

Bonnet Shores Fire District Harbor Management Plan

*As adopted by the Bonnet Shores Fire District Council
February 18, 2010*



Bonnet Shores Fire District Harbor Management Plan

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Bonnet Shores Fire District Harbor Management Plan

Introduction

The State of Rhode Island approved enabling legislation for the Bonnet Shores Fire District, independent from the Town, in 1974, and a subsequent implementing ordinance in 1976 for the management of vessels and moorings in the waters immediately adjacent to the Fire District. The Fire District council is further authorized to appoint its own harbormaster to enforce any harbor regulations for the District, and who may also be granted additional powers and jurisdiction from the Town.

The Fire District's Harbor Management Program shall remain separate from the Town of Narragansett administratively; however, it is contained as an element of the Town's overall Harbor Management Plan. The Bonnet Shores Fire District was incorporated by the R. I. General Assembly in 1932, and the District has a degree of autonomy from the Town. The ordinances and bylaws relating to harbor management and the appointment of a harbormaster are included at the end of this chapter. Although operating under a separate harbor management ordinance and bylaw, a cooperative relationship exists between the Bonnet Shores Fire District and the Town of Narragansett in relation to harbor management measures.

Many of the general recommendations in the Harbor Management Plan may also apply to the Fire District, with the exception of any specific issues and areas as noted. The issues, goals, and recommendations which are addressed in this chapter concern only those water-related matters which are unique to the Bonnet Shores area and the adjacent coastal waters within its jurisdictional limits.

Multi-Use Inventory

The main harbor area can be described as a cove which is located shoreward of a line drawn from the east end of Onondaga Road and extending in a southeast direction to the northeastern most point of 'The Bonnet'. A stone jetty extends seaward from the east end of King Philip Road and divides the area into two sections, north and south of this feature. Moreover, a sandbar extending from the east end of Anchorage Road is often exposed during low tides. This sandbar extends from the east end of Anchorage road to the east end of the jetty and terminates at Onondaga Road. This sandbar further divides the cove into an inner and outer harbor, although during high tides it will be approximately 6' below the surface of the water.

A small beach area providing seasonal lifeguards is located to the north of the jetty. Immediately to the south of the jetty is a launching ramp, and lying adjacent to the south of this, a fixed pier with a floating dock. The dock extends approximately 25 feet seaward from the mean high tide

line. The mooring area is divided by the sandbar into two separate usable areas; one area is located south of the jetty to Bonnet Point, and the other area is adjacent to dock. No swimming or waterskiing is permitted in the mooring areas.

Approximately 30 moorings for small boats are accommodated in the portion of the mooring area to the south side of the jetty, and shoreward of the sandbar. Approximately 35 larger vessels are accommodated by the area outside of the sandbar. A fairway extends seaward from the launching ramp and dock.

Recreational clamming takes place on a limited basis in the shallow portion of the mooring area.

The shoreline south of the cove along The Bonnet is rocky and is occupied mainly by recreational fishermen and sightseers. Some lobster traps and occasional divers and surfers can be found in the near-shore area.

To the west of Bonnet Point is a narrow inlet connecting Wesquage Pond to the open waters of Narragansett Bay. West of the inlet is a sandy beach utilized by the Bonnet Shores Beach Club. This area is used for recreational swimming, and is marked with buoys which are placed to prohibit boat traffic and to demarcate the area for swimmers. The rocky shoreline resumes and continues south from the beach area.

There are no marinas, boatyards, commercial fish facilities, boardwalks or federal navigation projects covered by the harbor management plan.

Natural Resources

In the main harbor area, eelgrass beds can be found along the length of the jetty to the north, with scattered shellfish to the south, however, the latter is rather scarce. Flounder and fluke reside in the outer harbor to the east of the sandbar. Various finfish such as striped bass and blackfish are species which congregate in the area near the north end of The Bonnet, as well as to the south at Bonnet Point. Lobsters and crabs can also be found along The Bonnet between these two points.

The Bonnet Shores Beach is a moderately developed barrier beach. The cove directly to the south is generally a sandy area, and, when the weather is harsh, particularly from a southerly direction, striped bass can be found working the surf. Blue fish come directly into the cove area as well. Sea clams also accumulate in the cove.

Currently there are no areas identified as wildlife or conservation studies. There are currently no intensive scientific research areas. There are no commercial fishing areas, anadromous fish runs, spawning areas, or shellfish beds.

Wesquage Pond

Wesquage Pond is a barrier pond located in Bonnet Shores to the north of the Bonnet Shores Beach. It is divided by a causeway into a 58-acre east basin and a 13-acre west basin, and is fed mainly by surface runoff from the surrounding area. Freshwater inputs also come from a stream that contributes to the 400+ acre watershed on the north side of the pond. Overall, the pond contains generally brackish water, though the west basin is less saline than the east. A salt marsh exists adjacent to the pond.

A wide expanse of land surrounding the entire pond is located within the 100-year flood zone. The flood zone is particularly pronounced on the southern and northeastern sides of the pond. Generally speaking, the soils immediately surrounding the pond are characterized by high water tables. The north and northeast shores of the pond are sewered.

An inlet to the pond is located on the south side of the east basin on Bonnet Shores Beach. The Fire District has a permit on file with the State (CRMC) for seasonal dredging of this inlet. In addition, flushing action over the barrier beach occurs from Narragansett Bay during times of high tides and storm events.

The average depth of the pond ranges between 4-5 feet and it has a soft mud bottom. Fish species such as pike, freshwater bass, and perch can be found in the waters of the pond, and numerous species of waterfowl dominate the general area as well. The Narragansett Comprehensive Land Use Plan documented less than 10 docks on the pond.

Harbormaster and Jurisdictional Boundaries

The Bonnet Shores Fire District Act of Incorporation was amended on May 8, 1974 (74-S 2641 A) to authorize the appointment of a harbormaster. The harbormaster's various powers and duties are described below, in the amendment at Section 10 and in the following ordinance as adopted by the Bonnet Shores Fire District Council on February 26, 1976. The jurisdictional boundaries wherein the harbormasters authority applies are also described in Section 10.

"Sec. 10. The Bonnet Shores Fire District Council is hereby authorized and empowered to appoint a harbor master and to ordain and establish such by-laws, rules, regulations, fees and compensation as such council may deem necessary and expedient for carrying out the provisions hereof. The jurisdiction, powers and duties of such harbor master shall include but not be limited to the regulations of speed, management, and control of all vessels and the size, type, location and use of all anchorages and moorings within the waters immediately adjacent and contiguous to the Bonnet Shores Fire District including, without limiting the generality of the foregoing, the authority and power to regulate and control water skiing in such confines. Such harbor master shall have such other and additional powers and jurisdiction as may be granted from time to time by the town of Narragansett. The jurisdiction boundaries of the harbor master's authority shall be from the most easterly point of land of the Bonnet Shores Fire District, a boundary line shall be drawn northerly and southerly, taking the northern most point of said District, taking a line due easterly from that point and further taking a point from the furthest southern extension of the said district drawing a line due easterly and due westerly where said lines shall intersect all areas bounded therein.

