMC designated ROW involves submitting evidence to the CRMC to document and affirm that legal public access to the shore for all citizens already exists at that location. It is a legal process which culminates in a public hearing by the full Coastal Resources Management Council.

CRMC Rights-of-Ways in Charlestown

The CRMC has just two designated rights-of-ways to the shore (Atlantic Ocean) in Charlestown (See Figures III-2 and III-3).

B-1 Charlestown Breachway, Charlestown Beach Road:

This access is part of the 79 acre Charlestown Breachway parcel owned by the RIDEM. It consists of a 40 foot wide ROW extending from the west end of the Charlestown Beach Road ROW, south to the Atlantic Ocean. According to an old survey (December 1981) it is 180 feet east of the breachway, but it is not distinguishable from the rest of the beach in this area.

B-2 East Beach Road:

This access is part of the 13 acre town-owned Blue Shutters beach parcel. It consists of a 33 foot wide ROW extending from the East Beach Road ROW where it takes a 90 degree turn, south to the Atlantic Ocean (December 1981 survey). Because the land on either side of it is publicly owned (acquired by the town from a private party in 1990) it is also indistinguishable from the remainder of the town recreation and beach area.

² There has only been one instance in which the CRMC allowed an abandonment and in that case it was a legal formality to accommodate the relocation of an existing ROW.

Other Public Access Points in Charlestown

Of course, public access to the ocean and the salt ponds consists of more than the CRMC's designated rights-of ways. There are other publicly owned areas, as well as those owned by private organizations that welcome the public. The known public access points are listed below; these are all described in more detail in Chapter II and indicated on Figure II-8.

Quonochontaug Pond

Quonochontaug Breachway and Boat Ramp (RI DEM)



Nate Bousquet

Quonochontaug Boat Ramp and Breachway

Ninigret Pond

Blue Shutters Beach (Town)

East Beach (RI DEM) / Ninigret Conservation Area (US Fish and Wildlife)

Charlestown Breachway and Boat Ramp (RI DEM)

Charlestown Town Beach (Town)

Shelter Cover Marina (private)

Pawaget Park (Town and RI DEM)

Ninigret Landing Marina (private)

Ninigret National Wildlife Area (US Fish and Wildlife)

Fort Ninigret (RI DEM)

Town Dock Road (Town)

Ocean House Marina (private)

Green Hill Pond

Creek Bridge (along Charlestown Beach Road)

Also considered to be public access is visual access, the provision of unobstructed views of the coast and shoreline areas, and interpretive access, the provision of signage and educational features to explain the history and ecology of the shore.

Issues

Limited Public Access to the Salt Ponds

While access to the ocean is provided by town, state and federal land along the barrier beaches, direct and easy access to the salt ponds is an issue, whether it is for fishing, swimming or boating. Most of the land around the perimeter of the ponds is privately owned. Specific sites of public access have limitations, as described:

Quonochontaug and Charlestown Breachways: state boat ramps in need of repair, limited parking

Charlestown Town Beach: non-motorized boat ramp only, very limited parking

Ninigret National Wildlife Refuge: non-motorized boat ramp only

Town Dock: extremely limited parking, natural shoreline subject to damage by pedestrians



Justin Vail Town Dock

Pawaget Park and Fort Ninigret: although considered areas with exceptional visual and interpretive access with available parking, these do not allow easy access directly to the water's edge or into the water (no boat access)

The lack of widely available access, as well as the conditions and limitations of the areas that do exist, make it a challenge for non-waterfront owning citizens to enter and fully enjoy the salt ponds.

Maintaining and Improving Public Access

Further privatization of the shore by development can displace traditional public access. Inconsistent maintenance of access areas, including lack of signage, and appropriation of public

sites by adjoining private land owners, has a negative impact on the use and enjoyment of the shore by the public. Available public access to the salt ponds should also be responsive to the actual demand for such access, both by residents and by visitors and tourists. It is important, therefore, to not only maintain existing public access sites, but to expand and improve these where possible, and to identify and develop additional sites.

Limited Shoreside Amenities

Over the years there has been a recognized need to enhance the recreational and educational use of the salt ponds through the development of shoreside support facilities. These include not just boat ramps and docks, but such amenities as restrooms, parking areas and picnic sites. A municipal landing or town-owned shorefront park would provide public access and support for non-waterfront people who wish to kayak or canoe, bring in small motorized boats, fish, or simply swim in the ponds.

Public Use of the Salt Ponds

Another issue is that of who uses the ponds and how these uses are allocated. As described in Chapter II, there are a multitude of user groups who enjoy Ninigret and Quonochontaug Ponds on any given day. These uses must be balanced in a way that preserves the ecological health of the ponds and is fair to all.

Goal: Maintain and improve public access to the salt ponds to ensure full use and enjoyment of the ponds by both residents and visitors.

Policies

1. The town will work in conjunction with the CRMC to preserve, protect and enhance the CRMC ROWs, and to identify potential CRMC ROWs, including existing public beaches, parks and conservation areas, and existing public streets or street right-of-ways ending at the shore.
2. The town will preserve, protect and enhance all other existing points of access to the ocean and the salt ponds, including visual and interpretive access. This includes working with appropriate state and federal agencies, and private organizations which provide public access to the shore, either through ownership or programming.

3. The town will work to identify additional public access points to the shore that are not in use now in order to respond to the demand for wider access, particularly to the waters of the salt ponds. These include municipal paper streets and other public right-of-ways; dedicated easements; and buried cables and other underground public utility easements.
4. The town will work to enhance the experience of those seeking recreational and educational access to the salt ponds by providing public shoreside support and amenities where feasible.

Recommended Actions

1. Undertake a Study of Existing and Potential Public Access Sites

Using information and resources available from the various federal and state agencies and institutions, including the US Fish and Wildlife, CRMC, RI DEM, and the URI Coastal Resources Center, as well as private conservation organizations and marina owners, the town, through the Coastal Pond Management Commission or its designee, will undertake the following:

- A compilation of existing public access sites to the ocean, and to the salt ponds in particular, including beaches, parks, refuges, breachways, boat ramps, fishing sites, pathways and viewsheds;
- An evaluation of the status, ownership and condition of each public access site;
- An identification of potential additional public access sites based on local research; and
- Development of a plan for each public access site that addresses accessibility, signage and needed physical improvements. The plan should include cost estimates and a priority rating for each site.



Justin Vail

Ninigret Pond on a Summer Day

2. Identify Public ROWs to be Upgraded to CRMC ROW Designation

There are of course many public ROWs to the shore which are not designated as such by the CRMC. This means that their legal status as a public resource may be uncertain and/or their preservation for public use may not be ensured in perpetuity. There are opportunities for some public access points to the salt ponds to be “upgraded” to CRMC designated ROWs. Because the CRMC designation process can be time-consuming and require significant research, municipal officials and interested citizens can assist by undertaking preliminary research involving town records, historical records and physical evaluation of the proposed site.

Public streets are obvious opportunities. Other options are roads of unknown ownership which have evidence of longstanding and active public use. Other public right-of-ways, dedicated easements and underground public utility easements can also be considered.

The Coastal Pond Management Commission or its designee could work with the CRMC Right of Way Subcommittee to identify and upgrade public ROWs to CRMC designated status.

3. Develop a Boat Launching Improvement Plan

It is a recommendation that the town develop a plan for annual maintenance, and improvement if necessary, of existing public boat launching ramps, as well as an identification of locations for additional public boat launching ramps for both Ninigret and Quonochontaug Ponds.

4. Establish a Signage Plan

Another recommendation is to provide signage to clearly indicate the location of public access sites which are not obvious like parks and bathing beaches. While the CRMC designated ROWs are marked by the blue and white standardized (9” by 9”) “Shoreline Public Access” signs, identification of other public access points that lead to the shore in a similar way are needed. The plan could also include the placement of town-owned and maintained trash receptacles at appropriate locations to encourage sensitive public use of these sites.

5. Increase Public Access Awareness through Outreach

Identifying public access sites through public outreach is way to promote both awareness of the salt ponds and encourage their use. It would serve to educate the general public on how and where they can access the shore and enter the waters of the ponds. A town-produced public access guide that includes a general map and the information obtained in the study (recommendation #1) can be distributed and also posted on the town website.

6. Develop Additional Shoreside Amenities

A final recommendation relating to public access is for the town to develop additional and/or enhanced public access areas with parking, dinghy storage and composting toilets for use by both mooring permit holders without deeded waterfront access, and the general public. This will require a specific study by the Coastal Pond Management Commission to evaluate parcels under current or potential public ownership, followed by development of a plan for carrying out the improvements when funding is available.



Vic G. Dvorak

Public Access Recommended Actions

Action	Responsible Party	Time Frame	Funding Source
1. Undertake a Study of Existing and Potential Public Access Sites	CPMC or Designee	Two to Five Years	Town
2. Identify Public ROWs to be upgraded to CRMC ROW Designation	CPMC or Designee, CRMC	Five Years±	Public
3. Develop a Boat Launching Improvement Plan	Harbor Master, CPMC	One to Two Years, On-going	Town, Grant
4. Establish a Signage Plan	Town Departments	Two Years±	Town
5. Increase Public Access Awareness through Outreach	Town Departments	On-going	Town
6. Develop Additional Shoreside Amenities	CPMC, Town Departments	Five Years±	Town

MOORING MANAGEMENT

Background

Mooring regulations in Charlestown are adopted by the Coastal Pond Management Commission and implemented by the Harbor Master. The regulations govern permitting procedures; the location, use and transfer of moorings; and mooring tackle specifications. There are 4 designated mooring fields in Quonochontaug Pond, and 13 in Ninigret Pond (see Figure III-4), all publicly managed by the Town of Charlestown. A boundary description of each mooring field and their delineation on aerial maps are contained in Appendix II, while the mooring counts by field (2017) are contained in Appendix III. The Harbor Master is responsible for issuing and approving mooring permits, and for locating them and monitoring their use.

The number of mooring permits that Charlestown may issue is set by DEM, with the numbers and sizes of the boats related to the dilution capability of the water in the area, under the assumption that these boats are capable of discharging sewage waste (although under Rhode Island “no discharge” rules, direct discharge into state waters is illegal). The principal goal of regulating moorings is to prevent further closures to shellfishing by protecting the quality of SA waters (suitable for bathing and contact recreation, and for shellfish harvesting).

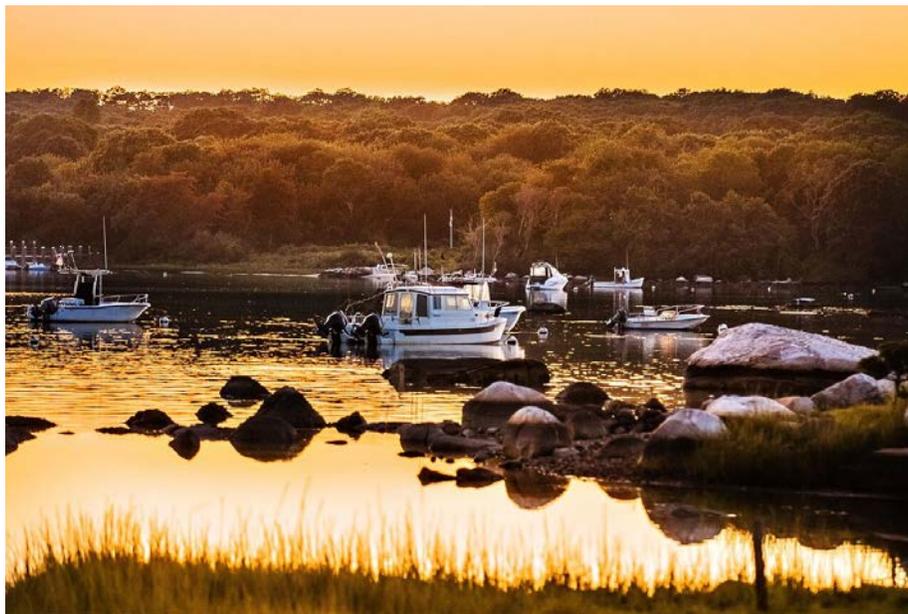
Mooring permits are issued as they become available and only in approved mooring fields. No more than 10% of the permits are to be used as commercial moorings, which are issued to a commercial entity such as a marina or waterfront business. In addition, waterfront property owners are entitled to a single mooring adjacent to their property, known as a riparian mooring, when the requirement for placing mooring tackle in the salt ponds can be met. Outhauls, a duo point anchoring device for the purpose of securing a boat in tidal waters and retrieving it from shore, are also a form of riparian mooring and are governed by Section 300.4.B.7 of the CRMC Red Book. Mooring requirements, including those for outhauls, can be found in the mooring regulations section of Chapter 96 of the town code, *Coastal Ponds and Moorings*.

The Harbor Master is responsible for directing the location of all mooring tackle. Once a permit is granted, the permit holder is responsible for acquisition of the mooring tackle, arranging its installation with a mooring service provider certified by the town, and its ongoing maintenance. Upon surrender of the permit, the holder is responsible for the removal of the mooring tackle; if it has to be removed by the town, the permit holder will be responsible for all associated costs, per town ordinance. The surrender of mooring permits and the issuance of new permits on an annual basis means that the configuration of the mooring fields are always subject to change.

Applications submitted to the CRMC for new residential docks on the salt ponds are also received and reviewed by the Harbor Master and the CPMC. At the time of review, it is determined if there are any moorings that will interfere with the proposed location of the dock.

If so, it is the responsibility of the permit holder to relocate the mooring. Permit holders will need to consult with the Harbor Master for the location the mooring will be moved to, and arrange for its relocation with their mooring service provider.

The shallow water depth of the salt ponds means that there is a limited amount of area available to moor vessels. Additionally, because the majority of the land surrounding the perimeter of the ponds is privately owned, providing public access to moorings is challenging. As of 2017, Charlestown has approximately 430 issued mooring permits in the coastal pond waters under their jurisdiction.



Vic G. Dvorak

Issues

Available Mooring Permits

As stated above, the total number of mooring permits, including for commercial moorings, that can be issued to both resident and non-resident applicants is determined by DEM, based in part by the potential negative effect on the water quality by vessels with marine heads that could discharge directly into the water. Since then, Rhode Island has become a “no-discharge” state, where all vessels that have marine sanitation devices capable of discharging overboard are required to have all means of intentional or accidental discharge closed and locked.

DEM must evaluate the nature of the mooring fields, the type of vessels and their use (including day use only vs overnight) and the availability of pump-out stations. Ninigret Pond has one

pump-out facility while Quonochontaug Pond has none. However, among the 430 permits issued in 2017, only 22 vessels have a marine sanitation device on board. The small number of marine heads along with the fact that these devices must be appropriately designed to prevent accidental discharge, means that there is little likelihood that additional mooring permits would result in a water quality issue related to boat sewage.

Currently a boat owner that does not own waterfront property with riparian entitlement to a mooring permit must be placed on the mooring permit wait list. The average wait list time is four years.

Mooring Field Congestion

When the Harbor Management Plan was first written, mooring fields were designed to accommodate the number of moorings at that time, as well as a number based on projected demand. The locations of the mooring fields were a function of the available public right-of-ways to the water in the two ponds, and of those properties with deeded access rights. However, in the years since some of these mooring fields saw a much higher demand for permits than anticipated. Other mooring fields saw much less demand; two such designated mooring fields were abandoned because they went unutilized.

With the high demand to place moorings in certain fields, these fields have begun to reach or have reached their maximum capacity, resulting in space not being immediately available for the boat owners of new mooring permits. In addition, as permit holders increase the size of the vessels they moor, there are issues relating to safety, navigation and property protection.



Vic G. Dvorak

Obsolete Mooring Tackle

Individual moorings are owned by the permit holders, who are responsible for their installation, and for removing them from the ponds when they relinquish their permits. Uniform standards for mooring tackle, the hardware used to secure a vessel at a mooring, have only been in place since the early 1990's (following the adoption of the original Harbor Management Plan).

Previously, mooring tackle could consist of engine blocks, train wheels and other items considered sufficiently heavy and stable enough to anchor a vessel. However, weight alone is not considered a sufficient or manageable means of providing a solid anchor. Today, mooring tackle components are designed and manufactured in a way to provide the most holding power – a safe and dependable permanent anchor for vessels of different sizes.

Most obsolete mooring components have been phased out of the salt ponds as mooring permit holders relinquish their permits. However, some mooring tackle in use today still consists of obsolete hardware and is of an insufficient design.

Commercial Vessels and Mooring Use

Over the past several years, the salt ponds in Charlestown have become one of the more desirable locations in Rhode Island for building a business in the rapidly growing aquaculture industry. With the increase in the demand for aquaculture lease space within the ponds, operating logistics for existing as well as future aquaculture businesses has become a growing concern for the town.

Commercial aquaculture operators make use of vessels, more than one depending on the size of the operation, which are designed to transport and process harvested shellfish. Currently these vessels are kept on various moorings, with no distinction made as to the type of vessel that is being used in the operation, or they are docked at one of the available commercial marinas if space is available. By state law, a vessel placed on the mooring with an approved permit cannot be restricted by type to either a recreational or commercial vessel. As a result, many residents have expressed concern that the aquaculture vessels provide an undesirable presence in mooring fields that are primarily used by recreational vessels. There is a need to have designated mooring areas within the salt ponds where commercial vessels may moor so as to have a minimal impact on other user groups, as well as on the scenic quality of the ponds. In addition, the limited areas of public access to the ponds are not designed for intensive use by commercial entities, leading to a shortage of space for parking and other land-side support facilities for this growing industry.

Goal: Provide defined mooring fields for the equitable and efficient distribution of moorings for both recreational and commercial vessels without compromising the ecological health of the salt ponds or public safety.

Policies

1. The town will work to increase the allowable number of mooring permits available to the public to help satisfy the current demand for mooring space in an equitable and ecologically sensitive manner.
2. The town will work to modify existing undersized mooring field sizes to accommodate both existing and future mooring placement in order to:
 - Maintain a safe environment for moored vessels;
 - Allow for navigation through and to and from mooring fields, and around docks;
 - Provide ample space to accommodate vessel size changes; and
 - Remain in compliance with the adopted mooring rules and regulations.
3. The town will require that all mooring tackle be brought up to the current specifications contained in the mooring regulations, to ensure that all moorings remain in their designated location and provide a dependable anchoring system.
4. The town will also work to remove any remaining heavy objects originally used as mooring anchors that may be a navigational hazard or a source of pollution affecting the water quality of the ponds.
5. The town will work to establish designated mooring fields for commercial vessels in order to reduce conflict with, and address the concerns of, residents and recreational users of the salt ponds.
6. The town will also work to enhance land-side support facilities to address the needs of permanent and temporary recreational mooring permit holders as well as the parking and water access concerns of aquaculture and other commercial fishing operators.

Recommended Actions

To carry out the policies above there are a number of specific recommendations for the town, specifically the Harbor Master in conjunction with the CPMC, to undertake. These recommendations are guided by the following principals:

- Mooring fields must be located to ensure minimal or no potential ecological damage to the water quality of the ponds and their shorelines. In particular, mooring fields must be sited as follows:

- So as to reduce impact on eel grass beds. In addition, much of the salt pond shoreline is fringe saltmarsh which is valuable for wildlife habitat, nutrient removal and flood protection. Accessing the ponds from these sensitive areas where dinghies are scattered and trampling of vegetation occurs is destructive to the marshes; and
- To ensure that tides and currents aid in the flushing, particularly of all new and significantly expanded mooring fields, and that these fields do not cause adverse effects on water quality.
- Mooring fields shall not obstruct access to designated shellfish management areas, traditional fishing grounds, public recreation areas and conservation areas.
- Mooring fields must be designed to ensure that there is safe vessel navigation between moorings and to and from docks and other shore-side structures. In general mooring areas must be designed to minimize conflicts with other uses of the salt ponds.
- Mooring fields shall provide a fifty foot setback from all residential docks, piers, floats, public launching ramps, federal navigation channels, fairways, anchorages and/or turning basins.
- The location of mooring fields and the allocation of the number of moorings must be done in a fair and equitable manner. Shallow water depths and limited public areas for parking and dinghy storage serve to restrict boating access to the ponds.
- Additionally, in the event that federal anchorages are established in the salt ponds, the town must also abide by the Army Corps of Engineers policy that mooring allocation in these anchorages is based on a policy of “open to all”.

1. Increase the Availability of Mooring Permits

To meet the demand for additional mooring permits, and in consideration of the fact that properly functioning marine sanitation devices on boats are required, and also that the shallow water depths of the salt ponds significantly limit the size and overnight use of vessels, the town proposes to undertake the following efforts:

- The Harbor Master will monitor use of moorings on a seasonal basis. If the Harbor Master finds that a mooring is not being used, or is underutilized over the course of multiple seasons, he will notify the permit holder, and depending on the circumstances, request the surrender of mooring privileges to allow the permit to be issued to a waiting applicant.

- The Harbor Master will maintain an annual inventory of boats which make use of each mooring field, with pertinent information such as vessel size and draft, sleeping capacity and presence of a marine sanitation device.
- Based on an accurate map of each mooring field, and an evaluation of the surrounding areas with the CPMC, the Harbor Master will determine which existing fields could be modified to allow additional mooring space.
- For any vessel with a marine sanitation device registered to a mooring permit, the applicant of the mooring permit will be required to provide proof of inspection verifying compliance with the state no discharge program.
- The town will also work to provide portable dump stations for self-contained port-a-potties at both public and private waterfront association locations during the boating season to respond to the need for waste disposal.
- Based on the cumulative efforts described above, the town will work with state agencies and officials to obtain approval for additional mooring permits for issue to the general public. It is expected that, in reviewing the inventory and the physical capacity of the mooring field areas, DEM will also address the availability and use level of the existing pump-out station. The town will work in conjunction with DEM on this issue.

2. Undertake Mooring Field Design

The Harbor Master will identify those mooring fields that are in the most demand, as well as those that are at or nearing maximum capacity. Utilizing the CRMC “Guide to the Siting of Mooring Fields”, the Harbor Master will work with the CPMC to recommend appropriate modifications to mooring field boundaries.

As mooring installations, removals and inspections are undertaken, the Harbor Master will work with mooring permit holders and service providers to relocate existing moorings as needed, in order to create a more efficient use of available space and mooring tackle placement.

3. Expedite Removal of Obsolete Moorings

The Harbor Master will maintain a record of which permit holders are using mooring tackle not in compliance with current specifications. The Harbor Master will notify all such permit holders that they are required by the next scheduled mooring tackle inspection to bring mooring tackle up to compliance in order to retain a valid mooring permit. Failure to comply will result in loss of the mooring permit.

The Harbor Master will also work in coordination with town-approved mooring service providers to ensure that permit holders bring mooring tackle into compliance and remove any existing abandoned mooring tackle and objects previously used as mooring tackle that present a threat to water quality and/or navigation.

4. Locate and Manage Use of Moorings by Commercial Vessels

To meet the need for mooring areas that can be used specifically by commercial vessels, the town proposes to undertake the following efforts:

- The Harbor Master, in conjunction with the CPMC and the town GIS Manager, will research suitable locations within the salt ponds for the siting and approval of mooring fields for commercial vessel use.
- The Harbor Master, in conjunction with the CPMC, will develop appropriate rules and regulations specific to the operation of any mooring field designated for commercial vessel use.
- The Harbor Master will require a permit holder with a commercial operation to place their mooring tackle in a mooring field designated for commercial vessels, unless the permit holder is operating a marina facility with riparian rights adjacent to a designated mooring field where the mooring can be placed.

5. Undertake a Study to Improve and Provide Land Side Support for Mooring Areas.

The final recommendation of this section of the Harbor Management Plan is for the town to work to provide more and/or enhanced public access areas with parking, boat launches, dinghy storage and sanitation facilities for use by both resident and non-resident mooring permit holders without deeded waterfront access, and for use by transient mooring users. This will require a specific study by the CPMC to evaluate parcels under current public ownership, followed by development of a plan for carrying out the improvements.

In addition, the successful operation of businesses making use of commercial moorings is dependent on providing areas for parking of commercial vehicles, storage of equipment and provision of sanitation facilities. The identification of areas for parking and other land-side support facilities should be part of any plan for designated mooring areas for commercial vessels within the salt ponds.

Mooring Management Recommended Actions

Action	Responsible Party	Time Frame	Funding Source
1. Increase the Availability of Mooring Permits	Harbor Master, CPMC, DEM	One to Two Years, As Needed	----
2. Undertake Mooring Field Design	Harbor Master, GIS Department, CPMC, DEM	One to Two Years, On-going	Town
3. Expedite Removal of Obsolete Moorings	Harbor Master, CPMC, Private Companies	One to Two Years, As Needed	Town, Private
4. Locate and Manage Use of Moorings for Commercial Vessels	Harbor Master, GIS Department, CPMC, DEM	One to Two Years	Town
5. Undertake a Study to Improve and Provide Land Side Support for Mooring Areas	CPMC, Town Departments	Two to Five Years	Town

STORM PREPAREDNESS

Background

A part of every harbor management plan is a storm preparedness component that assesses the risks that both harbor and shoreline users face from natural hazards, and identifies strategies to prepare for and respond to these hazards, as well as long term mitigation actions. In this way the Harbor Management Plan is compatible with Charlestown's Hazard Mitigation Plan.

Storms and Hurricane Risks Affecting the Salt Ponds

Charlestown has approximately 29 miles of coastline which is subject to flooding from both inland storms causing surface water run-off and high water tables, and coastal storms resulting in storm surges and wind driven waves. These conditions, along with high wind speeds, are produced by nor'easters, tropical storms and hurricanes throughout the year. The low-lying coastal ponds and their adjoining neighborhoods are the most vulnerable areas in Charlestown to the impacts of these severe storm events, including the potential for the barrier beaches to be overrun by storm surges.

While these weather conditions are influenced (and exacerbated) by the larger issues of climate change and sea level rise, the purpose of this section of the Harbor Management Plan is to focus on the actual storm events and the need to prepare boaters and property owners in advance of and during such events.

In recent years, Rhode Island has been subjected to a number of severe weather events:

- The Great Flood of 2010 – March 2010
- Tropical Storm Irene – August 2011
- Superstorm Sandy – October 2012

Superstorm Sandy in particular, caused significant flooding and damage along Rhode Island's southern coast. The storm surge destroyed buildings and marine structures and moved sand and debris into the coastal ponds. Septic systems were damaged and tanks exposed, and large trees downed. In Charlestown, ten homes were severely damaged or destroyed, most along the barrier beach section of Charlestown Beach Road. The town restricted entry to the Charlestown Beach Road area due to the devastation. An additional 26 homes had restricted entry until inspections could be made. Most of these homes were along East Beach Road, Surfside Avenue, Sandpiper Lane and West Beach Road (the Quonochontaug peninsula).

Contained in Appendix IV is the Saffir-Simpson Hurricane Wind Scale chart, a 1 to 5 rating system based on sustained wind speed during a hurricane. It describes the types of damages expected due to varying hurricane wind speeds, from category 1 (74-95 mph) to category 5 (greater than 155 mph). Shown below is a summary of the marine threats that can result from coastal flooding and storm surges, and high winds from severe storm events.



Joseph Warner Charlestown Beach Road after Sandy

Risk Assessment Table

Threat	Marina Interest	Effect	Result A	Result B
Flood/Surge	Boats on moorings and docks	Decreased scope	Dragging	Threaten boats, docks, homes and businesses
	Marina facility	Flooded facility Docks topping piles	Floating debris Spill of hazardous materials Freed docks and boats	Threaten surroundings
	Private residences	Flooded property Docks topping piles	Freed docks and boats	Property damage
Wind	Boats on moorings and docks	Windage	Dragging Dock lines parting	Environmental damage Property damage

Responsibility of the Harbor Master

The Harbor Master, in conjunction with the appropriate state and federal agencies, is responsible for coordinating all harbor activities related to preparation for, response to and recovery from, storm events affecting the coastal ponds. This is done in communication with the Charlestown Emergency Management Director, the Chief of Police and other town department heads.

As part of this Harbor Management Plan, the Town of Charlestown, through its Harbor Master, has developed a preparedness, response and recovery plan for hurricanes and other severe storm events, or as necessary for unpredictable events. These are described in detail in Appendix V and summarized below.

Preparedness:

From 3 days to 12 hours prior to the storm event, the Harbor Master is responsible for coordinating all preparedness activities. These include monitoring the storm, maintaining communication with all parties and taking the necessary steps to protect people and property. As part of this, the Harbor Master patrols the salt ponds and arranges safe havens for boaters as needed.

Response:

The Harbor Master will NOT respond to on-water emergencies during the actual storm event. This policy will remain in force unless revoked by the Emergency Management Director. The Harbor Master will remain on-site in the Police Department or other established command center to address any harbor-related issue. All vessels will be launched to allow the Harbor Master to begin operations immediately at the conclusion of the storm.

Recovery:

Immediately after the event, the Harbor Master has three recovery priorities:

- Priority 1 – Reestablish the marine patrol as an operational unit in order to facilitate the second and third priorities.
- Priority 2 – Take the necessary immediate action to minimize additional risk to life and property.
- Priority 3 – Reopen the salt ponds for recovery activity.

Responsibility of Marina Owners

Marinas are the primary gateways to the salt ponds. As such they can have a vital role in the success of any storm preparedness plan. Each marina is encouraged to have a plan in place in order to train staff and provide necessary services to effectively respond to a major storm event.

The marina storm preparedness plan should address the following efforts to safely and effectively prepare for a major storm event:

- Effective means of communication with boat owners and customers
- Priority list of actions based on the type of storm threat
- Seasonal preparedness of equipment necessary for full scale hauling of vessels
- Identification of secure storage areas to harbor or store vessels
- Training of staff to ensure safe working conditions and efficient work practices
- Communication with the Emergency Management Director and Police Department to allow marina personnel to work through mandatory evacuation curfews
- Securing of all marina property and gear that would be subject to high winds and storm surges

When the storm is approaching, the marina owners will need to meet with staff to review the action plan and assign responsibilities, while maintaining communication with the Harbor Master. Last, the marina plans should include recovery efforts based on storm damage, including prioritizing the re-establishment of services, aiding the RI Emergency Management Agency in necessary rescue and recovery, and assisting with insurance company claims.



Vic G. Dvorak

Responsibility of Individual Boaters

The primary occupants of the salt ponds are the individual boaters; in the event of a major storm they will be faced with the decision of what do with their boats. Each boater must be aware of the steps needed to take in advance of a storm event. A recommended plan of action is to be submitted to boaters as part of the approval of a new or renewed mooring permit.

Boat owners are encouraged not to stay aboard during major storm events. The town's standard operating procedure is NOT to respond to on-the-water requests for assistance during a major storm event and the U.S. Coast Guard will not respond to emergencies within the salt ponds due to unique navigational requirements. Boaters may be required to remove a vessel from the mooring gear by the Harbor Master should it be deemed necessary as mooring gear specifications are not designed to withstand high wind and major storm events.

The following are general guidelines:

- If the storm is less than tropical strength and the decision is made that boats can remain tied to the docks or on moorings, all lines should be doubled and chaffing protection provided where dock lines pass through fairleads and chocks over the vessel's side, and a secondary pennant added to mooring gear secured to a separate cleat. Dock lines should be attached to the high end of the pilings, if on a floating dock, rather than to cleats or other fastenings on the dock. If mooring tackle has been recently inspected and serviced, leaving the boat on the mooring may be the best option.
- One of the drawbacks to staying on a mooring, as with staying at a dock, is the threat of storm surge. Check with expected storm-surge forecasts to determine if the scope of the mooring will provide sufficient holding power at maximum tidal flow. All individuals who choose to leave their vessel on the mooring must notify the Harbor Master. The Town of Charlestown requires mooring inspections to be done every three years. Inspection reports are due prior to any mooring permit being approved. If a boater does leave their vessel on the mooring, they will be required to have an inspection completed after the storm event to verify the proper location, and that no mooring tackle components have been damaged resulting in possible mooring failure.
- Regardless of whether the boat remains at a dock or mooring, there are some basic steps that need to be taken before the storm strikes. The first step is to minimize the amount of surface area the wind can work against. The more surface area the wind has to push on, the greater the strain on all components of the boat and securing devices. Remove sails entirely and stow them below deck, especially roller furling jibs. Secure or remove everything in the cabin that is not fastened down, with particular attention to the galley area and chemicals stored in lockers. Secure all ports and hatches, and remove and cap all funnels. Tightly secure any tiller or wheel with strong lines from either side of the cockpit, do not leave coils of line on deck, and take out all slack from running lines on the deck or mast. In order to minimize damage caused by impact of loose boats in a crowded mooring field, it is important to place fenders on both sides of the boat. Once all precautions have been taken, the boat owner should leave the boat and seek shelter.

Issues

Ensuring Mooring Standards

One major concern with the safety repercussions of a storm event is the Harbor Master's involvement with setting mooring standards, placing ground tackle and conducting inspections. In order for a Harbor Master to avoid or minimize the amount of liability he must exercise reasonable care. This includes:

- Setting mooring standards which are appropriate for the area. The Harbor Master must be able to justify the standards which have been set. The maximum load the mooring gear is expected to withstand must be identified and documented.
- Providing mooring occupants with information on the stress points of moorings and offering advice on dealing with extreme weather conditions.
- Ensuring that all mooring gear is routinely inspected by the mooring permit holder and that proper records of these inspections are kept. The Town of Charlestown places the burden of mooring inspection on the boaters. Moorings are to be inspected every three years.
- Identifying and correcting situations which may cause damage to a moored vessel. If the Harbor Master learns that two boats are hitting one another the situation needs to be rectified quickly to minimize further damage, and potential risk to the environment and other property. The Harbor Master must first stop the vessels from hitting, which can be achieved by removing one of the vessels from its mooring. The Harbor Master then decides where to move the vessel. Information on mooring specifications and storm preparedness can be obtained through the Charlestown Harbor Master Office.

Clean-up of Storm Related Aquaculture Equipment

This chapter of the Charlestown Harbor Management Plan includes a description of the growing aquaculture industry, and the issues associated with this use of the salt ponds, principally the need to ensure a balance with the many other uses of the ponds. One aspect of the industry is the equipment used, including cages and racks and personal gear that can be broken lose or lost during storms and even high tides. There is a need for occasional shoreline clean-up, as well as emergency clean-ups after a storm event.

Clean-up of Storm Related Debris and Hazardous Materials

Post storm, there may be large amounts of debris within the salt ponds as a result of damage to waterfront homes, docks and vessels left on moorings, or even docks broken loose during the storm. Contributing factors include high winds that damage structures and blow debris into the salt ponds, and storm surges where the water level rises high enough to wash debris off the shore. Boats may break free from moorings and docks, and collide with other vessels or solid structures, or become swamped and sink. More of a concern is the potential for hazardous materials and liquids to end up in the salt ponds, causing ecological damage. There is a need to quickly mobilize available equipment and resources to clean up debris and hazardous items to prevent permanent harm to the environment.



