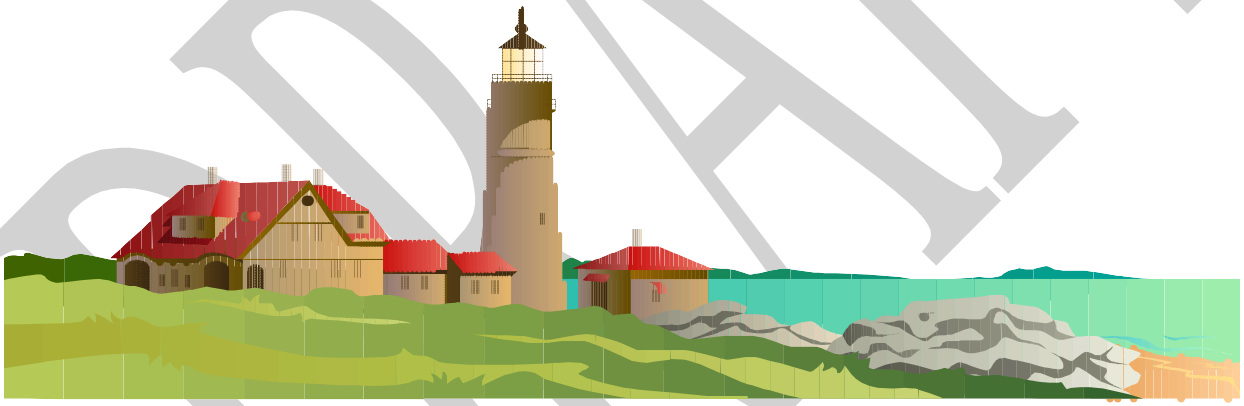
Guidelines for the Development of Municipal Harbor Management Plans



DRAFT

State of Rhode Island
Coastal Resources Management Council

Oliver Stedman Government Center 4808 Tower Hill Road Wakefield, Rhode Island
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DRAFT

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The revisions to the original *Guidelines* were undertaken in 1994 and completed during the summer of 1996. It had two principal purposes: the first was to incorporate sections not previously required but which had addressed issues common to every HMP developed since 1988. Therefore, these revised *Guidelines* now include model elements on public access, water quality management, and storm preparedness, as well as the original requirement of mooring management. The second purpose was to provide a format which could be more easily used as a management planning tool.

The revised *Guidelines for the Development of Municipal Harbor Management Plans* were edited by Jeffrey M. Willis and Laura Kelley Miguel, Marine Resources Specialists, of the CRMC and Thomas H. Brillat, marine consultant. Much of the research and development prior to final editing was done by Paul Watters, former CRMC Marine Resources Specialist, with the assistance Mike Newell, Bob Almeida and Henriek Dunlaevy, CRMC Marine Research Interns.

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~~SECTION I~~
~~INTRODUCTION TO HARBOR MANAGEMENT PLANNING~~

INTRODUCTION TO HARBOR MANAGEMENT PLANNING

A. BACKGROUND

New England has experienced a great deal of development along the waterfront and adjacent harbor areas during the past decade. Increase in the population density of coastal areas has brought increased demand for water related activities and uses of harbors and shoreline areas. Changes in the attitudes of society, evolutionary processes in business and industry, and the effects of nature have had a dramatic affect on shoreline use and harbor areas. These changes have led to user conflicts and water quality degradation.

In response to increasing pressures and multiple conflicts over existing water resource uses, the State of Rhode Island has empowered the Coastal Resources Management Council (CRMC) to enact regulations and planning programs designed to proactively stimulate coastal communities to develop comprehensive municipal ***harbor management plans*** (HMPs). The purposes of HMPs are to: 1) Provide a comprehensive and continuous evaluation of municipal harbor management activities; 2) Provide for a detailed assessment of current and/or proposed municipal harbor management programs, ordinances or regulations to ensure compliance with applicable regulatory and management requirements of the State of Rhode Island; and, 3) Delegate the primary management authority and responsibilities of consistent local harbor management programs to the municipalities.

It is in the best interests of every coastal community to have a well-thought out, carefully developed harbor management plan that provides a long range vision for controlled growth and development of harbor and shoreline areas. HMPs that achieve this aim routinely include policies and programs outlining goals for the development of the tidal waters adjacent to a municipality and/or the designation of specific locations, conditions, or other management requirements for activities conducted within the local harbor area. CRMC's success in implementing a statewide program for harbor management and emphasis on HMPs as a vital element of community comprehensive planning programs has created a standard by which other coastal states judge the success of their own efforts in land use planning.

The harbor planning process must be integrated closely with a community's comprehensive land use plan and zoning regulations in order to be successful. Recommendations for controlled development in a harbor plan that are nullified by land side zoning restrictions undermine the integrated planning cycle and may result in reducing economic returns to the community. A sound harbor management plan allows a community to guide expansion of waterfront development, marinas, mooring fields and other recreational boating activities. The time to examine these issues is **before** they reach a critical point. Communities must look closely at their present position and prepare long range recommendations and goals for the future.

B. HARBOR MANAGEMENT PLANNING AUTHORITIES

This section discusses the legislative authorities inherent in the harbor planning process from state, local and federal government sources. There are no specific requirements in this section, but it does provide a background in the regulatory process that affects the development of all harbor

~~management plans.~~

1. State Authority

Rhode Island Coastal Resources Management Council (CRMC)

The submerged lands, coastal resources and tidal waters of the state are subject to the State of Rhode Island's jurisdiction. These areas are owned by the State and held in trust for the public. The State carries out several different management and regulatory programs to protect the rights and interests of the public in these areas, primarily through the Coastal Resources Management Council (CRMC) and the Department of Environmental Management (DEM).

The CRMC is the state's primary agency for planning and management of coastal resources and the uses made of tidal waters. The CRMC was given jurisdiction over all activities taking place in tidal waters of the state and along the coastline by the General Assembly in 1971 (RIGL 46-23). CRMC was charged with "preserving, protecting, developing and, where possible, restoring the coastal resources of the state through comprehensive and coordinated long range planning and management". It was the aim of the General Assembly that these charges be implemented so as to produce the maximum benefit for society.

The enabling legislation that created the Coastal Resources Management Council also established the regulatory authority under which the CRMC operates. The regulations, procedures, and policies of the CRMC are laid out in the *Coastal Resources Management Program* (CRMP), also known as the "Red Book". The CRMP was adopted in 1978 and substantially revised to its current format in 1983. The CRMP identifies six categories of water "types" and designates tidal waters and coastlines of the state accordingly. The water types are: Type 1 - Conservation Areas; Type 2 - Low Intensity Use; Type 3 - High Intensity Recreational Boating; Type 4 - Multipurpose Waters; Type 5 - Commercial and Recreational Harbors; and, Type 6 - Industrial Waterfronts and Commercial Navigation Channels. Goals, policies and regulatory standards are established for each of these areas and the activities taking place within them. Adjacent shoreline features are also considered as part of the overall determination of activities which are allowed. In sum, the Water Type classifications and Shoreline Features, as well as other regulations, direct what uses may be made of an area and how these uses may be carried out.

The CRMP provides an overall "blueprint" for activities occurring on or within coastal areas and the CRMC carries out certain coordinating functions in order to promote and insure the CRMP objectives. These functions include: serve as a binding arbitrator for disputes involving coastal resources and the interests of two or more municipalities and state agencies; consult on and coordinate actions with local, state, regional and federal agencies and private interests; conduct and sponsor coastal research; and advise the Governor, General Assembly and the public on coastal matters. Additionally, all departments and agencies of state government are required to cooperate with the Council in discharging its responsibilities.

The approval of municipal harbor management regulations and plans is regulated under Section 300.15 of the CRMP. This section establishes that "all rules or management functions that apply to the use of tidal waters adjacent to a municipality" are considered Municipal Harbor Regulations and subject to review and approval by the CRMC. While the primary responsibility for developing and implementing harbor management remains at the local level, regulations to

ensure that actions taken by the municipalities are consistent with the overriding management programs are reserved by the state.

Rhode Island Department of Environmental Management (DEM)

The Department of Environmental Management (DEM) has primary responsibility within the state for implementing requirements of the Federal Clean Water Act, managing living resources of the state's waters, and for overseeing federal and state land acquisition and open space programs.

DEM has promulgated specific regulations and water quality standards to implement its authority under the Clean Water Act, through its Division of Water Resources. Water Quality Classifications and Standards are designed to protect and improve the quality of the state's waters where these may be threatened or impaired by pollutant discharges. The regulations contain an anti-degradation clause, which establishes that there can be no degradation of classified high-quality waters from their assigned classification due to a proposed activity. The regulations specifically identify concentrations of vessels, as in a marina or mooring area, as a potential source of pollution. The DEM currently utilizes a methodology developed by the National Shellfish Sanitation Program and the US Environmental Protection Agency to determine the potential impacts to water quality from marinas and mooring areas. Compliance of an activity with these requirements is obtained through the issuance of a Section 401 Water Quality Certification, which is prerequisite for CRMC approval of some activities.

The DEM Division of Fish and Wildlife, in conjunction with the Marine Fisheries Council, manages the fin and shellfish fisheries within the state. Current programs include the regulation of commercial fisheries, shellfish propagation and transplanting, and establishing and protecting shellfish management areas. The Division also provides comment to CRMC on proposals which may impact coastal resources. RIDEM also issues other permits which regulate development of shoreline areas, including: RIPDES, ISDS, underground injection control, and freshwater wetlands.

2. Municipal Authority

Local Harbor Ordinances and Harbormaster Authorities

Chapter 4 of Title 46 of the General Laws of Rhode Island (Harbors and Harborlines) confers upon the coastal municipalities of the state certain powers concerning the regulation of public waters within their jurisdiction. These powers can be segregated into management of vessel operations within harbors, including the removal of wrecks and derelict or abandoned boats or docks, management of anchorages and moorings, and regulation of activities such as water-skiing, skindiving, regattas, and marine parades.

The enabling legislation clearly grants towns these powers to ensure the orderly development of the harbor areas within their jurisdictions, particularly as applied to the use of these areas by vessels. Specifically, municipalities are granted authority and power to enact, through ordinance and an appointed harbormaster, rules and regulations to control activities on or in the waters

~~under their jurisdiction. They may also impose penalties for violations of such ordinances. In~~

addition, municipalities are empowered to enact zoning ordinances, wastewater management districts, erosion and sediment ordinances, and stormwater management ordinances, each of which can enhance the management of shoreline areas. However, the powers and duties granted through the enabling legislation may not be construed to abrogate the powers and duties of the CRMC.

It is also important to understand what municipalities are not empowered to do under Chapter 4 Title 46 of the GLRI. They are not specifically empowered to consider environmental impacts of activities, prevention of conflicts with other water dependent uses, or to decide resource allocation questions. This is significant, because these issues are often a consequence of how the municipalities exercise their existing authority and how these concepts are included in the HMP process is discussed in Section II of these guidelines.

3. Federal Authority

The U.S. Army Corps of Engineers, under regulatory outlined in Section 10 of the Rivers and Harbors Act of 1899, requires permits for all work seaward of the mean high water line in the navigable waters of the U.S. In Rhode Island, navigable waters are those subject to the ebb and flow of the tide. Therefore, harbor management plans that identify requirements for improvements to the harbor waters of the municipality such as public boat ramps, docks or commercial moorings, may require the municipality to obtain permits from the Corps' New England Division. Corps permits are also required under Section 404 of the Clean Water Act for activities involving the discharge of fill material into U.S. waters. On the coastline, the Corps' jurisdiction under the Clean Water Act extends landward to the high tide line, or to the landward limit of any wetlands, whichever is more extensive.

While the Corps' regulatory program is meant to focus primarily on navigation, it also considers the environmental consequences of proposals and their impact to other elements of public interest. This policy requires the Corps to base its decision to grant or deny applications for municipal projects on an evaluation of the probable environmental impact of the proposed activity and its intended use. The Corps first defines those factors specific to the public interest for each proposal, and then weighs the benefits resulting from the activity balanced against any reasonable foreseeable detriments.

The Corps' regulatory program seeks to ensure that unobstructed access to harbor channels is maintained, and that harbors that have been dredged or maintained with federal funds by the Corps (federal navigation projects) are made available on a policy of "open to all on a fair and equitable basis." Under provisions of this policy, moorings located in harbor areas that were dredged or maintained by the Corps are considered integral elements of the accessibility issue, and are subject to the Corps policy that access to these moorings be non-exclusionary. This means that non-residents of a coastal community must be granted equal opportunity to obtain mooring permits with those of residents, and that a certain percentage or proportion of available mooring space within a federally maintained harbor must be made available to transit boaters for anchorage. The policy also states that any funds received by the municipality for the rental of moorings in federal navigation projects must not exceed that required to maintain and service the mooring area.

C. ~~Planning Consistency: Federal, State, and Local Concerns~~

~~The final harbor management plan must be consistent with the requirements of the Rhode Island Coastal Resources Management Plan (RICRMP), Section 300.15, Special Area Management Plans, and State Guide Plan Elements. It must also meet specific federal and local standards. Specifically, goals and recommendations made in the harbor management plan must be consistent with those contained in the local comprehensive land use plan and with current zoning regulations of the respective community. This is important in order to ensure that the two planning concepts are carried out in conjunction with one another. Land and water side planning must be considered as one in the long range goals of the community in order to maximize social, economic and environmental benefits.~~

1. ~~U.S. Army Corps of Engineers~~

~~The Coastal Resources Management Council forwards all harbor management plans to the New England Division of the U.S. Army Corps of Engineers for review of consistency with applicable federal regulatory guidelines.~~

2. ~~Rhode Island Coastal Resources Management Program (RICRMP)~~

~~The CRMP provides a blueprint for allowable activities in particular areas of the state's coastal waters. The purpose of this section is to assist municipalities in fully understanding the CRMC policies that pertain to each Water Type within the jurisdiction of the municipality. By following these guidelines consistency with the CRMP can be achieved, and thereby reduce potential problems in the CRMC review of Harbor Management Plans.~~

~~The following list is a simplification of the allowed and prohibited uses of specific water areas under the CRMP and attempts only to provide general guidance to where differing uses might be allowed.~~

~~**Type 1 Waters - Conservation Areas:** 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 and the diversity of natural shoreline types. Included in this category are water areas that are within the boundaries of designated wildlife refuges and conservation areas, water areas that have retained undisturbed naturalhabitat or maintain scenic values of unique or unusual significance, and water areas that are particularly unsuitable for structures due to their exposure to severe wave action, flooding, and erosion~~

~~Fishing, swimming, shellfishing, aquaculture, wildlife areas, conservation uses, and low intensity recreational uses are allowable uses in Type 1 waters. Maintenance and improvement dredging, recreational mooring areas, commercial operations other than fishing and/or aquaculture, structural shoreline protection facilities, residential boating facilities, marinas, and launching ramps are all prohibited uses in Type 1 waters.~~

~~**Type 2 Waters - Low Intensity Use Areas**: 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. This category~~

~~includes water in areas with high scenic values 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.~~

~~Fishing, swimming, aquaculture, conservation areas, non-commercial recreational mooring areas, maintenance of existing navigational channels, transient anchorage areas, residential boating facilities, and launching ramps are allowable uses in Type 2 waters. Commercial mooring areas, improvement dredging, and marinas are prohibited uses in Type 2 waters.~~