X. THE BONNET SHORES FIRE DISTRICT COUNCIL HEREBY ORDAINS
HARBOR MASTER ORDINANCE

It is hereby ordained as follows:

SECTION 1. APPOINTMENT OF HARBOR MASTER. The Bonnet Shores Fire District shall appoint a Harbor Master to serve at the pleasure of the Fire District Council, as authorized by the General Assembly of the State of Rhode Island, May 8, 1974.

SECTION 2. COMPENSATION. The salary of the Harbor Master shall be an amount set by the Fire District Council.

SECTION 3. AUTHORITY. The Harbor Master shall have full power and authority within the jurisdiction fixed by law to

enforce regulations and give directions regarding anchorage, management, and control of all vessels within the waters of the Bonnet Shores Fire District.

SECTION 4. REMOVAL OF A VESSEL. The Harbor Master may remove for cause ~~from time to time~~ from any public wharf within the waters of the Fire District, any vessel not engaged in receiving or discharging cargo, or any vessel not anchored or moored in accordance with his directions in the waters under his jurisdiction.

SECTION 5. DESIGNATION OF MOORING AREAS. The Harbor Master shall, having due regard to the draft of each vessel and facility of navigation, designate upon a map of the waters subject to his jurisdiction the places where adequate permanent or temporary moorings or anchorage may be maintained.

SECTION 6. DESIGNATION OF MOORINGS. The Harbor Master shall assign all future moorings within the Bonnet Shores Fire District in accordance with the requirements of the boats; that is the length, draft, and facility of navigation. Such moorings shall conform to the specifications contained in Section 7 of this ordinance.

A. Any mooring now in position in the waters of the Fire District may be ordered moved by the Harbor Master, if in his judgment such removal be necessary, and all moorings now in position shall within two (2) years of the effective date of this ordinance comply with the specifications found in Section 7 of this ordinance.

B. The Harbor Master shall designate upon a map of the Boat Cove the locus of each mooring and to said map shall affix or append a list or key designating the name and address of the owner or agent of the owner of each vessel and the size and type thereof. The Harbor Master shall file said map with the Fire District Council and thereafter shall maintain it currently accurate. He shall also maintain two (2) currently correct copies thereof, one for himself and one in a place reasonably accessible to mariners for their convenience in consulting same during hours when the Harbor Master would not normally be available. He shall, on or before July 1 of each year, make a complete and accurate revision of both his Master Map and its copies.

C. The Harbor Master shall keep a detailed description of each mooring including its date of installation and subsequent inspections, its locus keyed to the map, the owner or agent's name, telephone number, home and business address, and the name, length and rig of the vessel.

D. The Harbor Master will, at his discretion, assign moorings to residents and/or taxpayers of the district who have heretofore maintained moorings in the Boat Cove insofar as this can be documented. Subsequent assignments will be at the discretion of the Harbor Master (except) that due regard shall be given to mooring needs of the residents within the Bonnet Shores Fire District.

E. A mooring is not transferable to a new owner when a boat is sold.

SECTION 7. MINIMUM MOORING SPECIFICATIONS.

<u>Boat Size</u>	<u>Chain Size</u>	<u>Rope Size</u>	<u>Mushroom Wt.</u>
12' - 14'	5/16"	1/2"	50#
14' - 17'	5/16"	1/2"	75#
17' - 20'	3/8"	1/2"	100#
20' - 23'	3/8"	5/8"	150#
23' - over	1/2"	5/8"	200#

Mooring line scope (distance from anchor to hull) must be 3 times the maximum depth of water at high tide. At least 1/3 of line must be chain. See table above for minimum rope and chain sizes.

SECTION 8. APPEAL. Anyone aggrieved by the action of the Harbor Master in assigning mooring locations or in specifying the nature of the mooring, may appeal the Harbor Master's decision to the Fire District Council, but not before fully informing the Council of his grievance in writing to the Clerk of the Council. If the Harbor Master denies a mooring and the applicant can show just cause, he may receive a hearing from the Fire District Council on his rights to have a mooring in the waters of the Fire District.

SECTION 9. OPERATION. No person shall operate any motorboat or any vessel in a reckless or negligent manner so as to endanger the life, safety or property of any person.

- A. No vessel shall be operated in excess of 5 MPH within the Boat Cove.

- B. The Harbor Master shall cause a sign stating the above restrictions to be so placed that it is clearly visible to those operating vessels within the waters wherein the above speed restrictions apply. Such signs will be maintained in place from June 1 to October 1 of each year.

SECTION 10. WATER SKIING. No water skiing will be allowed in the Boat Cove or bathing areas. No water skier or his boat shall approach any stationary or moving object closer than one hundred (100) feet, except as may be incidental to starting or finishing a run.

SECTION 11. POSTING REGULATIONS. The Harbor Master will post and maintain on, or adjacent to, the ramp gate and jetty an adequate digest of those portions of this ordinance relating to the operation of vessels upon the waters under jurisdiction of said Harbor Master.

SECTION 12. NOISE. No operator or owner shall cause or allow excessive noise in the operation of a vessel or watercraft, nor shall said owner or operator allow excessive noise aboard such vessel or watercraft when anchored or moored. Unmuffled sound from engines, outboards or other machinery is not permitted except by permission of the Harbor Master.

SECTION 13. DERELICTS. No derelict boats, motors, or piers, wharves, or docks shall be allowed in or upon the Fire District's shores.

SECTION 14. OBSTRUCTING PASSAGE. No object other than boats and approved moorings shall be used within the mooring areas which will interfere with the movement of the boats.

- A. Stakes shall not be driven to be used for mooring any vessel or boat, or for tying up any fish, lobster or bait car unless, in the judgment of the Harbor Master, their use would not be an obstruction.
- B. Mushroom anchors shall not be left with stems standing vertical.
- C. Floating-type rope shall not be used for mooring lines.

SECTION 15. PENALTIES. 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 any other enforcement agent 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 ordinance or regulations pursuant thereto shall, upon conviction thereof, be fined not exceeding \$20.00 each offense and each day that such neglect or refusal to obey shall continue after notice thereof given by the Harbor Master or other authority.