Justin Vail

Effective Public Information and Outreach

To ensure maximum public safety and protection of property during a hurricane or other severe storm event, preparedness must include effective public outreach regarding recommended procedures to follow in response to the event. There also needs to be an established means of emergency alert while the storm is underway. This requires widely distributed materials to boat owners and property owners at the beginning of the boating season. It also requires a means to immediately contact impacted parties in the days and hours before a storm.

The Harbor Department currently has an electronic (email) notification system to relay up-to-date storm related information to all mooring permit holders. All permit holders are required as part of their application to provide a valid email address, and members of the public are also encouraged to sign up for the same email notification system. This allows the Harbor Master to send information by mass email before, during and after a major storm event. The email notification system is to provide storm details, and storm preparation recommendations for boaters, property owners, associations and marinas, as well as to identify the steps the Harbor Department is taking depending on what storm preparedness level is in effect.

However, this email notification system is generally only utilized by the public with specific interest in receiving information pertaining to use of the salt ponds, resulting in a gap of keeping the larger community informed. Because of this, Code Red can be utilized as another means of notifying the public about important storm information and town wide preparations (see Recommended Action 6 below).

A related public outreach effort is made by the Town of Charlestown through their community newsletter “The Pipeline”, which is written and assembled by town staff. It is electronically mailed to all persons who sign up via the town website, and it is also mailed to every Post Office box and route address in Charlestown. Extra copies are distributed to the Town Hall and Library (over 4,700 copies).

The August 2016 issue was dedicated to “*Important Preparedness Information*”, including preparing for a hurricane, evacuations routes and procedures, shelter information, important phone numbers, re-entry into evacuated areas, and efforts after the storm, such as repairs and disinfections.

Long Term Impacts of Sea Level Rise

The latest projections from the National Oceanic and Atmospheric Administration (NOAA) indicate a 3 to 5 foot sea level rise by the year 2050, which would permanently flood many communities. Seasonal high tides, such as moon tides, increase these water levels by at least 2 feet and they climb higher during storm events. This means that within the next 30 years, dramatic changes can be expected in and around the salt ponds – changes to the barrier beaches, salt marshes, tidal flats and other habitats. It also means more frequent flooding of homes, septic systems and roadways of low lying neighborhoods on the necks between the salt ponds and around the shoreline, with serious consequences for water quality and recreational use. In addition, the extent of flooding will result an increase in structural damage and debris. This makes it all the more important to have a robust harbor management plan.

Goal

While eliminating all damage from a natural disaster is not possible, the Harbor Management Plan strives to provide the greatest degree of protection from storm events.

Goal: To the greatest degree possible, protect public health and safety and property during storm events that impact the salt ponds.

Policies

The goal of effective storm preparedness is to prevent the loss of life and property through the following policies:

1. Properly preparing harbor and shoreline areas for storm events;
2. Having a completed and enforceable response and recovery plan;
3. Working in cooperation with harbor and shoreline users to ensure that a coordinated approach is applied to hazard mitigation;
4. Integrating harbor hazard mitigation activities with other, ongoing, local hazard mitigation programs; and
5. Identifying and completing long-term actions to redirect, interact with, or avoid the impacts of sea level rise and storm events.

Recommended Actions

1. Establish Requirements for Marina and Boater Storm Preparedness

Marinas:

All marinas located in the salt ponds will be required to submit a “Marina Storm Preparedness and Recovery Plan” to address issues of community safety. A suggested plan is included in Appendix VI. Marina storm preparedness plans will be required following the adoption of the Charlestown Harbor Management Plan, with updated plans submitted to the Harbor Master by January 1 of each year. Individual marinas are encouraged to expand upon this plan as it relates to their specific situation.

Boaters:

Boat owners who hold a town mooring permit will be required to submit an “Individual Boater Storm Preparedness and Recovery Plan”. This will be accomplished by attachment of a preparedness plan to the annual mooring renewal forms. A suggested plan is included in Appendix VII. For a mooring permit to be approved, an individual preparedness plan must be attached to the mooring application. Boaters will be expected to comply, to the best of their ability, with the plan they have prepared. The boat owner should advise the Harbor Master of any significant changes to the plan made during the boating season.

2. Establish Requirements for Aquaculture Farmers Storm Preparedness

While it is a requirement of the CRMC aquaculture permit that a lease holder clean-up any storm related debris originating from their operation, an established plan to manage equipment in advance of a major storm event is recommended. This plan would become part of the local review of an aquaculture permit done by the Coastal Pond Management Commission. Allowing the Town to attach this as a requirement to the CRMC issued permit (and permit renewal) could be part of an amended memorandum of understanding (MOU) between the Town and the CRMC regarding management of aquaculture in the salt ponds (see Aquaculture section).

3. Establish Post Storm Clean-up Procedures

To protect the ecology of the salt ponds, as well as public health and safety, it is recommended that post storm procedures be put in place that identifies who is responsible for removing large debris and hazardous materials from the ponds; what homeowners should do with debris that washes ashore and what resources are available; and the role that the Harbor Department, the RI DEM and the US Coast Guard all play.

4. Undertake Annual Review and Education and Training Program

Starting at the beginning of each hurricane season (June 1) the Harbor Master shall, in conjunction with the Emergency Management Director, review the Charlestown Hazard Mitigation Plan and identify and recommend needed updates. The Harbor Master shall also distribute the storm checklist for boaters.

The Harbor Master shall maintain an accurate list of principal marine interests including the marinas, waterfront businesses, neighboring harbor masters, the US Coast Guard, facilities able to provide towing and salvage operations, and emergency and environmental response teams. The Harbor Master should also assess the feasibility of developing a volunteer corps who can assist him/her in securing vessels during a storm event or maintain security patrols after an event.

An annual education and training program conducted by the Harbor Master for the public should be enacted. This program should focus on storm preparedness for the boater. Other workshops should be conducted with the help of the Building and Zoning Department and the Planning Department to discuss shoreline construction standards and storm proofing homes and business.

The Harbor Master should compile a list of educational material that can be shared with harbor and shorefront users.

5. Establish Boat Evacuation Areas

At times, removal of all vessels kept on moorings or docks will be required due to the predicted severity of a storm. This may be due to wind intensity, where wind speeds combined with the weight of a moored vessel will be too great for mooring tackle, resulting in catastrophic failure or “dragging”. It may be due to storm surge, where the scope of mooring tackle will not be sufficient and docks are at risk of topping pilings. Both concerns pose a great risk to personal safety, property and the environment.

Under such circumstances, it would not be safe for boat owners to remove vessels and store them at properties which fall within the predicted flooding and storm surge areas. Therefore, when there is a high potential for storm surge, it is important that there be adequate boat storage areas available outside of the predicated flood zones for the duration of the storm. The Harbor Master will work with other town departments and private land owners, if needed, to arrange and provide such safe storage areas for boat owners. Upon notification, the public will be provided with the locations, and instructions for use, of alternate temporary boat storage sites, with assistance provided by the Harbor Department if needed. Some potential locations, which ideally should be south of Route 1, include Ninigret Park, and the large field behind the Charlestown Police Station (4901 Old Post Road).

6. Enhance Public Communication of Storm Events

It is also a recommendation of this plan that the Code Red system (or similar automated phone message system) for warning the public of approaching severe storm events be used as an enhanced warning system. Code Red is a mass telephone notification system available to anyone who wishes to provide their phone contact information so as to be informed about important emergency information from the Town of Charlestown.

7. Undertake Long Term Mitigation Projects

Maintain the Beachways Walls:

An important long-term mitigation effort is to maintain the existing Charlestown and Quonochontaug Breachway walls (see Breachway and Channel Management section of this chapter). Although these walls do not provide complete protection, there is a measure of safety and preservation gained by having the breachway walls maintained. Though maintenance is currently not the responsibility of the Town, Charlestown shall work in conjunction with state and federal agencies.

Increase Mooring Scope:

Methods to increase mooring gear scope within the coastal ponds without losing surface area maximization should be explored. Actions may include a targeted approach to providing more swing area to account for increasing the scope with storm pennants for vessels that remain during events. In the existing mooring configuration, increasing mooring scope is difficult. Therefore, the Town should explore alternative methods for gridding the mooring field that will allow space maximization and increased scope.



Joseph Warner Sand Deposit in Quonochontaug Pond Marsh after Sandy

Coordination:

A Memorandum of Agreement (MOA) shall be entered into with the Department of Public Works to establish the working relationship between it and the Harbor Master for completing the following storm preparedness activities:

- Preparing public waterfront property
- Securing or removing town docks and floats, if necessary

The Harbor Department shall work with the Planning Department and the Building and Zoning Department to establish redevelopment policies for shoreline areas. These policies will be consistent with CRMC and DEM regulations as follows:

- Encourage and participate in the maintenance, restoration and enhancement of beaches and dunes.

- Limit development and redevelopment in hazardous coastal areas to protect lives and property from coastal storms and hazards. Post storm development shall avoid extensive rebuilding and intensification of land uses in critical areas and encourage reductions in the amount and intensity of development in order to reduce exposure of lives and property to coastal hazards.
- Attempt to minimize public expenditures and reduce risk to public infrastructure and facilities through redevelopment.
- Encourage relocation of structures landward of critical areas. This can be done by influencing state policies, expenditures, and programs to reduce the amount and intensity of development and redevelopment.
- Require shorefront areas replacement of non-conforming uses and eliminate unsafe conditions and inappropriate uses as opportunities arise.
- Identify shorefront areas that shall be subject to post-storm regulations and acquisition in order to reduce loss of life and damage to property.

Storm Preparedness Recommended Actions

Action	Responsible Party	Time Frame	Funding Source
1. Establish Requirements for Marina and Boater Storm Preparedness	Harbor Master, CPMC	One to Two Years, On-going	Town
2. Establish Requirements for Aquaculture Farmers Storm Preparedness	Harbor Master, CPMC, CRMC	One to Two Years, On-going	Public
3. Establish Post Storm Clean-up Procedures	Harbor Master, CPMC, DEM	One to Two Years, On-going	Public
4. Undertake Annual Review and Education and Training Program	Harbor Master, CPMC, EM Director	One to Two Years, On-going	Town
5. Establish Boat Evacuation Areas	Harbor Master, Town Departments	Two to Five Years,	Town
6. Enhance Public Communication of Storm Events	EM Director, Harbor Master	On-going	Town
7. Undertake Long Term Mitigation Projects	Town Departments, State and Federal Agencies	Five Years \pm	Public

BOATING SAFETY AND NAVIGATION

Background

Over the years, use of the salt ponds has increased greatly. Many different activities now occur on the ponds, both recreation and commercial, throughout the season – power boating and sailing, waterskiing and windsurfing, fishing and shellfish harvesting, aquaculture, and swimming. As a result, congestion has increased along with growing safety concerns regarding the compatibility of these varied uses in proximity to each other. Much of the safety concern is related to the use of power boats, in terms of both navigation hazards to the boaters and potential conflict with non-motorized uses. There is also concern with boating in shallow waters and the impact this can have on eelgrass beds and other sensitive habitats (see Water Quality section).

Issues

Navigation Challenges

Charlestown is known as a coastal vacation community; most of the summer residents and vacationing tourists come to specifically enjoy the beaches and salt ponds. Within the salt ponds, there are many areas that can be hazardous to boaters, including rocky and shallow areas, ever changing channel routes and aquaculture lease areas with submerged cages and structures. Navigation around the ponds and through these hazardous areas can be difficult for an unfamiliar user, raising the potential for injury and damage to property and the environment.

In addition, local and federal navigation charts for both Ninigret and Quonnochoaug Ponds do not show accurate water depths, areas of safe navigation or locations of specific hazards. There is little information provided on services, restricted areas, no wake zones and preferred areas where different types of water related activities can be safely enjoyed.

Compatibility with Other Users

Recreational boating is a dominant use within the salt ponds. Large and small motorized vessels, small sailing vessels as well as wind and kite surfers, and paddle boats such as canoes, kayaks and standup paddle boards, all use the waterways and often intermingle with each other and with shellfishing and swimming activities. There are ordinances in place to prevent motorized vessels from traveling at unsafe speeds in channels, and passing too close to other boaters, shoreside structures and mooring fields. In many cases the passing is not so much a safety issue as a public disturbance issue.



Salt Ponds Coalition

Entering through the Charlestown Breachway

As boating in the salt ponds increases, additional areas within the ponds may need to be designated as “no-wake” or “slow” zones to decrease the risk of serious incidents on the waters and provide a greater level of safety overall, as well as to decrease the disturbance to the public, waterfront property owners and the environment in general.

Goal: Establish and maintain conditions that provide for the safety of boaters and other users of the salt ponds.

Policies

1. The town will work to increase public understanding of boating navigation and safety issues in the salt ponds.
2. The town will actively monitor and evaluate boating activities to determine the need for additional regulations and/or restrictions.

Recommended Actions

To carry out the policies above and maintain a safe environment for boaters and other users, the following actions are proposed:

Navigation:

1. Develop and Distribute Local Maps, Charts and Publications

Developing such materials that identify areas in the salt ponds best suited for safe navigation, as well as restricted areas and no wake zones, will require the following efforts

- * Review the current uses in the salt ponds, both recreational and commercial.
- * Obtain accurate bathymetry data of the salt ponds.
- * Work with different user groups to recommend which areas best suit different types of uses in the ponds.
- * Prepare a map and publications for each pond that indicates water depths; shows locations of boating services, mooring fields and navigational channels; and identifies recommended use areas and special restriction areas, including locations of eelgrass beds that should be avoided.
- * Make all material available to the public.
- * Review all maps, charts and publications on an annual basis, and modify as needed.



Salt Ponds Coalition

Safety and Compatibility:

2. Establish Additional Designated “No Wake” or “Slow Zones”

Developing such zones within the salt ponds as needed to maintain safety and minimize any disturbance to the public, waterfront property owners and the environment, will require the following efforts on the part of the Harbor Master:

- * Review areas of boating traffic within the ponds and evaluate their impacts to determine the need for additional travel or speed restrictions, including limits on boating in areas of shallow water habitats (eelbeds).
- * Consult with the Coastal Pond Management Commission on these areas.
- * Include these restricted areas within all publications made available to the public, and update as needed.
- * Clearly mark all areas within the salt ponds designated as “no wake” or “slow zones”.

Boating Safety Recommendations

Action	Responsible Party	Time Frame	Funding Source
1. Develop and Distribute Local Maps, Charts and Publications	Harbor Master, GIS Department, CPMC	One to Two Years, As Needed	Town, Private
2. Establish Additional Designated “No Wake” or “Slow Zones”	Harbor Master, CPMC, DEM	One to Two Years	Town

RECREATIONAL FISHERIES

Background

Recreational fishing and shellfishing in the salt ponds has been a major pastime of residents and visitors alike. In Rhode Island, marine fisheries, both commercial and recreational, are regulated by RI DEM Division of Fish and Wildlife, with oversight by the RI Marine Fisheries Council³.

The salt ponds provide spawning and nursery grounds for a large variety of finfish species, including winter flounder, which enter and exit the ponds seasonally. While there are no anadromous fish runs (migrations of fish spawned in freshwater) remaining in the ponds, large numbers of baitfish draw in larger predatory game fish such as striped bass, which are caught in and around the breachway channels. Fishing or spearfishing in the marine waters of Rhode Island requires a valid and current recreational saltwater fishing license, which can be a state issued permit, one from a reciprocal state, or from a national saltwater angler registration. For RI DEM Division of Fish and Wildlife Finfish Regulations see <http://www.dem.ri.gov/pubs/regs/regs/fishwild/rimf3.pdf>.



Jane Weidman

Charlestown Breachway

In addition to being incubators to juvenile game fish and bait-fish, the salt ponds have produced rich shellfish resources throughout history. Recreational shellfishing remains a major activity in the salt ponds. As recommended by the RI Marine Fisheries Council, both Quonochontaug and Ninigret Ponds have been designated as Shellfish Management Areas, which are regulated differently than other marine waters of the state. Management areas may have different harvest

³ <http://webservice.rilin.state.ri.us/Statutes/TITLE20/20-3/INDEX.HTM>

limits for quahogs, clams, mussels, oysters and bay scallops, while also providing areas for the cultivation and growth of different species of shellfish.

Based on water quality standards, all of Quonochontaug Pond is open to shellfishing, as is the large portion of Ninigret Pond, with the exception of the waters east of Heather Island. Green Hill Pond is closed to shellfishing. The harvesting of wild oysters is prohibited in Quonochontaug Pond (in both Charlestown and Westerly) until September 15, 2021. Other areas of both salt ponds are permanently closed as shellfish sanctuaries, as described below.

No license is required for a resident of Rhode Island for recreational shellfish harvesting. Non-residents must obtain a license and are allowed half the daily limit (1/2 peck vs 1 peck for residents). There is no harvesting of shellfish by SCUBA allowed in either pond. See <http://www.dem.ri.gov/pubs/regs/regs/fishwild/rimf4.pdf> for Division of Fish and Wildlife Shellfish Regulations.

Only eel potting remains as a commercial fishery in the ponds. Shellfish aquaculture, a growing commercial activity in the salt ponds, is described in the following section of the plan.

Issues

Development and Overfishing

A clean, functioning ecosystem, with plenty of natural habitat, is crucial to attracting and holding strong runs of game fish. Elevated nutrient levels in the salt ponds, driven mainly by increased housing density (see Water Quality section), threaten these nurseries with reduced oxygen levels that can slow growth and even result in fish kills.

Clamming and other shellfish harvesting, coupled with habitat degradation from development, has reduced shellfish productivity in the salt ponds over the past several decades to a level that no longer sustains a commercial shellfishery. Recognizing the low shellfish density, the RIDEM has imposed a variety of management measures to improve production. Reduced daily catch limits were enacted, although these are somewhat ineffective due to the large number of recreational harvesters and the lack of aggressive law enforcement.

Shellfish spawner sanctuaries were created in both Ninigret and Quonochontaug Ponds. These areas, which are closed to harvesting, are periodically stocked with sexually mature shellfish (quahaugs, oysters and scallops). The sanctuaries are strategically located in areas where larvae can be distributed throughout the pond waters. In Ninigret these areas include Foster Cove and an area in the western-most portion of the pond, while in Quonochontaug, it includes an area in the eastern portion of the pond. The DEM has been assisted by the Salt Ponds Coalition and

local shellfishermen, who have transplanted over 1,600 bushels of adult quahogs into the sanctuaries to serve as brood stock.

The Nature Conservancy, also in conjunction with DEM, has undertaken an oyster reef development program using recycled oyster and clam shells. In 2015, 131 tons of oyster shells were placed in Ninigret Pond to create eight new oyster reefs covering about an acre. The reefs, seeded with live oysters, provide new habitat where both sportfish and shellfish can thrive. The program was expanded into Quonochontaug Pond in 2017, where nine small scale experimental reefs are being built with surf clam shells. As stated above, oyster harvesting is prohibited in Quonochontaug Pond, thereby protecting the reefs and allowing for oyster propagation and growth. Both are part of a multiyear project throughout the South County coastal ponds to determine if building oyster reefs in shallow coastal areas can improve habitat for certain recreationally important fish such as black sea bass, tautog, striped bass, and summer and winter flounder.

Shellfish closure areas and spawner sanctuaries are shown in Figures III-5 and III-6, along with the locations of aquaculture lease areas, for Ninigret Pond and Quonochontaug Pond, respectively (see next section).

Fisheries Enforcement

As described throughout this plan, the duties of the Harbor Master consist of marine patrol operations enforcing local, state and federal boating safety laws and conducting boating safety inspections; enforcing town mooring regulations; assisting with marine emergencies within the salt ponds; and any other duties as set forth by the Town of Charlestown. Fisheries enforcement is not included in these responsibilities; while a major use of the salt ponds is recreational fishery, the Harbor Master has little training to recognize and enforce fisheries violations in the ponds. Complaints and calls for enforcement are directed to RI DEM and an Environmental Police Officer (EPO) who will respond to investigate the violation. Upon the request of DEM, the Harbor Master will assist, and if witnessing a violation, he has the authority to hold the subject until an EPO arrives.

Fishing violations that occur in the salt ponds may often be overlooked because of the inability of the Harbor Master to respond to and enforce fisheries laws. The DEM is responsible for enforcing environmental laws on a state-wide basis with a limited number of officers, so on any given day, an officer may not be on patrol within a particular salt pond and available to monitor recreational fishing or immediately respond to a possible violation.

Compatibility with Other Users

As stated throughout this plan, there is a need to maintain a balance of uses within the salt ponds, and to ensure compatibility and reduce potential conflict by allowing equitable access for all users. Access to the wild stocks of fish and shellfish, the most traditional use of the salt ponds, must be a major management priority.

Goal: Ensure an ecologically healthy and well managed environment that supports an active recreational fishery in the salt ponds.

Policies

The wild stocks of fish and shellfish in the salt ponds are a public resource. For those who cast their lines from the breachway walls and dig for clams in the mudflats, the fisheries provide a renewable food source. The long tradition of fishing and shellfishing in the salt ponds has social and cultural, as well as economic, benefits.

1. The town will continue to limit and regulate development in the salt ponds watershed, to monitor the water quality in the salt ponds, and to undertake all efforts to protect and enhance water quality (see policies in the Water Quality section of this chapter) so as to protect the habitat of fin and shellfish.
2. The town will work with appropriate agencies and organizations to rebuild depleted stocks and restore degraded habitats.
3. The town will work with DEM to manage fishery harvesting in an equitable and sustainable manner.



Ken Lopardo

Recommended Actions

1. Collaborate with DEM and the Salt Ponds Coalition on the Management of Shellfish Sanctuaries

The town can be a partner with DEM and organizations, including the Salt Ponds Coalition, to manage the spawner sanctuaries, including assisting with transplanting and seeding efforts, monitoring the areas, and providing mapping.

2. Collaborate with DEM and TNC on the Oyster Reef Program in the Salt Ponds

As they have done with the dredging program (see Breachway and Channel Management section of this chapter), the town can be a partner with other groups to restore habitat, the prime example being the TNC and DEM program to build reefs in the salt ponds from recycled oyster and clam shells. These reefs, which are seeded with juvenile oysters, provide a safe habitat for juvenile fish and crabs. The town will assist by mapping the reefs and approving locations where the shells can be stored and “cured”.

3. Develop a Program with DEM to Enforce Shellfishing Limits

The town can assist the DEM in preventing overharvesting of shellfish in the salt ponds. This can involve training by the Harbor Master (or Assistant Harbor Master) to recognize, investigate and enforce fishing regulations. Reference to state fishing laws can also be included in the town ordinances.

Recreational Fisheries Recommended Actions

Action	Responsible Party	Time Frame	Funding Source
1. Collaborate with DEM and the Salt Ponds Coalition on the Management of Shellfish Sanctuaries	Harbor Master, CPMC, DEM, SPC	One to Two Years, As Needed	Town, Private
2. Collaborate with DEM and TNC on the Oyster Reef Program in the Salt Ponds	Town Departments, DEM, TNC	One to Two Years, On-going	Town, Private
3. Develop a Program with DEM to Enforce Shellfishing Limits	Harbor Master, DEM	One to Two years, Ongoing	Public

AQUACULTURE

Background

History

Shellfish aquaculture is a growing industry in Rhode Island, with the large majority consisting of oysters, which are especially in demand as interest in locally grown and fresh food has surged. Oyster growing was once prevalent in Rhode Island waters, especially in the early part of the 20th century; at its peak around 1910, about 21,000 acres of Rhode Island's estuarine and coastal waters were leased for oyster farming. A decline was precipitated by oil and industrial pollution in Narragansett Bay as well as the Great Depression, and later due to the devastating impacts of the Hurricane of 1938 which destroyed much of the shellfishing infrastructure. The last oyster farm from that era closed in 1954.

There was renewed interest in oyster propagation starting in the 1970's, which included oyster leases in the local salt ponds. This was followed by legislation in 1996 which established the Coastal Resources Management Council as the permitting agency for all aquaculture projects in tidal waters. This marked the beginning of the current growth period of aquaculture in the state. As of 2016, there were 70 aquaculture farms in Rhode Island (predominately oysters), with over 274 acres under cultivation generating \$5.3 million in product consumption value.⁴ The salt ponds, in particular, are considered ideal for aquaculture farming due to the protective environment provided by the barrier beaches, the small tidal range and the moderate temperatures.

A description, including photographs, of the types of oyster farming and the gear that is used in open waters is provided by the following link:

<http://www.pangeashellfish.com/blog/the-different-methods-of-growing-oysters>



Ken Lopardo

Cultivated Oysters

The salt ponds also support a small wild (uncultivated) oyster population. To encourage oyster growth, and to provide additional habitat for shellfish and fin fish, The Nature Conservancy, in conjunction with RI DEM, established a number of new oyster reefs in Ninigret Pond in 2015 by

⁴ *Aquaculture in Rhode Island 2016 Annual Status Report*, prepared by David Beutel, Aquaculture Coordinator, Coastal Resources Management Council

depositing recycled clam and oyster shells. Some were seeded with baby oysters to jumpstart productivity.

Regulation of Aquaculture

The CRMC regulates the use of submerged state lands in the coastal zone, which includes, of course, the salt ponds. All aquaculture operations must first obtain a permit from CRMC which considers the type and viability of the operation, the location and size of the area to be leased, and the potential impacts, including on other existing and potential uses of the leased waters.

The aquaculture permitting process is as follows:

Preliminary Determination: A Preliminary Determination (PD) is initially done, which allows the CRMC Aquaculture Coordinator to review the proposal with all levels of government – local, state and federal, if necessary. In Charlestown, local review and input is provided by the Coastal Pond Management Commission (CPMC); the CPMC discusses the application at their regular monthly meeting, inviting public input, and sends comments back to the Aquaculture Coordinator. In this manner the PD does allow for initial public input. The Aquaculture Coordinator prepares and distributes a summary of all the issues raised during the PD process.

Full Application: Upon submission of the full application, in addition to state and federal contacts, the Aquaculture Coordinator sends out the public notice to the CPMC and the Harbor Master and to numerous other town contacts, as well as anyone who requests the notice. The CRMC provides a 30 day comment period.

Agency Response: Letters of response are received from the chair of the RI Marine Fisheries Council, which serves as an advisory board to the DEM Director on regulatory and management issues relating to marine fisheries, the DEM Division of Fish and Wildlife, which includes the Marine Fisheries section, and the DEM Division of Water Resources. The CRMC Bio-Security Board also reviews the shellfish species to be used; they must specifically approve any species which are non-indigenous. An aquaculture license is also required from DEM, to allow for the possession, importation and transportation of species used in an aquaculture operation.

Approval: Approval of an aquaculture permit is either done administratively, or following a CRMC public hearing. Anyone with an issue or objection, which is substantive in nature, may request that a public hearing be held by the full Council. An aquaculture application for which there are no objections and which involves a site of three acres or less can receive administrative approval, as described in Section 110 of the *Coastal Resources Management Program* (Red Book) whereby the head engineer, head biologist, executive director, associate director, administrative assistant and aquaculture coordinator discuss and review the application. If it is

approved through this process there is a 21 day appeal period. Section 110 approvals are posted on the CRMC website and the full Council is informed (See Appendix VIII Aquaculture Permit Flowchart).

Performance Bond: A performance bond is required to ensure that gear is removed or a site cleaned up in the event the operation is abandoned. An aquaculture lease is initially valid for a period of fifteen years, renewable for ten years thereafter. However, the lease is renewed annually and the site monitored by CRMC and the DEM Division of Fish & Wildlife.



Ken Lopardo Ninigret Oyster Farmer

Memorandum of Understanding between the Town of Charlestown and the CRMC

The Town of Charlestown, through its Town Council, and the CRMC, through its Chair and Executive Director, have entered into a memorandum of understanding (MOU) regarding aquaculture in the salt ponds that is based on mutual interest in “balancing water dependent recreational uses with healthy sustainable shellfish aquaculture”. The MOU, enacted on May 15, 2015 (see Appendix IX) provides for the following:

- Joint collaboration on the development of GIS maps that show aquaculture lease areas in the context of the ponds’ natural resources and physical uses.
- The development of a monitoring program, implemented by the Harbor Master, to oversee the lease site areas and ensure compatibility with recreational uses.
- Establishment of a task force of both town and CRMC representatives to address a variety of technical issues relating to equipment, as well as identifying areas of the salt ponds experiencing heavy recreational use.

Since the execution of the MOU, efforts have been underway on the part of the town and CRMC to carry out its provisions; maps have been produced showing the lease areas, the Harbor Master regularly patrols these areas throughout the season, and the members of the task force have been identified to address issues of mutual concern.

Aquaculture Leases in the Salt Ponds

It is an established CRMC policy that only 5% of the total open water surface area of each coastal pond, as measured below mean low water, can be occupied by aquaculture (see the Red Book, paragraph 6 of Section 300.11 Aquaculture E. Prohibitions). The 5% was a compromise limit established in 2009 as a result of the efforts of a large working group on aquaculture; it was intended to balance the often conflicting interests of regulators, academics, commercial oyster growers, wild harvest and recreational fishermen, and environmental advocates.

Ninigret Pond:

The total water surface area of Ninigret is 1,647 acres, which allows 82.35 acres to be used for aquaculture. As of June 2017, there are fourteen active aquaculture leases, encompassing a total of 60.95 acres. This represents 3.7% of the total pond surface water area leaving 1.3% or 21.4 acres available for lease. See Figure III-5.

In addition to the leases, some of the aquaculture permit holders have oyster hatchery and nursery operations. In addition, oyster spat collection by the DEM Division of Fish and Wildlife is carried out in the Type 1 waters of Foster Cove.

Ninigret Pond is unique in that it also supports the only remaining substantial population of the dominant oyster (*Crassostrea virginica*) growing wild in non-polluted water in western Rhode Island.



Jane Weidman Ninigret Oyster Farmer

Quonochontaug Pond:

The total water surface area of Quonochontaug is 745 acres, which allows 37.25 acres to be used for aquaculture. As of June 2017, there are five active aquaculture leases, encompassing a total of 6.22 acres. This represents 0.83% of the total pond surface water area leaving 4.17% or 31.03 acres available for lease. See Figure III-6.

Green Hill Pond:

There are no aquaculture operations or wild shellfish harvest in Green Hill Pond; it has been closed to shellfishing since 1987.

Issues

Location Suitability of Aquaculture Lease Areas

Many factors are reviewed by CRMC when an application for a lease is made. These include the location and size of the area, the species to be grown, and the method of management or cultivation. The following are evaluated as part of the decision to grant the lease:

- the compatibility of the proposal with other existing and potential uses of the area and areas contiguous to it, including navigation, recreation and fisheries;
- the degree of exclusivity required for the aquaculture operation on the proposed site;
- the presence of other aquaculture operations already in place in a given area;
- the safety and security of the equipment and lease area; and
- the likely impact of the proposed activity on the scenic qualities of the area.

Areas that are near bird nesting sites, that support a wild harvest of shellfish and eelgrass beds, and that could impact mooring fields and navigational channels are not appropriate for use as aquaculture farms.

Future Aquaculture Lease Areas

As stated above, oyster farming is a growing industry. The oyster growers in the south shore salt ponds in particular have successfully marketed their product, establishing a nationally recognized market for their cultured shellfish. It is an expectation of this plan that the demand for new oyster or other shellfish leases will likely continue until the 5% maximum of the open water acreage in each of the salt ponds is leased, particularly on Ninigret Pond. Because the ponds support wildlife, and a variety of water-based recreational and commercial activities as well as aquaculture, there is concern on the part of the public regarding the siting of future lease areas.



Meredith Haas

Oyster Farm Workers in Ninigret Pond

Ensuring that future aquaculture activities do not interfere with access to the ponds and the barrier beaches, or with other uses of the salt ponds, particularly recreational boating (both power boats and canoes and kayaks) was an issue raised during the process of rewriting the Harbor Management Plan and expressed at the August 24, 2015 public workshop to discuss the plan.

Two concepts were proposed: targeting areas suitable for aquaculture so as to avoid conflict with other uses, and keeping the local community better informed when a permit application is made. Conversely, the oyster farmers have concerns with maintaining a compatible coexistence with other pond users, and ensuring that recreational boaters do not endanger themselves or be disruptive to the oyster growing fields.

Lease Areas and Public Access

As a condition of an aquaculture permit, CRMC requires that all lease areas be marked appropriately with stakes and buoys, and placed so as to not interfere with navigation and other traditional uses of the water surface. Each aquaculture lease area is required to be marked with buoys of a specific color which has been assigned to that lease holder.

Except to the extent necessary to protect the animal or plant life being cultivated, the public shall be provided with means of reasonable access to and from the area for water activities such as boating, swimming and fishing. Any limitations upon uses by the public must be clearly posted.

However, navigating between aquaculture lease areas has become an issue for the boating public in those cases where they cannot distinguish a way around the lease sites without risking their boat getting entangled in aquaculture gear, thereby potentially damaging property and limiting access within the ponds or to the shore.

Shortage of Commercial Moorings and/or Dockage

As described in the Mooring Management section of this chapter, mooring permits are granted to waterfront property owners as so-called riparian moorings, or to the general public as a private or commercial mooring. At the time of the mooring permit application, the request for a commercial mooring can be made, which is issued to a commercial entity such as a marina or waterfront business. The growing aquaculture industry has increased demand for commercial dockage space and/or commercial vessel moorings. Mooring use by the commercial aquaculture operators, who need space for multiple vessels that are designed to transport and process harvested shellfish, can be potentially disruptive in existing mooring fields which are used primarily by recreational boaters.

There are presently only three mooring fields in Ninigret Pond which are in proximity to commercial marinas where public access can be provided. Quonochontaug Pond has only one public access point, the state boat ramp located at the Quonochontaug Breachway, which is not located close to any mooring fields.

Shortage of Landside Support

Commercial aquaculture also relies on landside support: areas for loading and unloading; equipment storage, including cages, racks and floats; and employee parking. There is a need in particular for the storage of aquaculture gear. Such gear must be regularly rotated to allow for sufficient growth and development of product, which includes drying to remove old growth that would suffocate and starve young shellfish. Aquaculture farmers are prohibited from leaving gear stacked on site when they are not on site, and storage of gear on the vessels is discouraged. Areas suitable for storage and drying of gear away from the waterfront would serve the operating needs of the aquaculture farmers while lessening the negative impact on the waterfront.

Landside sites that provide direct access to dockage and/or mooring areas are in short supply. There is a concern with how much landside area is available to accommodate commercial aquaculture operations, especially since it is a growing industry. Few mooring fields are located where vessels used for aquaculture operations can be accessed from town or other publicly owned sites.