~~**Type 3 Waters - High Intensity Recreational Boating Areas:** The Council's goal is to preserve, protect, and where possible, enhance Type 3 areas for high-intensity boating and the services that support this activity. Other activities and alterations will be permitted to the extent that they do not significantly interfere with recreational boating activities or values. This category includes intensely utilized water areas where recreational boating activities dominate and where the adjacent shorelines are developed as marinas, boatyards, and associated water-enhanced and water-dependent businesses.~~

~~Commercial and recreational mooring areas, public launching ramps, boatyards, marinas, houseboats (in marinas), channels, fairways, turning areas, structural shoreline protection facilities, and maintenance and improvement dredging are allowable uses in Type 3 waters.~~

~~**Type 4 Waters - Multipurpose Areas:** The CRMP policies for multi-purpose waters are to maintain a balance among the diverse activities that coexist in Type 4 waters; therefore, allowable and non-allowable uses for these areas will be measured against the degree to which they impair other activities such as fishing, water quality, navigation and recreational uses.~~

~~**Type 5 Waters - Commercial and Recreational Harbors:** The Council's goals are: to maintain a balance among diverse port-related activities, including recreational boating, commercial fishing, restaurants, and other water-enhanced businesses; to promote the efficient use of space; and to protect the scenic characteristics that make these areas valuable to tourism. These waters are adjacent to waterfront areas that support a variety of tourist, recreational, and commercial activities.~~

~~Berthing, mooring, servicing of recreational crafts, commercial fishing vessels or ferries, water-dependent, water-enhanced commerce, maintenance of navigational channels and removal of obstructions to navigation are allowable uses in Type 5 waters.~~

~~**Type 6 Waters - Industrial Waterfronts & Commercial Navigational Channels:** The Council's goals for Type 6 waters and adjacent lands under Council jurisdiction are to encourage and support modernization and increased commercial activity related to shipping and commercial fisheries. These water areas are extensively altered in order to accommodate commercial and industrial water-dependent and water-enhanced activities.~~

~~Modernization and increased commercial fisheries, berthing, loading and unloading, and servicing of commercial vessels, construction and maintenance of port facilities, navigation channels & berths, and construction and maintenance of support facilities for commercial fishing~~

~~are allowable uses in Type 6 waters. Activities which substantially detract from or interfere with the above listed priority use are prohibited in Type 6 waters.~~

3. Rhode Island Department of Environmental Management (DEM).

The Department of Environmental Management (DEM) has primary responsibility within the state for implementing requirements of the Federal Clean Water Act, and managing living resources of the state's waters. To implement its authority under the Clean Water Act, the DEM Division of Water Resources has promulgated specific regulations and water quality standards. Water Quality Classifications and Standards are designed to protect and improve the quality of the state's waters. The regulations contain an anti-degradation clause, which establishes that there can be no degradation of classified waters from their assigned classification due to a proposed activity.

The regulations specifically identify concentrations of vessels, as in a marina or mooring area, as a potential source of pollution. The DEM currently utilizes a methodology developed by the National Shellfish Sanitation Program and the US Environmental Protection Agency to determine the potential impacts to water quality from marinas and mooring areas. Compliance of an activity with these requirements is obtained through the issuance of a Section 401 Water Quality Certification. If a community can show within the plan that adequate marine vessel pumpout facilities exist to accommodate the number of vessels expected to be moored within a mooring field, DEM water quality concerns may be mitigated. If no pumpout facilities exist to accommodate these vessels, other mitigatory means must be addressed by the plan, such as the documentation of vessel length and use, or the detailed scheduling of installing a pumpout(s) to service the expected vessels. However, consultation with the DEM Division of Water Resources early in the planning process is encouraged to address this water quality concern.

The DEM Division of Fish and Wildlife, in conjunction with the Marine Fisheries Council, manages the fin and shellfish fisheries within the state. Current programs include the regulation of commercial fisheries, propagation and transplantation of shellfish, and the establishment and protection of shellfish management areas. The Division also provides comment to CRMC on proposals which may impact coastal resources.
RIDEM also issues permits which regulate development of shoreline areas. These include: RIPDES, ISDS, underground injection control, and freshwater wetlands. If any of these concerns will be addressed within the harbor management plan, the DEM should be consulted.

4. Local Compliance

Coordination with Community Comprehensive Plan

CRMC considers harbor management plans to be the seaward extension of comprehensive plans, therefore municipalities are encouraged to develop HMPs in conjunction with the town's comprehensive plan. In order to accomplish this, the town has three options:

1. Incorporate information required by the HMP and necessary recommendations into the community's comprehensive plan.
2. Keep the HMP as a separate stand alone element of the comprehensive plan.
3. Incorporate the HMP as an Appendix to the comprehensive plan.

D. ~~FUNDING~~

~~The development and administration of a harbor management program by a municipality may entails several costs. The most common ones are the costs necessary to cover the provision of a harbor master, administration of a mooring permit program, and improvements to harbor facilities. Much of these costs may be offset through permit fees for moorings placed within the public waters of harbor areas.~~

~~CRMC encourages municipalities to establish a harbor management fund to provide for costs associated with administration of the program. All fees collected from mooring permits and other uses of the tidal waters of the state should be deposited in this fund and used solely for harbor related costs. The Harbor Ordinance should specify terms of the fund, sources of revenue, and permitted expenditures. The Harbor Management Fund should be established, budgeted, and administered in a manner consistent with procedures contained within the municipal charter. Refer to Appendix III for a model ordinance.~~

~~SECTION II~~

~~THE HARBOR MANAGEMENT PLANNING PROCESS~~

THE HARBOR MANAGEMENT PLANNING PROCESS

The following section provides an overview of the planning process that a community may wish to utilize in the development of a harbor management plan. Experience with communities undergoing this process has shown that successful harbor plans are those that have had the most participation from the widest spectrum of the general public. Considering as many interests as possible when drafting the plan will result in a plan that represents the needs of the community it is designed to serve. Communities must utilize public participation in the planning process to help formulate a foundation for the harbor management plan.

A. THE MANAGEMENT PLAN AS A TOOL

Conceptually, a Municipal Harbor Management Plan may be understood as a "wet-side" application of more traditional land use planning theories and techniques. Such a plan becomes, in effect, a map for the use and management of harbor areas and activities occurring within them. Fundamental resource allocation and use decisions have been set forth in the CRMP. The Harbor Management Plan should be a guide to make activities, their location and management, and necessary protection measures under a municipality's jurisdiction, consistent with the requirements and policies of the CRMP.

The relatively limited jurisdiction that Rhode Island's coastal communities exercise over the watersheet (the surface of the harbors' waters) does not mean that harbor management planning is an uncomplicated process. Large numbers of people, from commercial fishermen and recreational boaters to windsurfers and swimmers, demand and have a right to the use of municipal waters. Each municipality must consider a variety of issues that include, but are not limited to: the allocation and equitable distribution of limited resources, such as physical space; the provision of appropriate restrictions on water uses and users in order to minimize conflict between competing activities; the protection of navigation; and the development of innovative tools for doing all these tasks. The community must also integrate its plans for the harbor with its land use ordinances and requirements, because water dependent industries, public access and supporting facilities such as parking are intimately linked to the activities on the water side. Developing a harbor management plan that takes into account all water and waterfront users presents real challenges to the harbor planning group within the municipality.
A Harbor Management Plan is developed by following basic planning phases:

1) preparing/gathering information for plan development;
2) reaching consensus on goals that are consistent with state policies; and
3) implementing the plan.

Within these phases specific tasks lead to the identification of issues and goals, development of policies, drafting a planning document, and establishing a system for harbor management that will allow the municipality to control the use of the harbor to achieve its goals. The following sections discuss the phases of plan development in more detail.

B. Harbor Management Commission

Formation of a Harbor Commission is the initial step in establishing the administrative structure of the municipality's harbor program. The Harbor Commission can be a separate commission created by local ordinance or an existing municipal body which assumes the responsibilities for development of the Harbor Management Plan and oversight of the harbor program. In either case, the local legislative body must make a decision. Should an ordinance be drafted it should specify the following:

- number of commission members;
- their method of selection;
- length of terms of office;
- procedures for filling vacancies;
- appointment by the respective town or city council;
- staggered terms to minimize turnover in a given year and to provide continuity to the leadership of the commission.
- the limits of the jurisdiction granted to the commission;
- authorization to prepare the harbor management plan for the tidal waters of the town;
- provide for the annual review of the plan;
- allow for any changes or additions to the plan as may be deemed necessary.

Harbor commission membership should represent groups most concerned with management of harbor resources. Members usually include commercial and recreational fishermen, marina operators, riparian property owners, recreational boaters, and commercial waterfront businesses. In addition, the municipal planning and zoning boards, and the town council should be represented on the commission. Consideration should also be given to representatives from other interest groups such as conservation, shellfish, and historical organizations since these agencies frequently regulate activities that affect harbor usage. For municipalities which share a common boundary intersecting a waterbody, there should also be ex-officio representation from each of the adjacent community's harbor commissions. Finally, the local habormaster should take an active role in commission activities.

The number of members on the commission should closely reflect the number of interest groups in the harbor, tempered with an understanding of what is a manageable size for such a group. Of equal importance is the fact that initial requirements for developing a new harbor plan are considerable and require a substantial time commitment from the members. Selection of members, therefore, should be done carefully in terms of this commitment

The Commission should assist in the management of the harbor through close coordination with the harbormaster and act as a Board of Appeals to hear complaints filed by any individual aggrieved by the enforcement or implementation of the applicable portions of the harbor management plan. The commission is also responsible for the development and recommendation of additional policies, rules, and regulations for the harbor management plan, subject to the approval of the town/city council and Coastal Resources Management Council as applicable. (See Appendix III for a model ordinance)

The Role of the Harbormaster

The Harbormaster, and any assistants or deputies, should be an employee of the municipality. He/she should be empowered to act for the Town Council or the Harbor Management Commission, and have specific powers and duties. Specific responsibilities of the Harbormaster should include, but not necessarily be limited to:

1) Acting as a non-voting, ex-officio member of the Harbor Management Commission;

2) Administering designated mooring areas;

3) Issuing permits for all moorings;

4) Keeping records of the location of all moorings, users and vessels within the designated harbor areas and other town waters;

5) Preparing and making available a current waiting list for mooring permits, if demand is greater than the number of moorings available in any given year;

6) Collecting mooring permit fees annually for deposit into the harbor management fund;

7) Enforcing any ordinance or provision of the harbor management plan, ordinance or any state boating safety laws as applicable.

c. **The Physical Planning Process**

Once a harbor commission has been established, the planning process typically consists of a series of steps such as an inventory of harbor and environmental resources, public input sessions, issue identification, and harbor management goal setting. Each are described in more detail below.

1. The Resource Inventory (Data Gathering)

Harbor areas support a multitude of activities including fishing, boating, commerce, recreation and wildlife. Each of these activities interacts with one or more of the others and the natural environment of the harbor. Management decisions must be made in order to protect desirable uses, to reduce the inevitable conflicts between them, and to protect the environment which supports them. The Harbor Management Plan is the context for these decisions and preparing information for the development of the HMP depends on two basic tools: the resource inventory and the planning process.

The first step in harbor assessment is conducting a resource inventory or characterization because baseline data for harbor planning must be established. This involves compiling information on water quality, fish and shellfish resources, historic resources, biological/wildlife areas, recreational sites, public access sites (e.g., rights-of-way and potential rights-of-way) an inventory of moorings, docks and boats, and the items listed later in these guidelines. By accurately assessing what currently exists, the town will have a greater capability of planning for

resources protection measures in the future. (See Appendix III for listing of state agency contacts and other sources of information.)

The list below details the information necessary to be collected in order to conduct a proper evaluation.

The Physical Setting

- Water depths from federally approved navigational charts;
- Water quality from DEM classifications, including the surface area within the specific classifications;
- Areas subject to extreme fetch and wave velocities (designated as V-zones on Federal Emergency Management Agency maps);
- Areas of shoaling and dredged areas;
- Navigational hazards.

CRMP Water Use Designations

- Map/Identify the CRMC's water use designations and list the priority uses for each area.

Current Uses Inventory

- Harbor Structures: Including but not limited to public, private and commercial marinas and boatyards, commercial fishing facilities, docks, wharves, boardwalks, and launching ramps;
- Federally maintained navigation channels, turning basins, anchorages, special anchorage areas;
- Current moorings and mooring areas, including a count of the moorings currently present, descriptions of where fields of 5 or more moorings are sited, the water area encompassed by them, the nature of their operation (public, private, commercial), the operators of these areas, and any areas designated for mooring placement;
- Shoreline access points, including CRMC designated rights-of-way, state parks and

launching ramps, municipal paper streets, dedicated easements for drainage outfalls and underground cables;

- Other use areas, including swimming areas, public beaches and windsurfing areas;
- Municipal shoreline zoning districts.

Natural Resource Areas

- Wildlife or conservation areas, including private and public reserves, unique natural areas identified through state studies or programs, and areas used intensively for scientific research;
- Recreational and commercial fishing areas including anadromous fish runs, spawning areas, shellfish beds and traditional prime fishing grounds;
- Biological habitats such as submerged aquatic vegetation beds, intertidal flats and tidal wetlands.

2. **Public Participation**

~~Public participation is an essential part of the planning process and is a prerequisite for CRMC plan approval. Further, developing a viable harbor management program requires broad~~

public participation in order to be successful. This includes public participation during the development stage as well as implementation stage of a harbor management plan. Accordingly, public participation will enable the harbor commission to develop recommendations that more accurately reflect the wishes of the community and enhance implementation of the plan.

There are many ways a town can involve the public: as members of the harbor commission; by inclusion at public meetings, workshops, and hearings; and by communicating information via articles in local papers, newsletters or fact sheets. Harbor management plans that have been developed with significant input from the public sector are more representative of the goals and desires of the community, and are often more readily accepted by the citizens of that community. Decisions made by a harbor commission based upon inputs provided by a wide spectrum of public interests are perceived as being fair and equitable and representative of a wide range of public interests.

The importance of public participation in the harbor management planning process cannot be overemphasized. A planning group or advisory committee, which provides the first level of community representation, should be formed by the harbor commission and/or the town council, to oversee the development of the plan. The members should represent various aspects of the municipalities' involvement within their harbor areas. Ideally, the committee should consist of members from the local planning, conservation and zoning boards, representatives from user groups such as commercial/recreational fishing associations, marinas, yacht clubs, community associations, and other public advocacy groups. The CRMC recommends that the town planner assume the lead role in preparing the actual plan. If this is not feasible, then one or two members of the advisory committee should represent the planning/zoning board. The University of Rhode Island's Department of Marine Affairs and Department of Community Planning can also be contacted for assistance from graduate and undergraduate students who may be available to work with local communities in the preparation of their plans.

Public workshops should be scheduled once an advisory committee has been established. Workshops can form the cornerstone of public participation efforts. To be successful, workshops should be convened by the harbor commission at regular intervals, beginning early in the planning process and continuing to the point where the plan has been completed and is ready for public hearing and adoption. The first public workshop is extremely important because it is at this meeting that the community will identify the issues associated with its harbor and shoreline areas. The identified issues should become the basis for the entire plan. In order to hold a successful first workshop, sufficient advance public notice should be given.

Based on the issues identified at the public workshop, subcommittees may be formed. The subcommittees typically consist of both members from the harbor committee and interested citizens knowledgeable about the particular issues. The subcommittees typically address a prescribed set of issues and/or problems (e.g. public access, water quality, etc.) and are charged with developing goals and objectives, and recommending actions and a series of policies to address specific concerns. The formation of issue groups, similar in composition to subcommittees but focused on a single issue, are another mechanism to include the public.