- A. Any person who shall remove from a location assigned by the Harbor Master any mooring belonging to another without authority from, or under the direction of the Harbor Master shall, upon conviction thereof, be fined as stated above.
- B. Any individual violating any provision of this ordinance may be cause for the Harbor Master's refusal to allow said individual with his vessel or other watercraft in the waters under the jurisdiction of said Harbor Master for such period of time as may be determined by the Harbor Master or the Fire District Council together with the necessary court action in cases of violation of State or Federal Law.
- C. If any boat owner, his agent, or any other person shall place a mooring or maintain anchorage, leave his vessel docked at a public wharf elsewhere than designated, said Harbor Master may remove or cause to be removed the mooring or vessel, or both, at his discretion and may charge the expense thereof to the person so doing.

SECTION 16. COMPLAINTS. All complaints for violation of this ordinance shall be made to the Harbor Master in writing.

SECTION 17. SECTIONS SEVERABLE. The provisions of this ordinance shall be severable and if any of the provisions shall be held invalid, the decision of the court respecting such provision, or provisions, shall not affect the validity of any other provision which can be given effective without such invalid provision.

SECTION 18. ANNUAL REVIEW. The Harbor Master shall meet jointly with the Fire District Council in the month of March of each year to review the preceding year's operation.

SECTION 19. This ordinance shall take effect upon its passage.

Adopted by the Fire District
Council February 26, 1976

CRMC Water Types

All of the coastal waters surrounding Bonnet Shores and including Wesquage Pond are classified as Type 1 conservation areas by the CRMC. The one exception is for those waters north of a line extending seaward from Bonnet Shores Road, which are classified as Type 2, or low-intensity use (see Appendix 3, Map 1). In addition, southern Wesquage Pond, from the inlet south to the sea, including all land occupied by the Bonnet Shores Beach Club, is classified as a Moderately Developed Barrier Beach by the CRMC.

Priority Uses for Type 1 and Type 2 waters, are identified respectively in the CRMC Redbook at Sections at 200.1.C.1 and 200.2.C.1 as follows:

Type 1 – The Council’s goal is to preserve and protect Type 1 waters from activities and uses that have the potential to degrade scenic, wildlife, and plant habitat values, or which may adversely impact water quality of natural shoreline types.

Type 2 – The Council’s goal 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

The Rhode Island DEM classifies the waters surrounding Bonnet Shores as class SA. Class SA is the highest salt water designation which waters in the state can receive. SA waters are suitable for bathing and contact recreation, shellfish harvesting for direct human consumption, and for fish and wildlife habitat (see Appendix 3, Map 2).

FEMA Classifications

The entire east facing shoreline of Bonnet Shores is classified by FEMA as a velocity zone, as is northern Wesquage Pond and the Bonnet Shores Beach Area. Wesquage Pond and the adjacent southern shoreline are further classified by FEMA as an Undeveloped Coastal Barrier.

Programs to Minimize Water Pollution

The fire district shall aid the town in enforcing the prohibition of sewage discharge from boaters. Violators will be subject to laws of the town.

The BSFD shall continue the educational program for boaters to keep them aware of the “no discharge” zone. Specifically, all such related BSFD activities shall be consistent with RIGL § 46-12-39 Discharge of sewage from boats as follows:

- (a) It shall be unlawful to discharge any sewage from a boat into the waters of the state unless discharged via a marine toilet which

is either a marine sanitation device-type I, or a marine sanitation device-type II, in proper working condition.

(b) It shall be unlawful to discharge any sewage from a boat into the waters of the state in an area which has been declared to be a no discharge zone.

(c) It shall be unlawful to operate or moor in the waters of the state, a boat which is equipped with a marine toilet which is not a type approved pursuant to the Clean Water Act, 33 U.S.C. § 1251 et seq., and that is in proper working condition.

(d) It shall be unlawful to operate or moor in the waters of the state in an area declared to be a no discharge zone, a boat which is equipped with a marine toilet which is not properly sealed to prevent discharge of sewage into the water.

(e) No discharge zones shall be identified by the department of environmental management. The department of environmental management shall utilize criteria established under the Federal Water Pollution Control Act of 1972 (Water Quality Act), 33 U.S.C. § 1251 et seq., and 40 CFR 140.4 in identifying such areas, and shall be the sole agency of the state in seeking federal designation of such areas; it shall seek the advice and comment of the Coastal Resources Management Council (CRMC). Municipalities of the state may nominate areas for designation as no discharge zones only as an element of a Harbor Management Plan (HMP) approved by the CRMC in accordance with established regulation.

Pump-Out Policy: Bonnet Shores Pump out policy is to adhere to all state regulations. The Bonnet Shores Fire District does not have any pump out facilities and there is only one boat in the mooring area that has a Marine Sanitation Device (MSD) on board. Historically, boats in the mooring area have been relatively small and have not had MSDs on board, and there are currently no indications that this trend will change in the near future. Nonetheless, the Bonnet Shores Fire District does not permit any discharge into the harbor and all moored boats are required to have a “no-discharge” sticker affixed to them as required by DEM.

Inorganic Waste Management: The fire district will develop a disposal program to address the issue of inorganic materials including waste oil, plastics, trash, paint and varnish. In addition, a disposal site that is convenient to boaters will also be explored.

Action Agent: Harbor Master
Time Frame: 2 years.

Wherever significant shallow water habitats are identified the fire district will restrict boating activities to decrease turbidity and destruction of such habitats.

Boating Safety

The Bonnet Shores Harbormaster is responsible for overseeing the enforcement of safe boating regulations such as, but not limited to reckless operation and excessive speed within Bonnet shores' coastlines.

To increase enforcement response time and/or timeliness with the Bonnet Shores Harbormaster and other law enforcement agencies, lifeguards will have communication devices such as two-way radios and/or cell phones. Copies of the BSFD (Bonnet Shores Fire District) rules and regulations as well as the Rhode Island Boating Regulations will be posted at the dock area. The Harbormaster will contact the Power squadron to schedule seminars concerning safe boating among other topics at the Bonnet Shores Community Center depending on interest. The Harbormaster will also contact the Coast Guard Auxiliary to schedule Yearly Courtesy Examinations, again, depending on interest. Speed limit and "No Wake Zone" buoys have been placed at the Eastern edge of the mooring field to eliminate damage from wake or irresponsible vessel operation.

Storm Preparedness

When there is a prediction that a severe coastal storm will hit the Bonnet Shores area, the Harbormaster will ensure that the gate at the launch ramp is locked in the open position and that an attempt is made to notify each mooring holder of the impending storm and the impact it may have on their vessels. Every effort will also be made to secure volunteers to help in the removal of the dock and gangway to a safe location. BSFD is currently researching the cost and feasibility of extending and/or raising the existing jetty to give further protection to the moorings in the harbor. The BSFD is also researching the feasibility and cost of dredging the harbor to increase the number of boats that could be safely moored there. A detailed Storm Preparedness Plan is included as Appendix 2 of this harbor management plan.

Public Access

The roads in the Bonnet Shores Fire District are private and there is no parking on any of the streets. While easements associated with public utilities may represent potential rights-of-way to the shore, there are no potential CRMC rights of way recognized at this time.