There is one marina (Ninigret Landing Marina), now owned by Ninigret Pond Oyster Holdings, LLC, an aquaculture co-operative formed by three of the oyster farmers in the pond. This 1.7 acre parcel adjoining Mud Cove includes a number of buildings including a garage, existing bait and tackle shop and a recently constructed greenhouse building used as an oyster hatchery. It also includes boat storage areas and parking, a boat launch and docks.



Steve McCandless

Oyster Hatchery

Public Education

As aquaculture increases its presence in the salt ponds, there is a corresponding increase in interest on the part of the public, particularly how oysters and other shellfish are cultivated and grown, what kind of equipment is necessary, how much area is required and how long it takes to grow an oyster, clam or scallop suitable for eating. This is an opportunity to not only educate the

public on the ecological benefits of aquaculture and its contributions to the local food supply and economy, but also to guide other users of the salt ponds on how to co-exist with the aquaculture farms – that is, a “do’s” and “don’ts” in the waters around the lease areas.

Debris Management

The final issue is the debris that is on occasion generated from oyster farms, such as mesh bags, unmoored cages and personal gear, particularly after events like spring tides and Nor’easters. There is a need for occasional shoreline clean-up, as well as emergency clean-up after a storm event. It is a requirement of the CRMC permit that the lease holders clean-up any debris that results from a storm event. In addition to monitoring the nearby shore areas and collecting debris as needed, the aquaculture farmers should have plans in place to manage their equipment in advance of a major storm event (see Storm Preparedness section of this chapter).

Goal: Support and manage aquaculture in the salt ponds as a sustainable and important local economic activity, while ensuring compatibility with other uses of the ponds.

Policies

Achieving a balance between a growing aquaculture industry and the traditional uses of the salt ponds is the focus of this section of the plan. The following policies have been identified to help achieve and maintain this balance:

1. Work with all agencies and users groups to identify areas in the salt ponds best suited for aquaculture, with consideration given to areas with available landside support, as well as impact on adjoining property owners and other users of the ponds.
2. Support the current CRMC Aquaculture Standard (Section 300.11 F.1n of the Red Book, as amended) establishing 5% of the total open water surface area of each salt pond as the maximum area to be occupied by aquaculture leases.
3. Increase the local distribution of notices of aquaculture applications to the CRMC.
4. Continue the local monitoring program conducted by the Harbor Master to ensure compliance with lease permits and compatibility between aquaculture and all other uses of the salt ponds, and expand monitoring activities as issues arise.

5. Work with agencies and non-profits to support non-commercial shellfishing, including efforts to enhance natural reproduction and encourage recreational harvesting.
6. Work cooperatively with aquaculture farmers on education of the public on shellfish cultivation and growing in the salt ponds, on co-existence between the farmers and other pond users, and on management of the clean-up of aquaculture related and other debris in the ponds and along the shore.



Ken Lopardo

Oyster Harvest

Recommended Actions

1. Address Aquaculture and other Salt Pond Issues with an Active Task Force

The MOU between the town and the CRMC includes the establishment of a task force consisting of town representatives and CRMC agency staff, the purpose of which is to respond to a variety of use and technical issues related to aquaculture. On the town side, the Task Force includes the Town Administrator, the Harbor Master, the GIS Manager, the chair of the CPMC, and a Town Council liaison.

Communication between the local and state levels allows for a mutual understanding of the issues related to aquaculture use in the salt ponds, as well as identification of ways to address these issues and other concerns. As new issues arise, continued cooperation between the town and CRMC is vital to keeping the balance of activity among all user groups in the ponds.

In addition to on-going communication, it is a recommendation of this plan that the Task Force meet annually to discuss the status of aquaculture within the coastal ponds. Topics will include issues and concerns raised by property owners and the public; any violation of regulations that have been witnessed or reported, and the actions taken; issues and concerns expressed by aquaculture lease holders; ways of improving overall aquaculture operations; managing enforcement responsibilities; and conflicts and resolutions with other user groups. It is also a recommendation that the Task Force expand its purpose to address other issues such as moorings and breachway management, and to review and update the MOU on an annual or as-needed basis.

Commercial aquaculture in the salt ponds will be evolving, and regular meetings of the Task Force will bring to light both the positive and potentially negative impacts that aquaculture has on the ponds and their shoreline areas. The proper siting and operation of the oyster farms are important in maintaining the water quality, scenic beauty and recreational attraction of the salt ponds.



Farm Service Agency (USDA)

In-Water Raw Bar

2. Maintain and Update Town Prepared Aquaculture-Related Mapping

As provided for in the MOU, a map has been prepared by the Charlestown GIS Department to show aquaculture lease areas. This map is updated as new aquaculture permits are issued. Because areas of traditionally used beach access, boating channels and shellfishing grounds all need to be considered when siting private aquaculture-leased areas, mapping must also include these and other important features of the salt ponds. It is a recommendation of this plan that a separate map that serves as a reference map of all the uses on-going in the salt ponds and related activities along the shore be created. This map will serve as a guide in identifying areas which are most suitable for aquaculture, and those areas which should be preserved for other uses.

The use map can be updated through an annual review by the CPMC of the aquaculture and other activities in the salt ponds in concert with all interested parties, i.e. the agencies and user groups referred to above. The following should be identified:

- Locations of landside support facilities and mooring areas for commercial vessels
- Areas of residential development along the shoreline
- Boating channels and corridors
- Eelgrass beds and restoration areas
- Recreational shellfishing and fin fishing areas
- Conservation and bird nesting areas
- Public beaches and beach access

Of particular interest is having a map for each pond that indicates the passageways between the aquaculture lease sites, particularly as new leases are added. Identifying such routes of passage serves the interest of both the recreational boaters and the aquaculture farmers.

The maps are to show overhead views of the aquaculture lease locations, with the colors on the maps corresponding with the buoys marking the sites in the ponds. From the water the public will be able to distinguish the areas between the lease sites that may be used for navigation and shore access. The corridor maps will be distributed through town offices and local marinas and businesses, and also made available online through the town website.

3. Expand Public Notice of New Lease Applications

As stated, public notice of new aquaculture permit applications are distributed by CRMC to a variety of local, state and even federal agencies. At the local level they are posted in Town Hall and are reviewed by the Coastal Pond Management Commission and the Harbor Master at the next monthly meeting of the CPMC following receipt of the application. All discussions regarding the applications are placed on record.

While there is an effort made to notify all parties of interest about new applications, the “fail-safe” method for any property owner or member of the public with interest in new aquaculture lease applications is to monitor either the CRMC website or the CPMC monthly meeting agendas on the Town of Charlestown’s website, or rely on a private organization which also tracks the applications.

In an effort to expand notification to as much of the public as possible, it is the recommendation of this plan that a link on the town website be provided for every aquaculture lease application that is made to the CRMC. The link would be placed on the Harbor Master’s page and would direct interested parties to the appropriate agency website where the full application can be reviewed.

The town can also provide a public notice service by creating an email list of all parties interested in receiving notice of aquaculture applications, or alternatively, any news or information regarding the salt ponds. Upon receipt of any new aquaculture application, notification of such can then be made by mass email distribution.

These methods will increase the likelihood that all interested parties will receive notice that a new aquaculture lease application has been submitted to CRMC and received by the town.

4. Identify Mooring Fields for Commercial Aquaculture Vessels

Areas for commercial aquaculture vessels to dock and/or moor, along with shore side access, are needed to run an efficient operation. Consolidating commercial vessels used in aquaculture operations to one location can help to address public concerns over issues such as unsightliness and odor sometimes associated with these vessels. With each new or expanded aquaculture lease, the landside use demand also grows. Mooring sites, access and landside support should be part of the consideration of any new aquaculture permit application reviewed by CRMC.

A recommendation of the Mooring Management section of this chapter is to have designated mooring areas within the salt ponds for commercial vessels. This recommendation includes specific steps to take in researching and mapping suitable areas and developing appropriate rules and regulations for their operation.

An area exists adjacent to the Ninigret Landing Marina on Sportsman Road where expansion of the existing mooring field adjacent to this parcel would provide an area where commercial vessels used for aquaculture can be moored with reduced impact to property owners and recreational uses. It is important that the use of any area for landside support of an aquaculture business be done in a manner that complies with the uses and standards of the Charlestown Zoning Ordinance.

5. Increase Aquaculture Lease Monitoring Program in Response to New Leases

Also as provided for in the MOU, the Charlestown Harbor Master, with CRMC guidance, is to oversee the aquaculture lease sites. A procedure for shared enforcement, or delegation by CRMC to the town, for limited violations is already in place. While the CRMC undertakes periodic monitoring, the Harbor Master monitors the day-to-day aquaculture operations to ensure that all regulations as specified by CRMC in the lease consent are followed. In the event of a violation, the Harbor Master documents it and sends notification to the leaseholder that the violation must be corrected. If a complaint is made by a third party, the Harbor Master

investigates and addresses it as needed. The CRMC is notified of all violations and complaints, and the status of each.

As commercial aquaculture in the salt ponds increases, so must the level of monitoring and enforcement responsibility by the Harbor Master. The town in conjunction with CRMC must periodically review any monitoring, enforcement and violation responsibilities delegated to the town and the Harbor Master, and modify as required.



Ken Lopardo *Floating Oyster Farm in Ninigret Pond*

6. Pursue Town Recreational Aquaculture Permits

Aquaculture as a recreational asset is also important. Wild harvest is very popular in the salt ponds and is a use of the ponds which is supported by the Town of Charlestown. It is a recommendation of the plan that the town obtain permits for aquaculture leases in suitable areas within the ponds that are publicly accessible, to be used primarily for recreational benefit, and as part of the 5% of the total open water surface area of each salt pond to be occupied by aquaculture leases.

Recreational aquaculture leases would be maintained and monitored by the town in cooperation with the local shellfish farmers who operate the commercial leases in the ponds. Specific areas would be open to the public for recreational use at a given time, and as the wild harvest becomes depleted, would be closed to shell fishing to be restocked with seed, spat, and legal sized shellfish for future growth and harvest. The use of a percentage of reproducing shellfish by the local aquaculture farmers will also help to sustain wild growth and development.

7. Require Marking of Aquaculture Gear

As described above, aquaculture operations require the use of large amounts of gear of varying design. During extreme cold the shallow areas of the ponds will freeze, creating issues of access for the aquaculture farmers, while the ice can often capture and relocate aquaculture gear as it thaws and moves. Of equal concern can be the disruption of equipment during storms and high wind events.

In order to preserve the scenic beauty of the salt ponds and to eliminate potential boating navigational hazards, it is the recommendation of this plan that a method of marking the ownership of aquaculture gear be established. This would allow the immediate identification of gear that is found adrift or along the shore. Developing an efficient and visible method of marking gear is best accomplished by the town, CRMC and the lease permit holders all working cooperatively.



Ken Lopardo

Ninigret Pond Oyster Farmers

Aquaculture Recommended Actions

Action	Responsible Party	Time Frame	Funding Source
1. Address Aquaculture and other Salt Pond Issues with an Active Task Force	Town Task Force, CRMC	On-going	Public
2. Maintain and Update Town Prepared Aquaculture-Related Mapping	GIS Department, Harbor Master, CPMC,	On-going	Town
3. Expand Public Notice of New Lease Applications	Town Departments	On-going	Town
4. Identify Mooring Fields for Commercial Aquaculture Vessels	Harbor Master, GIS Department, CPMC, DEM	One to Two Years	Town
5. Increase Aquaculture Lease Monitoring Program in Response to New Leases	Harbor Master, CPMC, CRMC	On-going	Public
6. Pursue Town Recreational Aquaculture Permits	CPMC, Town Departments, CRMC	Two to Five Years	Town

BREACHWAY AND CHANNEL MANAGEMENT

Background

Both the Charlestown and Quonochontaug Breachways (described in Chapter II) were constructed in the early 1950's to stabilize the connection from the salt ponds (coastal lagoons) to the Atlantic Ocean (Block Island Sound). The intent was to enhance the water quality within the salt ponds as well as to provide safe passage for local fisherman. The south coast of Rhode Island at this time was known to be an important fishing area for the state.



Vic G. Dvorak *Charlestown Breachway*

Prior to the construction of the hardened breachway structures, the environment of the salt ponds was significantly different, in terms of sediment accumulation, salinity and water quality. During calm weather, the ponds would be cut off from the ocean. Sediment transported along the barrier beach would bypass the ponds, the salinity of the ponds would be lowered due to freshwater entering through streams and surface water runoff, and the nutrient levels would be increased, impacting the water quality and often causing the ponds to become anoxic (depleted of dissolved oxygen).

The ponds would be breached periodically during storm events. Depending on the type of storm and its pattern, the breach would either occur into the pond from the ocean, or out of the pond.

The opening provided by the breach would result in the transport of large quantities of sediment into the ponds, increase the salinity to an amount similar to the open ocean, and reduce the nutrient levels of the water. The location of the breaches varied, occurring at low points in the barrier beach and resulting, over time, in a somewhat evenly spread accumulation of sediment.



Vic G. Dvorak *Quonochontaug Breachway*

Since construction of the breachways, sediment that would have naturally been carried along the shore now enters the salt ponds, and is deposited in consistent areas rather than being distributed more evenly within the ponds. The salinity levels stay fairly consistent. Although nutrient loading was significantly reduced when the breachways were initially constructed, over time it has increased because of additional development and activity in the watersheds resulting in more run-off (see Water Quality section of this chapter). The hardening of the breachways altered the natural habitat of the salt ponds and while the overall impact has been positive, it resulted in the need for ongoing maintenance.

Dredging History

Ninigret Pond:

Since the first maintenance efforts in 1985, dredging has occurred in Ninigret Pond over the years, largely due to environmental concerns. One major concern has been the loss of eelgrass beds through sedimentation. Eelgrass beds are a primary source of food and shelter to an abundance of marine life, including economically important finfish and shellfish, such as the bay scallop. The vitality of an estuary's eelgrass beds is an indicator of its overall health.

Major dredging was completed in 2006 and 2007 as part of the South Coast Restoration Habitat Project, a federally funded project overseen by the US Army Corps of Engineers, in conjunction with the CRMC. This ongoing project is intended to protect, restore and create prime eelgrass habitat in Ninigret and Quonochontaug Ponds in Charlestown and Winnapaug Pond in Westerly. Two areas of the tidal delta of the Charlestown Breachway were dredged to a depth of four feet (the prime depth for eelgrass habitat in the northeast), resulting in approximately 40 acres of new eelgrass beds.

Two protection areas were also created. One is an eight foot deep sedimentation basin seaward of the new eelgrass beds, created to protect them by slowing and trapping sediment that would otherwise cover the beds. This approximately six acre basin, referred to as the primary sedimentation basin, is expected to become filled over time, requiring ongoing maintenance. The second is known as the relief channel, which is located north of the beachway and through the tidal delta. This channel was dredged for a distance of approximately 1,700 feet and a width of 60 feet to a depth of 4.5 feet. It is designed to direct water flow and currents into the pond and around the newly established eelgrass beds to help produce optimum eelgrass growth. It also serves to improve the water quality throughout the pond. See Figure III-7.

The 2006/2007 dredging project removed approximately 122,000 cubic yards (CY) of sediment from the tidal delta of the Charlestown Breachway and 75,000 CY of sediment from the sedimentation basin and relief channel. As part of the restoration project, the US Army Corps of Engineers (ACOE) entered into an agreement with CRMC to maintain the basin and relief channel, on a five year or as needed schedule, in order to mitigate sediment transport into the restored eel grass beds. Inspections are conducted annually. Required maintenance activities vary according to the rate of sediment accumulation and the impacts of storm events.

In 2011 and 2012, the Town of Charlestown, in cooperation with CRMC, performed maintenance dredging of the sedimentation basin and relief channel. Approximately 57,000 CY of sediment was removed from the basin, and 16,000 CY from the channel, totaling about 73,000 CY. The town and CRMC each contributed approximately \$500,000 for this dredging effort.

In the summer of 2012 the town applied for and obtained (from the ACOE New England District, the RI DEM Division of Water Quality, and the CRMC) a ten year maintenance permit to continue the dredging efforts in Ninigret Pond. The new permit was modified to add a second sedimentation basin, of approximately four acres, located within the relief channel to better protect the fragile eelgrass habitat (see Figure III-7). This ten year permit allowed the town to pursue and obtain additional federal grant funding for dredging and restoration efforts in Ninigret Pond. The town intends to renew this permit after each maintenance dredging in order to ensure the pond's long-term health and viability.

In 2014, as a result of damage to the breachway structure from Superstorm Sandy, the town and CRMC applied for and received funding (from the Federal Emergency Management Agency) to remove boulders from the mouth of the Charlestown Breachway, as well as a sandbar a few hundred yards from the mouth of the inlet. The town supplemented the operation with \$75,000 from the Beach and Pond Preservation Fund (described below) to include removal of additional rocks that have always plagued boaters when navigating the inlet.

In late 2016 and early 2017 maintenance dredging was underway as a result of a separate grant (\$3.25 million) obtained from the Department of the Interior (DOI) to fund the Rhode Island South Coast Habitat and Community Resiliency Project. The main purpose of the DOI grant program is to increase communities' resilience to storm events and the impacts of sea level rise. The intent of the project in Ninigret Pond is to restore the adjacent marsh area which has become inundated due to sea level rise. The funding was provided to the CRMC, the Town of Charlestown and a number of other partners (public agencies and private organizations). The project consisted of dredging the two sedimentation basins and the relief channel and using the sediment for restoration of the adjacent marsh lands by elevating the marsh to promote revegetation, as well as for beach nourishment. Approximately 75,000 CY of material was dredged from the two basins and the relief channel.



Steve McCandless

Marsh Restoration with Dredged Sand, 2016

Quonochontaug Pond:

Quonochontaug Pond has never been dredged but the Town of Charlestown has mapped the sedimentation basin to determine the need for dredging. The pond was also included in the Army Corp of Engineers South Coast Habitat Restoration Project, but was last in the priority list established by the ACOE.

Town Pond and Beach Preservation Fund

In 2010 The Town of Charlestown established the Pond and Beach Preservation Fund dedicated to the environmental health of both salt ponds in Charlestown. The primary goal of the fund is to ensure the maintenance of the breachways by providing the local share for future dredging projects. It also funds other environmental projects associated with the ponds, such as breachway mapping and monitoring project in Ninigret Pond undertaken by the Charlestown GIS Department. The town has purchased highly accurate and specialized GPS/sounder equipment to measure the breachway and channel depths in order to monitor the rate of sediment accumulation. This monitoring is conducted at least semiannually, as well as prior to and after any major storm events. Because of the constant sediment transport into the pond through the breachway, the monitoring is needed to predict when the next dredging is needed.

There are plans to expand the mapping/monitoring to Quonochontaug Pond and to include other parts of both ponds. Allocations of \$150,000 to \$250,000 for this fund are included annually in the town's budget.

Issues

The Charlestown and Quonochontaug Breachways and the channels in both salt ponds are subject to the forces of nature. They require ongoing maintenance to ensure the protection of both wildlife habitat and the immense economic and recreational value the ponds provide for people. This maintenance requires ongoing monitoring, and it requires significant public resources and funding. There is a need for partnership among the local, state and federal agencies as well as the private organizations with an environmental interest in the ponds.

Goal: To provide for the ecological health of the salt ponds and their safe navigation by the ongoing maintenance and improvement of the breachways and channels.

Policies

1. Monitor the condition and use of the salt pond breachways and channels as valuable local and regional economic and recreation assets.
2. Coordinate and cooperate with state and federal agencies to provide for the ongoing maintenance and navigability of the breachway and channels of the salt ponds.



Nate Bousquet

Quonochontaug Breachway Opening and Private Docks in Channel

Recommended Actions

1. Maintain the Breachway and Channel Mapping and Monitoring Program

As a result of work completed by the Charlestown GIS Department, one breachway is now, and the other is proposed to be, subject to monitoring for changes in channel depths and locations that result from sediment accumulation and storm events. It is necessary to maintain this mapping and monitoring program in order to plan for dredging and other restoration efforts to protect the ponds' ecology and navigability.

2. Obtain and Renew Maintenance Dredging Permits

In order to position itself for future funding opportunities, it is recommended that the town renew its ten year dredging permit for Ninigret Pond on a five year or as-needed basis. Keeping the permit active means that the Town is always prepared to undertake the actual dredging as well as meet a requirement when applying for outside funding. In addition, the town should obtain a similar ten year maintenance permit for Quonochontaug Pond, and keep this permit active as well.



Steve McCandless

Dredge Equipment near the Charlestown Breachway, 2016

3. Maintain the Pond and Beach Preservation Fund

The town, through its annual budget process, has shown a consistent commitment to the salt ponds by supplementing the Pond and Beach Preservation Fund. This money is used for local environmental projects related to the ponds, and most importantly, serves as the local match for federal funds for large dredging and restoration projects. This funding should continue since maintaining the breachways and the overall health of the ponds and the barrier beaches is an ongoing effort.

Breachway and Channel Management Recommended Actions

Action	Responsible Party	Time Frame	Funding Source
1. Maintain the Breachway and Channel Mapping and Monitoring Program	GIS Department	On-going	Town
2. Obtain and Renew Maintenance Dredging Permits	Town Departments,	Five Years \pm	Town
3. Maintain the Pond and Beach Preservation Fund	Town	On-going	Town

BARRIER BEACHES

Background

The salt ponds are lagoon estuaries located between the Charlestown Moraine and the barrier beaches to the south. While only a third of the Quonochontaug Pond barrier beach is within Charlestown (0.6 miles), essentially the entire length of the Ninigret Pond barrier beach is within the town limits – East Beach Road barrier, on the west side of the Charlestown Breachway, is about 16,000 feet (3 miles), while the Charlestown Beach barrier, on the east side of the breachway, is about 4,000 feet (3/4 of a mile). A few hundred additional feet of the Charlestown Beach barrier lies within the Town of South Kingstown.

Off road vehicle access to the barrier beaches is governed by CRMC which requires all vehicle operators to obtain an annual permit⁵. While each barrier beach has different regulations regarding vehicle access and use, driving across the dunes is prohibited except along marked and stabilized trails. All barrier beaches are also subject to closure to protect the piping plover during nesting season.

Quonochontaug Pond – Ninigret Avenue Barrier

Other than from the Quonochontaug Breachway launch area, boating access to the pond in the Town of Charlestown is all from private property.

For vehicular access, the Quonochontaug Pond barrier beach is only accessible from Westerly, via a sand trail known as Ninigret Avenue, which is not a separate right-of-way but part of the lots through which it passes. Vehicles are allowed on the sand trail only between September 15 and June 15 of each year, and may not leave the sand trail to drive on the beach at any time.



Nate Bousquet

Quonochontaug Barrier Beach and Sand Trail

⁵http://www.crmc.ri.gov/offroadvehicles/BeachesTrails_RegsInfo.pdf

The portion of the barrier beach within Charlestown is owned by private conservation and sportfishing organizations, as well as the RI DEM, who own the eastern most end, part of a 15.5 acre parcel adjoining the length of the Quonochontaug Breachway. All of this land in Charlestown is zoned as Open Space – Recreation. No public parking is allowed, but during the off-season, access to private parking areas is not monitored.

Ninigret Pond – East Beach Road Barrier

The East Beach Road barrier is the longest stretch of barrier beach in Rhode Island. With the exception of a cluster of houses at the western-most end (near the town’s Blue Shutters Beach), this barrier is undeveloped and protected through its ownership by RI DEM and the US Fish and Wildlife Service (US FWS), although there are a few lots under private ownership. The barrier beach between the developed end and the Charlestown Breachway is either zoned for open space or is recommended to be. The RI DEM and US FWS work cooperatively to manage the area.

There is vehicle access to the barrier from East Beach Road (on the Quonochontaug peninsula). Otherwise beach access along the barrier is primarily by boat. Boaters usually anchor off-shore and wade to the beach – there are three pathways from the pond side to the ocean side which most people follow.

The public parking area on the DEM land (Ninigret Conservation Area) marks the end of the general public vehicle access along the barrier beach. Off-road vehicles with a permit from CRMC may access the sand trails along East Beach. Driving on the beach is only allowed from September 15 to April 1 of each year; during the remainder of the year, off-road driving is limited to the designated sand trails. The number of off-road vehicle permits is limited. The Ninigret Conservation Area is regulated according to state park rules – no fires, no alcohol, pets to be controlled, etc. The state does not provide rubbish dispensers, so everything is carry in/carry out.



Vic G. Dvorak

Ninigret Pond East Beach and Charlestown Beach Barriers

Ninigret Pond – Charlestown Beach Barrier

Charlestown Beach is a partially developed barrier beach with public road access and parking available at both town (Charlestown Town Beach) and state (Charlestown Breachway) facilities. DEM also allows R/V camping at their site along the breachway.

Issues

As stated in Chapter II of this plan, the salt ponds, marshes, tidal flats and their ecosystems would not exist without the barrier beaches; they would be destroyed by daily ocean waves and tides as well as storm events. As the first line of defense, the barrier beaches also protect the mainland side of the ponds from ocean swells and storms.

The barrier beaches also provide essential habitat, allowing the salt ponds to function as nursery grounds for finfish and shellfish. The barrier beach – salt marsh habitats are important stop-over sites for migratory birds, part of the US FWS so-called Atlantic Flyway, a major migratory bird corridor along the East Coast. A number of endangered and federally regulated species are present, including the salt marsh sparrow, and the piping plover, which nests and rears its young along the barrier beaches from April to September.

The fragile environment of the barrier beaches is subject to damage by both storms and human activities. The impacts of sea level rise and more frequent storm events resulting from climate change also provide a risk. Sea level rise can erode the barrier until it becomes too narrow to withstand the force of storms; this tends to push sand onto the bay or pond side, a “washover” effect which moves the barrier landward. Sea level rise could eventually break apart the barrier beaches. As stated earlier in this plan, the latest projections from NOAA indicate a 3 to 5 foot sea level rise by the year 2050, with dramatic changes expected in and around the salt ponds, including the barrier beaches.

With an understanding of the long term impacts of climate change on the salt ponds, it is necessary to manage the beaches in a way that preserves their integrity and reduces risk to property, both along the barriers and on the pond side. One aspect of this is to discourage or prevent additional residential development, which is neither appropriate nor safe for residents over the long-term.

The barrier beaches are also subject to the damaging impacts of off-road vehicle travel; the fragile dunes and vegetation can be damaged by trucks and SUVs that drive off the designated sand trails. Because of the difficulty in providing regular enforcement, self-policing by the vehicle operators is necessary, and is generally successful. However, one area in particular, named “Elbow Beach”, located at the end of the East Beach barrier (the west side of the

Charlestown Breachway) is a popular area for off-road vehicles to park during the seasons when these vehicles are allowed on the barrier beach. At this end of the East Beach barrier, the sand trail has been obliterated by successive storms and replaced by dunes and dune grass, and as a result vehicles travel over and around the dunes to reach the area where people park vehicles and access the breachway channel.

Goal: Preserve the undeveloped areas of the salt pond barrier beaches for conservation and passive recreation use.

Policies

The barrier beaches must be managed as a critical natural resource:

1. The town will work in conjunction with the RI CRMC, the RI DEM and the US Fish and Wildlife Service to protect and preserve the barrier beaches, including managing their use in an environmentally sensitive manner, and preventing further development through acquisition of private land when available and maintaining restrictive zoning.
2. The town will work with appropriate agencies and private organizations to educate the public about the importance of the barrier beaches to the life and use of the salt ponds, and the need to “tread lightly”.



Virginia Lee

Barrier Beach in Winter

Recommended Actions

1. Maintain Open Space Zoning along the Barrier Beaches

The town will ensure that all barrier beach areas considered undevelopable remain in or be rezoned to an open space /conservation zoning designation.

2. Identify Barrier Beach Parcels for Open Space Acquisition

The town will identify barrier beaches as priority areas for open space acquisition, including those areas now presently developed but subject to flood and storm damage, working in conjunction with the DEM and the Charlestown Land Trust and other private land conservation organizations.

3. Develop a Barrier Beach Public Information Brochure

The town will develop and post on its website a public informational brochure on the salt pond barrier beaches which includes a summary of the regulations regarding all forms of access to the beaches, particularly vehicular.

4. Develop a Plan to Protect and Regenerate Dune Areas at East Beach End

The Town will work with DEM and CRMC, and private land owners, to clearly mark a beach face access and parking for off-road vehicles during the off-season at the end of East Beach, and to erect fencing in certain areas near Elbow Beach to protect the dune system from damage by off-road vehicles. Specifically this will involve snow fencing to allow the regeneration of the dunes within DEM property up to the hardened breachway structure. Once populated with dune grass, this regenerated line of dunes will prevent off-road vehicle access to the fragile Elbow Beach area. Parking can then be limited to the elevated beach face immediately adjacent to the breachway.

Barrier Beaches Recommended Actions

Action	Responsible Party	Time Frame	Funding Source
1. Maintain Open Space Zoning along the Barrier Beaches	Town	On-going	NA
2. Identify Barrier Beach Parcels for Open Space Acquisition	Town Departments, Land Trust	Five Years±	Public
3. Develop a Barrier Beach Public Information Brochure	Town	One to Two Years, On-going	Town
4. Develop a Plan to Protect Dune Areas at East Beach End	Town Departments, DEM, CRMC	Two to Five Years	Public

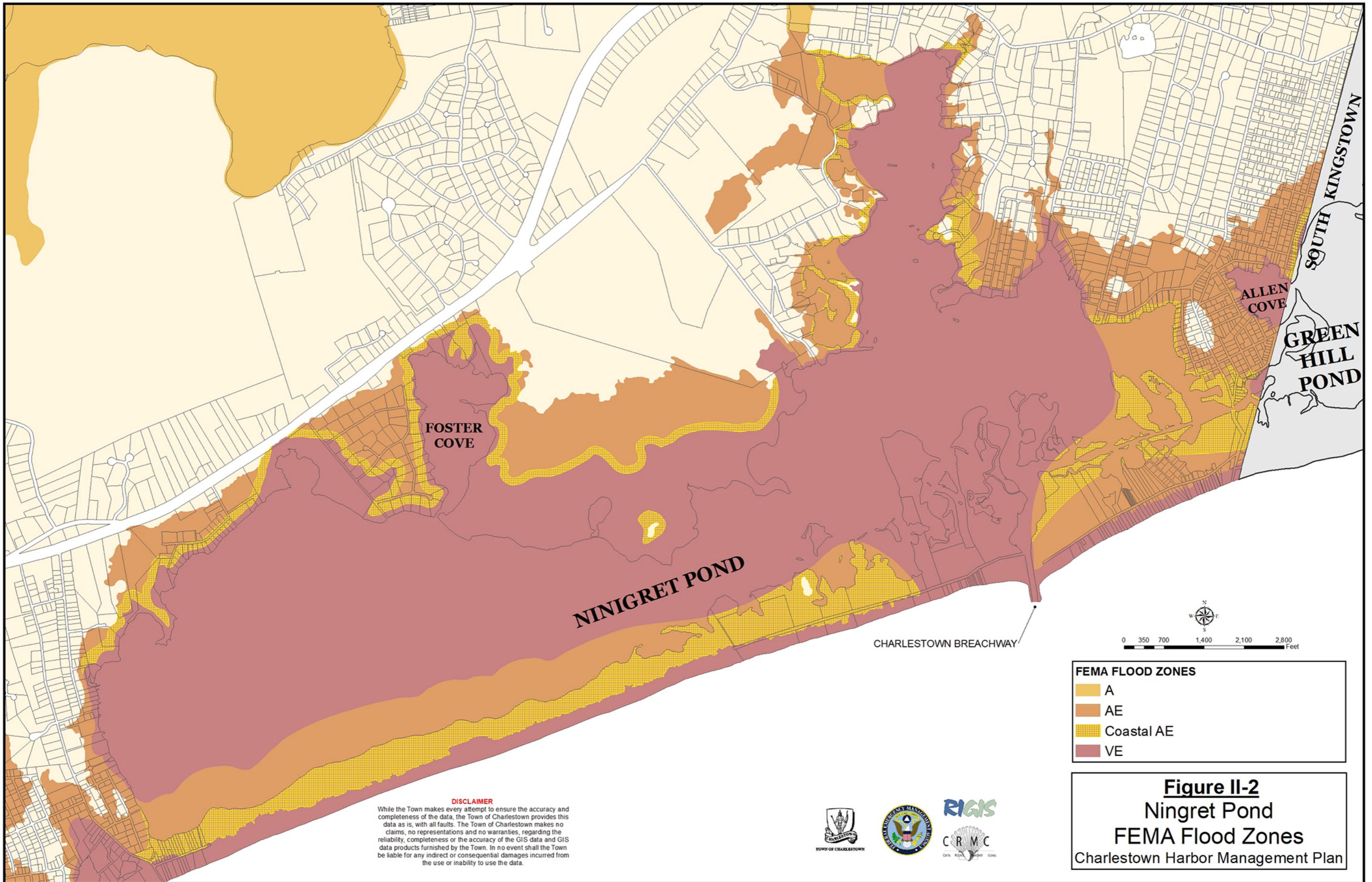


DISCLAIMER

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Figure II-1
The Salt Ponds of Charlestown
 Charlestown Harbor Management Plan