Additionally, every effort should be made to meet with members of the local news media to explain what harbor management planning is all about and what it means to the community. It is

~~important that municipalities encourage and solicit public participation throughout the planning process.~~

3. ~~Issue Identification~~

~~In preparing a Harbor Management Plan, there is a need to establish what the issues are, and what the problems and needs will be during the planning process. Based on the resource inventory and public input, the advisory committee should identify and define problems that the harbor management plan will address. Many of the problems occurring in municipal harbors are common throughout the state and existing approaches to managing these common problems can be easily adapted from one harbor to another. On the other hand, particular harbors may also have unique concerns that require individualized attention. The CRMC recommends that each municipality hold a series of public workshops at the beginning of the planning process to solicit community input into identifying issues of concern and community goals for the harbor.~~

~~The issues on which the plan should focus should be drawn from the concerns of the community, different users of the harbor, and the planning group itself. It is important that efforts stay focused on defining the problems and that the committee not try to develop recommendations before problems have been fully defined. The following issues are common throughout Rhode Island's harbors and, to a great degree, reflect issues which must be addressed in many water areas in order to be in conformance with the requirements of the CRMP:~~

- ~~The shortage of public and private marina space and boat launching areas;~~
- ~~The need or potential need to dredge or redredge navigation channels and marinas;~~
- ~~Encroachments within federally maintained navigation channels;~~
- ~~The need for more efficient utilization of mooring space within anchorage areas, the need for additional mooring space, and the need to allocate moorings fairly for private and commercial use;~~
- ~~The need to provide safe harbor and shore access for transient vessels;~~
- ~~A need for improved and expanded public recreational facilities and opportunities;~~
- ~~The need to protect unique wildlife areas, including CRMP Type 1 and 2 Waters;~~
- ~~The desire to improve and protect commercial and recreational shellfishing;~~
- ~~The potential for expansion of existing, or development of new, water dependent uses along the developed urban waterfronts of the state;~~
- ~~The need to provide appropriate restrictions on water uses and users in order to minimize conflicts between competing activities;~~
- ~~The need for coordination of harbor information and management activities among agencies, commissions, and departments on the state, federal and local levels;~~
- ~~Prevention or restoration of periodic or long term water quality problems related to recreational boating.~~

~~Assistance in scheduling meetings, workshops, etc. can be found in Appendix I - Schedule of Meetings.~~

D. POLICIES AND RECOMMENDED ACTIONS

Once the resource characterization/inventory has been completed and issues have been identified, the advisory committee can begin to develop policies and recommended actions to address the issues. Many communities have successfully used subcommittees to do this work. It is important for subcommittee members and the entire planning group to remember that policies should be consistent with CRMC regulations and the policies and requirements contained in this manual. They should be based on information derived from the resources characterization and citizen identification of relevant issues and take into account the legitimate political and fiscal constraints that may affect implementation of the plan.

At this point, the community planner or chair of the harbor planning committee should request CRMC involvement to review drafts of policies and recommended actions. CRMC will ensure that the proposed plan is developed in a manner consistent with these guidelines. A public workshop should be held once the harbor committee feels relatively comfortable with its proposed policies and recommended actions.

1. Policies:

The following *general policies* should be addressed in harbor management plans to ensure consistency with objectives of the CRMC. Guidance for more specific information included in the plan is contained in succeeding chapters in this manual.

The HMP should:

(a) Provide for the orderly use, operation, administration, development and preservation of the harbor and associated shoreline areas. This should be demonstrated within the context of the HMP and by a set of ordinances to enforce the policies contained in the plan;

(b) Carefully balance development with conservation of natural resources;

(c) Emphasize and describe the role of public participation used during the development and implementation of the harbor management plan.

(d) Provide a set of long range strategies to achieve the visions established through public participation;

(e) Prioritize the implementation of recommendations contained in the harbor management plan in a manner which assigns responsibility and accountability within the community;

(f) Coordinate with the municipal comprehensive plan and be viewed as the seaward extension of the town's comprehensive planning efforts.

2. Recommended Actions:

While policies identify what the town wants to manage, recommended actions set out how those policies will be implemented. Without an "action plan" outlined within the HMP, drafting a harbor management plan becomes a philosophical exercise and not a practical guide to resource management. Therefore, each policy must be accompanied by recommended actions for implementing the policy.

For example, many communities have adopted a policy which prohibits the overboard discharge of sewage wastes into the waters of the state, and which may read as follows:

"*It is the policy of this town to prohibit all overboard and through-hull discharges of boat sewage wastes into the waters of the state.*"

However, it is the recommended action which actually demonstrates how this policy will be implemented by the town. Such a recommended action may read as follows:

"It is recommended that the town confer through ordinance to the harbormaster the legal authority for regulating all overboard and through-hull discharges of boat sewage wastes into the waters of the state as found in Rhode Island General Laws 46-12-39 through 46-12-41."

E. Preparing Drafts of the Harbor Management Plan

It is important to understand that a harbor management plan consists of two interdependent elements: a plan and an ordinance.

The plan sets out the need for effective management of the harbors of a town by identifying pertinent issues, establishing policies that address these issues, and recommending actions that the community will undertake to implement these policies, consistent with relevant state and federal guidelines.

The ordinance is the legal implementation vehicle that gives specific local departments the ability to carry out the identified actions of the plan. Without the implementing ability of the ordinance, the plan can only act as a document that provides a long-term vision of how the community wants its harbor areas to be managed. Therefore, the development of the ordinance is as important as the development of the plan.

Once consensus has been reached on what policies and recommended actions are needed, a harbor ordinance should be drafted or the existing ordinance should be amended, as necessary. The development of a single document - The Harbor Management Ordinance - has worked best in many cities and towns. The Ordinance is divided into subarticles: Harbormaster Powers and Duties, Harbor Regulations, Mooring Regulations, Harbor Committee Powers and Responsibilities, etc. (See Appendix III for a sample model ordinance.) It is important to draft the ordinance at the time the plan is developed to ensure consistency with the plan's recommendations.

Because the harbor management plan should also be integrated with the town's comprehensive plan, land use plan, zoning regulations and other regulatory tools, changes should be recommended in the town zoning ordinances, where appropriate. Examples include requiring public access for new and/or expanded waterfront development, protecting water dependent uses, and mitigating nonpoint source pollution, such as faulty on-site disposal systems. The harbor management plan, as with the comprehensive plan, should contain a five-year implementation strategy for the recommended goals and it should also prioritize actions and assign responsibility (see below).

F. Adoption of the Harbor Management Plan

Once the harbor management plan and accompanying ordinance are written to the satisfaction of the harbor committee, the committee forwards it to the town council for final approval. In order to familiarize the town council with the plan and to answer any of their questions, joint work sessions should be scheduled between the harbor committee and the council, with assistance from CRMC staff. Then the town council typically holds a number of public hearings (in accordance with town requirements for approving plans and ordinances) and may recommend revisions before adopting the plan and sending it to the CRMC for final review and approval. When the harbor management plan and ordinance receive final approval by the town council the municipality forwards the plan, the ordinance, and a letter from the town solicitor certifying that the plan and ordinance have been properly approved to the CRMC.

G. Implementation

Assuming a favorable review and approval by the CRMC (see Section IV), the harbor management plan needs to be implemented.

A harbor management plan contains many recommendations designed to achieve the goals and policies established by the community. In order to ensure that these recommendations are carried out, the harbor management plan needs to include an implementation plan. The implementation plan takes the recommended actions and sets out a detailed schedule for implementation. The basic framework for this plan looks at each of the recommendations and provides the following details:

1. The primary responsibility within the local community for overseeing completion of a recommended action, either by position, title, or by agency;

2. A time schedule for accomplishing each action, with appropriate bench marks to ensure progress is maintained;

3. A draft of additional ordinances or regulations which may be required to implement the recommended actions;

4. An estimate of financial expenditures required to complete the recommended actions. See Appendix II for a sample implementation plan.

~~SECTION III~~

~~REQUIRED ELEMENTS OF A HARBOR MANAGEMENT PLAN~~

REQUIRED ELEMENTS OF A HARBOR MANAGEMENT PLAN

A. GENERAL ELEMENTS

All municipal harbor management plans must:

1. Contain a detailed analysis of the current uses of the municipal harbor and water areas (the Resource Inventory);

2. Include a comprehensive analysis of the major issues affecting a municipality and the means to address them (Issue Identification);

3. Develop a comprehensive management scheme for implementing the goals and policies of the harbor management plan (the Ordinance and Implementation Element); and

4. Include the parameters or physical boundaries of the local harbor waters.

B. ISSUE IDENTIFICATION ELEMENTS

Four major issues must be identified and addressed within all municipal harbor management plans. They are:

1. Public Access
2. Water Quality
3. Mooring Management
4. Storm Preparedness

A detailed analysis of each issue follows in this section. Any additional issues that a municipality wishes to address may also be included in the HMP.

1. Public Access

Public access to the shore and contiguous water areas is a right long recognized as inherent to citizens of the U.S. It is a right that will continue to be honored and protected by careful planning and management of coastal resources. The contents of this section focus on two basic areas. First, public access and the problems it typically presents for coastal communities are described, and second, the requirements for incorporating public access into harbor management planning are outlined.

Introduction

The right of the public to use the shoreline has its beginning in ancient civilizations that enacted laws and codes to protect this use. The Roman Emperor Justinian (483-565 A.D.) first recorded the public trust doctrine, which stated that:

"No one is forbidden access to the seashore. The public use of the seashore, as of the sea itself, is part of the law of nations, consequently everyone is free...to dry his nets and haul them up from the sea..."

The principle of this edict was that the shore and the sea were "common to all" and could not be privately owned. This understanding of Roman law carried forth into laws of European nations. England's Magna Carta (1215) noticed the public's right to fishing and navigation. Numerous interpretations and clarifications of this basic premise gave Queen Elizabeth I title to the tidal lands. The early American colonists brought with them this English common law concept of keeping coastal access open for all new settlers. As the American colonies grew and matured, control of the tidelands was assumed by the states as a public trust, where public trust means that the people of the state have placed the legal title of the public trust land with the government of that state to protect their rights to its use.

Public access to the shore is guaranteed under provisions of the Rhode Island Constitution, Article 1, Section 17, which provides for basic rights in relation to the shore. The Article states that

"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..."

At a minimum, the area below the Mean High Water (MHW) line is open to public access. Public access to the shore is guaranteed in order that the citizens of the state have access to the shore and waters in general, and are not prevented from reaching the waters during low tide. In Rhode Island, the state holds all water, land, and submerged lands below the mean high water mark in trust for the public. The Coastal Resources Management Council has been authorized by the state legislature to manage this public resource. In Rhode Island, public access to the shore is provided by designated rights-of-way which are the primary physical means by which the public reaches the shoreline and water areas.

Public Access is a general term used to describe the way the public legally reaches and enjoys the coastal areas and shoreline of the State which are held in public trust. Public access includes:

(a) Physical access: the ability to reach the shoreline from upland areas via perpendicular access points such as rights-of-way, boat launching ramps, and fishing piers; and the ability to pass and repass horizontally along the shoreline as guaranteed by the Rhode Island State Constitution.

(b) Visual access: the provision of unobstructed views of the coast and shoreline areas. Examples of visual access include; viewing platforms, observatories, scenic drives, and innovative architectural designs that provide unobstructed views.

(c) Interpretive access: the provision of signage, plaques, etc., or the use of innovative techniques which serve to educate the public about the historical,

ecological, or cultural significance of a site or the industrial/commercial utilization of public trust resources. Interpretive access may also include other methods which impart a sense of public ownership and understanding of public trust resources.

Amenities which enhance public access opportunities such as picnic tables, public restrooms, lighting, etc., and other improvements are considered vital contributions to public access.

Traditional public access sites to the shore are rapidly being displaced by commercial and residential developments. Some access sites are not properly maintained and/or marked, and thus have become "incorporated" or "privatized" by adjacent property owners. Some public sites are illegally chained and/or blocked off with signs declaring them for use only by neighborhood users. Local municipalities need to have an aggressive approach in order to maintain existing sites, identify and develop new sites, and identify and prioritize future access sites to the shore.

Discussion

As the privatization of the coastal zone continues and the ability of individuals to access the shore is reduced, the significance of public access points as the only link between the intertidal zone and the upland areas becomes more pronounced. Therefore, it is the purpose of this section of the harbor management plan to identify all issues related to existing public rights-of-way (ROWs), document potential and existing access points, and provide the community with recommended actions for their management and improvement.

A current inventory of existing access points is critical to the development of goals and recommendations for the community and compiling one should be the starting point for this section of the harbor management plan. Although the CRMC is the vested authority for designating all public ROWs to the shore, the community can assist the designation process by identifying potential public access points, conducting background research and gathering evidence for the CRMC legal staff to process. In most respects, the residents of the community have better knowledge of local shoreline areas and are better able to conduct the preliminary research necessary for identification of potential ROWs. In addition, information gathered through local research can be very useful to the community in coordinating the development of the comprehensive land use plan with the harbor management plan.

The community will find it especially helpful to provide an accurate physical description of each potential access point. After compiling evidence from the tax assessors office, land evidence records, town or city council records, street indexes, or any other reliable sources, members of the harbor committee should visit each potential or existing site. An assessment of field conditions at the site is valuable because it provides information on the status of a current or potential access point. Data on past maintenance and upkeep can be gathered and the background necessary to implement requirements for the enhancement and/or preservation of the site can be provided. A written description of each site, including comments on the condition, accessibility, and potential for use, should be prepared for inclusion in the public access section of the harbor management plan.

Researching available documents can assist the community in developing their plan by

~~eliminating the need to investigate ROWs already identified by various state agencies. The State~~

~~Comprehensive Outdoor Recreation Plan (SCORP) is the state's plan for outdoor recreation and is published by the R.I. Department of Administration as State Guide Plan Element 152. It identifies public and private actions that advance the public's opportunities for accessing state lands and waterways. The CRMC subcommittee on rights-of-way publishes a report annually entitled "Designation of All Public Rights-of-Way to the Tidal Areas of the State". The report lists all CRMC designated public rights-of-way to tidal areas of the state on a town-by-town basis. The University of Rhode Island, Coastal Resources Center, has produced a document entitled Public Access to the Rhode Island Coast. This publication provides a guide to parks, wildlife refuges, beaches, fishing spots, boat ramps, pathways and scenic view points along the state's coastline. Information on procedures for identifying and establishing public rights-of-way and on the rights-of-way designation process and its fact sheet, can also be obtained from the CRMC offices at 4808 Tower Hill Road in the Oliver Stedman Government Center, Wakefield.~~

~~*Policy Statement*~~

~~Adequate public access is necessary to meet the commercial and recreational needs of the State, and to support tourism, Rhode Island's largest industry. Tourism, commercial fishing, recreational boating, and commercial shipping comprise critical elements of the cultural and economic resources of the state and are dependent upon adequate access to the shore. Goals and recommendations of harbor management plans regarding public access should ensure that public access will be enhanced to provide access to and, whenever practicable, along the shore.~~

~~*Requirements*~~

~~Harbor Management Plans shall include public access provisions that:~~

(a) ~~Inventory and catalogue the condition of all CRMC designated rights-of-way in the community, and identify potential rights-of-way for designation by the CRMC;~~

(b) ~~Establish goals, policies and recommended actions designed to preserve, protect and enhance the existing public rights-of-way to the tidal waters of the town;~~

(c) ~~Design a maintenance program to be implemented by the community to improve and maintain all municipally owned rights-of-way;~~

(d) ~~Develop a prioritized list of CRMC designated rights-of-way that are municipally owned which could be improved by either public or private entities and identify appropriate site improvements required.~~

2. ~~Water Quality~~

~~The purpose of this section is to provide guidance to municipalities in applying the policies of the Coastal Resources Management Council (CRMC) related to maintaining and, where possible, improving water quality. These guidelines ensure that municipalities develop goals and recommendations in their harbor management plans that will be consistent with the goals of CRMC in addressing water quality issues.~~

Introduction

The Coastal Resources Management Council recognizes the unique and precious resources inherent in the state's coastal waters and is committed to protect and continually improve the water quality for the citizens of the state. It is considered of paramount importance to identify, measure and document all sources of both direct (point) and indirect (nonpoint) pollution and potential threats of pollution to these waters. Pollution from both land and water sources should be identified and the impacts of this pollution mitigated to the greatest extent practicable.