Moorings and the Mooring Field

The Bonnet Shores Fire District manages and collects fees for the moorings in the mooring field adjacent to Bonnet Shores at a rate that is determined by the BSFD council on a yearly basis. Mooring permits must be filled out on a yearly basis. (See Appendix 1, Section 13, Figure 1). The harbor has the capacity to hold approximately 75 moorings due to water depths and the natural configuration of the harbor area. There are currently 67 moored vessels in the

mooring area and only one contains a MSD. A waiting list open to all members of the public shall be developed and maintained when the maximum occupancy has been met, as determined by the harbormaster. Bonnet Shores Fire District residents shall be given preference for moorings in the mooring area; all moorings shall be allocated at a no greater than 3:1 resident to non-resident ratio. The transfer of mooring permits shall be consistent with the CRMC requirements in the *Guidelines for the Development of Municipal Harbor Management Plans*.¹

The mooring field's perimeter is described by the following corner points, in Rhode Island State Plane Feet Coordinates (see Appendix 3, Map 3):

NW corner: 350183E, 146771N

NE corner: 350542E, 146766N

SE corner: 350554E, 145543N

SW corner: 350181E, 146233N

Lines connecting these corner points approximate a rectangular area that encloses the deeper waters of the mooring field. The mooring field perimeter is completed by a line that follows the sinuosity of the coastline and connects the southeast and southwest corner points described above.

Inspection of moorings is the responsibility of the individual mooring owners. A signed document verifying inspection is required to be kept on record with the harbormaster as a condition for placing a mooring in the cove. Minimum mooring specifications as defined in section 7 of the Bonnet Shores Fire District Harbormaster Ordinance are as follows:

Table 1. Minimum Mooring Specifications

Boat Size	Chain Size	Rope Size	Mushroom Weight
12' – 14'	5/16"	1/2"	50 lbs
14' – 17'	5/16"	1/2"	75 lbs
17' – 20'	3/8"	1/2"	100 lbs
20 – 23'	3/8"	5/8"	150 lbs
23' – 25'	1/2"	5/8"	200 lbs
25' and over	5/8"	3/4"	250lbs.

The determination of where moorings shall be located is the responsibility of the harbormaster, who keeps on record a detailed map of the mooring area. Moorings are located to the south of the

¹ See the Guidelines at Section III (Required Elements of a Harbor Management Plan), subsection B (Issue Identification Elements), subsection 3.(Mooring Management), item (m).

jetty, with small boats concentrated in the inner harbor shoreward of the sandbar, and larger vessels seaward of the sandbar, in the outer harbor. Actual placement of moorings is the responsibility of the individual mooring owners at the request of the Harbormaster.

Every year, each mooring holder will sign and submit a form to the Harbormaster indicating that his/her mooring tackle has met the requirements of the BSFD and is in good working order. This will insure that all moorings have been inspected and will set uniform minimum standards which all mooring holders will have to meet as a requirement for obtaining a mooring permit. (See Section13, labeled “Figure 2”).

Transient anchoring is permitted anywhere outside of the mooring fields, but is discouraged adjacent to the swimming areas north of the jetty. This has been the policy of the BSFD due to the potential for unmanned boats to break free and go into swimming areas or into other vessels. Transients may access the dock for 15 minutes for loading and unloading of persons and gear.

The Fire District will require that all moored vessels are kept within mooring area perimeters except those on riparian moorings.

The mooring field and moorings will be situated in such fashion as to keep them from interfering with access to fairways, channels, docks, piers, floats, and launching ramps.

There are currently no Federal navigation projects in Bonnet Shores. Moorings will not be allowed in Federal navigation projects.

All new and significantly expanded mooring fields be sited to ensure that tides and currents aid in flushing the mooring area.

All new and significantly expanded mooring areas be sited to avoid adverse effects on water quality.

Swimming and water skiing are prohibited in all designated channels, fairways and mooring areas.

Moorings areas will be sited so as not to substantially interfere with designated shellfish management areas, traditional fishing grounds, public recreational areas and conservation areas.

Moorings areas will be sited so as not to significantly affect finfish and or shellfish resources, wetlands, submerged aquatic vegetation and aquatic habitat.

Swimming Areas

The Bonnet Shores Fire District manages two swimming areas and provides lifeguards at each one during the summer season.

1) One of these swimming areas is located in the Main Harbor to the west of the mooring field (see Appendix 3, Map3) and has a perimeter described by the following corner points, in Rhode Island State Plane Feet Coordinates:

NW corner: 349846E, 146442N

NE corner: 349989E, 146442N

SE corner: 349867E, 146296N

SW corner: 349989E, 146279N

Lines connecting these corner points approximate a rectangular area, the southern and western boundaries of which follow the sinuosity of the coastline and connect the southeast and northwest corner points described above.

2) The other swimming area is located in Bonnet Cove in the vicinity of the creek that runs from at the southern end of the Bonnet Shores Fire District (see Appendix 3, Map 4). This swimming area's perimeter is described by the following corner points, in Rhode Island State Plane Feet Coordinates:

NW corner: 348700E, 141867N

NE corner: 348964E, 141795N

SE corner: 348884E, 141549N

SW corner: 348444E, 141591N

Lines connecting these corner points form a skewed rectangle. This swimming area is also designated by a line of orange floats. No vessel, with the exception of Lifeguard boats may be in the area between the orange floats and the beach.

Beaches

There are three beaches designated under this harbor management plan. The Western portion of the beach in Bonnet Cove is owned and managed by the Bonnet Shores Beach Club, which maintains lifeguards for its members and guests. The other two designated beaches are owned and managed by the Bonnet Shores Fire District, which also maintains lifeguards for Bonnet Shores Fire District residents and their guests. One of these beaches is located easterly of the Bonnet Shores Beach Club and the other is located just to the north of the jetty in the main harbor area. All of these beaches are private. It is important to note that in Rhode Island, the mean high tide line divides the private portion of a beach with the public portion, the latter of which is located seaward of the mean high tide line.

Windsurfing areas

There are no designated windsurfing areas.

Launch Ramp

Taxpayers of the Bonnet Shores Fire District wishing to utilize the launch ramp to launch vessels only will pay a fee to the BSFD to do so. This fee will be determined by the BSFD council and will be reviewed yearly. This ramp was built using private funds on property deeded to the Fire District. Use of the ramp is controlled via a locked gate, with the harbormaster controlling access. All vessels using the ramp must have a Bonnet Shores launch sticker affixed to the vessel in the area designated by the Harbormaster (see Appendix 1, Section 13, Figure 3).