FOSTER COVE

NINIGRET POND

ALLEN COVE

GREEN HILL POND

SOUTH KINGSTOWN

CHARLESTOWN BREACHWAY

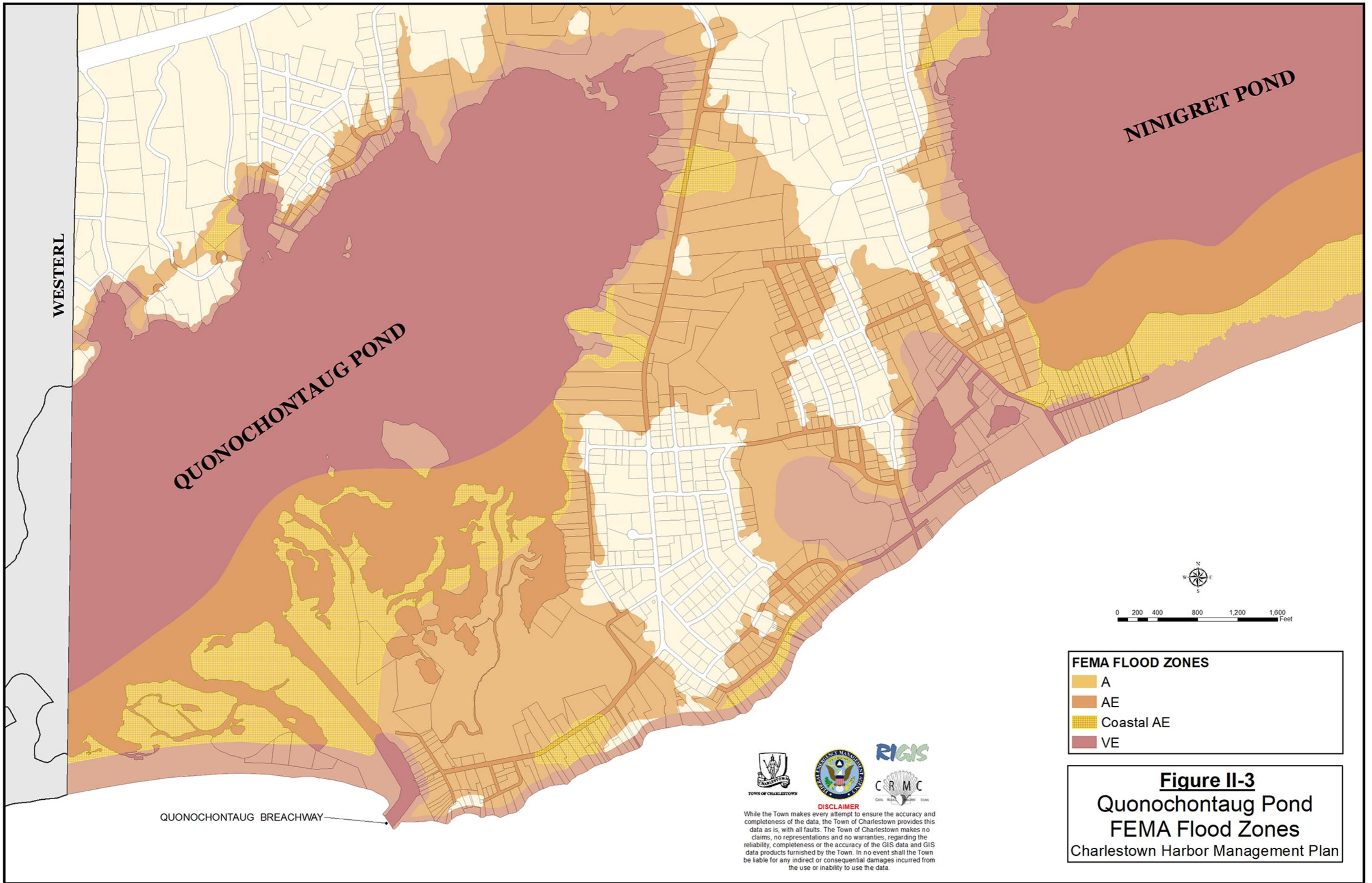
FEMA FLOOD ZONES

	A
	AE
	Coastal AE
	VE

Figure II-2
Ningret Pond
FEMA Flood Zones
 Charlestown Harbor Management Plan

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WESTERL

QUONOCHONTAUG POND

NINIGRET POND

QUONOCHONTAUG BREACHWAY

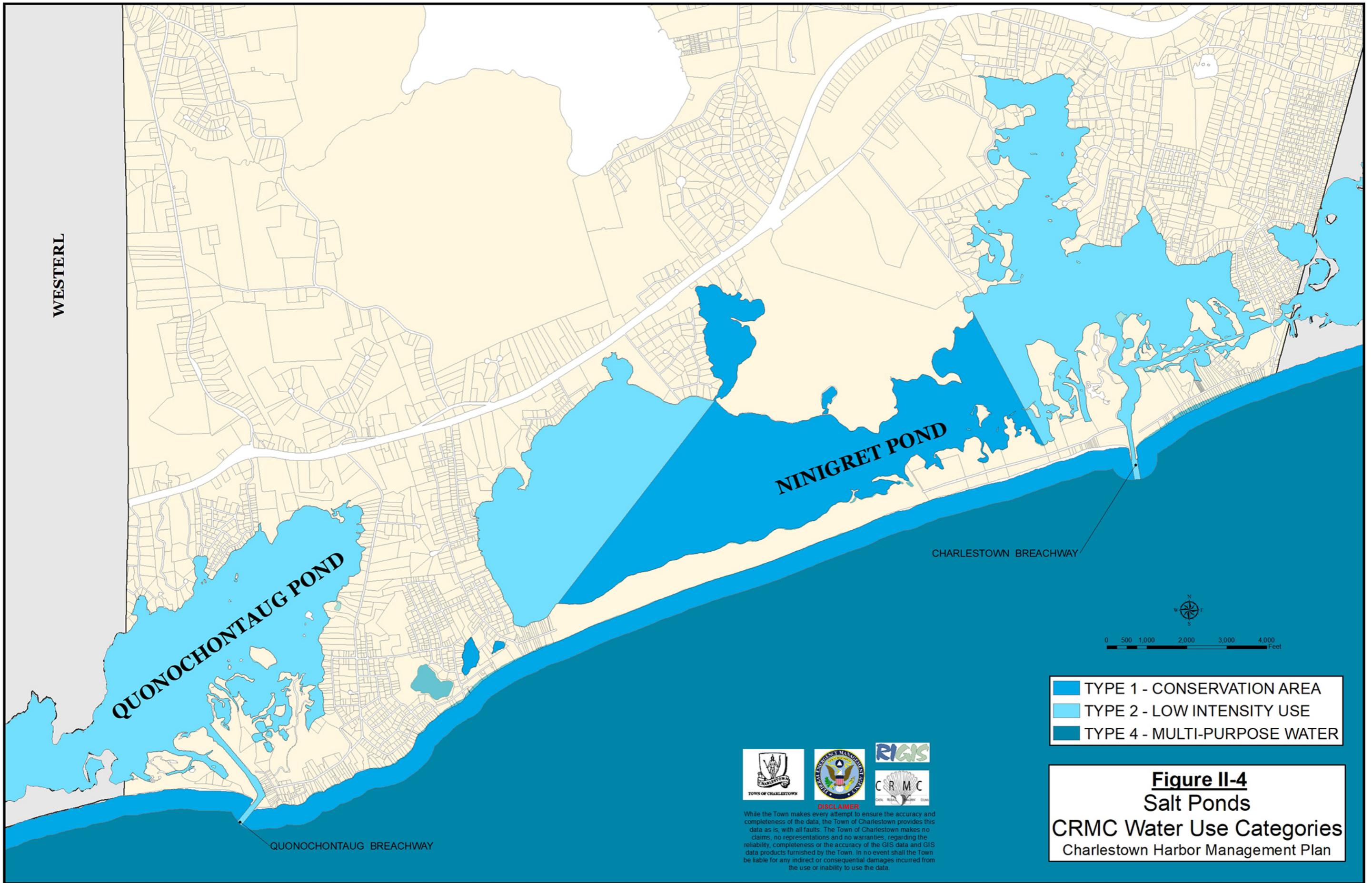
FEMA FLOOD ZONES

- A
- AE
- Coastal AE
- VE

Figure II-3
Quonochontaug Pond
FEMA Flood Zones
 Charlestown Harbor Management Plan



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Section 303(d) Water Quality Categories per RIDEM

Category 1 - Meets tested standards for clean waters: placement in this category does not necessarily mean that a water body is free of all pollutants. Most water quality monitoring is designed to detect a specific array of pollutants, so placement in this category means that the water body met standards for all the pollutants for which it was tested. Specific information about the monitoring results may be found in the individual listings.

Category 2 - Waters of concern: waters where there is some evidence of a water quality problem, but not enough to require production of a water quality improvement (WQI) project (including total maximum daily load [TMDL]) at this time. There are several reasons why a water body would be placed in this category. A water body might have pollution levels that are not quite high enough to violate the water quality standards, or there may not have been enough violations to categorize it as impaired according to Ecology's listing policy. There might be data showing water quality violations, but the data were not collected using proper scientific methods. In all of these situations, these are waters that we want to continue to test.

Category 3 - Insufficient data: water where there is insufficient data to meet minimum requirements according to Policy 1-11.

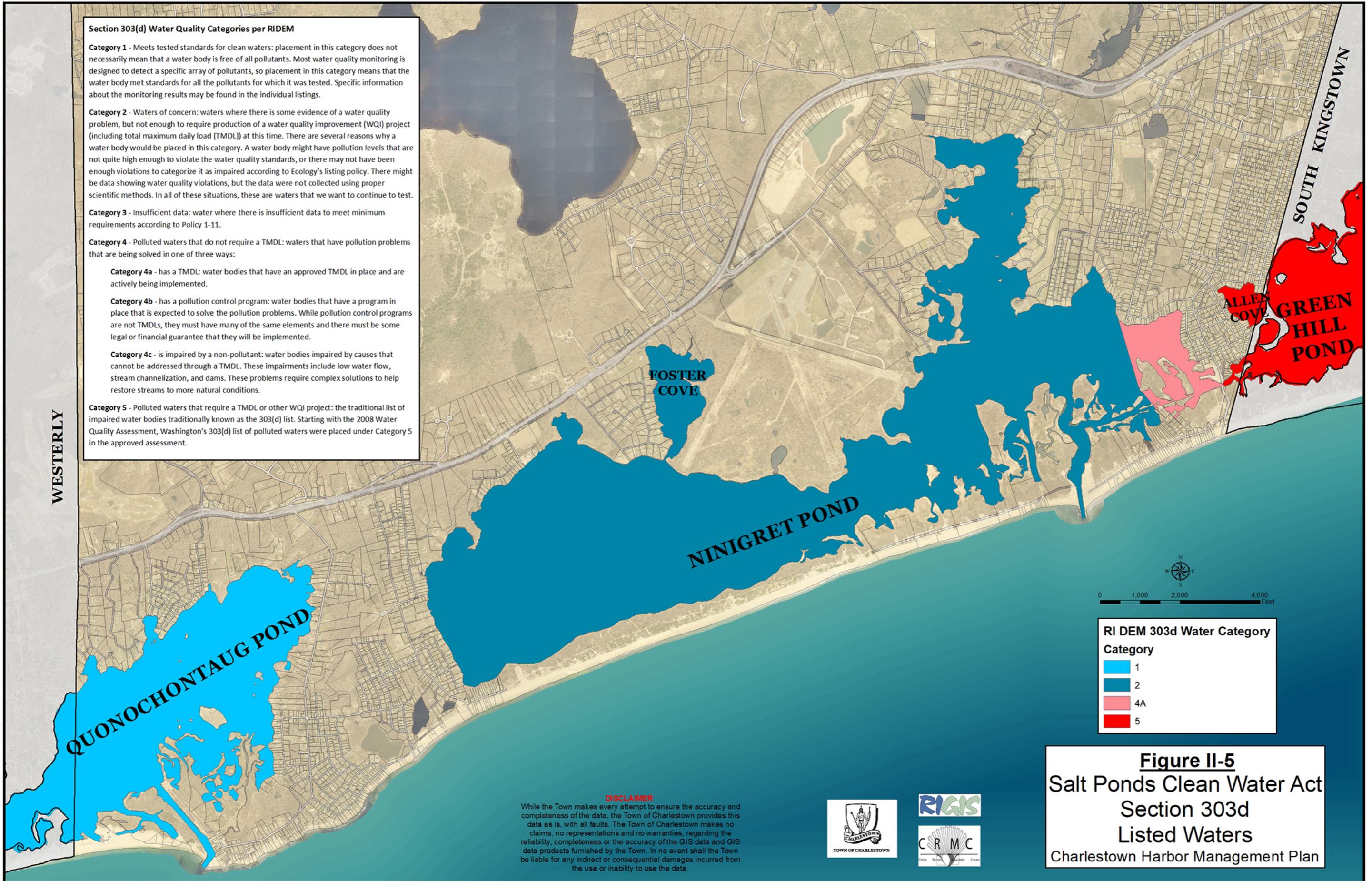
Category 4 - Polluted waters that do not require a TMDL: waters that have pollution problems that are being solved in one of three ways:

Category 4a - has a TMDL: water bodies that have an approved TMDL in place and are actively being implemented.

Category 4b - has a pollution control program: water bodies that have a program in place that is expected to solve the pollution problems. While pollution control programs are not TMDLs, they must have many of the same elements and there must be some legal or financial guarantee that they will be implemented.

Category 4c - is impaired by a non-pollutant: water bodies impaired by causes that cannot be addressed through a TMDL. These impairments include low water flow, stream channelization, and dams. These problems require complex solutions to help restore streams to more natural conditions.

Category 5 - Polluted waters that require a TMDL or other WQI project: the traditional list of impaired water bodies traditionally known as the 303(d) list. Starting with the 2008 Water Quality Assessment, Washington's 303(d) list of polluted waters were placed under Category 5 in the approved assessment.



WESTERLY

SOUTH KINGSTOWN

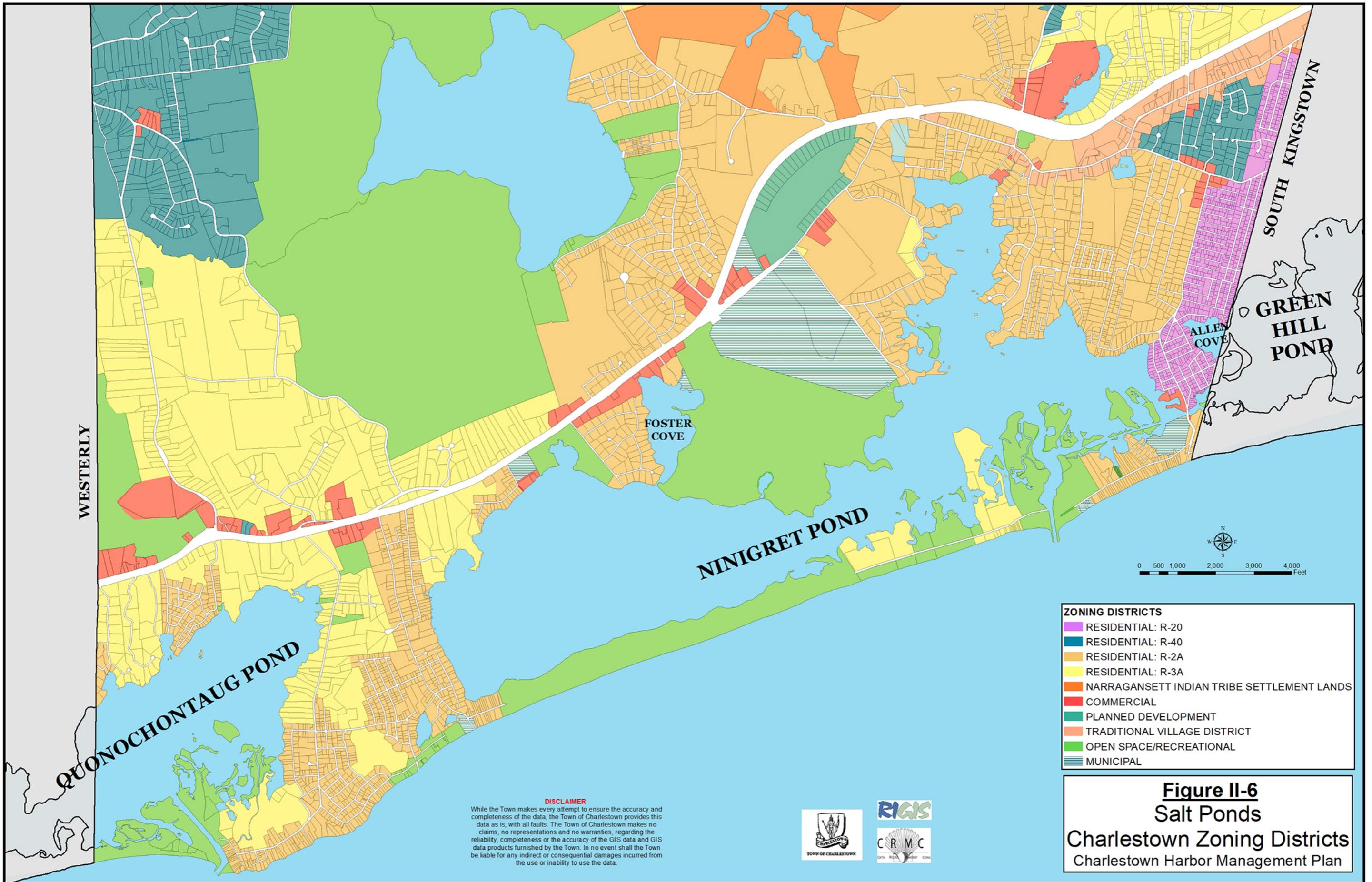


RI DEM 303d Water Category	
Category	Color
1	Light Blue
2	Dark Blue
4A	Pink
5	Red

Figure II-5
Salt Ponds Clean Water Act
Section 303d
Listed Waters
Charlestown Harbor Management Plan

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WESTERLY

SOUTH KINGSTOWN

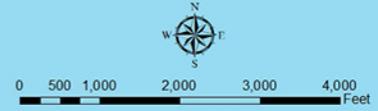
GREEN HILL POND

ALLEN COVE

FOSTER COVE

NINIGRET POND

QUONONCHONTAUG POND



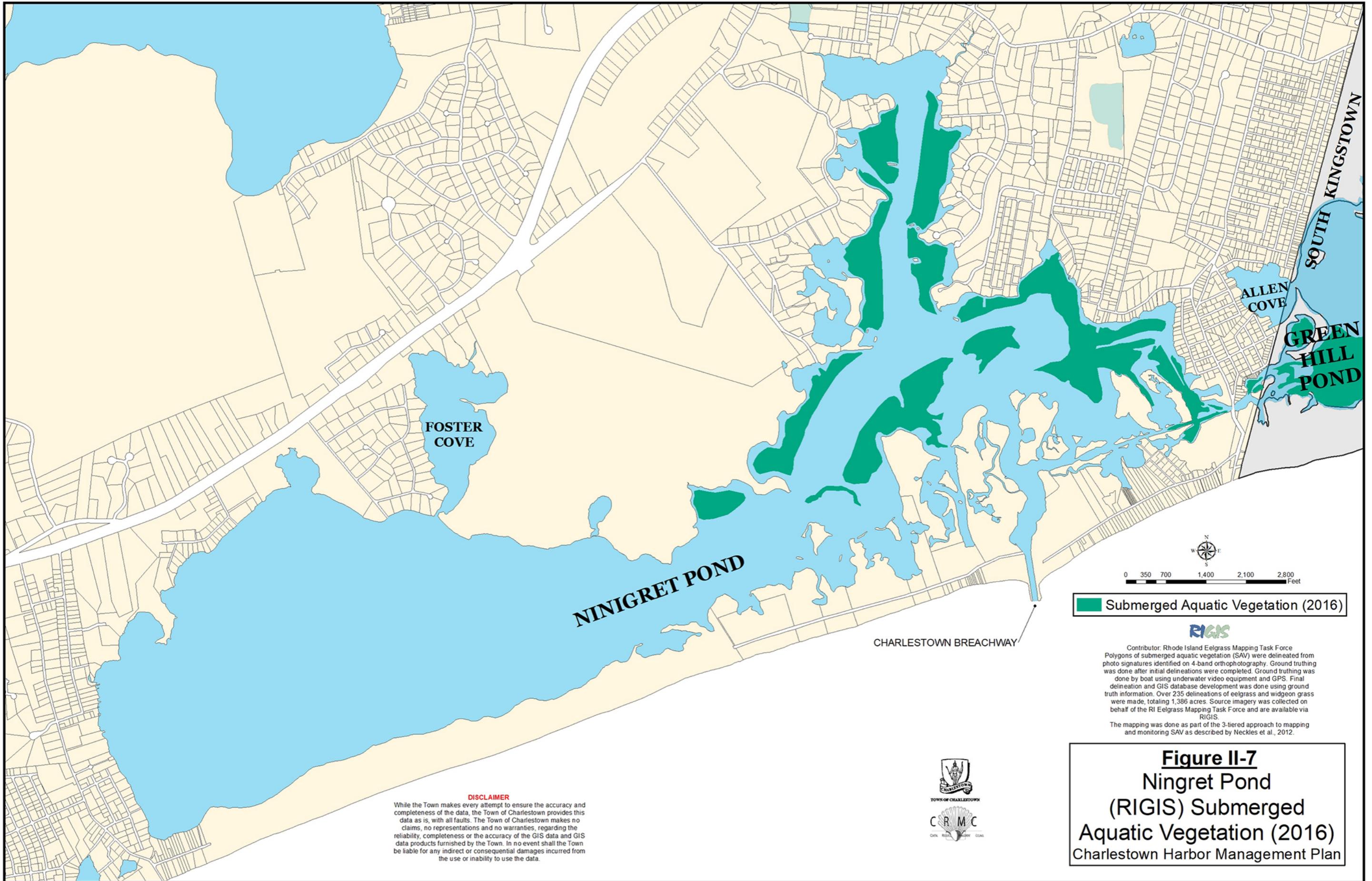
ZONING DISTRICTS

- RESIDENTIAL: R-20
- RESIDENTIAL: R-40
- RESIDENTIAL: R-2A
- RESIDENTIAL: R-3A
- NARRAGANSETT INDIAN TRIBE SETTLEMENT LANDS
- COMMERCIAL
- PLANNED DEVELOPMENT
- TRADITIONAL VILLAGE DISTRICT
- OPEN SPACE/RECREATIONAL
- MUNICIPAL

DISCLAIMER
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Figure II-6
Salt Ponds
Charlestown Zoning Districts
 Charlestown Harbor Management Plan



FOSTER COVE

ALLEN COVE

GREEN HILL POND

SOUTH KINGSTOWN

NINIGRET POND

CHARLESTOWN BREACHWAY

Submerged Aquatic Vegetation (2016)

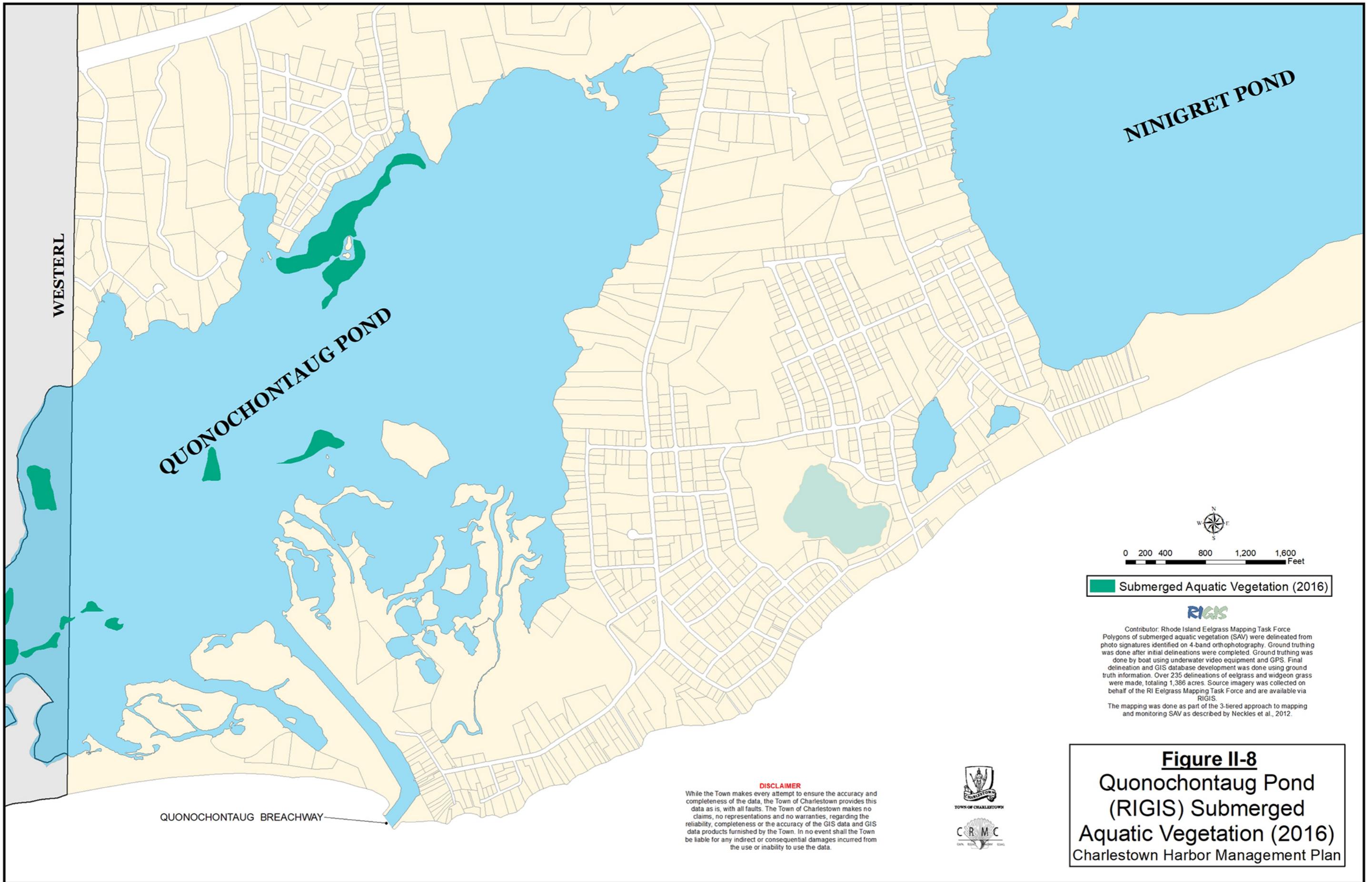


Contributor: Rhode Island Eelgrass Mapping Task Force
 Polygons of submerged aquatic vegetation (SAV) were delineated from photo signatures identified on 4-band orthophotography. Ground truthing was done after initial delineations were completed. Ground truthing was done by boat using underwater video equipment and GPS. Final delineation and GIS database development was done using ground truth information. Over 235 delineations of eelgrass and widgeon grass were made, totaling 1,386 acres. Source imagery was collected on behalf of the RI Eelgrass Mapping Task Force and are available via RIGIS.
 The mapping was done as part of the 3-tiered approach to mapping and monitoring SAV as described by Neckles et al., 2012.

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Figure II-7
Ninigret Pond
(RIGIS) Submerged
Aquatic Vegetation (2016)
 Charlestown Harbor Management Plan



WESTERL

QUONOCHONTAUG POND

NINIGRET POND

QUONOCHONTAUG BREACHWAY



0 200 400 800 1,200 1,600 Feet

Submerged Aquatic Vegetation (2016)

RIGIS

Contributor: Rhode Island Eelgrass Mapping Task Force
 Polygons of submerged aquatic vegetation (SAV) were delineated from photo signatures identified on 4-band orthophotography. Ground truthing was done after initial delineations were completed. Ground truthing was done by boat using underwater video equipment and GPS. Final delineation and GIS database development was done using ground truth information. Over 235 delineations of eelgrass and widgeon grass were made, totaling 1,386 acres. Source imagery was collected on behalf of the RI Eelgrass Mapping Task Force and are available via RIGIS.
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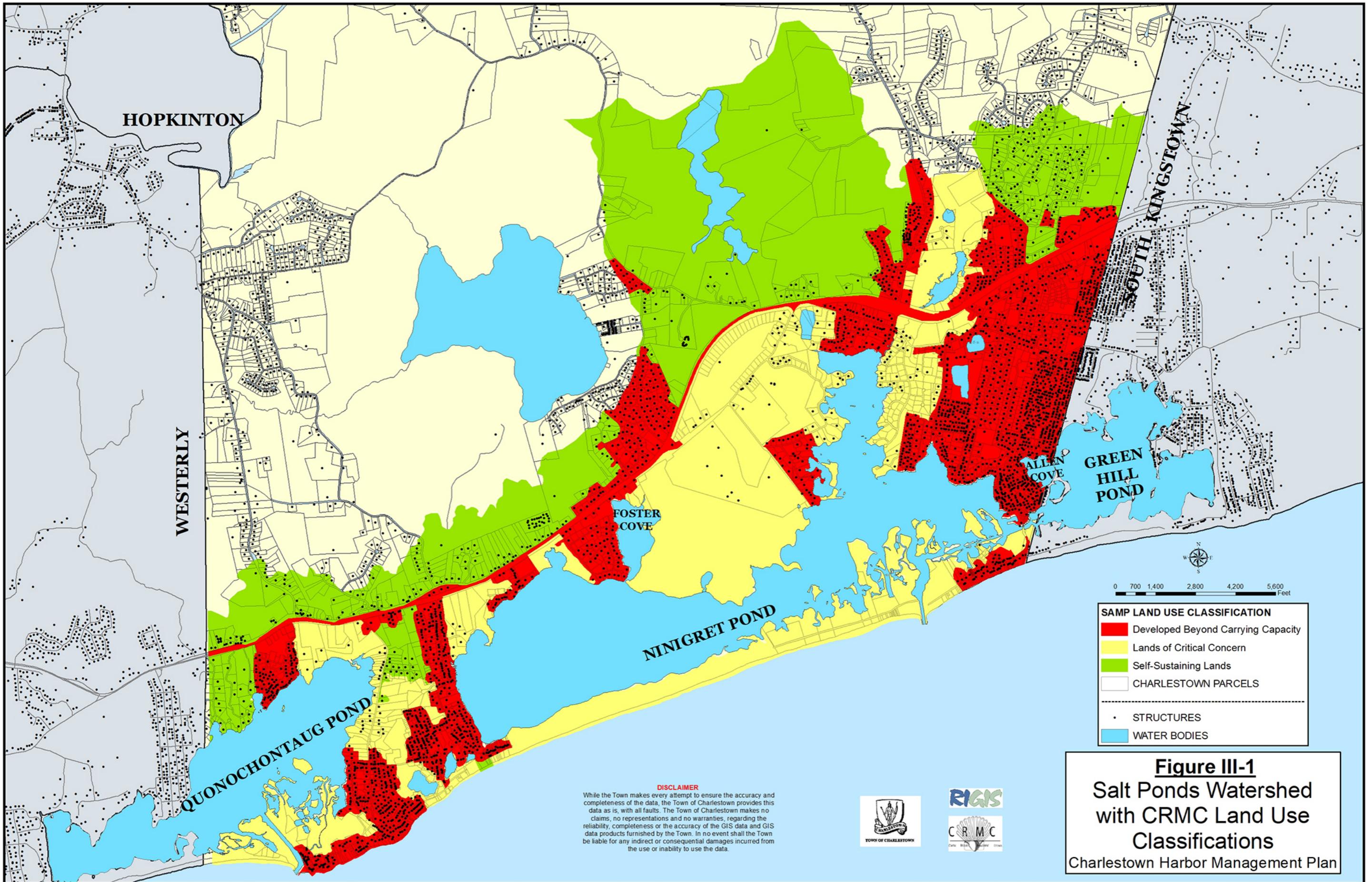
Figure II-8
 Quonochontaug Pond
 (RIGIS) Submerged
 Aquatic Vegetation (2016)
 Charlestown Harbor Management Plan



Figure II-9
Salt Ponds Uses:
Conservation and Recreation Areas
Marinas and Boat Launches
 Charlestown Harbor Management Plan

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SAMP LAND USE CLASSIFICATION

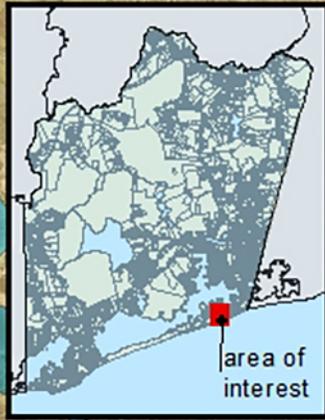
- Developed Beyond Carrying Capacity
- Lands of Critical Concern
- Self-Sustaining Lands
- CHARLESTOWN PARCELS

- STRUCTURES
- WATER BODIES

Figure III-1
Salt Ponds Watershed
with CRMC Land Use
Classifications
 Charlestown Harbor Management Plan

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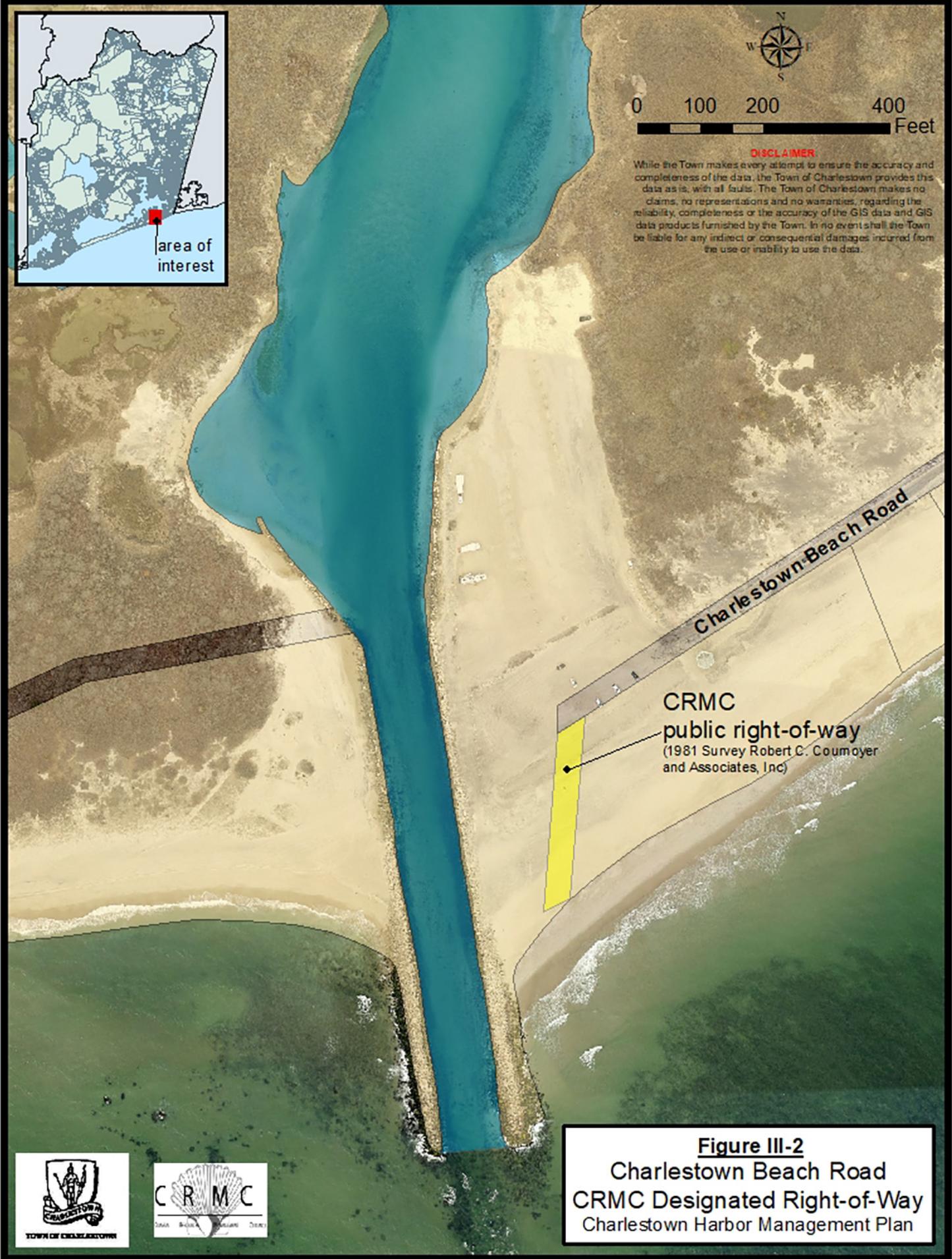