Generally, any activity or alteration that is proposed for tidal waters, coastal ponds, shoreline features, and areas that are contiguous to shoreline features are required to receive a Council Assent through the issuance of a permit for such activity. The tidal waters and shoreline areas have been assigned to one of six use categories (See Section I - Planning Consistency-CRMC). The use categories are directly linked to the characteristics of the shoreline since the activities on the shore are directly linked to the uses and qualities of the adjoining water areas.

Concentrations of vessels can often be sources of pollution. Sewage, gas, oil, and toxic bottom paints are all potential pollutants common to recreational boating and commercial vessels. In order to protect water quality, the DEM regulates the density and numbers of boats allowed in marinas, mooring areas, and harbors through the Water Quality Certification process. A primary emphasis of this program is the protection of public health and shellfishing areas. Allowable numbers of boats are dependent on the relationship between the area covered by the marina or mooring field, water depth, proximity to shellfish resources and availability of vessel holding tank pumpout facilities.

The characteristics of uses and activities occurring in Rhode Island's harbor areas are unique to the individual harbor in which they are located. Some harbors are used by a boating population that is primarily transient such as Block Island. Other harbors have significant commercial marinas like Warwick. And still others are predominantly residential or have other public uses similar to Point Judith Salt Pond. Water Type categories are, in part, determined by balancing the use that is made of a particular body of water and its existing characteristics, with the goal of protecting and maintaining existing water quality.

Discussion

In order for water quality to be maintained, and where possible improved, harbor management plans should address the overall impacts recreational boating have on water quality. Additional pollution comes from stormwater runoff, failed individual sewage disposal systems (septic systems) and sewage overflows. The negative impacts on water quality from these sources increase significantly in poorly flushed or shallow harbors and estuaries. Therefore, municipalities developing harbor management plans for these natural conditions should pay particular attention to policies that propose further development or expansion of existing facilities.

Harbor management plans should examine the status of marine pumpout facilities available to boaters in local waters. Requirements to increase the number or availability of pumpout facilities should be balanced with the anticipated growth of a harbor area, both in terms of number of boats as well as shoreside facilities. All marine pumpout facilities should be designed and positioned in a

~~manner that makes their use convenient for the boating public. In addition, all marine pumpout~~

facilities that are required by the CRMC to mitigate adverse impacts to water quality associated with recreational boating shall be available for the general public's use. Marina operators may charge a fair and nondiscriminatory fee to defray the cost of constructing and operating these facilities. Signs shall be posted directing the public to the location of the facility and should indicate the charge for pumping out and the operating hours.

Public education programs about the causes and effects of pollution and the impact it has on water quality should be developed as a method of preventing water pollution. Interpretive and instructional signs placed at marinas, public beach areas and boat launching ramps are a means of disseminating important information to the public. Pamphlets, flyers or newsletters can be utilized in a public education program by providing information on the use of marine sanitation devices (MSD) and pumpout facilities, emphasizing the impacts of pollution on shellfish areas, and providing guidance on environmentally sound practices for disposal of hazardous waste materials. Printed material could include a map of pumpout facilities in the local area, facts on boat pollution and plastic debris, and articles on the effects of boating activities.

Policy

The protection and continual improvement of the state's coastal waters and the maintenance of water quality for the general welfare of the public is an overriding goal of the CRMC, the DEM, and the Environmental Protection Agency. Each coastal community is expected to develop and support goals and recommendations in their harbor management plans that reflect continuing efforts to improve overall water quality. Municipalities should strive to ensure that the tidal waters of the municipality meet established water quality goals by preventing point and non-point pollutant sources to the greatest extent practicable.

Requirements

Harbor management plans shall include water quality provisions that:

(a) Develop programs for minimizing the introduction of pollutants, such as harmful cleaners and solvents and anti-fouling paints, into tidal waters of the municipality from recreational boats and shoreside activities;

(b) Ensure sufficient facilities exist for the safe and sanitary disposal of organic vessel-generated waste. This should be accomplished by having a comprehensive marina pumpout installation and maintenance plan that takes into account docked and moored vessels;

(c) Develop programs to provide for the disposal of waste oil, plastics, trash, paint, varnish, and other inorganic materials at municipal facilities convenient to recreational boaters; and

(d) Encourage operation and maintenance measures for marinas;

(e) Where significant shallow-water habitat is identified, restrict boating activities as necessary to decrease turbidity and physical destruction of such habitat;

3. ~~Mooring Management~~

~~This chapter addresses the requirements for developing a municipal mooring management plan as part of the harbor planning process.~~

~~*Introduction*~~

~~One focus of all Harbor Management Plans must be to provide orderly, safe, equitable and efficient allocation of the harbor space for boating. Municipalities accomplish this by: establishing policies for the location and distribution of moorings and anchorages; providing unobstructed access to federal and other navigational channels, anchorage areas and harbor facilities; and allocating space for moorings and/or anchorages for transient vessels. These requirements are necessary to adequately address potential conflicts between navigation, commerce, public access and the problems associated with high intensity recreational boating in the State's waters.~~

~~Two primary factors determine the level of use harbors may support: 1) water quality considerations that limit the numbers of boats; and 2) the availability of support facilities such as public access and shoreline parking. The resource inventory and the steps outlined in this section should generate sufficient information to indicate the boating capacity of the harbor. Once the ultimate capacity of the harbor area is determined, the municipality must make decisions on how to allocate that available space between the various users of the harbor.~~

~~Like many aspects of harbor management in Rhode Island, the mooring management process will be unique to the individual harbors and water areas. Decisions should be based on existing characteristics, the municipality's goals, and the issues defined earlier. The procedures outlined in this section provide basic guidance to be utilized in defining requirements that are common to all harbors.~~

~~*Discussion*~~

~~One of the most difficult tasks facing the group developing the harbor management plan is to strike a balance between commercial uses of the harbor and public recreational moorings. Demand for mooring space is expected to continue to grow and harbor management plans need to protect existing commercial and public uses and plan for future growth. The planning committee should seek to estimate potential growth of commercial facilities and compare that data with the recreational figures and the carrying capacity of the harbor. Information should be collected from local waterfront development plans, zoning ordinances, industry contributions to the local economy, and discussions with the marina owners. Subsequent decisions on how to allocate available space between commercial and noncommercial uses must also be made on the basis of the type and number of existing facilities, the relative contributions of commercial and noncommercial moorings at providing public access to the water, and community needs.~~

~~Mooring proposals must provide for an "equitable and efficient allocation" of moorings. Mooring plans that do not seek an equitable balance between commercial and non-commercial uses will, in many cases, be contrary to state policies. The requirements establish that mooring availability must incorporate considerations for residents, non-residents, and commercial users~~

~~based on recognition that the waters of the state must be available for use by all residents,~~

including inland residents. It must also recognize that the number of moorings must be related to the harbor's capability to support the proposed level of use.

Policy

(a) Municipalities shall manage their mooring areas and recreational boating activities in a manner which promotes safety and protects and preserves important aquatic and riparian habitat areas.

(b) Municipalities shall ensure that all harbor management plans develop a resident to non-resident mooring allocation permit policy.

Definitions

(a) **Mooring Areas**: shall be defined as any designated area managed by a commercial enterprise, a club, city or town where **five or more** recreational vessels are kept at moorings.

Public mooring areas are defined as those mooring areas managed by municipal or state agencies. Public mooring areas shall be delineated in approved harbor management plans and are subject to the requirements contained in Section 300.15 of the RICRMP and these Guidelines.

Marina mooring areas are defined as those mooring areas managed by a private organization (e.g., marinas, yacht clubs, etc.) Marina mooring areas shall be considered as marina facilities and are subject to the standards governing marina activities.

(b) **Rhode Island State Plane Coordinate System**:

The Rhode Island State Plane Coordinate System (RISPCS) consists of a system of x-y grid plane coordinates, established by the National Ocean/National Geodetic Survey, that can be used for defining and stating the geographic positions or locations of points on the surface of the earth within the state. This system is known as the "Rhode Island Coordinate System of 1983". A more technical definition of this system can be found in the NOAA Manual NOS NGS 5, State Plane Coordinate System of 1983, available through the National Geodetic Information Center, NOAA, Rockville, MD 20852.

Consistent with RIGL 34-8-9, these management procedures recognize that the Rhode Island State Plane Coordinate System of 1983 is the exclusive Rhode Island coordinate system. All mooring areas under the jurisdiction of the municipality preparing the harbor management plan must be described using the Rhode Island Coordinate System of 1983. The CRMC has software programs available for use by municipal agencies that will convert latitude/longitude coordinates into the State Plane Coordinate System.

Requirements

Harbor management plans shall include mooring management provisions that:

(a) ~~Develop a resident-to-non-resident mooring allocation policy of no greater than three resident mooring permits to one non-resident mooring permit (3:1), unless the mooring field~~

is within a federal navigation project, then mooring allocations shall meet the Army Corps of Engineers requirement of "open to all on a fair and equitable basis";

(b) Include the locations of all mooring areas. Coordinates of at least the corner points of each mooring field must be recorded using the Rhode Island State Plane Coordinate System (RISPCS) of 1983 as defined above. A chart or map stamped and signed by a registered professional engineer, land surveyor, or architect showing the detailed features of all mooring areas shall be submitted to CRMC on a site plan at a scale of 1"= 40' or larger. Navigational channels, fairways and any pertinent set back limits must be shown and keyed to the RISPCS grid. In addition, the following data must be provided for all mooring areas:

- Mooring areas must be shown on a map with each area's respective coordinates. Preferably, the coordinates of each mooring area should also be shown in an Appendix of the harbor management plan. Each corner of a mooring area should also be referenced to some landmark for general siting purposes, and a verbal description defining the boundaries of each mooring area in relation to shoreside feature (street ends, physical landmarks, zoning district boundaries or lot numbers) or harbor structures (breakwaters, piers, jetties, or navigation marks) should be included. The coordinate system points, however, will be the final basis for establishing the actual location of mooring fields.

- The total area of each mooring area using acres, square feet, or square meters; and

- Estimated yearly boat count of vessels greater than 25 feet in length.

(c) Moor all vessels within designated mooring areas, except for riparian moorings. Moorings assigned to riparian property owners will not be included in the total mooring count for designated mooring areas;

(d) Ensure mooring areas are not established, nor any vessel moored or anchored, so as to interfere with the free and unobstructed use of channels, fairways, or shoreside facilities within the harbor. Public mooring areas shall provide, where possible, a **50 foot setback** from all residential docks, piers, floats, public launching ramps, federal navigation channels, fairways, anchorages, and/or turning basins. Setback limits from riparian moorings and shoreline public rights-of-way shall be sufficient to allow for ingress and egress and to prevent interference with the exercise of private or public rights in these areas. Mooring areas shall be set back at least **three times** the U.S. Army Corps of Engineers' authorized project depth from federal navigation projects (e.g., navigation channels and anchorage areas);

(e) Ensure mooring areas and/or moorings dedicated to private commercial uses are not sited in federally maintained project areas;

(f) Ensure that tides and currents aid in the flushing of all new and significantly expanding mooring areas;

(g) ~~Ensure that all new and significantly expanding mooring areas do not cause significant adverse effects on water quality;~~

(h) ~~Prohibit swimming and water-skiing in all designated channels, fairways, and mooring areas;~~

(i) ~~Establish procedures for the administration and allocation of mooring spaces by implementing a permit system for use by all commercial and private mooring holders. Boat owners desiring a mooring shall be required to obtain a permit from the appropriate authority. In the event that all available mooring areas are filled, a waiting list for mooring permit applicants shall be developed by the municipality. The permit system, application process, and waiting list procedures shall be detailed in the Harbor Ordinance section of the harbor management plan.~~

(j) ~~Do not site mooring areas where they may substantially interfere with access to designated shellfish management areas, traditional fishing grounds as defined by the CRMC, public recreational areas, and conservation areas;~~

(k) ~~Do not site mooring areas where they may cause significant adverse effects on fish and shell fish resources, wetlands, submerged aquatic vegetation, or other important aquatic habitat areas; and~~

(l) ~~Ensure that mooring fields are serviced by adequate and accessible marine pumpout facilities and dump stations which are maintained in operational condition.~~

(m) ~~Develop a mooring allocation policy that limits the transfer of a private mooring permit to an immediate family member (brother, sister, mother, father, spouse, children or grandchildren) to a one time basis and prohibits the mooring permit transferee from subsequently transferring that private mooring permit under any circumstance. All private mooring permits that are forfeited by or not renewed by the transferee shall be made available to individuals on the waiting list.~~

~~*Methodology*~~

~~Municipalities describing mooring fields in accordance with the above may utilize any method to determine the corner points of mooring areas before converting to the State Plane Coordinate System. Two of the most common are described below.~~

(a) ~~Survey corner points -- most accurate method.~~

(b) ~~GPS (Global Positioning System) -- involves the use of a series of satellites in geosynchronous orbit around the Earth. The satellites transmit ultra stable signals and timing which can be received to obtain a position fix at any instant, either in a fixed or dynamic mode. In the dynamic mode (moving receiver), expected positional accuracy is on the order of 5 to 10 meters. In the fixed mode (stationary receiver), point positioning accuracy yields one meter or better results. Positioning data obtained from the GPS satellite constellation system can be converted to either latitude/longitude or the State Plane Coordinate System as required.~~

~~Although the Coastal Resources Management Council does not recommend the use of one particular product over another, the potential of a differential GPS receiver as an aid to siting~~

~~mooring fields has been studied and has been found to be a highly accurate and cost~~

effective surveying tool for siting mooring fields. To ensure the greatest accuracy, a portable GPS unit should have a feature that can perform differential recording of positioning data. It is recommended that reference to a GPS operator's manual for further explanation of the proper operation of this equipment be considered. When siting mooring fields using the Global Positioning System, the coordinates of at least the corner buoys of each mooring field must be obtained and transferred to the State Plane Coordinate System.

Mooring field mapping utilizing GPS data integrated with the capabilities of the Graphic Information System (GIS) has been tested and proven to be a viable process that will provide a means to accurately plot mooring fields, individual mooring locations, and harbor areas. The process has the potential to allow municipalities to accurately chart every coastal feature, private dock, marina, mooring, and mooring field in local waters. This capability provides an important tool for future water area, shoreline, and harbor management decisions. It also allows the municipality to work more closely with CRMC to compile specific shoreline and harbor development plans. Combining the capabilities of the GPS and GIS systems will greatly assist communities in assimilating harbor planning with comprehensive land use planning.