Conclusion

The objective of the Bonnet Shores Fire District is to provide for an efficient and equitable system of harbor management for all persons, waters, and shorelines within its jurisdiction. Preservation of the environment, promotion of personal and boating safety, mooring management, and enforcement of the Harbormaster Ordinance is essential in order for this objective to be met. Coordination, cooperation, and consistency with all harbor management and enforcement officials on the local, state, and federal levels shall occur, and will follow the proper hierarchy within the present system.

APPENDIX 1

Section 13, Figure 1

Mooring Permit Application

Applicant's Name_____

Address_____

City_____ State_____ Zip_____

Phone _____

Applicant's Winter Address (if Different)

Address_____

City_____ State_____ Zip_____

Boat Information

Registration Number_____

Vessel Name_____ Make_____

Length_____ Beam_____ Draft_____

Vessel Type_____

Mooring Rules and Regulations:

- When mooring rights have been terminated, it is the owner's responsibility to remove the mooring's tackle and gear within two weeks or it becomes the property of the Fire District.
- Moorings are not transferable. If you sell your property or decide not to renew your mooring it goes back to the Fire District and is given to the next available tax payer from the waiting List.
- All mooring must have mooring number on the float or mooring may be removed.
- Only registered/BSFD stickered boats are allowed on assigned moorings. Notify Harbormaster if different.
- Every vessel on a mooring or using the dock or ramp must have a Bonnet Shores sticker.
- The launching ramp gate must be re-locked immediately after use.
- The dock is for loading and unloading only or the boat may be removed at the owner's expense. 15 minute max.
- Do not leave unattended fuel on the dock.
- Swimming or diving from the dock is prohibited.
- No wake in the mooring area (5 mph speed limit)

Signature _____ Date_____

Section 13, Figure 2

Float and Gear Verification

Float size _____

Number and name on float _____

Boat size _____

Chain size _____

Rope size _____

Mushroom size _____

Date last inspected (Must be with last three years) _____

Inspected by _____

Mooring Holder Signature _____

Section 13, Figure 3

Bonnet Shores Fire District Launch Ramp Access Application

Please Print

Applicant Name _____

Bonnet Shores Address _____

Telephone _____

Vessel Registration Number: _____

Vessel Name: _____

Vessel Make: _____

Vessel Type: _____ Personal watercraft operator certification must be presented prior to the harbor master prior to issuance of launch ramp sticker for that type of vessel.

Vessel Length: _____ Beam: _____ Draft: _____

Sticker Number _____

Launch Ramp and Harbor Rules and Regulations:

1. Every vessel using the launch ramp or dock must have a Bonnet Shores Fire District Permit sticker affixed in the proper place.
2. Unless other arrangements have been made, access to the locked launch ramp will require a call to the Harbormaster Mike Tortolani at 230-4813 at least 24hrs. prior to requested use. No calls prior to 8am or after 6pm except in case of emergency.
3. The launch ramp gate **must** be re-locked immediately after use.
4. The dock is for loading and unloading only (15 minutes max.) or the vessel may be removed at the owner's expense.
5. Do not leave unattended fuel on the dock.
6. Swimming or diving from the dock is prohibited.
7. The dock and harbor area are designated as a no wake zone with a speed limit not to exceed 5 MPH.
8. No person shall operate any vessel in a reckless or negligent manner so as to endanger the life, safety, or property of any person.
9. Maximum of 30 minute parking on road at the launch ramp area for loading or unloading only.
10. Vessel trailers may not be parked on the beach.
11. Failure to abide by these rules and regulations may result in revocation of the Bonnet Shores Fire District sticker and /or citation.

The undersigned acknowledges the receipt and understanding of the rules and regulations pertaining to the launch ramp and harbor area and agrees to abide by these rules.

Signed _____

Date _____

\$30.00 Launch Ramp Fee Received on _____ by _____

Ck# _____

APPENDIX 2

STORM PREPARDNESS PLAN

100. Authority:

The primary authority for carrying out the responsibilities detailed in this plan is vested with the Harbormaster, who will work in cooperation with the harbor commission. However to successfully complete the activities outlined in this plan, the Harbormaster is required to work with other Bonnet Shores Fire District departments including the: BSFD Council and Harbor Committee, Beach Committee, the Town of Narragansett police department, fire department, department of public works and the emergency management officer.

200. Goals of the Harbor Hazard Mitigation Plan

To prevent the loss of life and property by:

- Properly preparing for storm events
- having a completed and enforceable response and recovery plan
- working in cooperation with harbor and shorelines users to ensure that a coordinated approach is applied to hazard mitigation
- integrating harbor hazard mitigation activities with other, ongoing, local hazard mitigation programs.
- identifying and completing long term actions to redirect, interact with or avoid the hazard.

300. Risk Assessment

310. General Harbor Characteristics:

The bottom consistency of the Bonnet Shores Fire District mooring area is mainly sandy. The average depth inside the sandbar is approximately 4 feet, and outside the sandbar is 10 feet.

The surrounding harbor uses can be divided into three general uses:

1. Open space – approximately 25% of the BSFD's waterfront is open space.
2. Residential - this use totals approximately 65% of the land use. Generally, the single family dwellings are built upon lots that range from 10,000 square feet to 1 acre.
3. Private Beach Club - approximately 10% of the BSFD's waterfront is occupied by the Bonnet Shores Beach Club.

320. High Hazard Areas:

Historically, the beach area and harbor area have been vulnerable to wind and wave damage and flooding.

330. Risk Assessment Table (Following page)

Threat	Marine interest	Effect	Result -1	Result -2
Flood/surge	Boaters on moorings and the BSFD dock	Decreased scope	Dragging	Threaten shoreline homes and businesses
	Private residences	Flooded property Dock topping piles	Freed dock and boats	
Wind	Boaters on moorings	Windage	Dragging or pennant structural damage	

400. Strategies for Preparedness, Response and Recovery

410. Bonnet Shores Fire District - The Harbormaster, in conjunction with the United States Coast Guard, will coordinate all harbor activities related to preparation, response and recovery. This will be done in coordination with BSFD Council, Harbor Committee, and the Beach Committee. In addition, the harbormaster will coordinate with the Town of Narragansett police department, fire department, department of public works and the emergency management officer.

410.1 Preparedness - The BSFD, through its Harbormaster, in conjunction with the United States Coast Guard, will activate the following preparedness, response and recovery plan 72 hours prior to a severe storm event or as necessary for unpredictable events.

LEVEL 3 - 72 HOURS

1. If hurricane, begin tracking and monitoring hourly weather reports
2. Contact any services under contract for after event to assess their readiness
3. Manage harbor traffic as it increases during marina/boater preparation activities
4. Ensure fuel tanks are full and reserve batteries are charged
5. Inventory and update first aid equipment and other onboard emergency tools
6. Contact local marinas and boat moving companies for statuses to relay to mariners.
7. Maintain radio watch
8. Alert local port community, encouraging boat owners to seek safe refuge, remove boats from water, or take action to minimize damaging effects
9. Alert local marinas, marine interests, holders of mooring permits, and occupants of special anchorage areas to impending emergency.
10. Keep Marine Safety Office (MSO) Providence apprised of hazardous conditions in harbor
11. Document waterfront using photographs or video
12. Start tracking time and resource allocations for possible state and federal reimbursement.
13. Post notice to have all vessels removed from Town docks.