0 100 200 400 Feet

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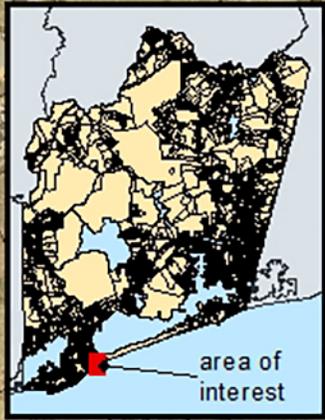


CRMC
public right-of-way
(1981 Survey Robert C. Coumoyer
and Associates, Inc)

Charlestown Beach Road



Figure III-2
Charlestown Beach Road
CRMC Designated Right-of-Way
Charlestown Harbor Management Plan



0 100 200 400 Feet

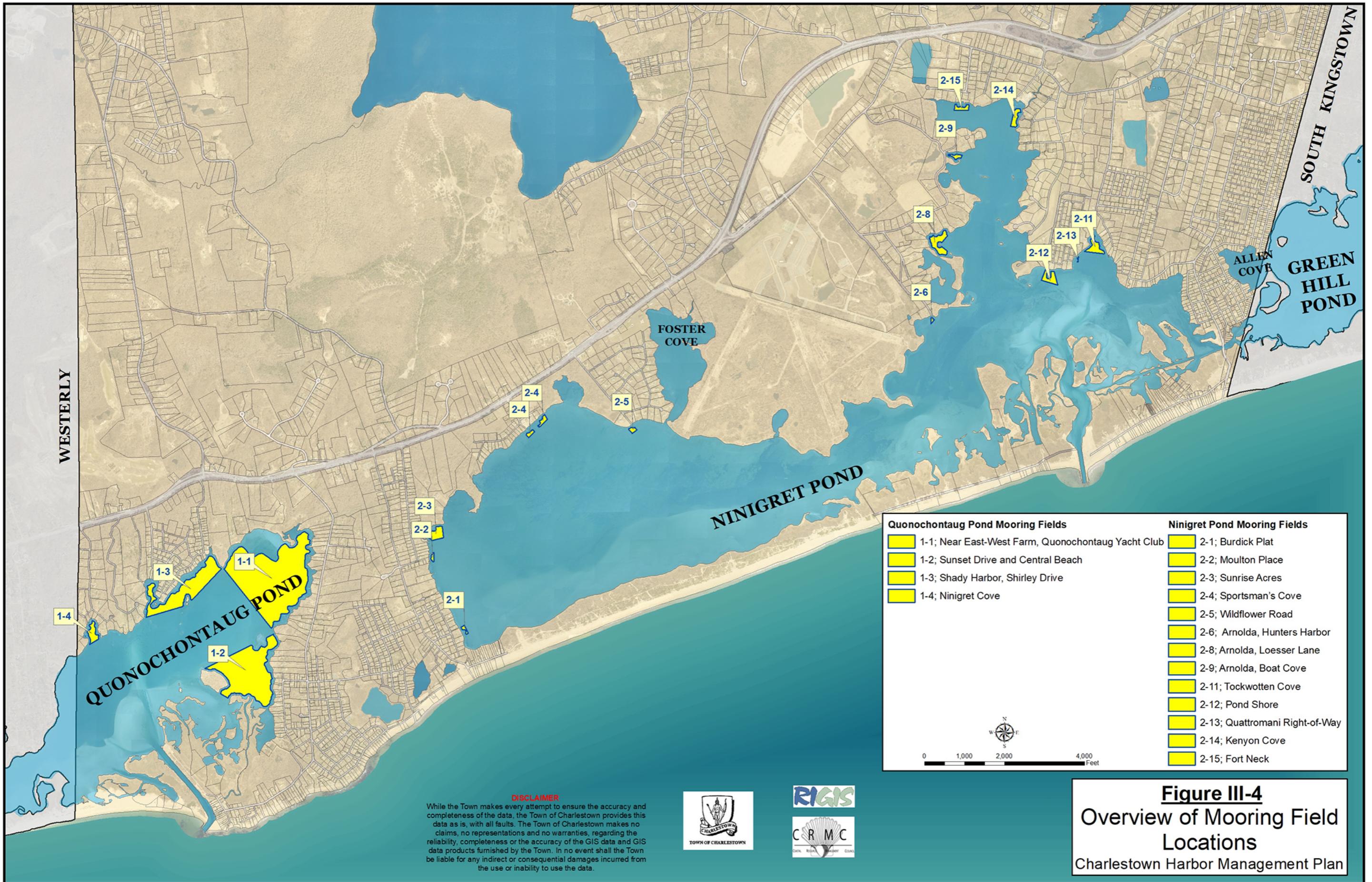
DISCLAIMER

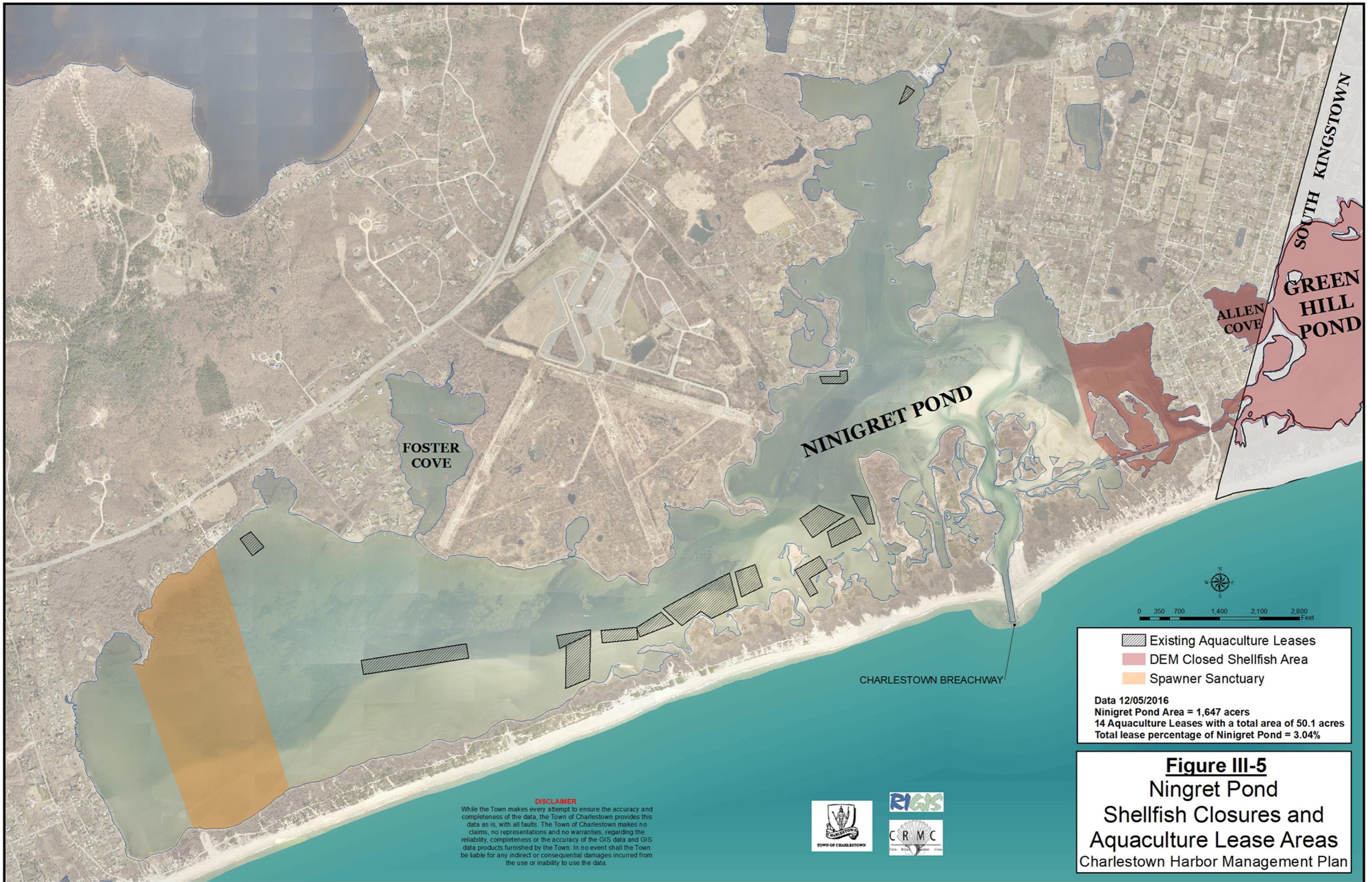
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Figure III-3
East Beach Road
CRMC Designated Right-of-Way
Charlestown Harbor Management Plan



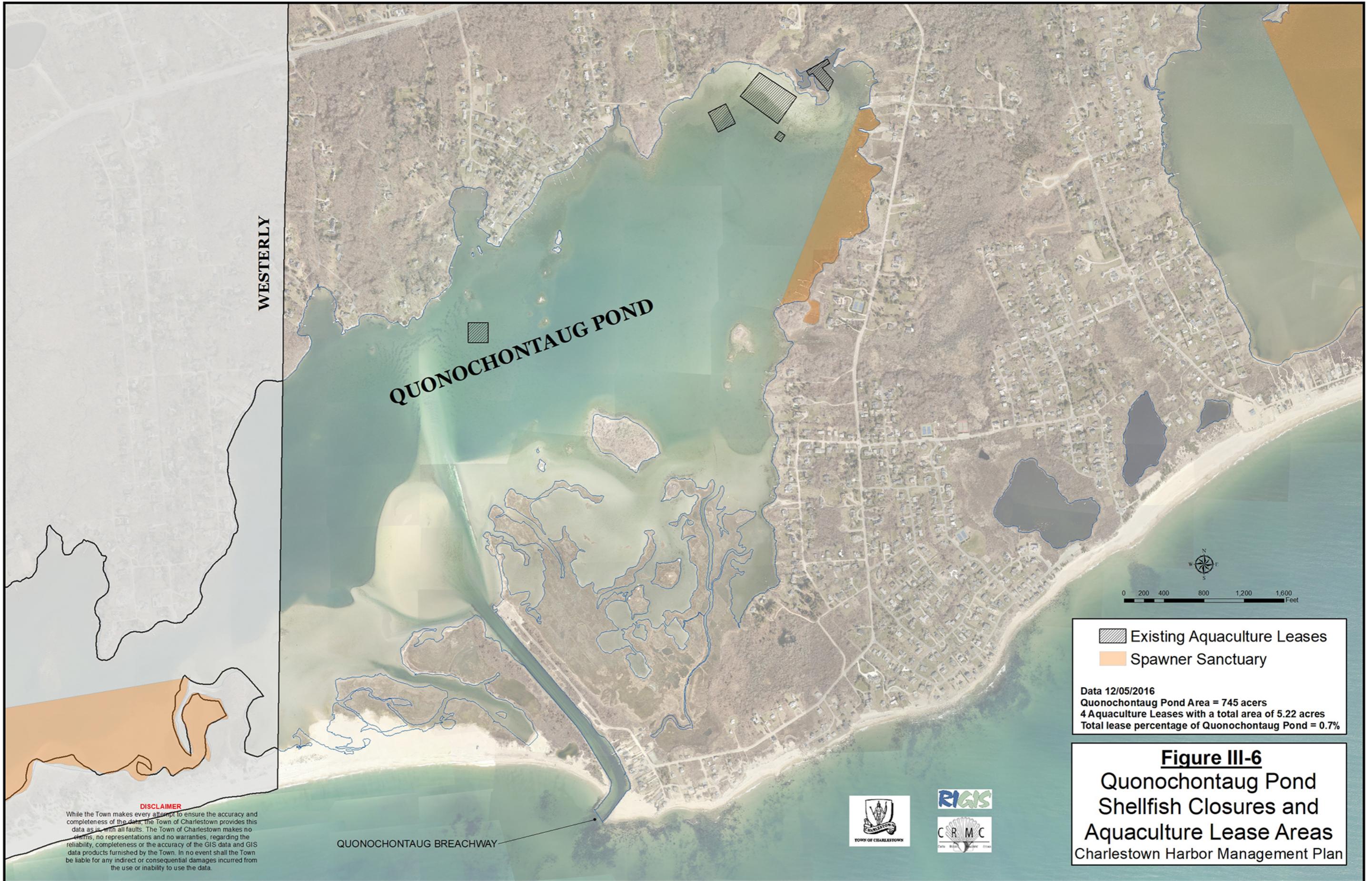




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WESTERLY

QUONOCHONTAUG POND

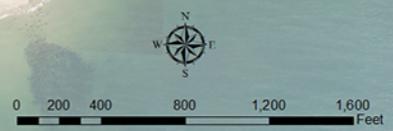
QUONOCHONTAUG BREACHWAY

-  Existing Aquaculture Leases
-  Spawner Sanctuary

Data 12/05/2016
 Quonochontaug Pond Area = 745 acres
 4 Aquaculture Leases with a total area of 5.22 acres
 Total lease percentage of Quonochontaug Pond = 0.7%

Figure III-6
 Quonochontaug Pond
 Shellfish Closures and
 Aquaculture Lease Areas
 Charlestown Harbor Management Plan

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APPROXIMATE LOCATION
1985 RELIEF CHANNEL

APPROXIMATE LOCATION
1985 STILLING BASIN

LINK CHANNEL
1985
ALTERNATE

LINK CHANNEL

CHARLESTOWN BREACHWAY

SOUTH KINGSTOWN

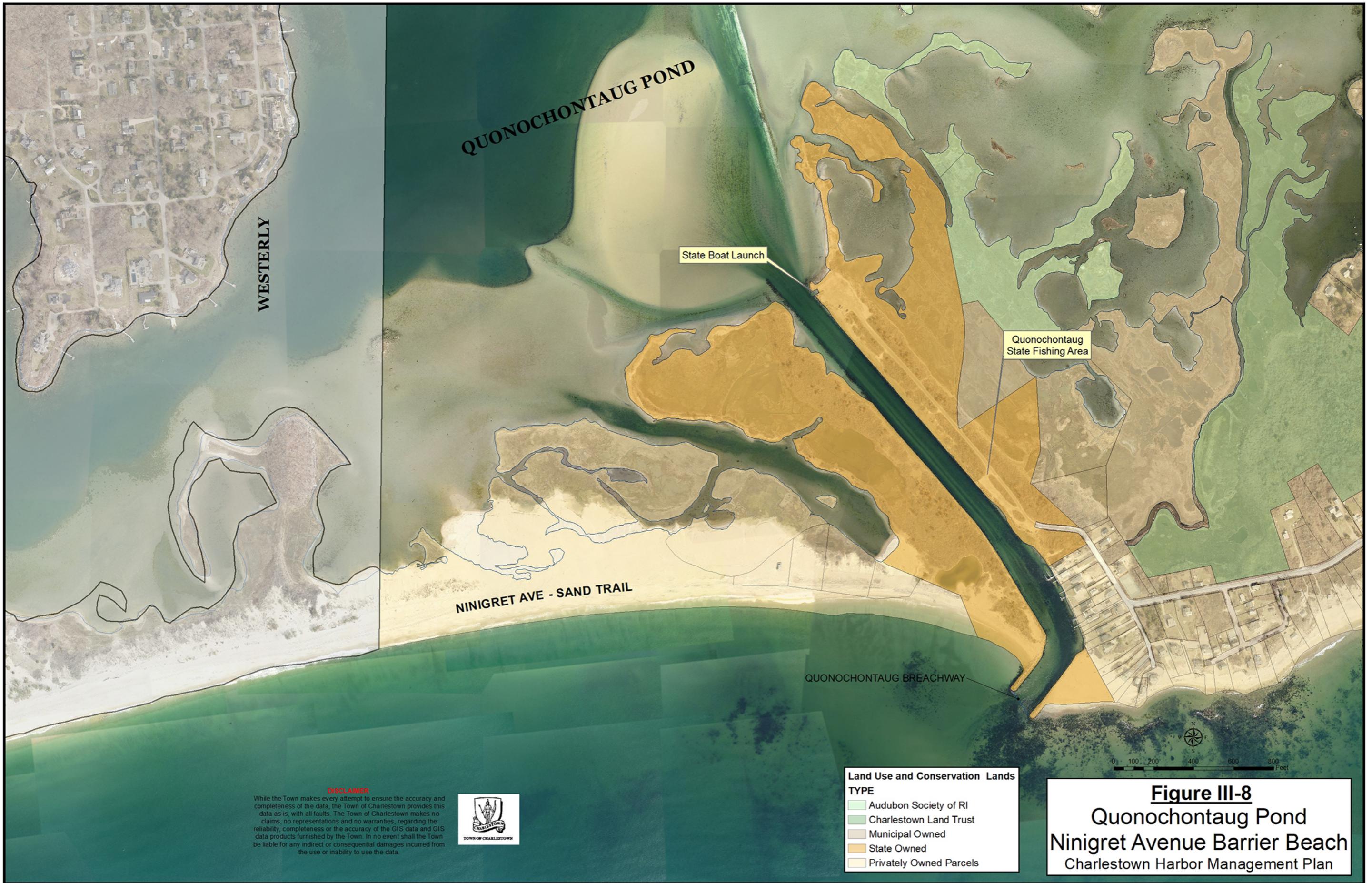


- Approximate Location of 1985 Dredging Effort
- Primary Sedimentation Basin
- Secondary Sedimentation Basin
- Relief Channel
- Eelgrass Restoration Area

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Figure III-7
Ningret Pond Dredging and Restoration Efforts
Charlestown Harbor Management Plan

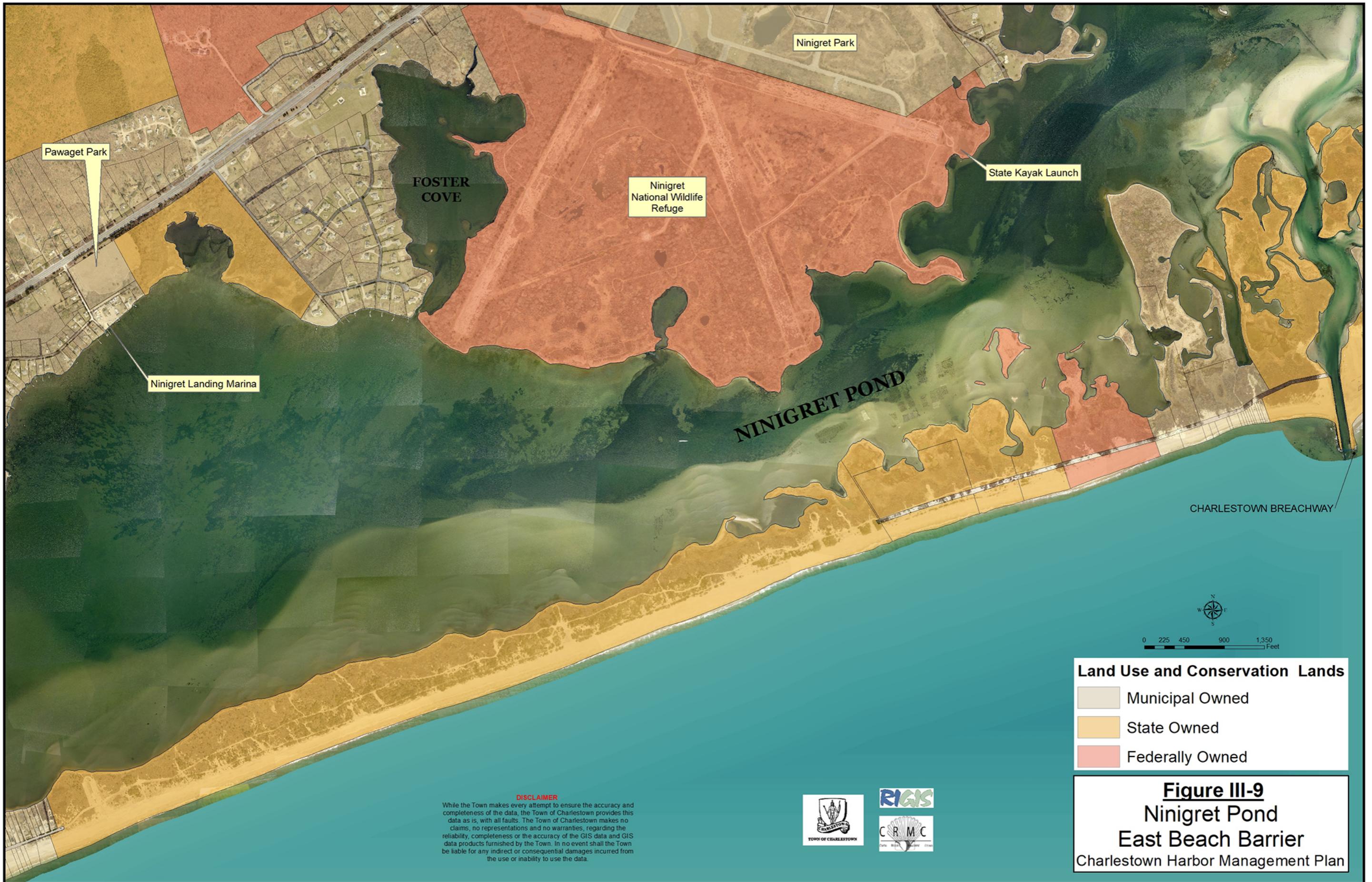


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Land Use and Conservation Lands	
TYPE	
■	Audubon Society of RI
■	Charlestown Land Trust
■	Municipal Owned
■	State Owned
■	Privately Owned Parcels

Figure III-8
 Quonochontaug Pond
 Ninigret Avenue Barrier Beach
 Charlestown Harbor Management Plan



Pawaget Park

Ninigret Park

State Kayak Launch

FOSTER COVE

Ninigret National Wildlife Refuge

Ninigret Landing Marina

NINIGRET POND

CHARLESTOWN BREACHWAY



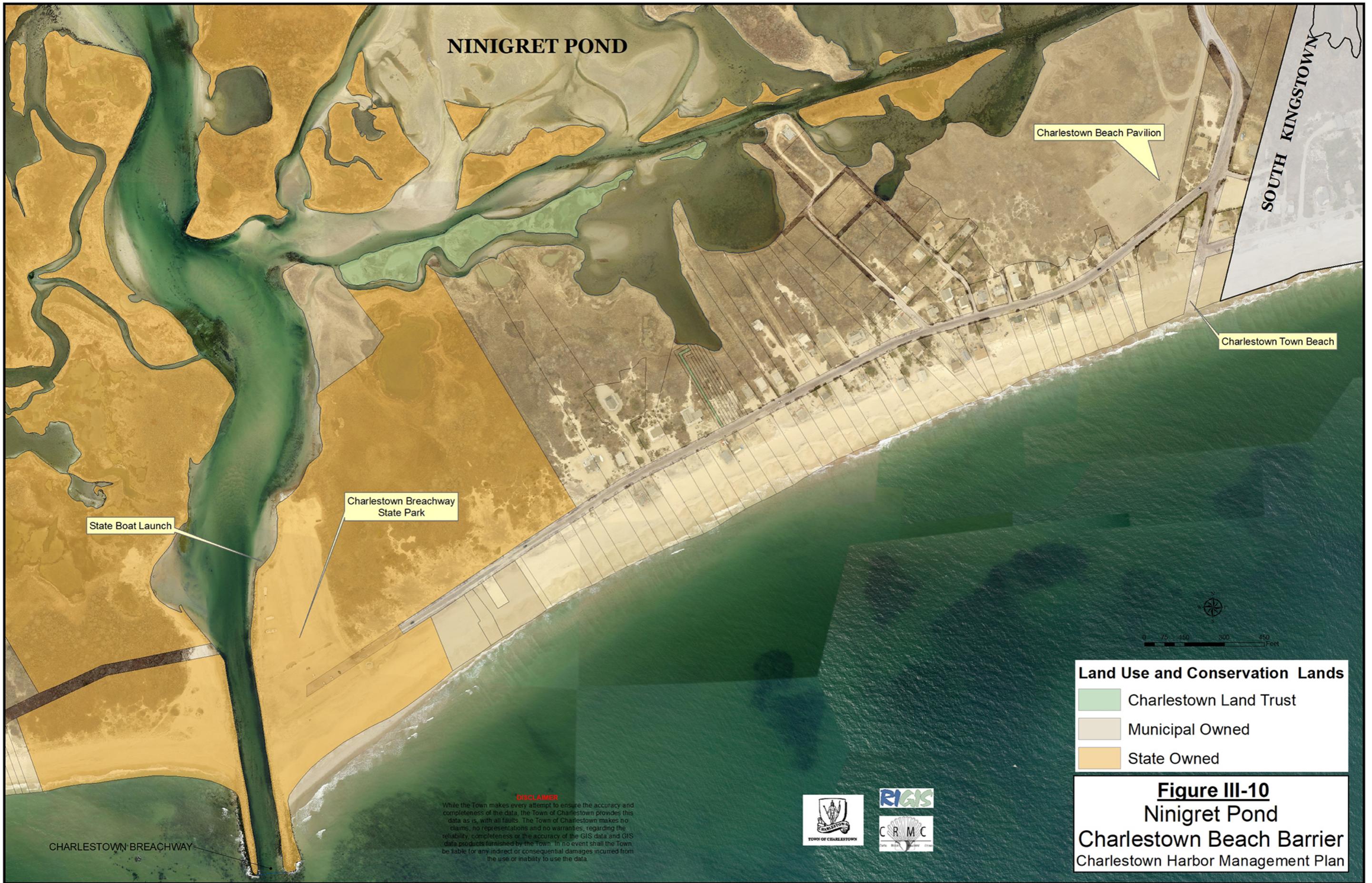
Land Use and Conservation Lands

- Municipal Owned
- State Owned
- Federally Owned

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Figure III-9
Ninigret Pond
East Beach Barrier
 Charlestown Harbor Management Plan



NINIGRET POND

Charlestown Beach Pavilion

Charlestown Town Beach

SOUTH KINGSTOWN

State Boat Launch

Charlestown Breachway State Park



Land Use and Conservation Lands

- Charlestown Land Trust
- Municipal Owned
- State Owned

Figure III-10
Ninigret Pond
Charlestown Beach Barrier
 Charlestown Harbor Management Plan

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CHARLESTOWN BREACHWAY

Appendix I
Ninigret Pond Marina Slip Counts

Ocean House Marina – 60 Town Dock Road

85 Slips



Ninigret Landing Marina – 60 Sportsman Road

62 Slips



Shelter Cove Marina – 523 Charlestown Beach Road

66 Slips

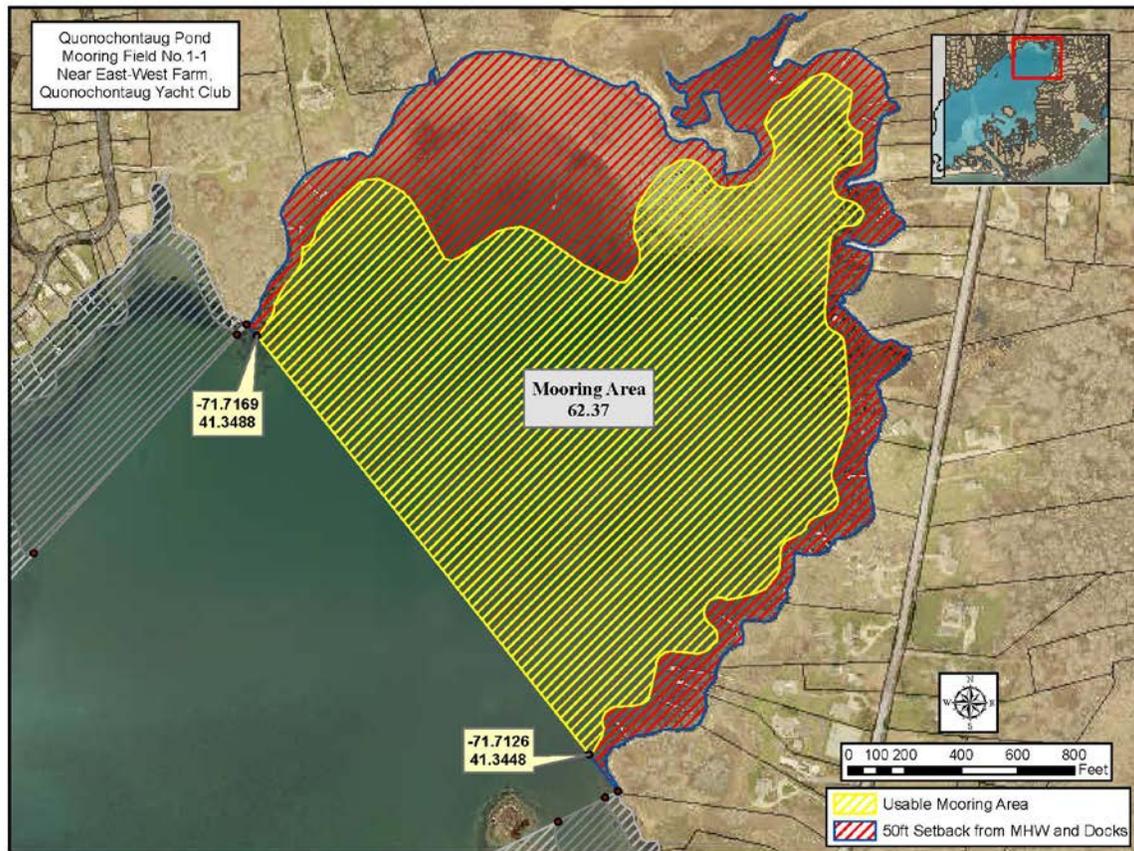


Appendix II Salt Ponds Designated Mooring Fields

Quonochontaug Pond

#1 Near East-West Farm, Quonochontaug Yacht Club

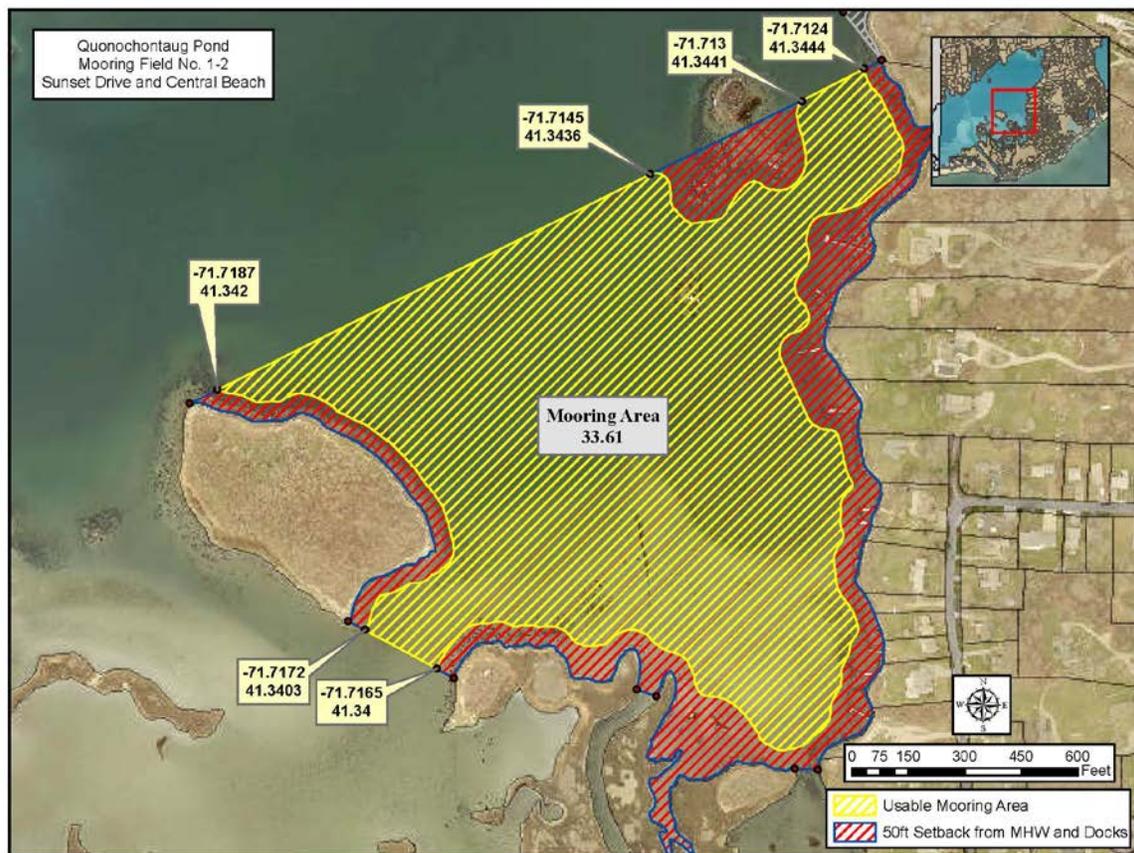
Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary line marked by a point beginning at -71.7169/41.2488, southeast to a point at -71.7126 / 41.3448.



Quonochontaug Pond

#2 Sunset Drive and Central Beach

Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary lines marked by a point beginning at -71.7124/41.3444, to a point southwest at -71.7130/41.3441, and then beginning at a point at -71.7145/41.3436, to a point southwest at -71.7187/41.3420, and then beginning at a point south of Bill's Island at -71.7172/41.3403, ending at a point southeast at -71.7165/41.3400.