4. Storm Preparedness

Introduction and Overview

Rhode Island has a long history of incurring severe storm damage from tropical storms and hurricanes and every community should have a well thought out strategy for storm preparedness as part of their harbor management plan. Since the National Weather Service began tracking major weather events in 1936, a total of thirty-one storms classified as either tropical storms or hurricanes have struck the State. The months of August and September have been the most active months for tropical cyclone activity, but the State has been struck as early as June and as late as October by hurricane force storms.

During the late summer and early fall of 1991, two major disasters devastated the New England coast. Hurricane Bob in August and the October coastal storm caused millions of dollars in damage to the regions boats and harbors. Even though Hurricane Bob was considered relatively mild at Category Three, the insurance industry estimated losses involving boats from that hurricane to be in excess of $60 million. Massive losses to coastal communities highlight the need for procedures that mitigate the damage to harbors and vessels from future storms. Vulnerability of the New England coast to more severe storms, in the Category Four or Five range, make the development and implementation of best management practices for harbor safety a particular concern for coastal municipalities.

Traditionally, harbor management plans have not addressed mitigating the affects caused by natural hazards or disasters. This issue was generally overlooked because several, more pressing issues such as mooring management and public access, needed to be addressed. However, issues such as mooring management must closely consider potential storm events. As with most issues addressed in the current generation of harbor plans, concerns about storm events and methods for mitigating damage should receive additional attention. Therefore, this guidance had been

~~developed to assist municipalities in developing local storm preparedness plans as part of their harbor management plans.~~

~~Hazard mitigation strategies should be considered not only by mooring holders, but by and for all harbor and shoreline users who are constantly threatened by the potential of a storm event. Although many of the strategies outlined in this document can be addressed in the harbor management plan, storm events can effect all harbor and shoreline users. For this reason other town planning and regulatory documents should also be considered as tools for mitigating storm damage.~~

~~A storm preparedness program should be more than a set of documents or written response procedures. It should be an ongoing, coordinated effort between citizens of the community and the state emergency management agency. The focus should be to prepare the public for emergency situations before an emergency strikes. This can be accomplished by developing lines of communication and joint plans between private and public agencies and groups that direct, control, and support operations in an emergency situation. The preparedness program should be developed so that it becomes part of the active planning process.~~

~~This section is taken from the document ***Hazard Mitigation for Rhode Island Recreational Harbor Communities***, developed by the University of Rhode Island Coastal Resources Center for the Rhode Island Emergency Management Agency (1995). The guidance and appropriate policies that follow have been condensed from this document and are divided into two main sections. The first is the policy with which each municipality must comply. The policy specifies four steps the municipality must complete. The second section outlines recommended methods for achieving the policy. There is a third component, Appendix VII, that answers some frequently asked questions pertaining to hazard mitigation and contains a model hazard mitigation plan for municipal harbors. When used together, these three sections should provide the municipality with clear directions for completing a hazard mitigation plan.~~

~~*Policy*~~

~~Harbor management plans shall include storm preparedness provisions that:~~

(a) ~~Assess the type and degree of risk that harbor and shoreline users face from natural hazards;~~

(b) ~~Develop strategies that prepare for, respond to, and recover from natural disasters;~~

(c) ~~Identify long term mitigation projects that will reduce damage from natural disasters; and~~

(d) ~~Describe specific steps for coordinated implementation.~~

~~*Natural Hazards Mitigation*~~

~~Hazard mitigation is defined by the Federal Emergency Management Agency (FEMA) as any action taken to eliminate or reduce the long-term risk to human life and property from natural~~

~~hazards. Natural hazards include flood, fire, hurricane, and earthquake. FEMA has identified several ways in which hazard mitigation actions are usually achieved. They are by:~~

- ~~acting on the hazard (seeding hurricanes)~~
- ~~redirecting the hazard (seawalls)~~
- ~~interacting with the hazard (building codes)~~
- ~~avoiding the hazard (relocating structures)~~

~~Increased numbers of shoreline uses and vessels in harbors are putting municipalities at risk. During severe storms, harbors and shoreline uses are extremely susceptible to forces of wind, rain, flooding, surge and wave action. These powerful forces combine to push boats from their berths onto bridges, roadways, public lands, and environmentally sensitive areas and wetlands. Damage caused by these grounded vessels is sometimes acute: leaking fuel and septic tanks; damage to roadways and bridges; and hazardous debris and flotsam littering the waterways, marshes, beaches and wetlands. The burden of removing these vessels, in terms of cost and nuisance, directly effects the whole community. Other problems include hazards from docks breaking free, waterfront buildings and storage areas being flooded, and the loss of power at sewage treatment facilities causing direct discharge of untreated waste into local waters.~~

~~This part of the harbor plan should be written in cooperation with appropriate municipal agencies such as: the harbormaster, police and fire departments, planning and zoning board, and the planning department. Responsibility for implementation should be clearly stated in the harbor hazard mitigation plan. Many of the implementation activities require that the harbormaster play the lead role.~~

~~*Risk Assessment*~~

~~A risk assessment identifies the types and degree of risk posed to harbor and shoreline users by natural disasters. This identification process provides insights concerning the level of vulnerability of local harbor and shoreline users, the allocation of financial and human resources, and the segments of the harbor community needing special attention. For instance, a risk assessment may identify that mooring field A is highly vulnerable because it faces a large fetch and has a sandy bottom which does not provide adequate holding for moorings.~~

~~Risk assessment can be completed by re-evaluating much of the information collected for the resource inventory. Important pieces of information include, but are not limited to: a description of harbor areas that includes bottom type; openness (fetch); number of moored and docked boats; a listing of docking facilities and services provided at each; a description of the surrounding land use activities; mooring and dock standards; man-made or natural characteristics; flood plain information; and historic vulnerabilities.~~

~~Once the information for the risk assessment is collected it should be evaluated by:~~

(a) ~~identifying specific threats associated with a natural disaster.~~

(b) ~~comparing each threat to each harbor and shoreline use and identifying what effect the threat will have on specific marine interests. It is common to combine similar harbor and shoreline users such as marinas, boaters, and homeowners instead of looking at each facility individually.~~

(c) listing potential effects (i.e., when surge occurs at a marina, docks top their pilings). Effects generally result in damage (i.e., when docks top their pilings, boat and dock damage result). Results can be carried out to several levels depending on the particular situation (i.e., when boats top their pilings, they are freed to damage the automobile bridge).

To assist in selecting strategies, it may be helpful to rank the results in order of significance to identify what effects need to be addressed immediately. Table 1 demonstrates a risk assessment model that looks specifically at a hurricane event.

Table 1: Risk Assessment Model for a Hurricane Event

Threat (cause)	**Marine Interest by Location**	**Effect**	**Result: Level 1**	**Result: Level 2**
Flood/Surge	Main harbor	wide fetch	poor holding	
	Moored boats	decreased scope	dragging	threaten auto bridge
	Marina facility	flooded facility	floating debris	threaten auto bridge
			spills of hazardous material	threaten surrounding wetland
		docks topping pilings	freed docks and boats	
	Private Residences	Flooded property		
		docks topping piles	Freed docks and boats	
Wind	Moored boats	windage	dragging or pennant breakage	
	Marina facility	windborne debris	structural damage	

Local Preparedness, Response and Recovery Strategies

The hazard mitigation strategy begins with the outputs of the risk assessment. The strategies should seek to reduce or eliminate the effect caused by the threat. Strategies should be selected to minimize the effects from identified threats. Action should be directed at the threat.

Strategies should be divided into preparedness, response and recovery sections. Each of these sections should define:

- who is responsible for implementing the section and specific actions;
- when should the activity be completed; and
- how are specific actions to be completed.

It is unlikely that the municipality has the resources or the authority to do everything that is needed to fully prepare, respond and recover from a natural disaster. Therefore, the municipality must work closely with those harbor and shoreline users that can take action to mitigate damage. To facilitate coordination, the municipality may consider requiring some harbor and shoreline users to submit individual facility or boat plans to the municipality. Individual plans should be compiled and maintained in one document, perhaps a three-ring binder, along with the Town's preparedness, response and recovery strategies outlined in the harbor management plan.

Individual plans from specific harbor and shoreline users, if required, should address preparedness, response and recovery activities. The municipality should provide specific guidance about how the plans should be written, submitted and updated to those persons having to write individual plans.

The municipality should seek to resolve conflicts between individual plans before a storm event. Opportunities to share resources such as cranes and salvage equipment should also be identified.

Contracts with service providers such as salvage firms should be arranged before the disaster occurs. This allows the harbormasters to easily activate a pre-arranged agreements immediately after the storm event without having to negotiate a contract.

The municipality preparedness sections should consider:

- how and when harbor and shorefront users will be advised to begin preparedness activities and be kept informed throughout the process
- safeguarding municipally owned facilities (i.e., beaches, docks) and equipment (i.e., boats).
- special issues such as boat owners wanting to stay on their vessel, increased boat traffic, and transient vessels.
- special hazards (i.e., absentee land/boat owners, commercial docking facilities) that need attention
- allocation of secure mooring areas (i.e., hurricane holes)

The response section should define what action the municipality will take during a storm event to protect people and property. The town manager, emergency response personnel, and the legal departments should determine the appropriate conditions for emergency operations. The following emergency responses should be addressed:

- who is qualified and authorized to dispatch personnel
- what are the parameters for dispatching personnel
- what equipment and precautions will be used

Emergency Response

There is the likelihood that a harbormaster will have to respond to a distress call from a vessel owner who initially decided to stay on his/her vessel and subsequently changed his/her mind. This scenario is common and dangerous. Whenever possible, the primary response should be by the Coast Guard, if the delay will not threaten the life of the boat owner. When immediate action is necessary, a response crew should be sent. The composition and responsibilities of this crew should have been established well before the storm

After a storm event, the primary objective is to secure the harbor so that harbor and shoreline users can safely begin the recovery phase. The first steps might be to institute security measures and crowd control to prevent looting and to protect curiosity-seekers from unnecessary injury and interference. Although the municipality may not be responsible for protecting each and every vessel that has washed up on the beach from being looted, the municipality does have a responsibility for maintaining civil order. The second stage of the recovery phase includes documenting damage to public property along the waterfront. This involves maintaining a file of what has been damaged, who the owners are, and what action is being taken. Standard activities to be considered may include:

- Immediate (within 24 hours)
  1. assess readiness of the harbormaster department, correct deficiencies
  2. complete rapid appraisal of damage
  3. assist emergency situations as appropriate
  4. initiate pre-established contracts services companies (towing, salvage) if required
  5. institute security watches as necessary

- Mid-term (within 1 to 14 days)
  1. complete inventory of damage
  2. notify appropriate parties regarding damage
  3. provide list of unidentified boats to appropriate authorities
  4. contact local harbor and shoreline users to assess their situation
  5. contact appropriate authorities such as the Coast Guard to provide a harbor status.
  6. begin to remove large pieces of floating debris

- Long-term (within 14 to 90 days)
  1. analyze effects of storm and results. Do they match risk assessment?
  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;
  4. update hazard mitigation plan and identify new mitigation opportunities;
  5. identify and apply for funding to implement hazard mitigation activities;
  6. complete any disaster assistance forms required by the state for reimbursement.

roperty that is not claimed and ha subsequently been taken into the town's custody is subject to the provisions of Rhode Island state law, Title 46, Chapter 10 which calls for the appointment of a commissioner of wrecks and shipwreck goods. It is the responsibility of the commissioner to inventory and store any found property in the town's custody. If a vessel is in a stable position and in no danger of sustaining additional damage then the salver cannot intervene without permission of the owner. This same is true for equipment or other goods which wash up on shore. A person who finds the property of another has not legal right of ownership even is he/she 'salvages' it. Legally, in Rhode Island, found goods and equipment are placed in the custody of the local commissioner of wrecks.

Educational materials and programs to guide boaters, harbormasters, marine operators, and local disaster officials in preparation for, response to, and recovery from major storms have proven to be successful tools for raising awareness about threats from natural disasters. These materials should be distributed widely throughout the community and be designed to stimulate study and encourage implementation of plans.

Inventory Longer Term Mitigation Projects

Medium and long term hazard mitigation projects may include large capital improvement activities or open space acquisition. An inventory of these proposed projects will be a valuable resource when hazard mitigation funding is made available after a storm event. An accurate inventory can easily be consulted to select appropriate projects that meet funding criteria. In developing this inventory, some projects may be able to be implemented during routine management and improvement such as new zoning ordinances or roadway improvements.

Identify existing funding sources that can be used to implement hazard mitigation actions. This information is generally available from the State Emergency Management Agency. When developing this section consider several key points:

- What projects may not be currently feasible but, if implemented, would mitigate damage? Building a breakwater or strengthening local building codes?

- What activities not directly associated with preparedness, response and recovery actions would make the harbor safer? Activities like educational programs informing boaters of new methods and technology may be important. These low cost efforts can have significant impact on the way boaters behave.

- How does insurance play a role in harbor hazard mitigation? Check on the town's insurance policy to identify any restrictions or limitations that may be in conflict with the hazard mitigation plan. Meet with boaters and marina operators to discuss methods for speeding the claim recovery process, perhaps hold an insurance workshop.

- What level of protection do existing mooring standards provide? Perhaps a study that examines the type of moorings that are most appropriate to the harbor could be conducted. Information gathered could then be used to improve existing mooring standards. If the scope (length of chain and/or line) of the mooring is dependent on the harbor density not the level of protection it offers, perhaps the harbor could be re-organized to better serve both purposes

~~To successfully survive a storm, all marine interests must play a role in preparedness and the municipality must play the important role of coordinator. Experience from previous storm events shows that one boat breaking loose initiates a domino effect causing significant damage to other property and natural resources. This happens even if all the boats are fully prepared except one. Therefore, this element of the harbor plan should specify how coordination will occur.~~

~~The harbormaster should be required to interface closely with other storm planning activities happening in the municipality. Each municipality usually has a storm preparedness plan that is maintained by the Emergency Management Officer. This plan should be reviewed and relevant parts should be used in the harbor plan. Overlap and potential conflicts between the two should be evaluated and changed.~~

~~Memoranda of Agreement with appropriate Municipal Departments should be established and maintained as part of harbor hazard mitigation planning. Municipal departments will likely include fire/police, public works, transportation, sewer, planning, and building inspection departments.~~

~~Link the harbor hazard mitigation plan with the Comprehensive Land Use Plan. All municipalities should have a State approved comprehensive land use plan that provides a blueprint for future development within the municipality. If, during the writing of the harbor plan, important land use changes are identified, those suggestions should be incorporated into the comprehensive plan. The comprehensive land use plan, in conjunction with local building codes, should specify adequate building requirements for structures in high risk zones. These codes specify building standards and required equipment. During the harbor planning process, evaluate local codes in terms of their resistance to storms.~~

~~Link the harbor hazard mitigation plan with the National Flood Insurance Program (NFIP). This program, administered through the FEMA, provides primary insurance coverage for private structures in high risk areas. NFIP uses a revenue based system and collects premium fees from the owners of structures in high risk areas. This program also evaluates and maps high risk flood hazard areas. The information available through this program should be used while completing the risk assessment phase of hazard mitigation planning. Also, if, during the risk assessment and subsequent planning activities, flood plain management issues are identified, they should be brought to the attention of the local or state flood plain manager. (e.g. significant changes to shoreline evaluation because of construction that are not reflected on the flood map).~~

~~Link the harbor hazard mitigation plan with waterfront zoning. Zoning provides the map for land development along the waterfront. During the planning process identify if there are any high risk uses in high risk areas. Depending upon the seriousness of the problem, the zoning requirements may require revisions. Water zoning could also be created by mapping the areas of the harbor that are higher risk because of the fetch, depth of water or surrounding land use. Also map vulnerable areas such as wetlands and bridges. Once these areas are identified, plan vessel berthing areas and other threats accordingly. This approach will create water zoning for harbor areas according to threat or vulnerability, allowing only certain uses according to the parameters of the specific zone.~~

~~SECTION IV~~
~~THE CRMC APPROVAL PROCESS~~

THE CRMC APPROVAL PROCESS

A. REVIEW

When the harbor management plan and harbor ordinance have been approved by the local town council, and a letter from the town solicitor has been provided certifying that the plan is consistent with the Rhode Island Coastal Resources Management Program (RICRMP), the HMP is sent to CRMC for staff review. It is reviewed for consistency with these Guidelines, and for applicability with any existing Special Area Management Plans and the RICRMP itself. Any major discrepancies discovered during this review process may cause the plan to be returned to the respective community for reconciliation.