LEVEL 2 - 48 HOURS

1. Continue to perform activities in level 3
2. Contact mooring permit holders who are not complying with preparedness plan.
3. Assist marinas/waterfront business with special requests
4. Continue to manage harbor traffic as it increases
5. Finalize emergency work schedule with assistant Harbormasters
6. Confirm arrangements to have Harbormaster vessel hauled and stored
7. Preparation of town properties with department of public works, that includes:
 - removing all town equipment from flood plain
 - securing all items such as trash bins, benches, etc.
 - complete necessary precautions for Harbormaster office
8. Establish liaison with police, fire and public works departments
9. Alert maritime community to unsafe conditions in the harbor as needed
10. Curtail regular business activities
11. Begin regular patrols of the harbor to ensure necessary individual precautions are begin taken
12. Advise MSO Providence as to the status of emergency preparedness in progress
13. Alert local harbor community to any impending closure of anchorages or waterways.
14. Encourage local marinas to suspend fueling operations and to secure fueling piers sufficiently to minimize pollution threat.
15. Inventory of individuals who plan on staying on their moored vessels during the storm event.

LEVEL 1 - 24 HOURS

1. Final patrol of the harbor
 - inventory number of vessels and precautions taken by harbor and shoreline users
 - clear public pier of vessels and equipment
2. Log information on transient boats (see section 82-178)
3. Fuel Harbormaster vessel
4. Haul and store Harbor Patrol vessel with assistance of the Department of Public Works
5. Complete shoreline survey and final harbor check from shore
6. Alert harbor community and MSO to any unsafe conditions in harbor
7. Continue to perform pertinent level 2 activities.
7. All vessels must be removed from town docks at this time. Transient moorings **will not** be allowed to be used during any storm event.
8. Raise hurricane signal twelve hours prior to storm's arrival

410.2 Response - The BSFD's policy is that no emergency watercraft will be dispatched for emergency response during a storm event. All requests for assistance will be forwarded to the nearest Coast Guard Station. This policy will remain in effect unless revoked by the Fire Chief or Town Administrator. The Harbormaster will remain on-call to address any harbor related issues. This will also allow the Harbormaster vessel to begin operation immediately at the conclusion of storm. The Harbormaster shall monitor police, fire and marine frequencies throughout the event.

410.3 Recovery - Immediately after the event has terminated, the town has three recovery priorities.

Priority 1:

Reestablish the Harbormaster's Office as an operational unit in order to facilitate the second and third priority

Priority 2:

Take the necessary immediate action to minimize additional risk to life and property.

Priority 3:

Reopen the harbor for recovery activity.

To achieve these priorities, the following sequential actions will be taken:

IMMEDIATE 24 HOURS

1. Assess readiness of the Harbormaster's Office, correct deficiencies
 - reestablish radio communications.
2. Complete rapid appraisal of damage
3. Provide damage assessment information to town officials and to MSO Providence.
4. Initiate pre-established contracts services companies (towing, salvage) if required
5. Institute security watches as necessary
6. Alert maritime community to unsafe conditions in the harbor
7. Provide damage assessment information to town officials and to MSO Providence
8. Track time and resource allocation of Harbormaster's Office for possible state and federal reimbursement.

MID-TERM 1 TO 14 DAYS

1. Complete comprehensive inventory of damage using photographs and video if possible
2. Notify appropriate parties regarding damage (i.e., mooring holders)
3. Provide list of unidentified boats to MSO Providence and DEM Enforcement
4. Contact local harbor and shoreline users to assess their situation
5. Provide MSO Providence with a daily harbor status.
6. Begin to remove large pieces of floating debris from the harbor
7. Assist town and state agencies with damage assessments and emergency permitting process.

LONG-TERM 14 TO 90 DAYS

1. Analyze effects of storm on the harbor. Complete summary report within 30 days of storm event for Town Council and Town Administrator.
2. Review mitigation list and selection actions that could be implemented during the recovery phase
3. Conduct an evaluation meeting for harbor 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
7. Assist emergency situations as appropriate
8. Track time and resource allocations for possible state and federal reimbursement.

420. Harbor and Shoreline Users

421. Boaters - Boats moored on possible town managed moorings will be required to submit a preparedness plan. This will be accomplished by adding a preparedness plan questionnaire as part of the annual mooring renewal forms. For a mooring permit to be approved, the questionnaire must be completed and returned with 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 Harbormaster of any significant changes to the plan made during the boating season.

Mooring standards have been developed to maximize safety during normal weather conditions. To safeguard a moored boat during a severe storm event, additional precautions will be necessary. These actions will include:

- Improving the connection between the vessel and the mooring chain by using chafing gear and extra lines.
- Reducing windage
- Whenever possible, increase scope.

Boaters should also consider:

- Bypassing the mooring swivel and attach the chain directly to the pennant.
- Hauling their boat and storing it upland
- Leave anchor lights and auto bilge pumps on.
- Ensure that self-bailing cockpit drains are clear of debris
- Add an emergency catenary weight at the vessel end of the chain to absorb shock

Boat owners are encouraged **NOT** to stay aboard during major storm events. The town's standard procedure is not to respond to on-the-water requests for assistance during a major storm event. Such requests for assistance will be forward to the nearest U.S. Coast Guard Station.

422. Waterfront business (excluding marinas) - All waterfront business are expected to take the necessary precautions to protect their property.
423. Shorefront home owners- All shorefront homeowners are expected to take the necessary precautions to protect their property.
424. Special Hazards
1. Transients- vessels not usually moored in the harbor, but seeking safe refuge will be allowed to moor in the specified anchorage areas. Transit yachts will not be allowed to tie to a mooring if not authorized by both the mooring owner and the Harbormaster. Transient vessels seeking shelter will provide the Harbormaster with:
 - Name of owner and captain if different.
 - Home port
 - Registration/documentation numbers
 - Length, draft and type (power/sail)
 - Number of persons aboard
 - Address and phone were owner can be contacted
 2. Passenger vessels - As deemed necessary by the Harbormaster, local passenger vessels will submit individual plans to the Harbormaster. These plans will include information about planned preparedness, response and recovery actions.