Quonochontaug Pond

#3 Shady Harbor, Shirley Drive

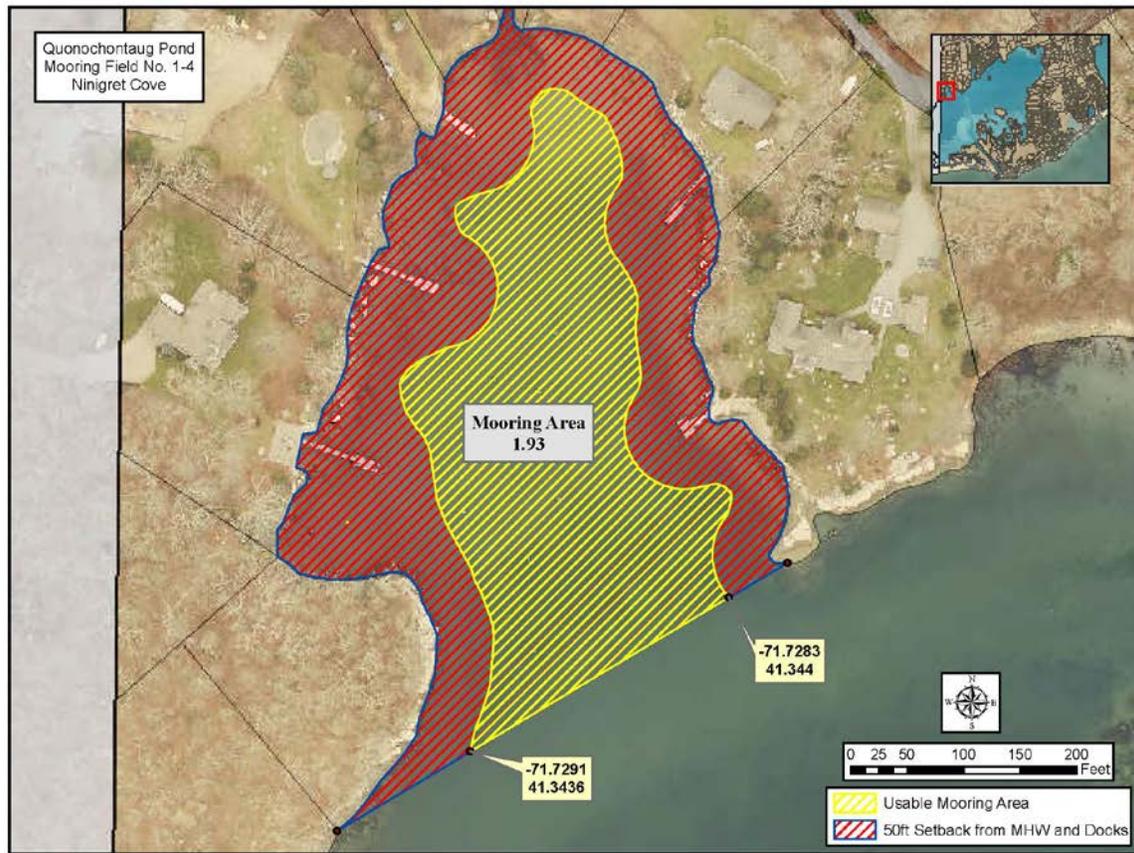
Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary lines marked by a point beginning at -71.7172/41.3488, to a point southwest at -71.7198/41.3467, then beginning at a point southwest of Picnic Rock at -71.7207/41.3462, to a point west/southwest at -71.7240/41.3455.



Quonochontaug Pond

#4 Ninigret Cove

Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary line marked by a point beginning at -71.7283/41.3440, to a point southwest at -71.7198/41.3467.



Ninigret Pond

#1 Burdick Plat

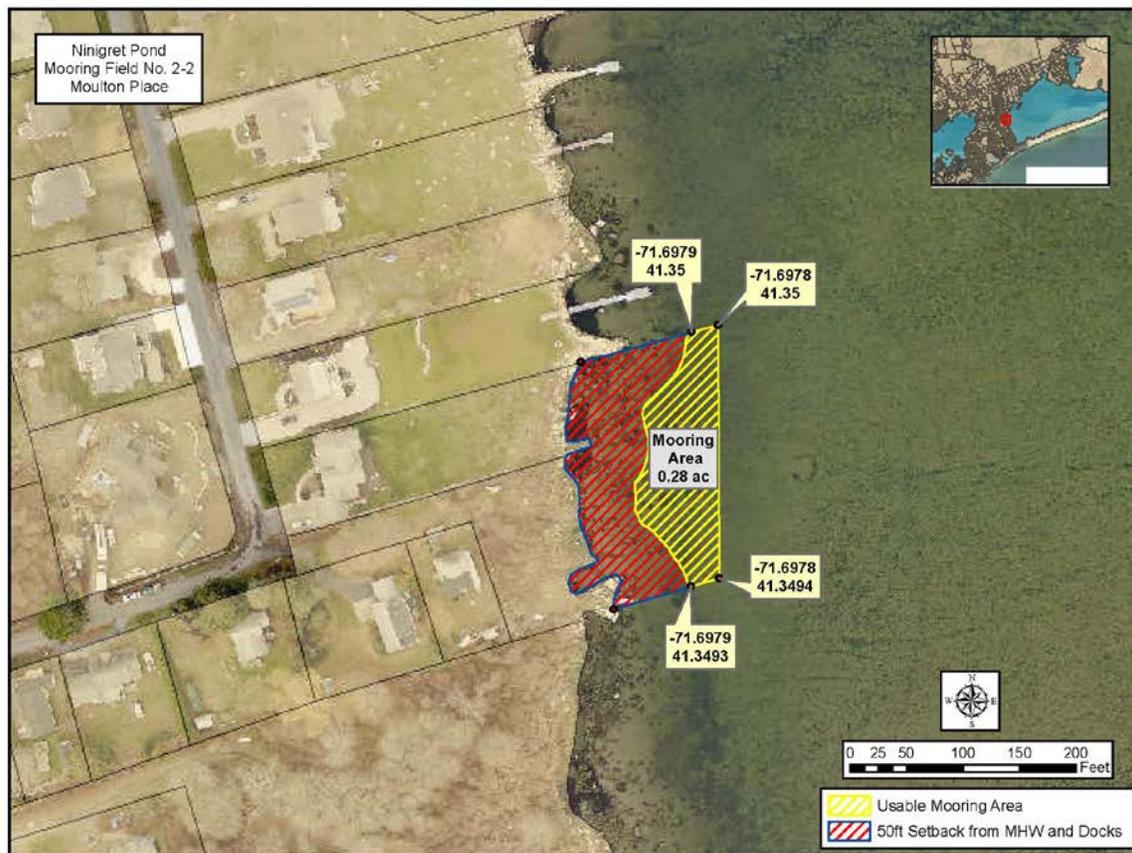
Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary lines marked by a point beginning at -71.6953/41.3449, to a point northeast at -71.6950/41.3450, turning south/southeast to a point at -71.6946/41.3445, then turning west/southwest ending at a point at -71.6948/41.3444.



Ninigret Pond

#2 Moulton Place

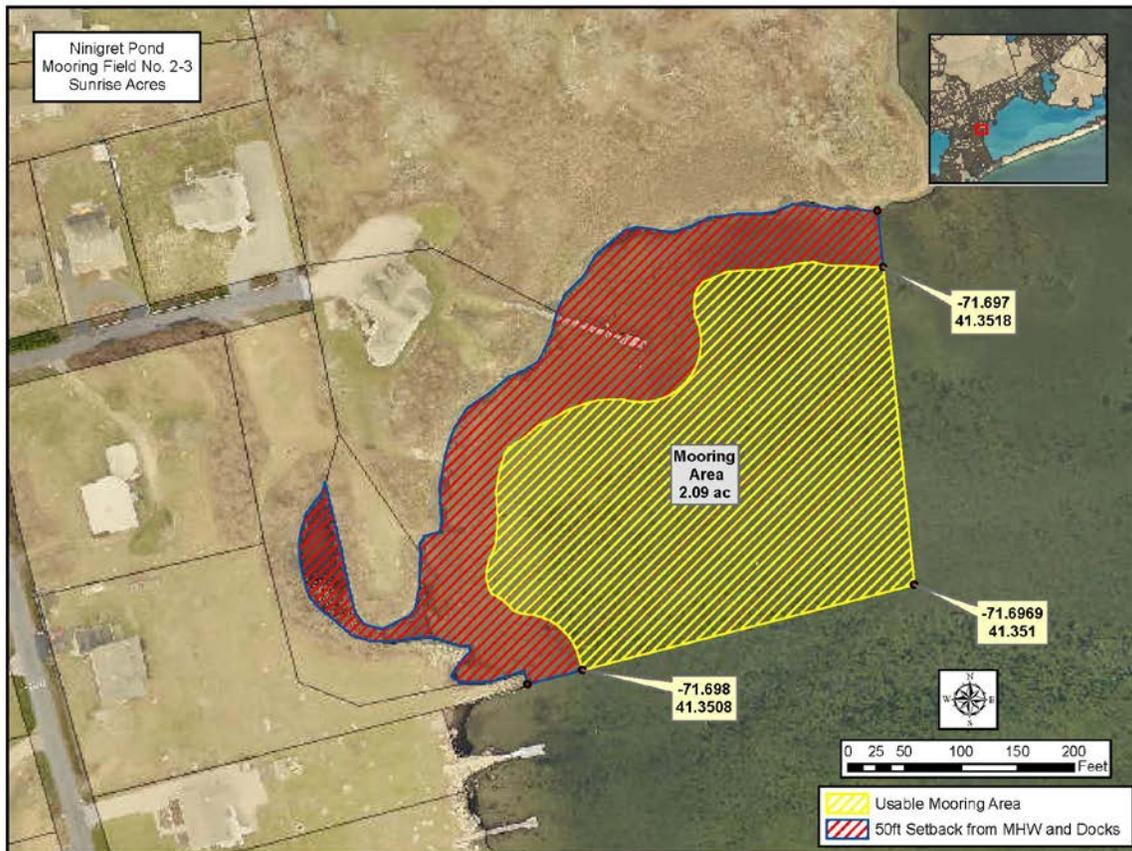
Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary lines marked by a point beginning at -71.6979/41.3500 to a point east at -71.6978/41.3500, then turning south to a point at -71.6978/41.3494, ending at a point west at -71.6979/41.3494.



Ninigret Pond

#3 Sunrise Acres

Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary lines marked by a point beginning at -71.6970/41.3518, to a point south at -71.6969/ 41.3510, then turning west/southwest ending at a point at -71.6980/41.350.



Ninigret Pond

#4 Sportsman's Cove

Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary lines marked by a point beginning at -71.6877/41.3595, to a point southeast at -71.6875/41.3592, turning to a point southwest at -71.6882/41.3586, to a point at -71.6886/41.3583, to a point marking the southwest corner at -71.6892/41.3579, then turning northwest ending at a point at -71.6889/43.3581.



Ninigret Pond

#5 Wildflower Road

Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary lines marked by a point beginning at -71.6795/41.3586, to a point southeast at -71.6793/41.3584, then turning southwest to a point at -71.6798/41.3582, the turning northwest to an ending point at -71.6801/41.3585.



Ninigret Pond

#6 Arnolda, Hunters Harbor

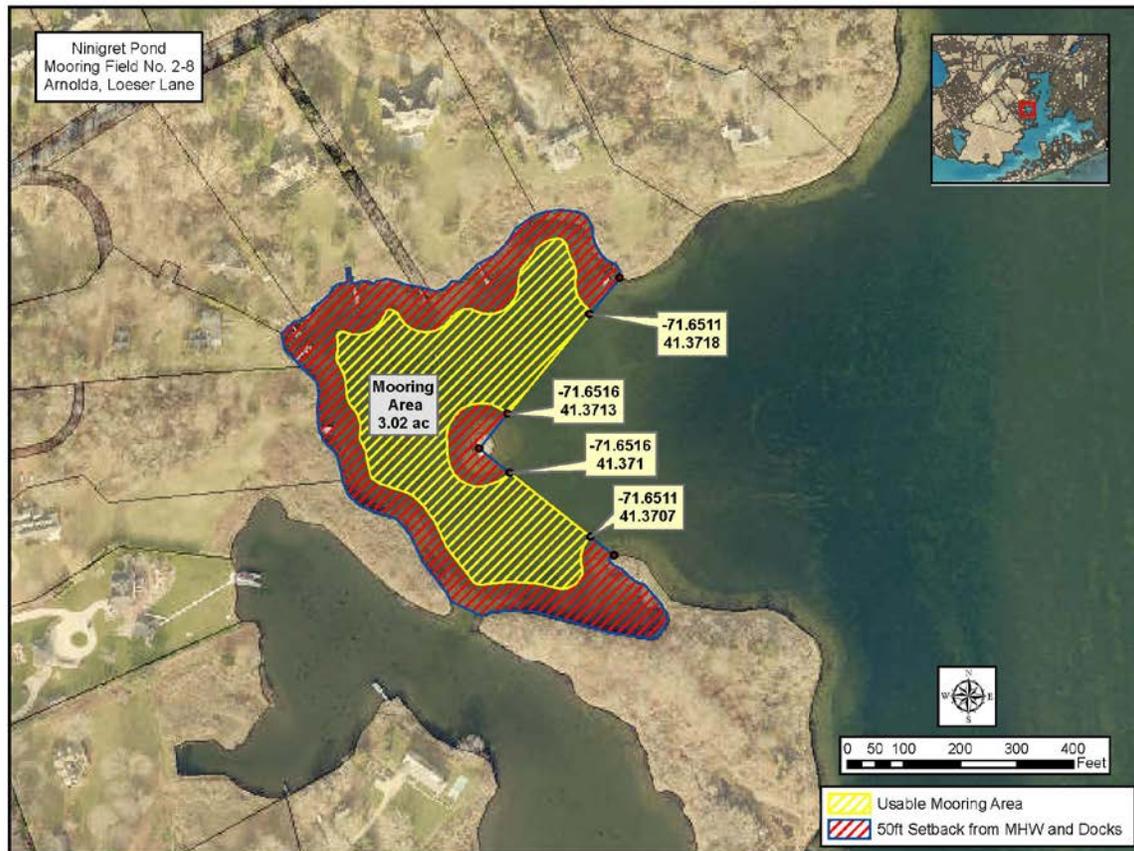
Waters shoreward, maintaining a fifty (50) foot setback from MHW and docks, and inside the boundary lines of a point -71.6523/41.3660, to a point southwest at -71.6526/41.3658, turning north to a point at -71.6526/41.3661.



Ninigret Pond

#8 Arnolda, Loesser Lane

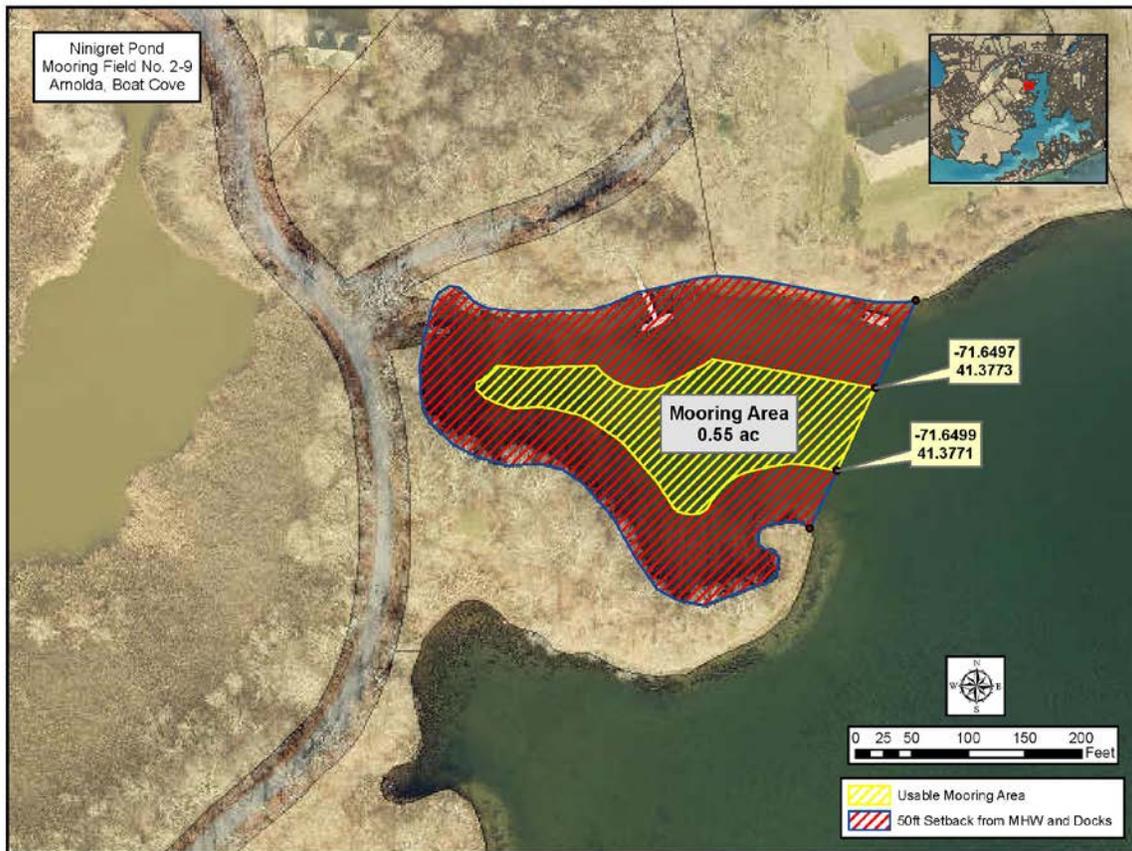
Waters shoreward, maintaining a fifty (50) foot setback from the mean high water (MHW) mark on land and docks, and inside the boundary lines beginning at a point at -71.6511/41.3718, to a point southwest at -71.6516/41.3713, and beginning at a point at -71.6516/41.3710, to a point southeast at -71.6511/41.3707.



Ninigret Pond

#9 *Arnolda, Boat Cove*

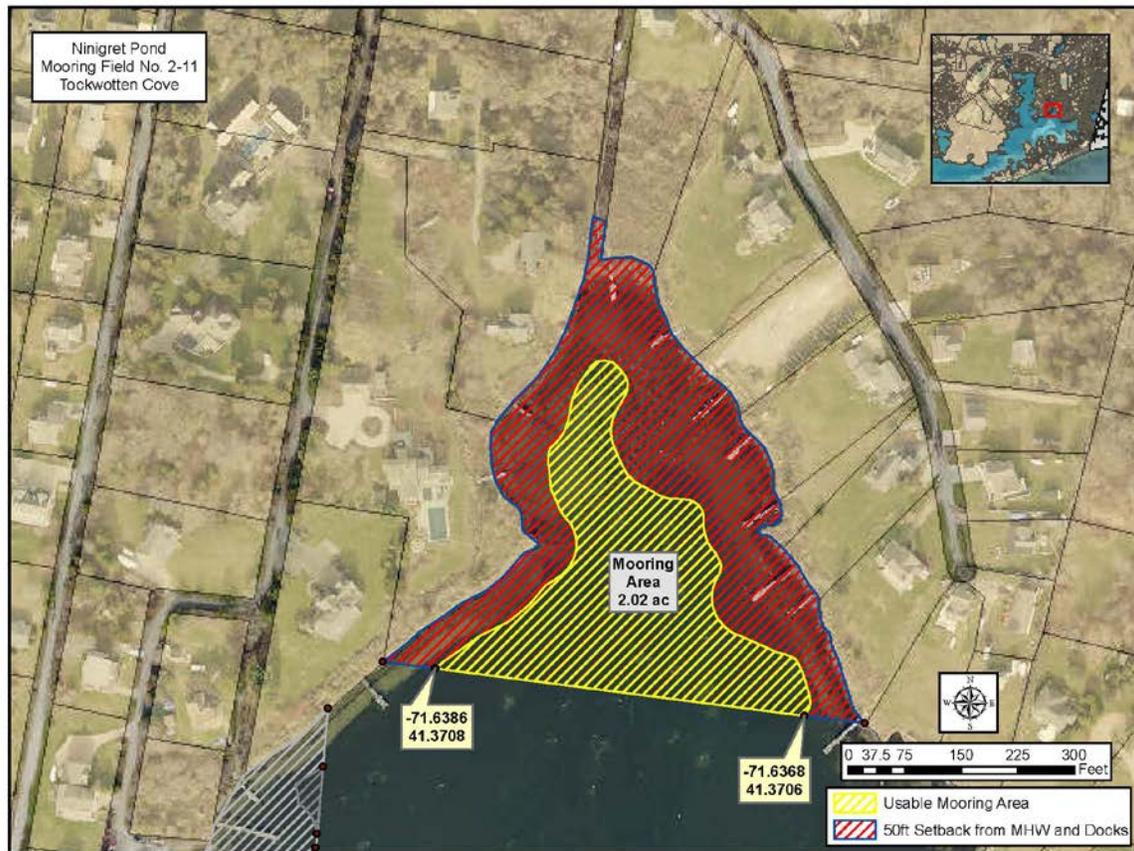
Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary line marked by a point beginning at -71.6497/41.3773, to a point south/southwest at -71.6499/41.3771.



Ninigret Pond

#11 Tockwotten Cove

Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary line marked by a point beginning at -71.6368/41.3706, to a point west/northwest at -71.6386/41.3708.



Ninigret Pond

#12 Pond Shore

Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary lines marked by a point beginning at -71.6413/41.3694, to a point south/southeast at -71.6410/41.3684, the turning northwest to a point at -71.6425/41.3688, then turning north/northeast ending at a point at -71.6421/41.3695.



Ninigret Pond

#13 Quattromani right-of-way

Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary lines marked by a point beginning at -71.6391/41.3704, south to a point at -71.6392/41.3701, and beginning at a point at -71.6392/41.3701, to a point south at -71.6392/41.3700, then turning west to a point at -71.6392/41.3700.



Ninigret Pond

#14 Kenyon Cove

Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary lines marked by a point beginning at -71.6449/41.3793, to a point west at -71.6453/41.3793, then turning north/northeast to a point at -71.6450/41.3804, to a point northeast at -71.6448/41.3805, and ending at a point at -71.6445/41.3805.



Ninigret Pond

#15 Fort Neck

Waters shoreward, maintaining a fifty (50) foot setback from docks and the mean high water (MHW) mark on land, and inside the boundary lines marked by a point beginning at -71.6491/41.3808, to a point south at -71.6492/41.3804, turning west to a point at -71.6505/41.3804, and then turning north ending at a point at -71.6504/41.3808.

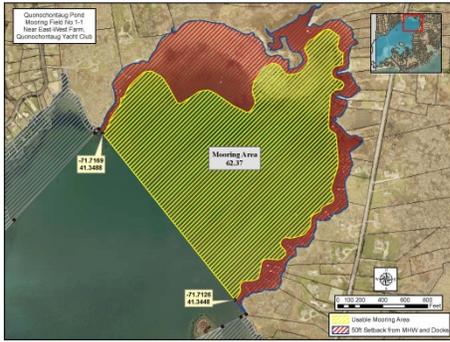


Appendix III

Active Mooring Counts by Field, 2018

Quonochontaug Pond

1-1, Quonnie Yacht Club – 67



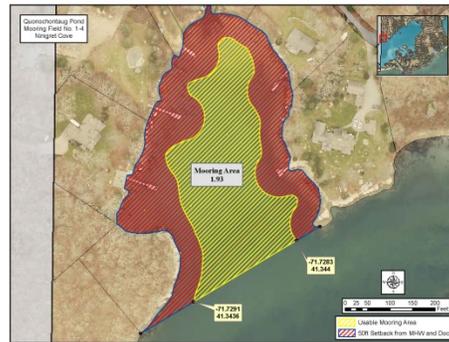
1-2, Sunset Drive and Central Beach – 41



1-3, Shady Harbor, Shirley Drive – 44



1-4, Ninigret Cove – 9



Ninigret Pond (Cont.)

2-11, Tockwotten Cove – 29



2-12, Pond Shore – 11



2-13, Quattromani Right-of-Way – 4



2-14, Kenyon Cove – 10



2-15, Fort Neck – 9



Appendix IV

The Saffir-Simpson Hurricane Scale

The Saffir-Simpson Hurricane Scale is a 1-5 rating based on the hurricane's present intensity. This is used to give an estimate of the potential property damage and flooding expected along the coast from a hurricane landfall. Wind speed is the determining factor in the scale, as storm surge values are highly dependent on the slope of the continental shelf and the shape of the coastline, in the landfall region. Note that all winds are using the U.S. 1-minute average.

Category One Hurricane:

Winds 74-95 mph (64-82 kt or 119-153 km/hr). Storm surge is generally 4-5 ft above normal. No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Some damage to poorly constructed signs. Also, some coastal road flooding and minor pier damage.

Category Two Hurricane:

Winds 96-110 mph (83-95 kt or 154-177 km/hr). Storm surge is generally 6-8 feet above normal. Some roofing material, door, and window damage of buildings. Considerable damage to shrubbery and trees with some trees blown down. Considerable damage to mobile homes, poorly constructed signs, and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of the hurricane center. Small craft in unprotected anchorages break moorings.

Category Three Hurricane:

Winds 111-130 mph (96-113 kt or 178-209 km/hr). Storm surge is generally 9-12 ft above normal. Some structural damage to small residences and utility buildings with a minor amount of curtainwall failures. Damage to shrubbery and trees with foliage blown off trees and large trees blown down. Mobile homes and poorly constructed signs are destroyed. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the center of the hurricane. Flooding near the coast destroys smaller structures with larger structures damaged by battering from floating debris. Terrain continuously lower than 5 ft above mean sea level may be flooded inland 8 miles (13 km) or more. Evacuation of low-lying residences with several blocks of the shoreline may be required.

Category Four Hurricane:

Winds 131-155 mph (114-135 kt or 210-249 km/hr). Storm surge is generally 13-18 ft above normal. More extensive curtain wall failures with some complete roof structure failures on small residences. Shrubs, trees, and all signs are blown down. Complete destruction of mobile homes. Extensive damage to doors and windows. Low-lying escape routes may be cut by rising water 3-5 hours before arrival of the center of the hurricane. Major damage to lower floors of structures

near the shore. Terrain lower than 10 ft above sea level may be flooded requiring massive evacuation of residential areas as far inland as 6 miles (10 km).

Category Five Hurricane:

Winds greater than 155 mph (135 kt or 249 km/hr). Storm surge generally greater than 18 ft above normal. Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. All shrubs, trees, and signs blown down. Complete destruction of mobile homes. Severe and extensive window and door damage. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the center of the hurricane. Major damage to lower floors of all structures located less than 15 ft above sea level and within 500 yards of the shoreline. Massive evacuation of residential areas on low ground within 5-10 miles (8-16 km) of the shoreline may be required.

Note: Only three Category Five Hurricanes have made landfall in the United States since records began: the Labor Day Hurricane of 1935, Hurricane Camille of 1969, and Hurricane Andrew in August, 1992.

Appendix V

Storm Preparedness and Recovery Schedule for Harbor Master and Staff

LEVEL 3 - 72 HOURS PRIOR TO STORM

1. If hurricane, begin tracking and monitoring hourly weather reports.
2. Manage marine traffic as it increases during marina/boater preparation activities.
3. Ensure all patrol vessel fuel tanks are full and reserve batteries are charged.
4. Inventory and update first aid equipment and other on board emergency tools.
5. Maintain radio watch.
6. Alert local community, encouraging boat owners to seek safe refuge, remove boats from water, or take action to minimize damaging effects.
7. Alert local marina, marine interests, and holders of mooring permits, to impending emergency.
8. Keep U.S. Coast Guard Marine Safety Office (MSO) Providence, and local emergency management apprised of hazardous conditions in harbors.

LEVEL 2 - 48 HOURS PRIOR TO STORM

1. Continue to perform activities in level 3 as required.
2. Contact those town mooring holders who are not complying with their preparedness plan. Plans are prepared by mooring holders in accordance with the guidelines provided herein and submitted with mooring applications to the Harbor Master.
3. Finalize emergency work schedule with Assistant Harbor Masters.
4. Confirm arrangements to have marine patrol vessel(s) hauled and stored.
5. Prepare town properties, with Department of Public Works, including:
 - Securing all items such as trash bins, benches, etc. that are located in shoreline areas
 - Completing necessary precautions for harbor master dock area.
6. Establish liaison with Police Department, Department of Public Works and Emergency Management Director.
7. Alert maritime community to unsafe conditions in the coastal ponds as needed via internet, mass email, code red notification system, radio and marine patrol vessels.
8. Communicate with marina crews regarding specific needs they may have.
9. Curtail regular business activities.
10. Begin regular patrols of the coastal ponds to ensure that necessary individual precautions are being taken.
11. Advise MSO Providence, and local emergency management of the status of emergency preparedness in progress.
12. Alert local community to any impending closure of anchorages or waterways.

13. Encourage local marinas to suspend fueling operations and to secure fueling equipment sufficiently to minimize pollution threat.

LEVEL 1 - 24 HOURS PRIOR TO STORM

1. Continue to perform pertinent level 2 activities.
2. Undertake final patrol of the coastal ponds.
3. Log information on remaining moored or anchored vessels.
4. Arrange for safe haven for all boaters in need of shelter. Coordinate with Police Department. Harbor Department will NOT assist during the storm event.
5. Fuel Harbormaster vessel(s).
6. Haul and store marine patrol vessels – NO LATER THAN 12 HOURS BEFORE STORM!!!!
7. Complete shoreline survey and final harbor check from shore.
8. Alert community, MSO, and local emergency management to any unsafe conditions in the coastal ponds.

IMMEDIATE - FOR 24 HOURS AFTER STORM

1. Assess readiness of the marine patrol; correct deficiencies, reestablish radio communications.
2. Complete rapid appraisal of damage.
3. Provide damage assessment information to town's Emergency Management Director and to MSO Providence.
4. Be aware that the marine patrol is not in the business of marine salvage. The Harbor Master and assistants will not tow, remove vessels from the beach, or otherwise provide salvage services except in extreme and unusual circumstances.
5. Institute security watches as necessary.
6. Alert maritime community to unsafe conditions in the coastal ponds.
7. Track beginning time and resource allocation for possible state and federal reimbursement.

MID-TERM - 1 TO 14 DAYS AFTER STORM

1. Complete comprehensive inventory of damage using photographs, video, and GPS if possible.
2. Notify appropriate parties regarding damage (i.e., mooring holders and marinas).
3. Provide list of identified and unidentified boats to local emergency management, MSO Providence, and DEM Enforcement.

4. Contact local harbor and shoreline users to assess their situation and identify requests for assistance.
5. Provide local emergency management and MSO Providence with a daily harbor status.
6. Begin to remove large pieces of floating debris from the coastal ponds and bring to designated shorefront collection areas.
7. Assist town and state agencies with damage assessments and emergency permitting process.

LONG-TERM - 14 TO 90 DAYS AFTER STORM

1. Analyze effects of storm on the coastal ponds. Complete summary report for the Town Administrator within 30 days of the storm event.
2. Review mitigation list and select actions that could be implemented during the recovery phase.
3. Conduct an evaluation meeting for coastal ponds and shoreline users to identify problems not properly addressed by this plan.
4. Complete a survey of boat damage.
5. Update Hazard Mitigation Plan and identify new mitigation opportunities.
6. Assist in emergency situations as appropriate.
7. Transfer collected harbor debris from collection site to town disposal area.

Appendix VI

Marina Storm Preparedness and Recovery Plan

Town of Charlestown

Marina Storm Preparedness Plan

PREPARATION AND RECOVERY ACTIVITIES

Preparation

Phase Three (Alert); 72-48 Hours Prior to Storm's ETA

- Notify all personnel that the facility is on a hurricane or severe storm alert. All personnel will commence preparations for putting the severe weather preparedness plan in action.
- Begin facility protection preparations by policing all yard, marina, and dock areas to stow away or secure loose equipment and items. Store in covered or sheltered areas.
- Secure all flammable and hazardous materials, such as waste oil receptacle.
- Commence plans for securing remaining in-water vessels. Ensure that all vessel removal operations are well underway. A list of vessels to be hauled from the water and secured is to be established in advance. Those vessels that remain in the water will be secured with extra lines and fenders.
- Top off vehicles with fuel as necessary, in preparation for the securing of all fueling operations and equipment; expected loss of electrical power during a hurricane may disrupt fuel supplies after the storm.
- Check and secure any loose siding or roofing on work sheds and business buildings.
- Take down large signs, antennas, or other removable items subject to wind damage.
- Commence facility protection precautions. Install storm shutters or protect windows with masking tape to reduce the possibility of flying glass.
- Check First Aid and other emergency supplies and restock.
- Monitor storm's progress and maintain contact with Harbor Master

Phase Two (Watch); 48 -24 Hours Prior to Storm's ETA

- Notify all personnel that facility is on hurricane or severe storm watch.
- Continue to monitor storm's progress and maintain contact with the Harbor Master.
- Complete securing operations in lowland locations. All dock structures, field buildings and offices will be secured.

- Assess all electrical supplies to areas that may become flooded. Plan for shut-off at final evacuation.
- Secure all fuel supply tanks and lines at the shore side installation.
- Disconnect and protect all electric motors, pumps, and like equipment at or below ground level, or place in a safe location.
- Secure waterside sewage pump-outs. Turn off sewage grinder pump breakers at last call to evacuate marina.
- Turn off fresh water supplied from municipal or other water lines.
- Check that all emergency supplies are readily available, such as first aid kits, fire protection equipment, sufficient stores of provisions, including bottled fresh water, fuel for emergency generators, battery-powered lighting, flashlights or lanterns, battery powered radios, VHF units.
- Notify Harbor Master of any transient boaters requiring shelter during the storm event.

Phase One (Warning); 24 Hours Prior to ETA

In these hours prior to the projected arrival of the hurricane, the “hurricane warning” advisory will have been issued and it is highly likely that the hurricane will make landfall or pass near the marina facility. Continue or complete the following activities:

- Notify all personnel that the facility is on hurricane or severe storm warning.
- Continue to monitor storm’s progress.
- With all vessel protection and securing operations completed, make a final check of doubled mooring lines, tied off with sufficient slack, and fender boards and/or other protective equipment in place.
- Secure as necessary any remaining operational facility buildings.
- Secure power to marina, if evacuated.
- Release employees who are not manning facilities during the storm with sufficient time to seek safe location prior to the storm. Give instructions for reporting back to work after the storm at that time.
- Notify Harbor Master of any transient boaters requiring shelter during the storm event.

Recovery

The following will be considered when returning to the area:

- Extensive damage may have been caused by the hurricane. While checking the condition of the marina facility is main concern, there may be limitations to access to the facility or at the facility itself. An inspection of the facility will be made as soon as practicable to determine conditions, damages, and security of premises.
- Post storm security will be provided as a priority to protect against vandalism. Personnel returning to the facility and beginning the preliminary damage assessment are to be aware of the following:
 - Wear boots and use extreme caution.
 - Be aware of possible downed electrical wires, which should be considered “hot” and avoided until the power company or facility electrical maintenance personnel services the wires.
 - Check facility fueling docks and tanks for leaking gasoline or diesel fuel, where applicable. File a report with the Harbor Master if a leak is found.
 - Do not start electrical equipment that has been submerged in water until it has been checked and repaired as necessary.
 - Report immediately, broken septic systems or water systems to the Harbor Master.
 - Check building, shop, and dock electrical wiring completely prior to turning on the main power switch.

Town of Charlestown

Marina Storm Preparedness Plan

Please complete and return this page of the document only.