Following staff review, a completed report will be forwarded to the CRMC Planning and Procedures Subcommittee for review and recommendation to the full Council. The plan will be scheduled for public hearing before the entire Council at which time members of the community's Harbor Commission will be invited to attend in order to address any questions Council members may have concerning the plan. The Council will vote to approve or reject the plan, with approval generally being given for a period of five years. The Council may grant limited approval pending correction of minor discrepancies, or satisfactory completion of plan deficiencies, as may be indicated in staff review documents.

Harbor Management Plans shall be classified by the CRMC as one of two types: Interim or Final.

1. Interim Harbor Management Plans - Interim HMPs shall be those elements of approved municipal programs which, in the determination by the CRMC, are consistent with, support, or advance the goals and policies of the CRMP, but which require continuing oversight to insure that the concerns and requirements of the CRMP are met. CRMC will hold public hearings to solicit the input and concerns of interested and affected segments of the public. In granting approval, the CRMC shall set conditions concerning CRMC oversight and the manner in which the Interim HMPs may be exercised. Upon approval, primary management authority for activities managed under the Interim HMP shall be delegated to the municipality, and all applications for such activities shall be required to gain local approval, subject to the conditions and stipulations established above. The CRMC shall reserve the right to refuse delegation of any activities it feels are inappropriate for municipal governance where these activities are subject to the regulatory authority of the state. Upon approval and delegation of management authority, no separate application may be made to the CRMC for that activity. The conditions and stipulations of the delegation of management authority shall be detailed in final CRMC decisions on Interim Harbor Management Plans.

2. Final Harbor Management Plans - Final Harbor Management Plans shall be those comprehensive municipal programs which establish a management plan for the most desirable use of the harbor for recreational, commercial, conservation and other purposes consistent with the requirements of the CRMP, and which meet the following requirements:

- identify existing and potential harbor problems;

- establish goals and make recommendations for the use, development and preservation of the harbor and its resources consistent with the policies, goals and requirements of the RI Coastal Resources Management Program;
- establish an adequate management structure for implementation of the Plan;
- identify officials responsible for enforcement, and propose ordinances to implement the plan;
- include a verbatim copy of all proposed ordinances, resolutions or other documents which have been, or will be adopted to authorize and/or guide the regulation or management;
- include a certification from the legal department or solicitor of the municipality that the proposed regulations or management programs conform to the Coastal Resources Management Program and the General Laws of the State of Rhode Island;
- include, but not be limited to, provisions for the orderly, safe, equitable and efficient allocation of the harbor for boating by establishing:
    (a) the location and distribution of seasonal moorings and anchorages;
    (b) Unobstructed access sufficient to prevent the interference with the exercise of private or public rights to and around: federal navigation channels; anchorage areas and harbor facilities; riparian areas associated with waterfront properties; and shoreline public right-of-ways;
    (c) space for moorings and/or anchorages for transient vessels; and,
- provide a map prepared and stamped by a professional engineer, land surveyor or architect that designates the area of tidal water that will be affected by the Harbor Management Plan;

In addition, the following sections are suggested for inclusion in the HMP.

- boundaries designating the limits of seaward development of pierhead, bulkhead and shoreside activities, to be approved and established by the CRMC. Designation of such lines shall not be construed to abrogate or diminish the exercise of the regulatory powers of the State of Rhode Island regarding activities conducted within these areas;
- recommendations for approval and establishment by the CRMC of channels and boat basins;
- boundary lines designating the limits of areas for the location of vessels with persons living aboard, to be approved and adopted by the CRMC, with review and recommendation from the Department of Environmental Management;
- recommendations for the location of marine pump-out facilities and the designation of no discharge zones in accordance with Section 312 of the Water Quality Act of 1987.

Factors Considered in Preparation of the Plan

In preparing the plan, the municipality shall consider the following factors:

- Recreational and commercial boating;
- Recreational and commercial fisheries and shellfisheries;
- Fish and shellfish resources, including leased beds, licensed aquaculture projects, and shellfish management areas as designated by the Department of Environmental Management;
- Conservation of natural resources, including the policies, rules and regulations of the Coastal Resources Management Council and Program, the Department of

~~Environmental Management, and the State Guide Plan;~~

- Areas subject to high velocity waters, including but not limited to hurricanes, wave washes or tsunamis, that are designated as V-zones on flood insurance rate maps published by the National Flood Insurance Program;
- Water dependent uses, as defined in the Coastal Resources Management Program;
- Water Quality standards, as established by the Department of Environmental Management;
- Recreational uses other than boating and fishing;
- Water dependent educational uses;
- Public access to and along the shoreline and tidal waters of the state, including the Guest Mooring Program of the Department of Environmental Management and CRMC designated public rights-of-way;
- Contiguous land uses and transportation facilities, including parking and sanitary facilities;
- The right and privilege of all citizens of the state to the use and enjoyment of the natural resources of the state with due regard for the preservation of their values.

B. Approval: Delegation of Management Authority and Implementation

Upon acceptance, the CRMC shall submit to the Department of Environmental Management, the Department of Administration/Division of Planning, and the Army Corps of Engineers/New England Division all Final Harbor Management Plans for concurrent and, if applicable, separate review. The Department of Environmental Management exercises authority over the applicable elements of a harbor management plan that may impact water quality and subsequently may require water quality certification. The Department of Administration/Division of Planning, and the Army Corps of Engineers/New England Division review each plan for consistency with their authorities. If a harbor management plan requires water quality certification, such certification will be obtained outside the CRMC approval process.

Upon approval, the CRMC shall issue a determination of consistency with the RICRMP and delegate primary management authority to the municipality for activities under the jurisdiction of the Final Harbor Management Plan, subject to similar restrictions established for Interim HMPs described above. No separate application for activities subject to the jurisdiction of the Final Harbor Management Plan shall be made to the CRMC.

Upon approval of the plan, any official of the state, municipality or any other political subdivision making regulatory decisions or undertaking or sponsoring development affecting the area within the jurisdiction of the plan shall, to the maximum extent practicable or allowable by law, make such decisions or conduct such activities consistently with the recommendations and requirements of the plan, unless such official shows cause to the CRMC why a different action should be taken, or that there exists an overriding public interest in pursuing such decisions or activity.

All elements, activities, authorities and management functions contained within approved Final Harbor Management Programs, and any activities carried out under those provisions shall be considered to be acting under license from the State of Rhode Island. In no way shall this be

~~construed to create or impart property rights, title or other rights to the municipality or individuals inconsistent with or contrary to the rights of the public in tidal waters of the state.~~

~~In all instances, the CRMC reserves the right to override local decisions in those instances where there is a probability of confliet with the CRMP or potential damage to the coastal environment and to exercise its authority under 46-23 GLRI to function as a binding arbitrator in any matter of dispute involving both the resources of the state's coastal region and the interest of two (2) or more municipalities or state agencies.~~

~~All Final Harbor Management Plans shall be reviewed by the CRMC every 5 years. All changes to approved Final Harbor Management Plans, or elements thereof, shall be submitted to the CRMC for review and approval.~~

APPENDICES

Appendix I: Schedule of Meetings

The following is a suggested schedule of meetings to begin the harbor planning process. It is provided as a guide to the community based on experiences from other municipalities.

1. Initial Meeting of Harbor Committee/Commission. Committee becomes familiar with the process to be used throughout the development of the harbor management plan. (Can be accomplished with or without a facilitator knowledgeable in harbor planning). Schedule the first public workshop and subsequent meetings. Public workshop should be scheduled at least 2-3 weeks in advance to allow for adequate public notice and time for articles to appear in local papers. Frequently the resource characterization/inventory is completed by this meeting.

2. First Public Workshop. Explain the harbor management planning process and results of the resource characterization to the public. Open the remainder of the meeting to public discussion of issues and definitions of the problems. Collect list of volunteers to work on issues within the HMP.

3. Harbor Committee. Discuss the first public workshop. Consolidate issues and problems identified by the public into general categories. Set up subcommittees and notify volunteers of first meeting. At least one member of the Harbor Committee should be on each subcommittee. (This meeting should occur within one-two weeks of the public workshop).

4. Subcommittee Meetings. Hand out a list of issues and general categories as identified in the public workshop. Break into groups to further discuss each issue and define specific problems and their impact on the harbor. Have harbor committee members hand out a sample format to be followed for all issue reports. For example, each report could be organized into: problem statement, discussion of problem, suggested policy statement, and recommended actions. Each issue group should schedule additional meetings to work toward completion of a report summarizing their findings and recommendations. Before the meeting adjourns, the harbor committee should establish a firm deadline for all issue reports, usually three weeks. (This meeting should occur within two weeks of the first public workshop while the results of the meeting are still relatively fresh in everyone's mind).

5. Harbor Committee Meeting. Issue reports should have been received and distributed to all members for review prior to this meeting. Review issue reports for accuracy. Policies and recommended actions should be discussed by the harbor committee at this time. Weekly meetings should be scheduled with each issue group. Ideally, a rough first draft incorporating the issue reports and initial thoughts on policies and recommended actions should be drafted and distributed to subcommittee members and issue group representatives before the weekly meetings. (Draft #1 should be sent out at least 1-2 weeks before the weekly issue meetings)

6. Weekly Meetings to Discuss Issues. Review issue section of HMP with issue group representatives to reach consensus on issue statement. Discuss policies and recommended actions. (Schedule one meeting per week for each issue. Meeting should not last more than 2 hours. If there is a particularly lengthy issue schedule two consecutive meetings)

7. ~~Revise Plan Based on Meetings. Change the plan as agreed upon by the Harbor Committee. Circulate drafts to all members and representatives from issue groups. (Draft #2)~~

8. ~~Draft Ordinance. An ordinance should be drafted based upon the policies and recommended actions of the HMP. Once drafted, meetings should be scheduled with the Town Solicitor to ensure that the ordinance is consistent with Town, State, and Federal Laws.~~

9. ~~Summary Discussion and Wrap Up. Invite issue group representatives. Make revisions as necessary. (Draft #3)~~

10. ~~Hold Town Council Work Session. Mail draft #3 to town council for their review at least two weeks prior to work session. Meet informally with town council to discuss the content of the HMP. In particular, policies and recommended actions and the proposed ordinance should be reviewed. Make revisions as necessary. (Draft #4)~~

11. ~~Public Workshop #2. Draft #4 should be made available for public comment at least two weeks prior to the workshop. Review process and take public comments. Provided there are no major problems, vote to adopt plan and forward to town council. Make revisions if necessary. (Draft #5)~~

12. ~~Town Council Review and Adoption of Plan and Ordinance. Schedule public hearings for adoption of the ordinance and plan. Once plan and ordinance are adopted by the town, send copies to CRMC for final approval. (The town council adoption process generally takes up to two months because of open meeting laws. Two meetings each requiring 2-3 week advance notice.)~~

Appendix II: Sample Implementation Plan

Each harbor management plan should incorporate an IMPLEMENTATION PLAN that provides a means of ensuring that goals and recommendations are included in the Town's planning process. The Implementation Plan takes major recommendations from the HMP and:

1. Assigns responsibility within local government for each action;
2. Sets a general schedule for accomplishing each action;
3. Suggests applicable new ordinances or regulations, new town administrative services, and estimated costs involved.

RECOMMENDED ACTIONS shall be supported with the following data:

1. Action - Recommended implementation action;

2. Reference - HMP page number, Section, Sub-section, etc;

3. Responsibility - The agency, board or commission which is responsible for implementing the action and reporting on progress and completion schedule;

4. Time Line - Estimated number of weeks, months, or years to complete the action;

5. Cost - Estimate of the approximate cost to complete the action.

Implementation Plan Example:

Action: Construct public launching ramp on Town property at Smith Street; Dredge the ramp site to allow launching of deep draft boats.

Reference: Harbor Management Plan, Page 24, Section III, Subsection 1

Responsibility: Harbor Commission/Harbormaster, Planning and Engineering offices

Timing: Dredging commences January 1994; ramp construction by September 1994

Costs: Dredging - $25,000; Ramp and Parking - $100,000

Appendix III: Model Harbor Ordinance

Town of Salty Acres, Rhode Island

AN ORDINANCE FOR THE TOWN OF SALTY ACRES COASTAL WATERS AND HARBOR AREAS

Chapter Xx. Harbors and Vessels Code Article 1. Goals of the Ordinance

Article 2. Definitions
Article 3. Jurisdiction and Authority
Article 4. Harbor Regulations
Article 5. Mooring Regulations
Article 6. Fees and Penalties
Article 7. Harbor Management Fund
Article 8. Liability
Article 9. Severability
Article 10. Effective Date

ARTICLE 1. GOALS OF THE ORDINANCE

Section 1. Manage the coastal waters and harbor areas of the Town of Salty Acres, as described herein and hereafter referred to as the Town, by establishing regulations that balance and manage the diverse uses of the waters, harbor areas, and waterfront and to minimize user conflicts.

Section 2. Provide a mechanism to ensure the administration and operational costs of this ordinance and the Harbor Management Plan are shared by the Town of Salty Acres, private and commercial mooring owners, and other groups or individuals as may be identified by the Harbor Management Commission, described herein.

Section 3. Maintain, improve, and develop public access opportunities to the coastal waters of the Town of Salty Acres for the benefit of all user groups.

Section 4. 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.

Section 5. Maintain compliance with the Town of Salty Acres Comprehensive Community Plan.

ARTICLE 2. DEFINITIONS (These are town-defined and specific)

ABODE ANCHORING
CHANNEL
COMMERCIAL MOORING
FAIRWAY
HARBOR MGMT COMMITTEE
HARBORMASTER LAUNCHING RAMP
MARINA
MEAN HIGH WATER MOOR
MOORING
MOORING ASSIGNMENT COMM.
MOORING TACKLE
NON-RESIDENT
NON-WATER-DEPENDENT USE
NON-WATER-RELATED USE
PERSON
QUALIFIED INSPECTOR RECREATIONAL BOATING FACILITY RESIDENT
RESTRICTED AREA
RIGHT-OF-WAY
VESSELS
WATER-DEPENDENT USE
WATER-RELATED USE

ARTICLE 3. JURISDICTION AND AUTHORITY

Section 1. Jurisdiction. The coastal waters and harbor areas of the Town of Salty Acres included under the jurisdiction and authority of this ordinance are those coastal waters and harbor areas within the jurisdiction of the corporate boundaries of the Town of Salty Acres as they pertain to the Thames River, the Gulf of Oman, Bluff Hill Cove, the Rio Grande, and all other coastal waters and harbor areas not otherwise named within this jurisdiction.