500. Inventory of longer term mitigation projects

1. Maintaining the existing boulder revetment at Colonel John Gardner. Although it does not provide complete protection, there is a measure of safety gained by having the revetment properly maintained.
2. Methods to increase scope within the harbor without losing surface area maximization should be explored. Actions may include a targeted approach to removing vessels from moorings and increasing the scope with storm pennants for those that remain. 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.
3. Implement an annual education and training program conducted by the Harbormaster for the public. This program should focus on storm preparedness for the boater. Other workshops should be conducted with the help of the building inspector and planning board to discuss shoreline construction standards and storm proofing homes and business.
4. The Harbormaster should compile a list educational material that can be shared with harbor and shorefront users.
5. Maintain an accurate lists of principle marine interests including marinas, waterfront business, neighboring Harbormasters, Coast Guard, Towing and Salvage Companies, Environmental Response teams, Key vessel operators (charter boats and ferries) fishing cooperatives, etc.

6. Starting at the beginning of each hurricane season (June 1) the Harbormaster shall:
 - review local harbor hazard mitigation plan and update as necessary
 - distribute and post revised plan
 - inspect all storage sheds, outbuildings, and portable office trailers for proper tie-down.
 - inspect all emergency power sources and lighting systems to ensure they are operational
 - prepare and distribute a storm checklist to boaters
7. Conduct a Disaster Mitigation workshop for Business and Industry in cooperation with RI Emergency Management Agency. Propose activities that can be implemented to mitigate damage. Suggested actions for local coastal business may include:
 1. Place more essential equipment and functions on higher levels of the structure, above the anticipated flood level;
 2. Construct berms around the facility;
 3. Install or have dewatering pumps;
 4. Provide emergency generators and potable water storage;
 5. Install blowout plugs in floor slabs whose elevation is below anticipated flood elevation.
 6. Install master shutoff valve controls for sewer, gas, and water above anticipated flood elevation;
 7. Reinforce walls to carry hydrostatic and hydrodynamic loads;
 8. Install flood proof electrical systems and utility cores in areas subject to flooding; and
 9. Install safety glass in windows.
8. Assess the feasibility of developing a volunteer corp. that can assist the Harbormaster secure vessels during the phase or maintain security patrols after an event.

600. Coordination

Memorandum of Agreement shall be entered into with the BSFD Council to establish the working relationship between it and the Harbormaster for completing the following activities: preparing pubic waterfront property and hauling and storing the Harbormaster vessel.

The harbor and beach committees shall work with the Council to establish redevelopment policies for shoreline areas. These policies will be consistent with CRMC and DEM regulations.

In order to discourage redevelopment of critical shoreline areas and to reduce vulnerability of life and property to coastal hazards the town should:

1. Encourage and participate in the maintenance, restoration and enhancement of beaches and dunes.
2. 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.
3. Attempt to minimize public expenditures and reduce risk to public infrastructure and facilities through redevelopment

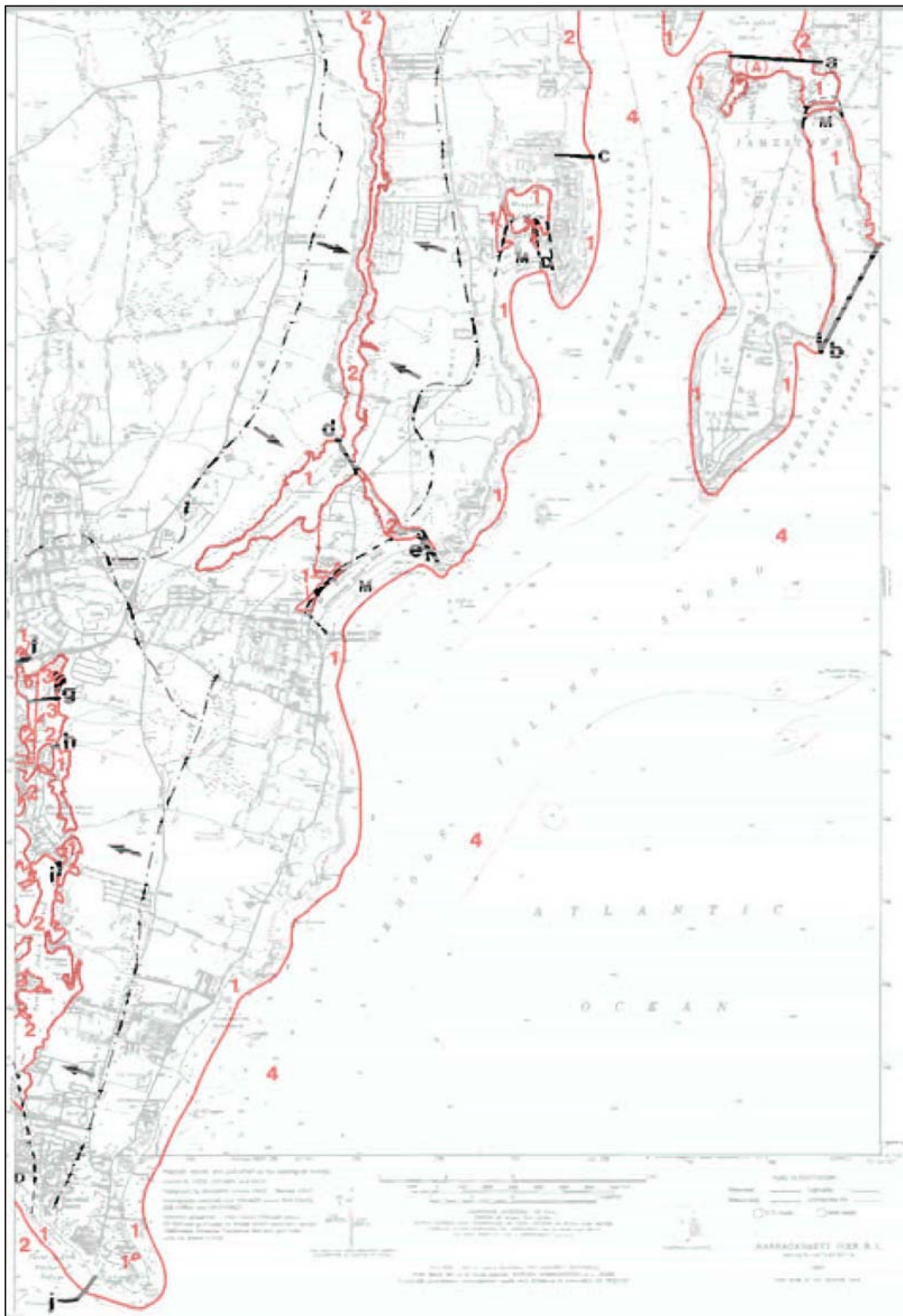
4. Encourage relocation of structures landward of critical areas. This can be done by influencing State policies, expenditures, and programs to reduce the amount and intensity of development and redevelopment
5. Require shorefront areas replacement of non-conforming uses and eliminate unsafe conditions and inappropriate uses as opportunities arise
6. Identify shorefront areas that shall be subject to post-storm regulations and acquisition in order to reduce loss of life and damage to property.