General Information

Primary Contact

Name: _____

Primary Phone: _____

Secondary Phone: _____

Email: _____

Secondary Contact

Name: _____

Primary Phone: _____

Secondary Phone: _____

Email: _____

Additional plans or comments:

Acceptance

I have read preparation and recovery activities recommendations that have been provided, and I agree to prepare this facility in advance of a storm event, to the best of my ability, to minimize risk to this facility, the environment, and the property of others.

Signed: _____

Date: _____

Appendix VII
Individual Boater Storm Preparedness and Recovery Plan

Town of Charlestown
Individual Boater Storm Preparedness Plan

Name: _____

Mooring #: _____

Telephone: _____ Email Address: _____

Federal and state regulations require that mooring permit holders submit a “Storm Plan” to the Town along with their annual mooring permit application. Listed below are several of the most commonly accepted steps to take prior to a storm event. When a hurricane or severe storm warning is issued, you will be expected to prepare your vessel, to the best of your ability, to minimize loss to your property and property of others.

Not all dangerous storms are hurricanes. It is important to be “storm ready” throughout all the season. **Depending on the predicted severity of a storm, the Harbor Master may require all vessels be removed from moorings. Each permit holder shall specify the name and contact information of a contractor, or responsible party, who is authorized to remove the vessel in their absence.**

Recommended Safety Precautions:

- Check local marine weather for updated storm information.
- Double your lines and make sure chafe gear is in place where lines pass through fairleads and chocks, or over the side of the vessel. Chafing is the most common reason boats come loose in a storm.
- Put ample fendering on both sides of your boat.
- Reduce windage by removing sail covers and sails, especially roller furling sails. Also remove the boom, dodgers and awnings and any other items on deck that could come loose. If you cannot remove them, it is imperative that they be as tightly secured as possible. Secure all loose material below deck.
- Make sure all cabin areas, windows, doors, and hatches are closed and secured.
- Ensure bilge pumps are operational and batteries are fully charged.
- Remove all electronics and ship’s documents to shore.
- Remove any protruding objects such as anchors in bow rollers that could catch on another vessel.

- Shut off fuel and water systems, remove portable fuel tanks and close all seacocks.

Do NOT attempt to ride out a storm on board. The Harbor Department will not respond for service during the storm.

In the event it is required that all vessels are to be pulled out for an approaching storm event, and you are unable to do so, please indicate which marina or boat hauling contractor will remove your boat in your absence:

Marina/Boat Hauler Name: _____

Telephone: _____ Email Address: _____

Additional plans or comments:

Please submit the name of an alternate party who can be reached in your absence:

Alternate Contact Name: _____

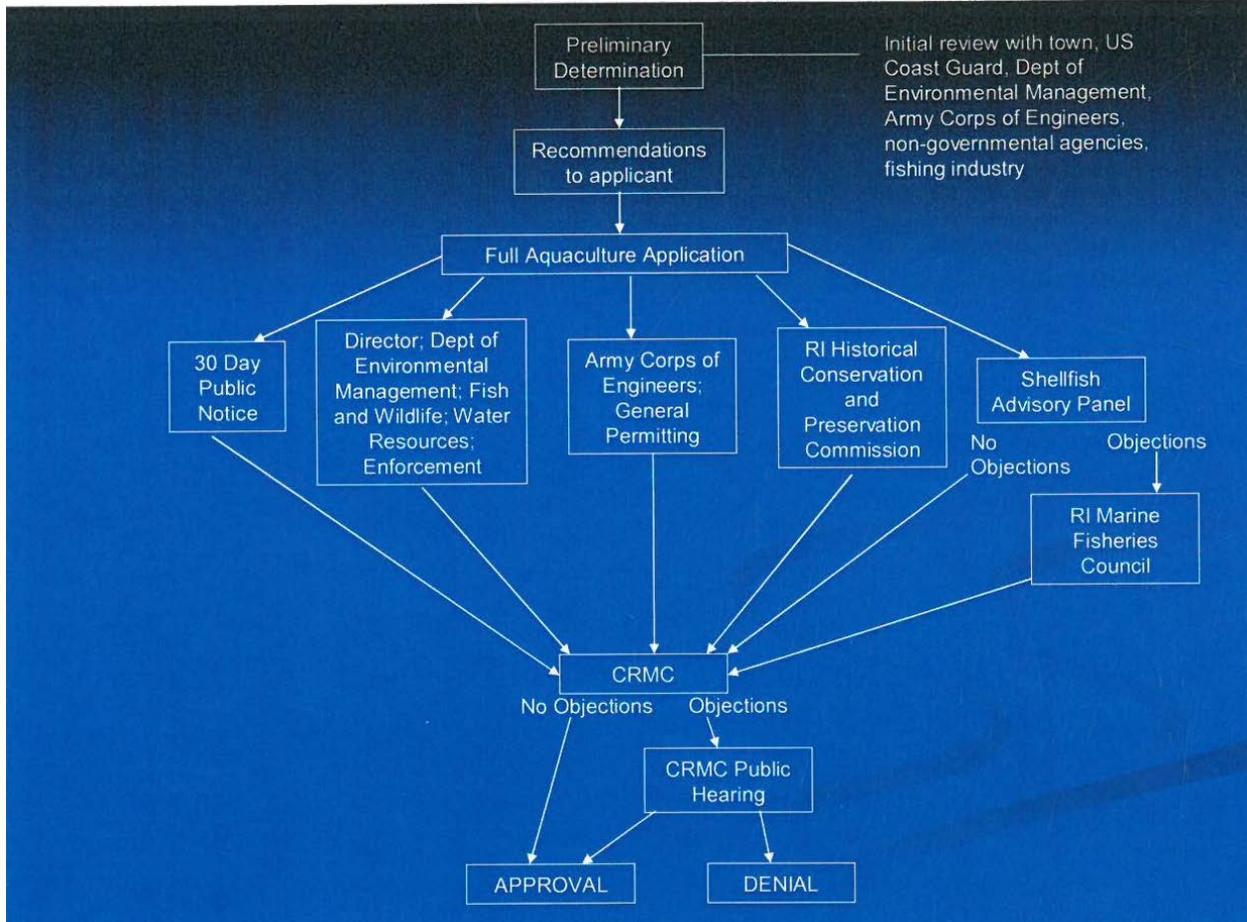
Telephone: _____ Email Address: _____

I have read the above safety recommendations. I agree to prepare my vessel in advance of a storm, to the best of my ability, to minimize risk to my own vessel and to the property of others.

Signed: _____

Date: _____

Appendix VIII Aquaculture Permit Flowchart



Appendix IX
Memorandum of Understanding between the
Rhode Island Coastal Resources Management Council (CRMC) and the
Town of Charlestown, Rhode Island on Aquaculture

Whereas, R.I. Const., Art. I, Sec. 17, guarantees to the people the right to enjoy and freely exercise all rights of fishery ...;
and

Whereas, it is in the best public interest of the people and the state that the land and waters of the state, are utilized properly
and effectively to produce plant and animal life; and

Whereas, the process of aquaculture is a proper and effective method to cultivate plant and animal life; and

Whereas, the process of aquaculture should only be conducted within the waters of the state in a manner consistent with
the best public interest, with consideration given to the effect of aquaculture on other uses of the free and common fishery
and navigation, and the compatibility of aquaculture with the environment of the waters of the state; and

Whereas, the CRMC and the Town of Charlestown are interested in balancing water dependent recreational uses with
healthy sustainable shellfish aquaculture and the CRMC supports aquaculture in those locations where it can be
accommodated among other uses of Rhode Island waters; and

Whereas, while the Town of Charlestown and the CRMC both recognize that responsible shellfish aquaculture has a net
positive effect on the environment, each also recognizes that in the framework of adaptive management protocols, research
into the ecology of coastal waters and our understanding of ecosystem carrying capacities is constantly evolving and
improving.

Therefore, for the coastal lagoon systems of Ninigret Pond and that portion of Quonochontaug Pond which lies within the
municipal boundaries of the Town of Charlestown, the following Memorandum of Understanding has been developed.

The Coastal Resources Management Council and the Town of Charlestown shall:

- Collaboratively and with mutual consent develop Geographic Information System (GIS) data layers of the ponds' natural resources and physical uses, including existing aquaculture lease areas;
 - Produce GIS map products for public use and to assist and facilitate the aquaculture application review process;
- Develop an aquaculture lease site and recreational use monitoring program for the ponds, to be implemented by the Town's harbor master with CRMC guidance, cooperation and oversight;
- Create a Task Force of Town staff and Agency staff to discuss issues of concern such as but not limited to the issues of:
 - Fixed or floating structures or barges in Type 1 waters in Ninigret Pond.
 - Fixed structures or barges in Type 2 waters in Quonochontaug or Ninigret Pond.
 - Gear-intensive aquaculture v. bottom culture.
 - Identification of heavy recreational use areas.
 - Hunting adjacent to aquaculture lease sites.
 - Generators and Lighting Fixtures on aquaculture lease sites.
 - Delegated or shared enforcement by CRMC to the Town for limited violations.

Rhode Island Coastal Resources Management Council (CRMC)

BY: 
Name:
Title:

Date: May 15, 2015

Town of Charlestown

BY: 
Mark S. Stankiewicz,
Town Administrator

Date: MAY 13 2015

Appendix X
Chapter 86 of the Town Code *Boats and Waterways*

86-1. Purpose.

The purpose of this chapter shall be to promote the safety of persons and property through reasonable regulation in the use, operation, equipment and anchorage of vessels in all bodies of water within the boundaries of the Town of Charlestown.

86-2. Definitions.

HEADWAY SPEED

The slowest speed at which a personal watercraft can be operated and maintain steerage way.

MOTORBOAT

Any vessel propelled in whole or in part by mechanical means, either inboard or outboard, and using a motor powered by gasoline, diesel fuel, naphtha, kerosene, steam or fuel oil. Water jets and motor skis are included in this definition.

OPERATOR

A person who operates or who has charge of the navigation or use of a watercraft.

PERSONAL WATERCRAFT

A vessel which uses an inboard motor powering a water jet pump as its primary source of motive power and which is designed to be operated by a person sitting, standing or kneeling on the vessel, rather than the conventional method of sitting or standing inside the vessel.

VESSEL

Every description of watercraft, other than a seaplane on the water, used or capable of being used as a means of transportation on water.

WATER

All lakes, rivers, streams, ponds or other bodies of water located within or partly within the boundaries of the Town of Charlestown.

86-3. Operating near bathing areas.

No motorboat or other vessel, while being operated upon waters within the boundaries of the town, shall pass closer than 100 feet of any established or public bathing area on the shores of the waters of the town.

86-4. Speed limit; reckless operation

- A. No person shall operate any motorboat or other vessel in a reckless or negligent manner so as to endanger the life, safety or property of any person.

- B. No vessel shall be operated in excess of five miles per hour or shall leave a wake in the confines of any breach-way, channel area, designated mooring field or anchorage, or within 200 feet of any dock-age area or while passing through areas where other vessels are at anchor for fishing in any confined area.
- C. Vessels within 200 yards of entering or exiting the mouth of a breach-way, may exceed 5 mph, or leave a wake, in order to maintain vessel control and safe navigation when poor surf conditions exist, but will do so in a safe manner as to not endanger life or property.
- D. The Harbor Master shall cause a sign or signs stating the preceding restrictions to be so placed that it is clearly visible to those operating vessels within the waters wherein the speed restrictions apply. These signs will be maintained in place by the Town of Charlestown.

86-5. Slowing to pass certain craft.

Motorboat or other vessel operators shall use due and reasonable care in passing close to or near other vessels and shall slow to a reasonable and safe speed when passing rowboats, canoes, sailboats or other vessels not propelled by mechanical means.

86-6. Obedience to Harbor Master and Police.

Boat operators shall obey lawful directions given to them by the Harbor Master, his assistants or by any police officer employed by the Charlestown Police Department in enforcement of the provisions of this chapter, as well as all boating laws as are covered under the provisions of the Federal Safe Boating Act of 1971 and such amendments as shall have been made thereto. Such boat operators immediately upon being instructed by the Harbor Master or a police officer employed by the Charlestown Police Department, by voice or such sound device as may be used, shall heave to, to allow boarding by such officer and shall comply with the lawful direction of such officer. Checking of all required safety equipment, as well as proper registrations of vessels under power, shall be considered a lawful direction of said officers.

86-7. Waterskiing, swimming, and personal watercraft operation

- A. No waterskiing will be allowed during the hours between sunset and sunrise or in posted areas, channels, fairways, designated mooring fields, or in anchorages. No water-skier or his/her boat shall approach any stationary or moving object closer than 200 feet, except as may be incidental to starting or finishing a run.
- B. No person shall operate a vessel for towing a person or persons on water skis, or a surfboard, or similar device unless there is in the vessel a person at least twelve (12) years of age, in addition to the operator, in a position to observe the progress of the person or persons being towed. Any person or persons on water skis, a surfboard, a tube or similar device that is being towed behind a vessel on any waters of this state shall be required to wear a life jacket approved by the U.S. Coast Guard.

- C. Swimming is prohibited in all posted areas, channels, fairways, designated mooring, or anchorage areas within the town.
- D. Personal watercraft operation and use shall be permitted in the Town of Charlestown subject to the following regulations:
- 1) A person may not operate a personal watercraft at any time between the hours from 1/2 hour after sunset to 1/2 hour before sunrise.
 - 2) A personal watercraft must at all times be operated in a reasonable and prudent manner. Maneuvers which unreasonably or unnecessarily endanger life, limb or property, including, but not limited to weaving through congested vessel traffic, or jumping the wake of another vessel unreasonably, shall constitute reckless operation of a vessel and are prohibited.
 - 3) No person under the age of 16 shall operate a personal watercraft on the waters of the Town of Charlestown unless an adult accompanies him or her or unless he or she has passed a Department of Environmental Management or United States Coast Guard approved safety course.
 - 4) It is unlawful for the owner of any personal watercraft or a person having charge over or control of a personal watercraft to authorize or knowingly permit the same to be operated by a person under 16 years of age in violation of this section unless the provisions of Subsection 3 are met.
 - 5) A person may not operate a personal watercraft within 200 feet of swimmers, divers, shore or moored vessels, except at headway speed.
 - 6) Personal watercraft, when launched from shore or returning to shore must proceed directly to the area where operation is allowed in a direction and course as perpendicular to the shore as possible and at a speed not in excess of headway speed.
 - 7) No person shall operate a personal watercraft unless he or she and any passenger is wearing a personal flotation device, which is approved by the United States Coast Guard.
 - 8) No person shall operate any personal watercraft in a reckless manner so as to endanger the life, limb or property of another.
 - 9) No person shall operate any personal watercraft unless it is numbered in accordance with R.I. Gen. Laws Section 46-22-4.
 - 10) A person operating a personal watercraft equipped by the manufacturer with a lanyard-type engine cutoff switch must attach such lanyard to his or her person, clothing, or personal flotation device as appropriate for the specific vessel.

11) No personal watercraft shall be operated or used on those certain bodies of water located in the Town of Charlestown as follows:

- a) Quonochontaug Pond.
- b) Watchaug Pond.
- c) Those portions of Schoolhouse Pond (also known as "Cochampaug Pond") and Deep Pond, not within the Settlement Lands of the Narragansett Indian Tribe and described as Tract No. 1 or Tract No. 2, as further delineated on Sheets 1, 2, and 3 (of 5) on those certain surveys entitled, "Trust Lands of the Narragansett Indian Tribe, Washington County, Rhode Island," prepared by the United States Department of the Interior, Bureau of Land Management, dated April 5, 1993 and recorded May 27, 1993 in Plat Book 12 at Pages 5 through 9 of the Town of Charlestown Land Evidence Records, and
- d) Ninigret Pond (also known as, "Charlestown Pond").

86-8. Sanitation and waste disposal.

- A. The owners or operators of all vessels operated, moored or anchored within the waters under the jurisdiction of the Harbor Master shall not permit acts contrary to the public health or sanitary regulations, including such laws, ordinances, rules and regulations as shall be promulgated by the federal, state or local body in authority.
- B. No rubbish, cans, debris, garbage, raw sewage, dead fish or other offal shall be discharged upon or into the waters under the jurisdiction of the Harbor Master.
- C. No petroleum products shall be dumped or pumped onto or into the waters of the town.

86-9. Noise.

No operator or vessel owner shall cause or allow excessive noise in the operation of a vessel, nor shall such owner or operator allow excessive noise aboard such vessel when anchored or moored. Un-muffled sound from engines, outboards or other machinery is not permitted, except by permission of the Harbor Master.

86-10. Derelict boats, motors and structures.

No derelict boats, motors or piers, wharves or docks shall be allowed in or upon the town's waters or shores.

86-11. Vessels which are unsightly or menaces to navigation.

- A. No vessel or watercraft of any kind whatsoever which is of an unsightly appearance or in badly deteriorated condition or which is likely to damage private or public property or

which might become a menace to navigation shall be permitted to moor or anchor in waters under the jurisdiction of the Harbor Master.

- B. The Harbor Master and Coastal Pond Management Commission jointly shall determine whether any vessel or other watercraft is of unsightly appearance or in a badly deteriorated condition, and, if a vessel is found to be so, they shall take proper steps for removal of the same. If the owner of any vessel or watercraft so determined to be of unsightly appearance or in a badly deteriorated condition shall fail to remedy such appearance or condition within a reasonable time, the Harbor Master shall notify the owner of record of such vessel or watercraft, in writing, and such owner shall thenceforth be subject to penalties as provided in 86-20. The Harbor Master shall be designated as the Commissioner of Wrecks and Shipwrecked Goods pursuant to the provisions of Title 46, Chapter 10, of the Rhode Island General Laws. In addition, the Harbor Master shall have the authority, on behalf of the town, to recover the cost of removing any wrecks or derelicts or abandoned boats from the owner or persons responsible, pursuant to the provisions of Section 46-4-6.11 of the Rhode Island General Laws.

86-12. Use of town floats, docks and property.

- A. The maximum period during which a boat may tie up to the town floats or docks shall be one hour unless permission is obtained from the Harbor Master.
- B. Repairing, other than emergency repairs of a minor nature, is prohibited at town floats or docks.
- C. No fishing gear, equipment or any other matter shall be allowed to remain on the town float or dock, except during the actual operation of loading or unloading.
- D. No fish, bait or other marine life may be kept, cleaned or disposed of on the town floats or dock, nor shall the same be disposed of in violation of § 86-8.
- E. There shall be no soliciting from town-owned floats, or docks without permission of the Harbor Master
- F. All persons injuring or damaging a town-owned float or dock, or all persons liable therefor, shall within 30 days reimburse the town in an amount equal to the cost of repairing such damage as determined by the Harbor Master and the Town Administrator.

86-13. Obstructing channels and vessels.

- A. No warps, lines or fishing gear shall be passed or set out from any island or point of land or anchored in any commonly used part of any water in the town which is considered a channel or from any dock so as to obstruct vessels passing along the same.

- B. Stakes shall not be driven to be used for mooring any vessel or boat or for tying up any fish or bait can, unless in the judgment of the Harbor Master their use would not be an obstruction.
- C. Any fishing gear set in any water within the town shall be marked in such a manner as to allow all operators of vessels to see such markings, including the end of any nets set in the water of the town. Any violation of this provision shall be brought to the attention of the Town Administrator by the Harbor Master, and a request for a prosecution against the owner in violation shall be made.
- D. Moorings shall not be located so that vessels, when lying to the same, shall block any channel or approach to any channel or obstruct the approach to docks or other moorings.

86-14. Houseboats.

Houseboats, meaning a boat designated primarily for human habitation and which may be used as a home and is not self-propelled, will not be permitted to moor, anchor or tie up within the waters under the jurisdiction of the Harbor Master.

86-15. Certificate of Boater Safety Education.

- A. No person born on or after January 1, 1986 shall operate a vessel that is fitted with propulsion machinery of more than ten (10) horsepower unless the person shall have successfully completed a boating safety education program as approved by the director of the Rhode Island Department of Environmental Management.
- B. Any person operating a personal watercraft (Jet-Ski), shall have successfully completed a boating safety education program as approved by the director of the Rhode Island Department of Environmental Management.
- C. Any person having in his or her possession a certificate of completion of any boating safety course approved by NASBLA shall be considered to be in compliance with this ordinance.
- D. The following persons shall be exempt from the educational provisions of this chapter provided that they can provide proof of exemption:
 - 1) A person who operates a vessel under training, directly supervised by a person on board the vessel who is eighteen (18) years of age or older and having in possession a certificate of completion of a boater safety course.
 - 2) A person who holds a valid commercial vessel operator's license issued by the United States Coast Guard, a state, or a province;
 - 3) Non-residents temporarily using the waters who meet the requirements of their state of legal residence.

- 4) A person who is operating a rented vessel that has watched an instructional video and successfully passed a written safety exam administered by the rental company as requirements for renters.

86-16. Scuba diving, skin diving, or snorkeling – warning flags.

Any person scuba diving, skin diving, or snorkeling in an area where power or motor boats are operated, shall place a warning flag on a buoy at a place of his or her submergence. Motorboats shall not be operated within fifty feet (50') of any warning flag. No person shall be in violation of this section if he or she travels within fifty feet (50') of a scuba diver or snorkeler who is in fact obstructing navigation.

86-17. Required equipment.

Any vessel in use on Charlestown waters shall carry all required equipment as outlined in Rhode Island General Law, Regulation of Boats section 46-22-5.

86-18. Operation of unnumbered vessels, or improper display of Vessel Registration Number.

- A. All vessels on the waters of Charlestown shall be numbered.
- B. No person shall operate or give permission for the operation of any vessel unless the vessel is numbered in accordance with Rhode Island General Law Regulation of Boats, or in accordance with applicable federal law, or in accordance with a federally approved numbering system or another state, and unless;
 - 1) The certificate of number awarded to the vessel is in full force and effect, and
 - 2) The identifying number set forth in the certificate or number is displayed on each side of the bow of the vessel.
- C. A vessel shall not be required to be numbered if it is;
 - 1) A vessel properly registered in another state using Charlestown waters of 90 days or less or vessels from another country temporarily using Charlestown waters.
 - 2) A vessel purchased within fourteen (14) days and holds a valid Temporary Registration Card.
 - 3) Ship's lifeboats or vessels used only for racing.
 - 4) A rowboat less than 12 feet long, or a canoe or kayak.

86-19. Flotation devices – children.

Any person transporting a child under thirteen (13) years of age in a recreational vessel less than sixty-five (65) feet in length on the waters shall require that the child wear a personal flotation device approved by the United States Coast Guard when underway, unless below deck or in a closed cabin.

86-20. Penalties for offenses, and fines.

The Chief of Police or his/her designee shall prosecute any violation under this chapter after notification by the Harbor Master of said violation. Such prosecution shall be in the Municipal Court.

Every owner, master, agent or person in charge of any vessel or watercraft, surfboard or water-skier, who shall neglect or refuse to obey the directions of the Harbor Master or other enforcement officer of a local jurisdiction in matters within their authority to direct, and every person who shall resist or oppose such Harbor Master or other authority in the execution of his duties or shall violate any of the provisions of this chapter or related regulations shall, upon conviction therefore, be fined not exceeding \$50 for each offense, and each day that such neglect, refusal or opposition shall continue after notice thereof is given by the Harbor Master or other authority to any owner, master, agent or other person in charge of a vessel, watercraft or mooring shall constitute a separate offense.

Any person who shall remove from a location assigned by the Harbor Master any posted sign or Mooring belonging to the town or another without authority from or under the direction of the Harbor Master shall, upon conviction therefore, be subject to a fine of up to \$50.

Any individual's violation of any provision of this chapter may be cause for the Harbor Master's refusal to allow such individual with his vessel or other watercraft in the waters under the jurisdiction of the Harbor Master for such period of time as may be determined by the Harbor Master or the Coastal Pond Management Commission, together with the necessary court action in cases of violation of state or federal law.

All fines levied in § 86 are payable to the Town of Charlestown within 14 days of the offense. Failure to pay the fine as required within 14 days shall subject the violator to an additional fine not to exceed \$50 and to answer to the offense in Municipal Court, unless such nonpayment is handled in accordance with § 86-20.F.

Any fine levied in § 86, disputed by the violator, may be adjudicated in the Municipal Court, provided that such adjudication is requested in writing within 14 days of the offense. This ordinance shall take effect upon its passage.

86-21. Complaints.

All complaints for violation of this chapter shall be made to the Harbor Master, in writing.

86-22. Harbor Master.

There shall be a Harbor Master for the Town of Charlestown who shall be appointed by the Town Council upon the recommendation of the Town Administrator.

86-23. Assistant Harbor Masters.

Assistant Harbor Master(s) for the town shall be appointed by the Town Administrator upon the recommendation of the Harbor Master. Assistant Harbor Master(s) shall report directly to the Harbor Master and are authorized with the same duties as the Harbor Master, under the direction of the Harbor Master.

86-24. Compensation; budget.

The Harbor Master and Assistant Harbor Master(s) shall receive compensation requested by the Coastal Pond Management Commission budget and approved in the annual budget by the Town Council.

86-25. Authority and duties of Harbor Master.

The Harbor Master shall report functionally and administratively to the Chief of Police and have the following duties:

- A. Be responsible for the administration and enforcement of the provisions of the Harbor Management Plan and any ordinances and regulations adopted pursuant thereto.
- B. Process applications for the issuance of mooring permits and assign proper placements of moorings in accordance with Chapter 96, Coastal Ponds and Mooring.
- C. Keep proper records of all mooring application information, including the locations of moorings, mooring owners and vessel usage of mooring, and type of vessels using moorings.
- D. Prepare, keep current and make available a waiting list for mooring permits in accordance with the provisions of Chapter 96, Coastal Ponds and Mooring, and regulations adopted pursuant hereto if the demand for available mooring permits is greater than the number of available mooring locations in any given year.
- E. Manage and maintain records of mooring tackle inspections, authorize commercial and private, qualified inspectors of mooring tackle, and, if determined necessary, inspect mooring tackle in accordance with the provisions of this chapter and regulations adopted pursuant hereto.
- F. Carry out all other powers and duties authorized to Harbor Masters under various state, local and federal marine laws, including but not limited to marine sanitation device (MSD) inspection and discharge responsibilities afforded through the United States Coast

Guard, MARPOL ANNEX V, Section 312 of the Clean Water Act, Title 46-22 of the General Laws of Rhode Island and future laws yet to be enacted.

86-26. Coastal pond regulations.

The Coastal Pond Management Commission shall adopt rules, procedures and regulations for the operation of this chapter, said regulations, fees and charges, and shall become effective upon approval, by resolution, of the Town Council.

86-27. Posting regulations.

The Harbor Master may post and maintain on or adjacent to all floats, docks and launching sites within the town, and other feasible locations, an adequate digest of those portions of this chapter relating to the operation of vessels under the jurisdiction of the Harbor Master.

86-28. Review of operations.

The Harbor Master shall attend meetings of the Coastal Pond Management Commission and make reports to the Town Council as may be required.

Appendix XI
Chapter 96 of the Town Code *Coastal Ponds and Moorings*

96-1. Purpose.

The goals of this chapter are to:

- A. Provide for the regulation of the public waters within the Town of Charlestown, as described herein and hereafter referred to as the "coastal ponds," by establishing regulations that balance and manage the diverse uses of the coastal ponds of the Town of Charlestown; and to minimize user conflicts.
- B. Ensure that all waterway activities are occurring in a safe and controlled manner so as to prevent unnecessary accidents through the administration and enforcement of the Harbor Management Plan, and the rules and regulations established pursuant hereto.
- C. Provide a mechanism to ensure that the administration and operational costs of this chapter and the Harbor Management Plan are shared by the Town of Charlestown, private and commercial mooring owners and other groups or individuals as may be identified by the Coastal Pond Management Commission, hereinafter described.
- D. Regulate, monitor, administer and manage all moorings placed in the coastal ponds by providing fair and efficient means for mooring space allocation, the continuation of mooring services and the maintenance of mooring areas.
- E. Maintain, improve and develop public access opportunities to the coastal ponds of the Town of Charlestown for the benefit of all user groups, including those without boats who seek to use the coastal ponds for passive and active recreation.
- F. Remain consistent with the goals and regulations of the Rhode Island Coastal Resources Management Council, the Rhode Island Department of Environmental Management, the State Guide Plan and the United States Army Corps of Engineers.
- G. Maintain and improve the quality of water within the jurisdictional boundaries of the Town of Charlestown.
- H. Maintain compliance with the Town of Charlestown Comprehensive Plan, as the same may be amended from time to time.

96-2. Definitions.

The following definitions will apply to this chapter and any regulations that are adopted pursuant to Chapter 96-5 hereof:

ANCHOR

To secure a vessel temporarily to the bottom of a water body by dropping an anchor or other ground tackle from a vessel.

BREACHWAY

A connecting channel, usually between a coastal pond and the ocean, which permits water exchange between the two.

CHANNEL

Any water areas that are reserved for unobstructed movement of vessels.

COASTAL POND MANAGEMENT COMMISSION

An appointed group of residents who are responsible for overseeing and instituting the Town Harbor Management Plan's rules and regulations.

COASTAL PONDS

Ninigret Pond, Quonochontaug Pond and Green Hill Pond, described as coastal ponds or lagoons located behind a barrier beach which, in their natural condition, permanently or occasionally exchange waters with the ocean.

FAIRWAY

Any locally designated water areas reserved for unobstructed movement of vessels.

HARBOR MASTER

An official appointed by the Town Council of the Town of Charlestown upon the recommendation of the Town Administrator to carry out the provisions of this chapter or any other ordinance and any additional regulations subsequently adopted for the implementation of the ordinance.

LAUNCHING RAMP

A man-made or natural facility used for the launching and retrieval of boats.

MARINA

Any dock, pier, wharf, float, floating business, or combination of such facilities that services five or more recreational boats.

MARINE SANITATION DEVICE (MSD)

A specific piece of machinery or system of machinery that is dedicated to treat, process, and/or store raw, untreated sewage that can accumulate onboard water vessels. It does not refer to portable devices such as portable toilets.

MOOR

To permanently secure a vessel to the bottom of the water body by the use of mooring tackle.

MOORING

A place or a semipermanent anchorage installation consisting of a heavy anchor, mooring buoy and a pennant whereby buoyant vessels are secured to the bottom of a water body in accordance with this chapter.

MOORING PERMIT, COMMERCIAL

A permit issued to a commercial entity by the harbor master, and where the mooring tackle associated with the mooring permit is located on the coastal ponds within a Coastal Resources Management Council approved mooring field and can be rented by the permit holder for profit.

MOORING PERMIT, PRIVATE

A mooring permit that is issued by the harbormaster to an individual, or a waterfront association within the coastal ponds, and where the mooring tackle associated with the mooring permit is used by the permit holder.

MOORING SPACE

The water space assigned to a permit holder by the harbor master, where the mooring tackle associated with the mooring permit is placed.

MOORING TACKLE

The hardware used to secure a vessel at a mooring and which is kept in place seasonally or semi-permanently.

MOORING, WATERFRONT

A mooring held by a riparian property owner under a permit granted by the Town of Charlestown, and which is located within the coastal waters bordering that property as bounded by the seaward extension of that property's lateral lot lines.

OUTHHAUL

Non-single-point anchoring device, for the purpose of securing a boat in tidal waters and retrieving it from shore.

PERSON

An individual, group of people, firm, association, organization, partnership, trust, company or corporation.

RECREATIONAL BOATING FACILITY

A marina, launching ramp, residential and limited recreational boating facilities, recreational wharves, piers and slips, floats or floating docks, and recreational mooring areas.

REGISTERED OWNER

The person owning the vessel assigned to a mooring permit at the time of issue.

RESIDENT

Any person whose legal residence is the Town of Charlestown or any person resident in another community or state but who owns real estate within the Town of Charlestown.

RESIDENTIAL BOATING FACILITY

A dock, pier, wharf, or float, or combination of such facilities, contiguous to a private residence, condominium, cooperative or other home owners' association properties that may accommodate up to four (4) boats.

RIGHT-OF-WAY

An unobstructed path or corridor from a public thoroughfare or facility leading to or along the coastal ponds and shoreline areas below the mean high-water mark.

TRANSIENT MOORING

Any mooring designated for rental and short term use on a first come, first serve basis.

VESSEL

Every description of watercraft, other than a seaplane on water, used or capable of being used as a means of transportation on water. Specifically excluded by this definition are floating homes or houseboats.

VESSEL, COMMERCIAL

Any type of vessel used primarily for any type of commercial venture, including but not limited to fishing, towage, salvage and the carrying of passengers for hire.

WATERFRONT ASSOCIATION

A home owners association, where the home owners within the association all have deeded use of a waterfront right of way or a parcel of waterfront property.

96-3. Jurisdiction of Town.

The coastal ponds of the Town of Charlestown are those coastal ponds within the jurisdiction of the corporate boundaries of the Town of Charlestown known as "Ninigret Pond" and "Quonochontaug Pond" and all other coastal waters not otherwise named within the town's jurisdiction.

96-4. Coastal Pond Management Commission.

The Coastal Pond Management Commission shall be the local regulatory body authorized to regulate the coastal ponds of the town through the implementation of the Harbor Management Plan, ordinances, and, regulations. The Coastal Pond Management Commission shall enforce the provisions and ordinances of the Harbor Management Plan as well as adopt additional policies, rules and regulations for the implementation of the Harbor Management Plan and subsequent ordinances and perform all acts necessary and consistent with the Harbor Management Plan and such ordinances, subject to the approval of the Charlestown Town Council and the Coastal Resources Management Council.

A. Composition. The Coastal Pond Management Commission shall consist of seven (7) resident members appointed by the Town Council after duly advertising the availability of these positions, with representation from each of the following groups, to the extent possible: two

(2) recreational boaters, one (1) commercial fisherman, one (1) commercial marina or marine-related service operator, one (1) residential shorefront property owner and two (2) undesignated members, one (1) of whom shall be a resident of the Town of Charlestown north of Route 1. At least one (1) member of the Commission shall have a boat moored or docked on Ninigret Pond, and at least one (1) member shall have a boat moored or docked on Quonochontaug Pond. In the event that the Town Council does not have sufficient applicants from any particular representative group described above, the position shall be filled with any otherwise qualified candidate.