Section 2. The Harbor Commission. The Harbor Commission shall be the local regulatory body authorized to regulate the coastal waters and harbor areas of the Town through the implementation of the Harbor Management Plan and subsequent ordinances. The Harbor 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 con-consistent with the Harbor Management Plan and such ordinances, subject to the approval of the Town Council and the Coastal Resources Management Council.

(a) **Composition.** The Harbor Commission shall consist of ( ) members, with representation from each of the following groups: recreational boating community; commercial fishing industry; marina and/or boatyard operators; environmental groups; public access interests; inland representation; and one citizen at large; etc..

(b) **Appointments.** Members shall be appointed by the for terms consisting of years. Initial appointments shall be staggered.

(c) **Vacancies.** Vacancies shall be filled as necessary and in accordance with the initial appointment.

(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~~

____( ) members of the commission. The secretary shall keep minutes of all meetings and file such minutes with the Town Clerk in accordance with established procedures and the Administrative Procedures Act..

(e) **Powers and Duties.** The Harbor Commission shall be the local regulatory body authorized to regulate the coastal waters and harbor areas of the Town through the implementation of the Harbor Management Plan and its subsequent ordinances. The Harbor Commission shall adopt rules of procedure and operation for its meetings and 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 its subsequent ordinances which may be necessary to fulfill the goals and objectives of the Harbor Management Plan and meet the requirements of the its ordinances;

(2) Create additional authorities and duties for the Harbormaster, herein 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 to expend monies in the Harbor Management Fund;

(4) Act as a board of appeals, sitting with the Town Council, to hear any person aggrieved by any decision of the Harbor Commission and/or harbor- master(s) in their enforcement and implementation of this ordinance;

(5) Review and revise as necessary the Harbor Management Plan and its subsequent ordinances for Town Council and Coastal Resources Management Council approval. The Harbor Management Plan and its ordinances shall be reviewed and revised at least once every five (5) years;

(f) **Ex-Officio Members.**

(1) The Harbormaster shall be a non-voting, ex-officio member of the Harbor Commission.

(2) To enable to Harbor Commission to coordinate issues of mutual concern between adjacent coastal municipalities, there may be one non-voting, ex-officio member from the_____Harbor Commission and the_____Harbor Commission.

(g) **Compensation.** Harbor Commission members may be compensated for any normal expenses incurred in the performance of their duties.

Section 3. Harbormaster.

(a) ~~There shall be a Harbormaster for the Town who shall be appointed by the Town Council and who shall serve at the pleasure of the Town Council. The Harbormaster shall report to the Harbor Commission and have the following duties:~~

(1) Be responsible for the administration and enforcement of the provisions of the Harbor Management Plan and its ordinances;

(2) Process applications for the issuance of mooring permits and assign proper placements of moorings in accordance with this ordinance;

(3) Keep proper records of all mooring application information, including the locations of moorings, mooring owners and vessel usage of mooring, type of vessels using mooring, etc...

(4) Prepare, keep current, and make available a waiting list for mooring permits in accordance with the provisions of this ordinance if the demand for available mooring permits is greater than the number of available mooring locations in any given year;

(5) Inspect mooring tackle in accordance with the provisions of this ordinance;

(6) Carry out all other powers and duties authorized to the harbor- master under various state and federal marine laws, including but not limited to Marine Sanitation Device (MSD) inspection and discharge responsibilities afforded through the U.S. 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.

(b) Assistant Harbormaster(s). Assistant harbormaster(s) for the Town may be appointed by the Town Council and shall serve at the pleasure of the Town Council. Assistant harbormaster(s) shall report directly to the harbor- master and are authorized with the same duties as the harbormaster, under the direction of the harbormaster.

(c) Compensation and Budget. The harbormaster and assistant harbor- master(s) shall receive an annual salary. The harbormaster is responsible for the day-to-day administration of a harbor management budget, with Harbor Commission authorization. The harbormaster and assistant harbormaster(s) salaries shall be determined by the Harbor Commission and included in a harbor management budget prepared annually by the Harbor Commission for Town Council approval.

ARTICLE 4. HARBOR REGULATIONS

Section 1. Vessel Speed. The operation of any vessel within the coastal waters and harbor areas of the Town of Salty Acres shall proceed in a manner which protects all persons and property from damage from waves, wake, and operation. Operators of vessels within the coastal waters and harbor areas of the Town of Salty Acres shall comply with state regulations on vessel speeds and wake which establishes a maximum speed for vessels at five (5) miles per hour, no wake (GLRI

~~46-22-9).~~

Section 2. Vessel Speed Zones. The Town hereby designates the following vessel speed zones, to be established and marked immediately by Town Council petition to the Rhode Island Department of Environmental Management Division of Boating Safety:

(a) **Federal Navigation Channels:** Vessel speed shall not exceed ____ miles per hour in any Federal Navigation Channel located within the area of jurisdiction of this ordinance.

(b) **Navigation Fairways:** Vessel speed shall not exceed five (5) miles per hour nor create wake in any navigation fairway as established and described herein.

(c) **Mooring Fields:** Vessel speed shall not exceed five (5) miles per hour nor create wake in any mooring field as established and described herein.

Section 3. Vessel Operations. Vessels used alone or in engaged in activities including, but not limited to, water skiing, jet skiing, para-gliding, and other like uses are not allowed within 200 feet of any swimming area, mooring area, shoreside facility, Rights-of-Way ingress and egress point, launching ramp, federal navigation channel, nor navigation fairway. Vessels used in these manners are allowed within 200 feet of shoreside facilities when the sole purpose is to begin or end such activity.

Section 4. Navigation Fairways. Navigation fairways are hereby designated within the following parameters, to be forwarded to the Coastal Resources Management Council for U. S. Coast Guard establishment:

(a) **Bluff Hill Cove:** Beginning adjacent to the eastern side of the Dismal Island Bridge, the fairway runs generally east for approximately 500 yards and ends 100 yards south of Thomas Point, at a width of 75 feet.

(b) **Cabot Cove:** Beginning at the terminus of the breakwater, the fairway runs due east for approximately 1000 yards and ends 100 feet west of the Town Dock, at a width of 100 feet.

Section 5. Obstruction of Channels, Fairways, and Berthing Space. No vessel shall be moored or anchored so as to interfere with the free and unobstructed use of channels, fairways, or berthing spaces within the areas under Town jurisdiction as detailed in ARTICLE 3 of this Ordinance.

Section 6. Swimming. Swimming is prohibited in all federal navigation channels, navigation fairways, mooring fields, and transient anchorage areas.

Section 7. Fishing. Fishing and shellfishing is prohibited in all federal navigation channels, navigation fairways, and mooring fields. The placement of lobster pots, pot floats and fish nets is also prohibited in all federal navigation channels, navigation fairways, and mooring fields.

Section 8. Use of Vessels as Abodes. In accordance with the RI Coastal Resources Management Program, Section 300.5, houseboats or floating businesses are prohibited from

~~mooring or anchoring unless within the boundaries of a marina. Houseboats or floating businesses shall tie into pumpout facilities.~~

Section 9. Boat Sewage Waste. The disposal of untreated boat sewage wastes by any means into the coastal waters of the Town is prohibited.

Section 10. Marine Debris. The discharge of any waste, garbage, refuse, petroleum product or by-product, paint, varnish, dead animals, fish, bait, or any other debris is prohibited under this ordinance.

Section 11. Towing and Moving of Vessels. If any vessel berthed, moored, or anchored in the coastal waters of the Town is found to be in violation of any provision of this ordinance, the harbormaster is directed to move, relocate, or tow such vessel. In addition to any fines such violation may incur, a fee of $$ $$ shall be collected from the vessel owner for such harbormaster action. This fee shall be set by the Town Council annually, upon recommendation from the Harbor Commission.

Section 12. Rafting. Vessels may raft on a single mooring when such activity does not interfere with the proper functioning of adjacent moorings or vessel anchorages. Vessels at raft shall be manned at all times.

Section 13. Abandoned Vessels and Structures.

(a) Upon determination of the harbormaster, the harbormaster may take custody and control of abandoned vessels and structures located in the coastal waters and harbor areas of the Town and remove, store, or otherwise dispose of such vessel or structure at the expense and sole risk of the owner of the abandoned vessel or structure. Reasonable notice of such removal, storage, or disposal shall be publicly advertised.

(b) The harbormaster shall assume all of the duties and powers of the Commissioner of Wrecks and Shipwrecked Goods as detailed in the General Laws of Rhode Island, Title 46 Chapter 10 Sections 1 through 13.

Section 14. Special Events. The Harbor Commission, with approval from the Town Council, may authorize in accordance with all appropriate state and federal guidelines, certain special events, such as swimming races, regattas, marine parades, or other marine and maritime activities that may from time to time be held on or in the coastal waters and harbor areas under the jurisdiction of the Town.

Section 15. Boat Standards. Every vessel entering the coastal waters and harbor areas of the Town of Salty Acres shall be equipped as required by Title 46-22 of the General Laws of Rhode Island, as amended, and all similar federal laws, rules and regulations. Consistent with Title 46-22 of the General Laws of Rhode Island, as amended, the harbormaster shall have the authority to enforce all provisions of Title 46-22.

Section 16. Right-of-Ways to the Water.

(a) No person shall block, barricade or in any way impede the public use of or access to

~~designated public rights-of-way to the water as defined by the Coastal Resources Management Council or the Town of Salty Acres.~~

(b) No person shall store a vessel, vehicle or structure on a designated public right-of-way to the water as defined by the Coastal Resources Management Council or the Town of Salty Acres.

(c) Any person in violation of this section of the Ordinance shall be subject to a fine in accordance with ARTICLE 6 Section ___ of this Ordinance.

Section 17. Transient Anchoring and Anchorages.

(a) A vessel may anchor on its own anchor in the coastal waters and harbor areas of the Town except in federal navigation channels, navigation fairways, mooring fields, swimming areas, rights-of-way ingress and egress areas, and launching ramp areas, for a period not to exceed ___ hours. Written consent of the harbormaster is required for extended visits of more than ___ hours. No vessel anchored under such conditions shall be left unattended. Owners and/or operators of such vessels may go ashore, but must be available to tend the vessel in the event of heavy weather. It shall be the vessel owner's and/or operator's responsibility to remain clear of all moored vessels, and other structures.

(b) **Transient Anchorages.** The following areas are established for use as transient anchorage areas:

Bluff Hill Cove: From point_____to point____to point____.

Cabot Cove: From point_____to point____to point____.

Section 18. Failure to Stop. It shall be a violation of this ordinance for any person to refuse to move or stop on oral command or order of the harbormaster or assistant harbormaster(s) operating from a patrol boat identified as such and exercising the duties lawfully assigned to him.

ARTICLE 5. MOORING REGULATIONS

Section 1. Permitting.

(a) No mooring shall be located in the coastal waters and harbor areas of the Town of Salty Acres until a permit has been issued for the use of such mooring by the Harbor Commission. No mooring shall be located nor shall be maintained unless the mooring owner has received a valid mooring permit issued by the Harbor Commission for the mooring and that the mooring conforms to the specifications and standards set forth in this ordinance and permit.

(b) **Request for a New Mooring Permit.** To be eligible for a new mooring permit, an applicant must own a boat for which a mooring permit is being sought, or be a commercial mooring operator. All requests for new mooring permits shall be submitted to the Harbor Commission on the application forms provided by the Harbor

~~Commission by ____ of each year. Mooring permit applications are available at the Town Clerk's office. An application shall be accompanied by the appropriate fee and shall be received by _____ in the offices of the Harbor Commission. A complete and accurate mooring~~

permit application must be provided before the Harbor Commission can act to approve or deny such application. The Harbor Commission shall determine if a new mooring permit can be issued only after all provisions of the Harbor Management Plan and this ordinance are met.

If the Harbor Commission issues a mooring permit, the mooring owner for which such permit has been issued must locate the mooring at the direction of the harbormaster or assistant harbormaster(s) in accordance with the Harbor Management Plan and this ordinance.

(c) Permit Renewals. Applications for renewal of a valid mooring permit shall be submitted to the Harbor Commission on the application forms provided by the Harbor Commission by _____ of each year. An application shall be accompanied by the appropriate fee and shall be received by in the offices of the Harbor Commission. Failure to submit a complete and accurate application by shall result in the loss of mooring space.

The Harbor Commission shall mail the application forms by 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 Commission of any change in address.

The Harbor Commission shall approve or reject mooring permit applications by _____.

(d) Relocation of Existing Permitted Mooring. All requests for relocation of existing permitted moorings must be submitted to the Harbor Commission. Information for such a request must meet the requirements listed for a mooring permit application, as well as show proof of a valid mooring permit issued for the previous year. The reasons for a mooring relocation must also accompany the request. Based upon availability of space, the requirements of the ordinance, and the type and size characteristics of vessel, action will be taken on the request. Any requests received by the Harbor Commission that is not complete shall be returned to the applicant and no action will be taken on the request.

(e) Failure to Renew an Existing Valid Mooring Permit. Failure to renew an existing valid mooring permit in accordance with the provisions of this Ordinance by _____ of any given year shall result in the permitted owner's abandonment of all his privileges and interests in the previously permitted mooring space. The harbormaster, under direction from the Harbor Commission, may remove the now abandoned mooring at the permitted owner's expense. Such expenses may in turn be recovered by the Town, in accordance with any provision of this Ordinance.