In order to further coordinate local policies contained in the comprehensive land use plan for resource protection, coastal management, the town should consider the following policies.

1. The BSFD should work with appropriate state agencies to ensure that Post-storm shoreline management options for shoreline areas shall be consistent, to the extent possible, with use, density and other land uses policies and standards contained in the comprehensive land use plan.
2. Create local priorities for acquiring coastal properties to promote hazard mitigation, public recreation, and resource management objectives contained in the comprehensive plan.
3. Post-storm redevelopment options should consider impacts to evacuation routes, as determined by emergency management officials.
4. Maintain and or adopt minimum parcel size and configuration requirements on the subdivision of critical shoreline features.
5. Discourage platting of shoreline properties and encourage replatting to accommodate post-storm relocation of structures landward.

APPENDIX 3

Maps

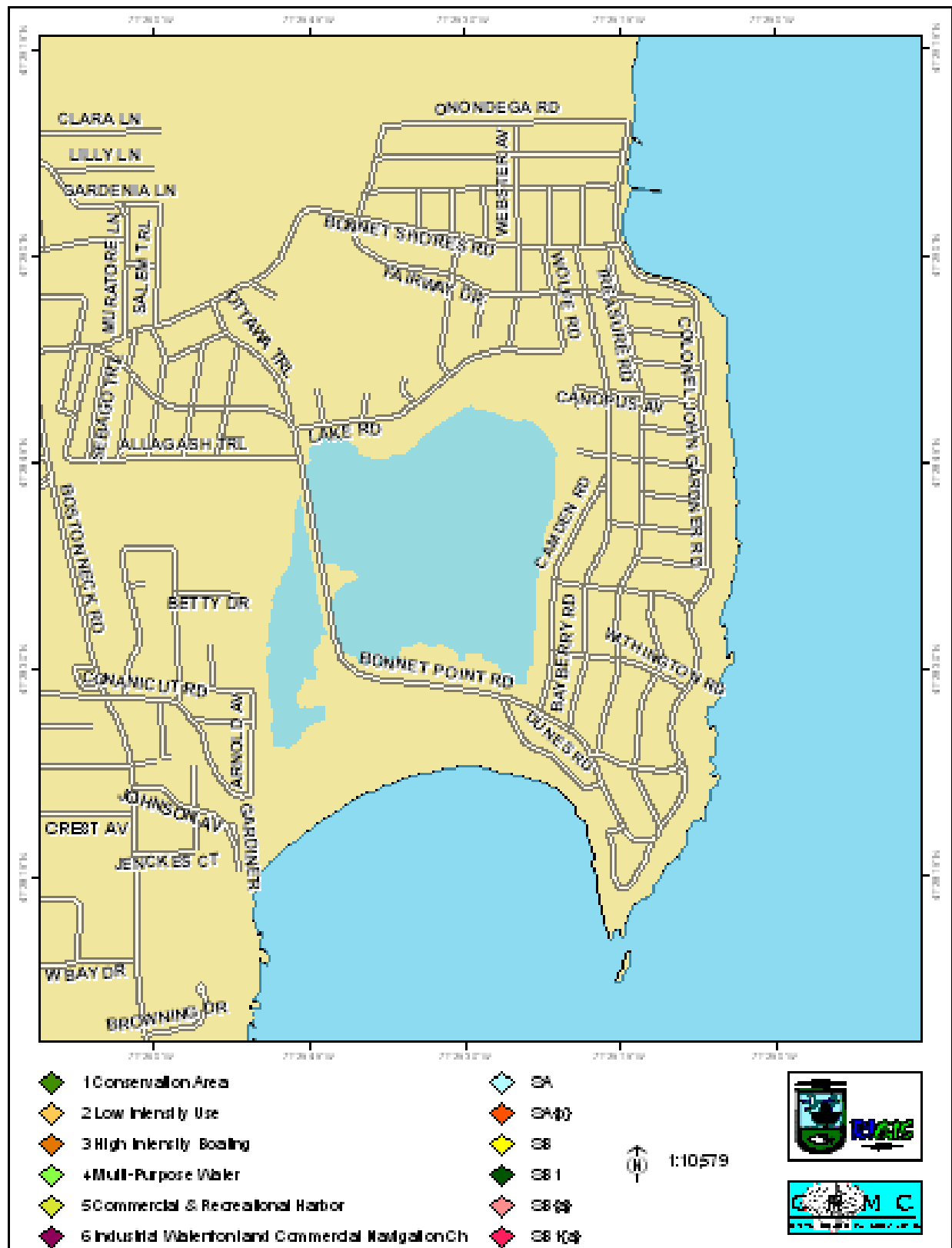


MAP 1. CRMC Water Types for Bonnet Shores Fire District

Description of Boundary Line Designations on Map 1.

The following boundary line designations describe those points along the coastline where one water use type changes to another. Each mapped boundary is coded by letter on each quadrangle map to a verbal description as listed below. Except where otherwise noted, the water use classifications along any shoreline reach and between any two boundary line designations run parallel to the general coastal trend and extend 500 feet seaward from the mean high water mark. All water areas within the bounds of channel markers as depicted on U.S. Department of Commerce Nautical Charts #13221 and #13205 (1978) are considered navigation channels, and are classified as type 3, 4, 5, or 6 waters, as appropriate.

- a. A straight line from the southern end of Maple Avenue to the end of the large wharf at Beaverhead.
- b. A straight line from Southwest Point to the tip of Shore Point.
- c. A straight line extension of the south side of Bonnet Shores Road.
- d. A straight line across the entrance to Pettaquamscutt Cove from the northernmost tip of land at Little Neck West of the Sprague Bridge, thence generally northwesterly, touching the northeastern border of the wetland called "sedge beds", thence continuing straight to where it meets land on the northern part of the cove entrance.
- e. A straight line across the entrance to the Narrow River from the south side of Clump Rocks to the tip of the Narragansett Beach barrier spit.
- f. A line across the northernmost side of the Route 1 Bridge.
- g. A straight line running from west to east through the center of Nun buoy #24.
- h. A straight line across the inlet to Long Cove at its most narrow point.
- i. A straight line across the inlet to Champlin Cove from the tip of Cedar Point to the southernmost point on Harbor Island.
- j. A line along the outside of the Harbor of Refuge breakwater.



Map 2. DEM Water Quality Classifications for Bonnet Shores Fire District

The DEM “SA” Water Quality Classification applies to all the coastal waters within the parameters of the Bonnet Shores Harbor Management Plan.

Bonnet Shores Fire District Harbor Management Plan



Map 3. Mooring Field and Swimming Area (CRMC GIS map: C. Chafee)

Note: The approximate area of the mooring field is 97,860 ft²

Bonnet Shores Fire District Harbor Management Plan



Map 4. Swimming Area 2