- B. Appointments. Members shall be appointed by the Town Council for terms consisting of three (3) years. Appointments shall be staggered so that approximately one-third (1/3) of the membership terms shall expire each year.
- C. Vacancies. To the extent possible, vacancies shall be filled from the group in which the vacancy occurred.
- D. Officers. A Chairman, Vice Chairman and Secretary shall be elected by the members of the Commission. Meetings shall be called by the Chairman or at the request of at least three (3) members of the Commission. The Secretary shall keep minutes of all meetings and file such minutes with the Town Clerk.
- E. Powers and duties. The Coastal Pond Management Commission shall be a local regulatory body authorized to regulate the coastal ponds of the town through the implementation of the Harbor Management Plan, ordinances, and regulations. The Coastal Pond Management Commission is authorized to:
 - 1. Recommend to the Town Council the adoption of rules, regulations, fees, penalties and other amendments to the Harbor Management Plan and any subsequent ordinances which may be necessary to fulfill the goals and objectives of the Harbor Management Plan.
 - 2. Recommend additional authorities and duties for the Harbor Master, hereinafter detailed, with the approval of the Town Council.
 - 3. Assist in the preparation of an annual budget in accordance with the provisions of the town charter to expend moneys in the Coastal Pond Management Fund as defined in Chapter 96-8.
 - 4. Act as a board of appeals, to hear any person aggrieved by any decision of the Harbor Master in the enforcement and implementation of this chapter and the regulations adopted hereunder. The Coastal Pond Management Commission shall file all of its decisions with the Town Clerk, and any person aggrieved by a decision of the Coastal Pond Management Commission may appeal said decision to the Town Council by filing a notice of appeal with the Town Clerk within fifteen (15) days after filing of the decision.
 - 5. Review and revise as necessary the Harbor Management Plan and its ordinances and regulations for the Town Council and Coastal Resources Management Council approval.

The Harbor Management Plan and any ordinances and regulations adopted pursuant thereto shall be reviewed and revised at least once every five (5) years.

F. Ex officio members.

1. The Harbor Master shall be a nonvoting, ex officio member of the Coastal Pond Management Commission.
2. The Chairman of the Conservation Commission, or his/her designee, shall be a nonvoting, ex officio member of the Coastal Pond Management Commission.
3. To enable the Coastal Pond Management Commission to coordinate issues of mutual concern between adjacent coastal municipalities, there may be two (2) nonvoting, ex officio members from the Harbor Commission. One (1) of South Kingstown and one (1) of Westerly, Rhode Island.

G. Compensation. Coastal Pond Management Commission members may be compensated for any normal expenses incurred in the performance of their duties but shall otherwise not be compensated.

96-5. Regulations.

A. The Coastal Pond Management Commission shall adopt rules of procedure and regulations for the operation of this chapter, which regulations shall not become effective until approved by resolution of the Town Council after public hearing.

B. Mooring Regulations

1. Permitting process.

a. No mooring tackle shall be located in the coastal ponds of the Town of Charlestown until a valid permit has been issued for the use of such mooring tackle by the Harbor Master, and when the mooring tackle associated to the mooring permit conforms to specifications and standards set forth in these regulations.

b. Request for a mooring permit.

- 1) The Harbor Master must be contacted directly for all mooring permit requests to provide the mooring permit applicant with the correct application that must be submitted.
- 2) Mooring permit applications can be obtained from the Harbor Master or the Town Clerk's office. An application shall be accompanied by the appropriate fee and shall be received by the Town Clerk. A complete and accurate mooring permit application must be provided before the Harbor Master can act to approve or reject such application. The Harbor Master shall determine if a mooring permit

can be issued only after all provisions of the Harbor Management Plan and the regulations are met.

- 3) If a mooring permit cannot be issued to an applicant, the applicant can request to be placed on the mooring permit wait list. A mooring permit wait list application can be obtained from the Harbor Master or the Town Clerk's office, and can also be completed electronically online. A complete and accurate mooring permit wait list application must be submitted along with the required one time processing fee as described in Chapter 98-6 before the Harbor Master can approve or reject such application.
- 4) At the time a mooring permit wait list applicant's name comes up on the wait list to be granted an available mooring permit, the applicant will be notified via email by the Harbor Master that a mooring permit has become available. The applicant will have fourteen (14) days to accept the mooring permit. Upon acceptance of an available mooring permit, the applicant will be provided a mooring permit application by the Harbor Master. A complete and accurate mooring permit application, along with the required mooring permit fee as described in Chapter 96-6, must be submitted within fourteen (14) days to the Harbormaster or the Town Clerk's office before the Harbor Master can act to approve, or reject the issuance of a mooring permit to the applicant.
- 5) If the Harbor Master issues a mooring permit, the permit holder for which such permit has been issued must locate the mooring tackle at the direction of the Harbor Master or Assistant Harbor Master(s) in accordance with the Harbor Management Plan and these regulations.

c. Permit renewals.

- 1) The Harbor Master shall mail a notice of mooring permit renewal along with mooring permit renewal instructions by March 1 of each year to those persons who held valid mooring permits at the end of the previous calendar year, to the address listed on their last mooring permit. It shall be the responsibility of the mooring permit holder to notify the Harbor Master of any change in address.
- 2) A mooring permit renewal must be completed electronically online, and mooring fees as described in Chapter 96-6 be paid in full by March 31. A mooring permit holder may request a mooring permit renewal application be provided if the applicant is unable to complete the mooring permit renewal electronically online. Applications for renewal of a valid mooring permit shall be submitted to the Harbor Master or the Town Clerk's office by March 31 of each year-and shall be accompanied by the appropriate fee.
- 3) Failure to submit a complete and accurate application by March 31 of each year will result in a late fee as described in Chapter 96-6. Applications for renewal not

received prior to June 1 of each year will result in revocation of the mooring permit by the Harbor Master.

2. Relocation of an existing permitted mooring tackle.
 - a. All requests for relocation of existing permitted mooring tackle must be submitted to the Harbor Master in writing by mail or email. The mooring permit holder must have been issued a valid mooring permit for the previous year, and provide the reason for the request to relocate mooring tackle associated with the mooring permit. Based on availability of space, requirements of the ordinance, and type and size characteristics of the vessel, appropriate action will be taken on the request. Any request received by the Harbor Master that is not complete and in writing, will result in the request being denied, and no action will be taken.
3. Failure to renew an existing, valid mooring permit.
 - a. Failure to renew an existing valid mooring permit in accordance with provisions of these regulations by June 1 of any given year shall result in the permit holder's surrender of the mooring permit, and abandonment of all his privileges and interests in the previously permitted mooring space. The Harbor Master shall make available the surrendered mooring permit for issuance, and may remove the now abandoned mooring at the permit holder's expense. Such expenses may in turn be recovered by the Town, in accordance with any provision of these regulations.
4. Forfeiture of a mooring permit and mooring tackle space.
 - a. Failure to comply with requirements of the ordinance or regulations.
 - b. Removal of mooring tackle by the permit holder and notification to the Harbor Master that the mooring has been removed.
 - c. Failure to comply with and remedy within thirty (30) days violations described in the Harbor Master's violation notice that the mooring does not comply with the mooring tackle standards hereinafter set forth.
 - d. Any mooring tackle that is not associated with a commercial mooring permit that is being rented for profit.
 - e. Any mooring in violation of the regulations set forth for the request of temporary mooring tackle use as described in Chapter 96-5(B)(7)(c).
 - f. Any such forfeited mooring permit shall remain in the name of the permit holder for a period of twenty-one (21) days after notice by certified mail to the permit holder, within which time the permit holder shall have the right to appeal the forfeiture. In the event the appeal is not granted, the Harbor Master shall have the right to issue the mooring permit and dispose of such mooring tackle as he/she sees fit.

5. Available space.

- a. The total number of moorings not associated with waterfront property permitted in both coastal ponds within the Town of Charlestown shall not exceed 300.
- b. The Harbor Master shall determine the number of mooring spaces available for mooring placement within designated mooring fields. These available mooring spaces shall be made available to those persons whose names appear on the mooring permit waiting list as described in Chapter 96-5(B)(6).
- c. Charlestown residents shall be given priority for a mooring permit over non-residents. A non-resident shall not lose priority for a mooring permit to a resident more than three (3) times before such non-resident is given first priority to an appropriate mooring space. In the case of a mooring field located within a federal navigation project, permits shall be allocated according to the U.S. Army Corps of Engineers requirement of "open to all on a fair and equitable basis".
- d. If any mooring permit waiting list applicant shall refuse a grant of mooring space, his or her application shall be removed from the mooring permit waiting list. Requests for mooring tackle relocation shall be given the same preferential treatment as stated above regarding residents and non-residents. All approved mooring permits, and approved mooring tackle locations shall be recorded by the Harbor Master after all requirements as described in Chapter 96-5(B)(8)(b) have been met.
- e. If an applicant on the mooring wait list has been granted a mooring permit by the Harbor Master, upon acceptance, the applicant must provide proof that they will have a vessel to occupy the mooring to the Harbor Master within sixty (60) days, or the mooring permit shall be revoked and there shall be no refund of any collected mooring fees. Accepted forms of proof shall be a copy of a state issued boat registration, boat title, bill of sale, or a boat rental/lease agreement in the name of the applicant.
- f. If an applicant on the mooring wait list has been granted a mooring permit by the Harbor Master, upon acceptance, mooring tackle must be installed in the designated location, or provide proof that a mooring tackle installation has been scheduled with an approved mooring inspector within sixty (60) days. If the mooring tackle has not been installed, or proof of a scheduled mooring tackle installation by an approved mooring inspector has not been provided, the granted mooring permit will be revoked and there will be no refund for any collected mooring fees.

6. Waiting list.

- a. The Harbor Master shall maintain a waiting list of applicants seeking a mooring permit when the allowable limit of mooring permits, not to include waterfront mooring permits, has been issued, or no mooring space in the designated mooring fields is available. Placement of applicants on such a waiting list will be recorded

from completed mooring permit waiting list applications as they are received and approved by the Harbor Master. A one-time application processing fee set by the Coastal Ponds Management Commission as described in Chapter 96-6, will be applied and due at time of initial application by an applicant to be placed on the waiting list. The Harbor Master shall update the waiting list at least twice a year in January and June, and make available for public review at all times online, and at the Town Clerk's office.

- b. The waiting list application form shall include an applicant's name, mailing address, contact phone numbers, email address, boat information if available, requested mooring field location, and signature.
- c. Waiting list application renewal forms will be sent out annually during the month of October and must be completed by current waiting list applicants to remain on the waiting list for the next season. Renewal forms must be completed and returned to the Harbor Master or the Town Clerk's office no later than November 30. Waiting list applicants who fail to submit a waiting list application renewal form by November 30 will be removed from the waiting list.
- d. Waiting list requirements.
 - 1) A waiting list application must be submitted to the Harbor Master or the Town Clerk's office by the applicant requesting to be placed on mooring permit waiting list. All required information must be completed before waiting list application will be accepted for processing.
 - 2) Waiting list application processing fee as described in Chapter 96-6.
 - 3) Completion of a waiting list renewal application annually by the listed applicant.

7. Occupancy of mooring.

- a. Nothing other than the vessel, or its tender, which has been permitted for a mooring permit shall occupy said mooring tackle. The Harbor Master shall have the authority to move any vessel or other object violating provisions of this section, with such movement at the expense and risk of the vessel or object owner.
- b. Mooring tackle associated with any mooring permit, must be occupied by the mooring permit holder's vessel for the majority of the mooring season.
- c. The Harbor Master may permit temporary use of mooring tackle associated with an approved mooring permit by another person upon written request to the Harbor Master by the permitted mooring permit holder for a private or waterfront (riparian rights) mooring permits.
 - 1) The mooring permit and mooring tackle shall not be in violation of this chapter.

- 2) A temporary mooring use form must be completed by the mooring permit holder and submitted to the Harbor Master before a request for temporary mooring use will be approved or rejected by the Harbor Master.
 - 3) A non-refundable processing fee as described in Chapter 96-6 will be due for each request for temporary mooring use and shall be paid before a request for temporary use will be approved or rejected by the Harbor Master.
 - 4) Up to four requests for temporary use of mooring tackle will be allowed, with a maximum of fourteen (14) days use per approved request.
 - 5) The permit holder is responsible for ensuring that any users of their mooring tackle abide by town ordinances Chapter 86 Boats and Waterways, and Chapter 96 Coastal Ponds and Mooring. Any violations will result in future requests by the permit holder for temporary mooring use to be denied, and/or subject to the provisions of Town Code of Ordinances, Chapter 96-7 Penalties for offenses, and fines.
 - 6) Any violations of Chapter 96-5(B)(7)(c) will result in the said mooring permit being revoked, and the forfeiture of mooring space.
8. Mooring permit classification and requirements.
- a. Mooring permits are classified as the following:
 - 1) Private mooring permit
 - 2) Waterfront recreational mooring permit (riparian rights)
 - 3) Commercial mooring permit
 - b. Mooring permit requirements.
 - 1) Private mooring permit.
 - a) Available to both resident, and non-resident applicants who are listed on the mooring permit waiting list where moorings are issued as they become available and as described herein of Chapter 96-5(B)(5).
 - b) A holder of a private mooring permit issued by the Harbor Master is authorized to moor any vessel they so choose, as long as the vessel is sea worthy, and does not exceed the maximum allowed vessel size of the mooring tackle as described herein of Chapter 96-5(B)(16).
 - c) Mooring tackle of a private mooring permit shall be located within an approved mooring field as designated within the Harbor Management Plan.

- d) Proof of boat ownership is required to obtain and hold a private mooring permit. Documentation with vessel information shall be submitted to the Harbor Master upon request.
 - e) A storm preparedness and recovery plan shall be completed and submitted to the Harbor Master.
 - f) Private mooring permit holders may request the temporary use of mooring tackle by another person in accordance with Chapter 96-5(B)(7)(c).
 - g) Private mooring permits in effect, in violation of these regulations will be revoked by the Harbor Master and there shall be no refund of collected mooring fees.
 - h) The annual fee for a private mooring permit is set by the Coastal Ponds Management Commission, and can be found in the Town Code of Ordinances, Chapter 96-6. Fees.
- 2) Waterfront mooring permit (riparian rights).
- a) Waterfront mooring permits are available to residents or associations with waterfront property (riparian rights). This does not include individual property owners who have deeded use of waterfront right of ways.
 - b) Moorings tackle owned by persons who own waterfront property are allowed to be placed in the coastal ponds of the Town in riparian waters directly adjacent to their waterfront property as bounded by the seaward extension of that property's lateral lines. The property owner must comply with all mooring permit application requirements and receive a mooring permit from the Harbor Master as described herein, and the mooring tackle must meet all mooring tackle standards and inspections as described hereinafter, before such placement will be permitted. One (1) such mooring tackle is allowed to be placed in these areas by waterfront property owners.
 - c) A holder of a waterfront mooring permit issued by the Harbor Master is authorized to moor any vessel they so choose, as long as the vessel is sea worthy, and does not exceed the maximum allowed vessel size of the mooring tackle as described herein of Chapter 96-5(B)(16).
 - d) Persons who have an approved mooring permit associated with waterfront property (riparian rights) may apply to have an outhaul (see Chapter 96-5(B)(16)(d) for specifications). Outhaul mooring arrangements are not considered moorings, but the Harbor Master may authorize an annual permit for such, provided that Charlestown has a Coastal Resources Management Council approved and active harbor management plan. An outhaul is a non-

single-point anchoring device, for the purpose of securing a boat in tidal waters and retrieving it from shore.

- e) Except as provided below, an outhaul(s) is/are to be permitted to the contiguous waterfront property owner.
 - (1) Up to two (2) outhauls may be allowed per waterfront property.
 - (2) Outhauls are not permitted on properties which contain a recreational boating facility.
 - (3) Permits are to be issued only if they are consistent with the Rhode Island Coastal Resources Management Program (Red Book), including the provisions of Section 300.18 (must not disturb submerged vegetation or habitat).
 - (4) Charlestown procedures acknowledge that the Coastal Resources Management Council retains the authority to revoke any permits issued by the Town of Charlestown if it finds that such permit conflicts with the Rhode Island Coastal Resources Management Program.
 - (5) From November 1st to April 1st, when a boat is not being secured by the device on an annual basis, the outhaul cabling system shall be removed.
 - (6) Outhauls may be "grandfathered" in their current location upon annual Harbor Master documentation that such outhauls have been in continuous use at such location since 2004 and the contiguous property owner(s) agree in writing to such; however, such "grandfathering" is extinguished whenever a recreational boating facility is approved at the location.
- f) Proof of boat ownership is required to obtain and hold a waterfront mooring permit. Documentation with vessel information shall be submitted to the Harbor Master upon request.
- g) A storm preparedness and recovery plan shall be completed and submitted to the Harbor Master.
- h) Waterfront mooring permit holders may request the temporary use of mooring tackle by another person in accordance with Chapter 96-5(B)(7)(c).
- i) Waterfront mooring permits in effect in violation of these regulations will be revoked by the Harbor Master and there will be no refund of collected mooring fees.

j) The annual fee for a waterfront recreational mooring permit is set by the Coastal Ponds Management Commission and can be found in the Town Code of Ordinances, Chapter 96-6. Fees.

3) Commercial mooring permit.

a) Available to a commercial entity as defined in Chapter 96-2 only.

b) Rental use of mooring tackle associated with an approved commercial mooring permit is allowed, and may be occupied by any vessel type, recreational or commercial.

c) The permit holder is required to complete and submit to the Harbor Master, a temporary mooring use form for any vessel utilizing the mooring at any time. A new form must be completed and submitted at any time the vessel utilizing the mooring is to change.

d) The permit holder must provide a description of what the mooring will be used for.

e) Adequate parking and sanitary facilities must be provided.

f) Mooring tackle must be located within an approved mooring field as designated within the Harbor Management Plan and placed at the location within the mooring field as directed by the Harbor Master.

g) Commercial mooring permits in effect, in violation of these regulations will be revoked by the Harbor Master and there will be no refund of collected mooring fees.

h) A storm preparedness and recovery plan shall be completed and submitted to the Harbor Master.

i) The annual fee for a private mooring permit is set by the Coastal Ponds Management Council, and can be found in the Town Code of Ordinances, Chapter 96-6: Fees.

9. Mooring permit application requirements.

a. All applications for a mooring permit shall contain the following information.

b. All applications for a mooring permit shall include a storm preparedness and recovery plan to be completed by the mooring permit holder or applicant.

1) Private mooring permit.

- a) Applicant information shall include; name, mailing address, local address if applicable, twenty-four (24) hour contact phone, secondary/cell phone if applicable, email address, and an emergency contact with a twenty-four (24) hour contact phone number.
 - b) Vessel information shall include; state issued boat registration number as displayed on the vessel, hull identification number, year, make, model, color, length, width, draft, and marine sanitation device type.
 - c) Mooring information shall include; mooring permit number, mooring permit field assignment, date of last mooring inspection, mooring inspection status, and current mooring service provider.
 - d) Signature accepting the rules and regulations.
- 2) Waterfront mooring permit.
- a) Applicant information shall include; name, mailing address, local address if applicable, twenty-four (24) hour contact phone, secondary/cell phone if applicable, email address, and an emergency contact with a twenty-four (24) hour contact phone number.
 - b) Vessel information shall include; state issued boat registration number as displayed on the vessel, hull identification number, year, make, model, color, length, width, draft, and marine sanitation device type.
 - c) Mooring information shall include; mooring permit number, mooring permit field assignment, date of last mooring inspection, and current mooring service provider.
 - d) Signature accepting the rules and regulations.
- 3) Commercial mooring permit.
- a) Applicant information shall include; name of business, business contact person, mailing address, local address if applicable, twenty-four (24) hour contact phone, secondary/cell phone, email address, and an emergency contact with a twenty-four (24) hour contact phone number.
 - b) Mooring information shall include; mooring permit number, mooring permit field assignment, date of last mooring inspection, mooring inspection status, and current mooring service provider.
 - c) Signature accepting the rules and regulations.

10. Numbering.

- a. Each mooring permit and the mooring tackle associated with the mooring permit located in the coastal ponds of the Town of Charlestown, once permitted, shall be assigned a number annually by the Harbor Master.

11. Mooring records.

- a. The Harbor Master shall keep a detailed record of all mooring permits, mooring tackle, their location, along with the permit holder's name, home mailing (and business, if applicable) address, telephone number(s), mooring permit number, date mooring was set, last mooring inspection date, and vessel data. The Harbor Master may keep separate or combined private or commercial mooring records, in accordance with this provision.
- b. The Harbor Master shall keep on file individual boater storm preparedness and recovery plans submitted as required by mooring permit holders.

12. Permit ratios.

- a. Commercial moorings shall comprise no more than ten percent (10%) of all moorings in all designated mooring fields considered in total. Mooring permits associated with waterfront property owners are not to be included in this ratio.

13. Transfer of moorings.

- a. Transfer of a private mooring permit to an immediate family member of the mooring permit holder (brother, sister, mother, father, spouse, children or grandchildren), as designated by the mooring permit holder, on a one time basis is permitted. Subsequent transfers of the mooring permit by the mooring permit transferee is prohibited under any circumstances.
- b. Transfer of a commercial mooring permit shall not be permitted.

14. Anchoring, town transient, and waterfront associations.

- a. Any vessel may anchor on its own anchor in the coastal ponds of the Town for a period not to exceed forty-eight hours. Written consent of the Harbor Master must be obtained for periods longer than forty-eight (48) hours. Owners or operators of such vessels may go ashore, but must be available to tend the vessel in the event of heavy weather or other emergency and must notify the Harbor Master where they may be reached in case of emergency. Anchored vessels must be kept clear of all moored vessels. No vessel may anchor in any navigation channel, fairway, ingress and egress path, mooring field, or swimming area.

- b. The town does not have moorings available for public transient use.
- c. The existence of a waterfront association confers no special priorities with regard to assignment of moorings to its association members. A waterfront association must certify to the Harbor Master that parking and dingy storage space is available for association members when parking and dingy storage is necessary for access to moorings~~s~~ tackle. Dinghy storage shall not be placed where it may damage the coastal buffer. Waterfront associations are required to keep parking and dinghy storage areas free of litter and abandoned boats. Moorings~~s~~ permits that are issued to waterfront associations must be located in Charlestown, and Coastal Resources Management Council approved mooring fields.

15. Mooring fields.

- a. No mooring shall be located or placed within the coastal ponds of the Town without a valid mooring permit issued by the Harbor Master and without having the mooring inspected as detailed herein and approved by the Harbor Master. The Harbor Master must direct the placement of the mooring.
- b. No vessel so moored shall extend beyond the designated mooring field boundaries as described in the Harbor Management Plan.
- c. All designated mooring fields sited within the coastal ponds of the Town shall be set back a minimum distance of:
 - 1) Fifty (50) feet from the mean high water (MHW) mark of the shore, and fifty (50) feet from shore side structures such as, but not limited to, docks and piers; and
 - 2) One hundred (100) feet from the center line of all navigation channels, fifty (50) feet from center line of all fairways, and twelve and a half (12.5) feet from ingress and egress paths to shore side structures including but not limited to docks, boathouses and launching ramps. Ingress and egress to and from shore side structures shall follow the shortest path possible to the navigation channel. The Harbor Master may designate that docks for adjacent properties share the same ingress/egress path through a mooring field.
- d. Mooring field designations.
 - 1) Certain waters of the Town of Charlestown shall be designated as mooring fields. Those waters herein designated are authorized for the placement or permitted moorings as detailed within these regulations.
 - 2) Mooring fields designated in accordance with all policies of the Town of Charlestown's Harbor Management Plan, the policies and requirements of the Coastal Resources Management Council's Guidelines for the Development of

Municipal Harbor Management Plans, and the Coastal Resources Management Council's Management Procedures for Sitting Mooring Fields.

- 3) Any revisions to the size or location of designated mooring fields shall require Town Council approval. Once Town Council approval is obtained, approval for the revisions from the Coastal Resources Management Council shall also be obtained. Once approval has been obtained from the Coastal Resources Management Council, the revisions may take place.
 - 4) Visual maps and the established mooring field designations can be found on the Town of Charlestown website, under Harbor Management and Boating.
- e. No mooring shall be placed where the clearance between the hull bottom of a moored vessel and the coastal pond bottom shall be less than twelve (12) inches at mean low water (MLW).
 - f. No mooring tackle shall be placed where a boat's swing will take it within fifty (50) feet of the mean high water (MHW) mark on the shore, over traditional fishing grounds as defined by the Coastal Resources Management Council, and public recreation areas. All mooring or anchorage areas must be sited in relation to these areas so as to protect and preserve their value, access to, or use of them.
 - g. No mooring tackle shall be placed where a boat's swing will take it within one hundred (100) feet of the center line of navigation channels, fifty (50) feet of the centerline of fairways, or twelve and a half (12.5) feet of the center line of ingress or egress paths to and from shore side structures.
 - h. Mooring tackle shall be arranged so as to minimize the possibility of collision with other moored boats. The swing of any moored boat may not come closer than fifty (50) feet to any shoreline or shore side structure.
 - i. A "No-Wake" speed of five (5) mph shall be observed in all mooring areas.
 - j. No mooring shall be located within three hundred (300) feet of federal, state or town conservation areas, except in the case of that mooring tackle owned by a waterfront property owner whose property is adjacent to a conservation area.
 - k. All mooring fields shall be serviced by adequate and accessible marine pump out facilities and dump stations, which are at all times maintained in operational condition.
16. Mooring tackle specifications.
- a. All mooring tackle placed under these regulations must meet the following standards and be comprised of the following components.

- 1) Mooring tackle shall consist of an approved anchor, two (2) sections of galvanized steel chain connected with a galvanized steel swivel and shackle, a buoy and a nylon pendant.
- 2) The length of the anchor chain connected to the anchor shall be equal to at least three-eighths (3/8) inch in diameter and one and one-half (1 1/2) times the maximum depth of water at mean high water (MHW) where the mooring is placed and be connected to a second length of chain by a swivel. The second length of chain shall be at least three-eighths (3/8) inch in diameter and equal in length the maximum depth of water at mean high water (MHW). All shackles shall be safety wired.
- 3) The mooring buoy shall be constructed of encapsulated high density foam. The buoy shall have buoyancy rating sufficient to support the weight of the lighter chain so that at least two-thirds of the buoy projects above the water surface.
- 4) The nylon pendant shall consist of a minimum one-half (1/2) inch line, and equal in length to one and one-half (1 1/2) times the distance from the water line to the bow chock. The pendant shall be secured to the bottom of the buoy with a spliced thimble and shackles and equivalent anti-chaffing gear at the boat end.
- 5) The following table shall establish guidelines for the weight of the approved anchor. The Harbor Master may modify these guidelines based on conditions at the mooring site taking into account such factors as composition of the bottom, wave height, current, and wind conditions. In cases where the anchor is in less than three (3) feet of water at mean low water (MLW), a marking buoy shall be suspended above the anchor to mark its location as a hazard to navigation.

Boat Length	Anchor Weight	Lower Chain	Upper Chain	Pennant
Under 10'	50 LBS	3/8"	3/8"	1/2"
10-15'	75 LBS	3/8"	3/8"	1/2"
16-19'	150 LBS	1/2"	3/8"	1/2"
20-22'	200 LBS	1/2"	1/2"	1/2"
23-25'	250 LBS	5/8"	1/2"	5/8"
26-30'	300 LBS	5/8"	1/2"	5/8"

Both summer floats and pickup buoys must be readily and intelligibly visible above the water at all times when in use. The winter sticks or stakes shall not be placed prior to October 1 and shall be removed from coastal pond mooring spaces not later than June 1 of each year. Assigned Town mooring stickers shall be affixed to mooring float and permitted boat by June 30. All summer floats and winter sticks or stakes must be marked with permit holder's assigned number and blue reflective stripe. Numbers must be bold and at least two (2) inches in height. No other markings other

than the assigned permit number, and current year mooring permit sticker, shall be visible on the floats. The mooring permit holder's last name may also be displayed on the mooring float, but it is not required.

- b. The Harbor Master may approve variances to mooring tackle specifications other than those minimum standards described herein for specific cases if such specifications are appropriate for the area in which a mooring will be located.
- c. Outhaul specifications.
 - 1) Outhaul pipes shall be a minimum of one and one-half (1 ½) inch galvanized steel pipe.
 - 2) Outhaul line should be a minimum of three eighths (3/8) inch.
 - 3) All vessels using outhauls must be equal to or less than sixteen (16) feet in length.
 - 4) No motorized vessels with more than eight (8) horsepower shall use an outhaul.

17. Inspections.

- a. All new moorings in the coastal ponds of the Town must have the chain, tackle, and anchor inspected by a town qualified mooring inspector prior to setting the mooring. Once an inspection has been completed, a certificate of inspection must be completed by the mooring inspector and forwarded to the Harbor Master.
- b. Every permit holder shall be required to maintain his mooring in safe condition. Any chain, shackle, swivel, or other tackle which has become warped or worn by one-third (1/3) its normal diameter shall be replaced. Failure to maintain a safe mooring shall be cause for revocation of the mooring permit and shall be deemed a violation of these regulations. The Harbor Master or his designee may inspect any moorings at any time to determine compliance with this section.
- c. All moorings shall be inspected once every three (3) years by a town qualified mooring inspector. The inspection shall be made by either raising the mooring or by underwater inspection. Such inspection shall determine compliance with the mooring and mooring tackle standards of these regulations. The Harbor Master shall record and maintain records of such inspections. All costs of any mooring inspection required under the provisions of these regulations shall be the responsibility of the mooring permit holder. Mooring permit holders will be notified, at time of permit renewal when their mooring tackle is due for inspection. The Harbor Master shall divide all moorings into three equal groups. In the first three years of these regulations, two groups will be inspected earlier than three (3) years. This will be necessary to develop a three (3) year rotation. Mooring permit holders shall be responsible for arranging inspections, and inspections shall be completed by June 30th of the year due.

d. Mooring inspectors.

- 1) Mooring service providers must be certified as qualified by the town to conduct inspections and maintain all mooring tackle. To be certified as qualified by the Harbor Master, mooring inspectors must meet the following requirements:
 - a) Have submitted an application to be certified as a qualified mooring inspector along with the application fee as set forth by these regulations.
 - b) Have completed a mooring inspection and maintenance training program approved by the Coastal Ponds Management Commission, or provide proof of other mooring tackle inspection training or experience.
 - c) Have passed a Coastal Ponds Management Commission approved written mooring inspection exam issued by the Harbor Master.
 - d) Show proof upon request by the Harbor Master of required equipment to properly conduct mooring tackle inspections.
 - e) Complete all mooring tackle inspections, maintenance, and modifications in accordance with Chapter 96-5(B)(16).
- e. Any mooring tackle component found not to be in compliance with these regulations shall be subject to issuance of a violation according to Chapter 96-5(B)(18).

18. Violations.

- a. Any mooring permit or mooring tackle found not to be in compliance with this ordinance and regulations or any other related Town or State statute shall be deemed a violation.
- b. The Harbor Master is empowered to issue such violations. It is the discretion of the Harbor Master whether a violation warning or violation shall be issued.
- c. The Harbor Master shall issue and make notification of violation warnings by email, and in person or by certified mail.
 - 1) Upon receipt of a violation warning, the person shall have seven (7) days to contact the Harbor Master.
 - 2) If no contact is made within seven (7) days, a violation notice will be presented in person, or by certified mail.

- 3) Violations to mooring tackle must be rectified within thirty (30) days or fines and/or penalties will be issued subject to the provisions of Town Code of Ordinances, Chapter 96-7.

19. Fines and penalties.

- a. Any violation pertaining to mooring tackle placement and/or tackle components, shall be subject to relocation or removal of mooring tackle by the Harbor Master at the mooring permit holders risk and expense.
- b. Any violation pertaining to Chapter 96-5(B)(7) will result in loss of the mooring permit, and forfeiture of mooring space.
- c. All violations are subject to the provisions of Town Code of Ordinances, Chapter 96-7.

96-6. Fees.

- A. Mooring fees are non-refundable and shall be set annually by the Coastal Pond Management Commission and shall be approved as part of the Coastal Pond Management Commission's budget submittal to the Town Council. At no time shall the fee collected by the Coastal Pond Management Commission from any mooring permit applicant be less than the following:
 1. Private mooring permit, resident/non-resident: One hundred-thirty five dollars (\$135)
 2. Waterfront mooring permit (riparian rights): One hundred-thirty five dollars (\$135)
 3. Commercial mooring permit: Two hundred-sixty dollars (\$260)
 4. Mooring permit application late fee: Twenty-five dollars (\$25)
 5. Temporary mooring use fee (Per Request): Twenty-five dollars (\$25)
 6. Mooring permit wait list application resident/non-resident: Twenty-five dollars (\$25)
 7. Qualified mooring inspector certification: Fifty dollars (\$50)

96-7. Penalties for offenses, and fines.

- A. The Chief of Police or his/her designee shall prosecute any violation under this chapter after notification by the Harbor Master of said violation. Such prosecution shall be in the Municipal Court.
- B. Any violation of this chapter or regulations promulgated hereunder or any violation of the Town of Charlestown Harbor Management Plan shall be punishable by a fine not to exceed one hundred dollars (\$100) for each violation or by imprisonment not exceeding ten (10)

days. Each day the violation exists shall be deemed a new violation. Violation of this chapter may result in the loss of a mooring permit.

- C. It shall be a misdemeanor punishable by a fine of not more than one hundred dollars (\$100) for any person to refuse to move or stop on oral command or order of the Harbor Master or his designee exercising the duties lawfully assigned to him.
- D. All fines levied in Chapter 96 are payable to the Town of Charlestown within fourteen (14) days of the offense. Failure to pay the fine as required within fourteen (14) days shall subject the violator to an additional fine not to exceed fifty dollars (\$50) and to answer to the offense in Municipal Court, unless such nonpayment is handled in accordance with Chapter 96-7(E).
- E. Any fine levied in Chapter 96, disputed by the violator, may be adjudicated in the Municipal Court, provided that such adjudication is requested in writing within fourteen (14) days of the offense. This ordinance shall take effect upon its passage.

96-8. Coastal Pond Management Fund.

A Coastal Pond Management Fund is hereby created to receive and expend moneys for coastal pond related purposes as determined by the Coastal Pond Management Commission and approved by the Town Council. All revenues generated by town boat launching fees, mooring permit fees, qualified mooring inspector fees, other fees of this chapter and fines levied under the authority of this chapter shall be deposited into this fund. Funds shall be disbursed for purposes directly associated with the management and implementation of the Harbor Management Plan and this chapter. Moneys from this fund shall be allocated to the Harbor Master and/or his designee for the purpose of enforcing the provisions of the Harbor Management Plan and/or this chapter. The Coastal Pond Management Fund shall be established, budgeted and administered in a manner consistent with the budget procedures of the Town of Charlestown. It is not anticipated that receipts into the fund will cover all costs of the Harbor Master and Coastal Pond Management Commission. Accordingly, additional expenses will be provided from general funds.

96-9. Liability.

Persons using the coastal ponds of the Town of Charlestown shall assume all risk of personal injury and damage or loss to their property. The Town of Charlestown assumes no risk on account of accident, fire, theft, vandalism or act of God.

96-10. Recordkeeping.

All records relating to this chapter and the regulations promulgated hereunder shall be maintained by the Charlestown Town Clerk, and all violations shall be processed by the Harbor Master or the Police Department in accordance with the provisions of law applicable thereto.