(f) Forfeiture of Mooring Space. Any owner of a mooring located in the coastal waters and harbor areas of the Town shall be deemed to have forfeited his mooring space by reason of the following:

(1) Failure to comply with any of the requirements of this Ordinance;

(2) ~~Removal of mooring and mooring tackle by mooring owner and notification to the harbormaster and/or Harbor Commission that the mooring has been removed;~~

(3) ~~Failure to respond to the harbormaster's and/or Harbor Commission's notice that the mooring does not comply with the mooring tackle standards herein after set forth, or that the mooring has been displaced or moved from its permitted location.~~

(4) ~~Failure to resurface or replace mooring within sixty (60) days after being advised by the harbormaster that the mooring is down.~~

(g) ~~**Available Spaces.** As of_____of each year, the Harbor Commission shall determine the number of mooring spaces available for moorings placement as the sum of all authorized mooring spaces minus the totals of all not completed/not acceptable mooring permit renewal applications [Article 5, Section 1(e)], not renewed mooring permits [Article 5, Section 1(e)], and forfeited mooring space [Article 5, Section 1(f)]. These available mooring spaces shall be made available to those persons whose names appear on the waiting list.~~

(h) ~~**Waiting List.** The Harbor Commission shall maintain a waiting list of all applications for private and commercial mooring permit requests when no mooring space is available within the coastal waters and harbor areas of the Town. Placement of applications on such a waiting list will be recorded from complete mooring permit applications as they are received by the Harbor Commission. The Harbor Commission shall update the waiting list twice a year and make the waiting list available for public review at all times.~~

(I) ~~**Occupancy of Mooring.**~~

(1) ~~No vessel shall occupy a mooring other than the one for which it has been permitted. The harbormaster shall have the authority to move any vessel violating the provisions of this section, with such movement at the expense and risk of the vessel owner.~~

(2) ~~The harbormaster may permit the temporary use of a mooring by another vessel upon written request by the permitted mooring owner.~~

~~**Section 2. (a) Mooring Permit Application Requirements.** The following requirements are set for applications for mooring permits:~~

(1) ~~**Private Moorings.** All applications for private mooring permits shall contain the following information:~~

a. ~~Name, Address and Telephone (home and office) of owner;~~

b. ~~Vessel Name, Registration Number, Length (ft), Width (ft), Draft (ft), Type, and Color;~~

c. ~~Number of Sleeping Berths, if any, and Type of Marine Sanitation Device (MSD), if any;~~

d. ~~Mooring Classification, Actual mooring weight;~~

e. ~~Appropriate registration fee;~~

f. ~~Area(s) where applicant would like to locate mooring, prioritized.~~

(2) ~~**Commercial Moorings.** Commercial moorings shall only be permitted in approved mooring fields as designated within the Harbor Management Plan and Ordinance. All applications for commercial mooring permits shall contain the following information;~~

a. ~~Name of Business, Owner's Name, Address and Business Telephone;~~

b. ~~Name, Address, and Telephone of Business Manager, if different from applicant;~~

c. ~~Number of Moorings requested;~~

d. ~~Mooring Field in which mooring(s) would be located;~~

e. ~~Compliance with Section 300.4.E.1(a) & (b) of the Rhode Island Coastal Resources Management Program (RI CRMP) as they relate to the provisions of sanitary facilities and parking requirements.~~

(b) ~~**Additional Requirements for Commercial Mooring Permits.**~~

(1) ~~Commercial mooring permit holders must submit to the Harbor Commission within receiving such a permit a breakdown by mooring with the following information:~~

a. ~~Vessel Name, Registration Number, Length (ft), Breadth (ft), Draft (ft), Type, and Color;~~

b. ~~Number of Sleeping Berths, if any, and Type of MSD, if any;~~

c. ~~Mooring Classification, Actual mooring weight;~~

(2) ~~Upon initial submission of the above information to the Harbor~~

~~Commission, each commercial mooring permit holder must submit an annual report with the information required in Article 5, Section 2(b)(1) (above) and shall prepare and submit a plan that details the use and layout of those commercial moorings permitted within a Town mooring field by April 1 of each year.~~

Section 3. Numbering.

(a) Each mooring located in the coastal waters and harbor areas of the Town of Salty Acres, once permitted, shall be assigned a number by the Harbor Commission. The number will be displayed in contrasting color in two places on each mooring buoy or pick-up float in block letters at least _____ inches in height.

(b) Any mooring not displaying a mooring registration number will be considered a not permitted mooring. Not permitted moorings, and any vessels attached thereto, will be removed in accordance with any provisions of this Ordinance.

Section 4. Moorings Records. The Harbor Commission and harbormaster shall keep a detailed record of all moorings, both private and commercial, their location, along with the owner's name, home (and business, if applicable) address, telephone number(s), mooring permit number, date mooring was set, last mooring inspection date, and vessel data as detailed above at Article 5, Section 2(a) and (b). The Harbor Commission and harbormaster may keep separate or combined private and/or commercial mooring records, in accordance with this provision.

Section 5. Permit Ratios. There shall be a permit ratio for all moorings in the Town of 35 percent commercial and 65 percent private. Mooring permits associated with residential waterfront property owners are not to be included in this ratio.

Section 6. Moorings Associated with Residential Waterfront Properties. Moorings owned by persons who own residential waterfront property are allowed to be placed in the coastal waters and harbors areas of the Town in those waters immediately adjacent to the upland residential waterfront property. The mooring owner must comply with all mooring permit application requirements and receive a mooring permit from the Town as described herein, and the mooring must meet all mooring tackle standards and inspections as described hereinafter, before such placement will be permitted. One (1) such mooring is allowed to be placed in these areas by residential waterfront property owners.

Section 7. Transfer of Moorings. Mooring permits cannot be transferred from person to person.

Section 8. Mooring Fields.

(a) No mooring shall be located or placed within the coastal waters and harbor areas of the Town of Salty Acres without a valid mooring permit issued by the Harbor Commission and without having the mooring inspected as detailed herein and approved by the harbormaster. The harbormaster must direct the placement of the mooring.

(b) No vessel so moored or anchored shall extend beyond the designated mooring field boundaries, as detailed herein.

(c) All designated mooring fields sited within the coastal waters and harbor areas of the Town shall be setback a minimum distance of:

(1) ~~100 feet from the Mean High Water mark of the shore to accommodate the placements of moorings associated with residential waterfront property owners; and,~~

(2) ~~50 feet from all federal navigation channels, navigation fairways, Right-of-Way fairways, shellfish management areas, and shoreside structures such as, but not limited to, docks and piers.~~

(d) ~~**Mooring Field Designations.** Certain waters of the Town of Salty Acres shall be designated as mooring fields. Those waters herein designated are authorized for the placements of permitted moorings as detailed within this Ordinance. They are located in accordance with all policies of the Town of Salty Acres' *Harbor Management Plan*, and the policies and requirements of the Coastal Resources Management Council's *Guidelines for the Development of Municipal Harbor Management Plans*. Any revisions to the size, and/or location of these mooring field designations 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 CRMC, the revisions may take place.~~

~~The following mooring field designations are herein described and designated and are plotted on Map A1 and A2, Appendix A:~~

~~**Mooring Field A:** In Salty Acre Harbor, Mooring Field A begins at a point 100 feet east of Narragansett Avenue (RI State Plane Coordinate 42356), parallels the shore at a 100 foot distance from MHW north to a point 100 feet east of North Shore Road (RI SPC 42556), turns east until a point 50 feet west of the federal navigation channel (RI SPC 42589), and parallels the federal navigation channel south to a point 50 feet west of the federal navigation channel and 1000 feet east of Narragansett Avenue (RI SPC 42389).~~

~~**Mooring Field B:** In Salty Acre Harbor, Mooring Field B begins at a point 100 feet west of Walnut Road (RI SPC 42399), parallels the shore at a 100 foot distance from MHW north to a point 100 feet west of Birch Street (RI SPC 42599), turns west until a point 50 feet east of the federal navigation channel (RI SPC 42590), and parallels the federal navigation channel south to a point 50 feet west of the federal navigation channel and 1000 feet west of Walnut Road (RI SPC 42390).~~

~~**Mooring Field C:** In Bluff Hill Cove, Mooring Field C begins at a point 100 feet north of the State Pier Docks #2 at the east entrance of Marine Drive (RI SPC 42112), parallels the docks with a 100 foot setback buffer west to a point 50 feet from Can 17 at the federal navigation channel (RI SPC 42001), turns north along the federal navigation channel with a 50 foot buffer setback for 500 feet to Can 19 (RI SPC 42301), turns east and parallels the State Pier Docks #1 with a 100 foot setback buffer to a point 100 feet south of the easternmost State Pier #1 Docks (RI SPC 42312), then connecting RI SPC 42112 with RI SPC 42312.~~

Section 9. Mooring Tackle Specifications. (Refer to Appendix VI for specific mooring tackle recommendations.) All tackle shall meet the following minimum standards:

(1) The maximum length of the pennant should be two and one-half times the distance from the bow chock to the water plus the distance from the bow chock to the mooring cleat or post.

(2) All pennant lines running through a chock or any other object where chafing may occur should have adequate chafe guards.

(3) The total scope of the chain should be two and one-half time the depth of the water at high tide. The bottom and top chain should each consist of approximately 50 percent of the scope.

(4) All shackles, swivels, and other hardware used in the mooring hookup should be proportional in size to the chain used.

(5) All shackles should be properly sized.

(6) The pennant should be spliced or shackled into the bitter end of the top chain below the buoy so the strain is not carried by the buoy. The use of a second pennant and anchor in heavy weather is encouraged.

(7) Only mushroom and/or concrete anchors will be acceptable on permanent moorings.

(8) The minimum distance between any two moored vessels should be 1.25 times the total mooring scope plus the length of the larger vessel.

(b) The harbormaster may approve informal 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. The harbormaster must file such variances with the Harbor Commission.

Section 10. Inspections.

(a) All new moorings in the coastal waters and harbor areas of the Town must have the chain, tackle, and anchor inspected by the harbormaster or his designee prior to setting the mooring.

(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 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 this Ordinance. The harbormaster or his designee may inspect any moorings at any time to determine compliance with this section.

(c) All moorings shall be inspected once every _____ years and the results of such inspection shall be reported to the Harbor Commission. Mooring inspections shall be performed by a qualified 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 this Ordinance. Any mooring or component of a mooring reported not in compliance with this Ordinance shall be replaced within thirty (30 days of such notice. Any mooring washed ashore during a storm shall be inspected by the harbormaster or his designee before it is reset. All costs of any mooring inspection required under the provisions of this Ordinance shall be the responsibility of the mooring owner.

(d) Within forty-five (45) days after a mooring and/or its mooring tackle has been reported to violate any requirements of this Ordinance, a second mooring inspection must be completed to determine if the violation has been corrected and meets the standards detailed in this Ordinance. The results of such second mooring inspection must be reported to the Harbor Commission. Failure to correct the violation shall cause the mooring to be deemed not safe and shall be cause for the revocation of the mooring permit, a violation of the Ordinance, and subject to the removal of the mooring from the coastal waters and harbor areas of the Town in accordance with any provision of this Ordinance at the risk and expense of the mooring owner.

(e) Qualified Inspectors.

(1) The Harbor Commission shall develop and set standards for the requirements and qualifications of mooring inspectors. The Harbor Commission may designate as many inspectors as it feels are necessary. Minimum requirements for mooring inspectors that the Harbor Commission shall consider are that an inspector must hold certificate as a certified SCUBA diver, and that all mooring inspectors are familiar with the minimum mooring and mooring tackle specifications of this Ordinance.

(2) The Harbor Commission shall make available an application form for which potential mooring inspectors may complete to be considered a designated mooring inspector. The application shall be filed with the Harbor Commission with the appropriate fee. The Harbor Commission shall determine if such applications meet the requirements to be a qualified mooring inspector for the Town and shall so designate the applicant as a qualified mooring inspector able to carry the certain provisions of this Ordinance for which such activity is allowable. Qualified mooring inspectors must reapply by ____ of each year.

(3) The Harbor Commission shall keep a list of all qualified mooring inspectors and shall make this list available to all mooring permit holders.

ARTICLE 6. FEES AND PENALTIES

Section 1. Fees.

(a) All applications for mooring permits shall be accompanied by the appropriate fee. All such fees are non-refundable. These fees shall be set annually by the Harbor Commission and shall be approved as part of the Harbor Commission's budget submittal to the Town Council. At no time shall the fee collected by the Harbor Commission from an mooring permit applicant be less than the following:

Commercial	$ 100.00
Private/Non-Residential	$ 50.00
Private/Residential	$ 25.00

(b) All applications for qualified mooring inspectors shall be accompanied by a fifty ($50) dollar fee.

Section 2. Penalties.

(a) Any violation of this Ordinance or any violation of the Town of Salty Acres *Harbor Management Plan* shall be punishable by a fine not to exceed one hundred ($100.00) for each violation or by imprison- maned not exceeding days. Each day the violation exists shall be deemed a new violation. Violation of this Ordinance may result in the loss of boating and/or mooring privileges for a period of up to years.

(b) It shall be a misdemeanor punishable by a fine of not more than one hundred ($100.00) dollars for any person to refuse to move or stop on oral command or order of the harbormaster or his designee exercising the duties lawfully assigned to him.

ARTICLE 7. HARBOR MANAGEMENT FUND

Section 1. Creation. A harbor management fund is hereby created to receive and expend monies for harbor-related purposes as determined by the Harbor Commission. All revenues generated by town boat launching fees, mooring permit fees, qualified mooring inspectors, other fees of this ordinance, and fines levied under the authority of this ordinance shall be deposited into this fund. Funds shall be dispersed for purposes directly associated with the management and implementation of the Town of Salty Acres Harbor Management Plan and this ordinance. Monies from this fund should be allocated to the harbormaster and/or his designee for the purpose of enforcing the provisions of the Town of Salty Acres Harbor Management Plan and/or this ordinance. The harbor management fund shall be established, budgeted and administered in a manner consistent with the procedures of the Town of Salty Acres.

ARTICLE 8. LIABILITY

Section 1. Persons using the coastal waters and harbor areas of the Town of Salty Acres shall assume all risk of personal injury and damage or loss to their property. The Town of Salty Acres assumes no risk on account of accident, fire, theft, vandalism or acts of God.

~~**ARTICLE 9. SEVERABILITY**~~

Section 1. If any provisions of this ordinance are held invalid or in-operative, the remainder shall continue in full force and effect as though such invalid or inoperative provisions had not been made.

ARTICLE 10. EFFECTIVE DATE

Section 1. This ordinance shall take effect upon its passage.

Appendix IV: State of Rhode Island contact sources for further information

Coastal Resources Management Council Stedman Government Center 4808 Tower Hill Road Wakefield, RI 02879 222-2476	R.I. Department of Environmental Management, Water Resources 235 Promenade St. Providence, RI 222-3961
The University of Rhode Island Coastal Resources Center Marine Resources Building Narragansett Bay Campus Narragansett, RI 02882 874-6224	R.I. Department of Environmental Management, Boating Registration 235 Promenade St. Providence, RI 222-6647
R.I. Department of Administration, Division of Planning 265 Melrose St. Providence, RI 02907 222-2656	R.I. Harbormasters Assn. Dan Leahy, Secretary 15 Garfield Ave. Rumford, RI 02916

Appendix V: SAMPLE MOORING PERMIT APPLICATION

APPLICATION FOR 19_____MOORING SPACE PERMIT

1. Applicant's Name:_____Date:_____
2. Address:_____
3. Telephone: Home:_____Office:_____
4. Name of Vessel:_____
    a. Length:_____
    b. Beam:_____
    c. Draft:_____
    d. Power/Sail:_____
    e. Type of MSD:_____
5. Vessel Registration Number and State of Issue:_____

Provide photocopy of all registration forms to include vessel documentation certificate if applicable. Applications sent without copies of current registration or documentation will be returned unapproved. NAME APPEARING ON MOORING PERMIT MUST BE THE SAME AS THAT APPEARING ON VESSEL REGISTRATION OR DOCUMENTATION FORMS.

6. Mooring Tackle:
    a. Mushroom anchor weight:_____
    b. Chain size and length:_____
    c. Date of last inspection:_____
    d. Name and address of certified mooring inspector:

_____

_____

DO NOT LEAVE THIS SECTION BLANK. DO NOT WRITE "SAME AS LAST YEAR". THIS INFORMATION IS REQUIRED FOR MOORING PERMIT ISSUE.

SAMPLE MOORING APPLICATION

A COPY OF THE DIVER'S CERTIFICATE OR OTHER CERTIFICATION OF INSPECTION ATTESTING TO THE RELIABILITY AND SERVICEABILITY OF THE MOORING TACKLE **MUST** ACCOMPANY THE PERMIT APPLICATION.

7. No-Discharge Policy Statement.

The Town of_____prohibits the discharge of any sewage or pollutants whatsoever into the waters under its jurisdiction. Every mooring permittee shall be expected to abide by this policy which will be strictly enforced. PLEASE READ AND SIGN THE FOLLOWING CERTIFICATION STATEMENT.

"I am aware that the Town of_____prohibits the discharge of any sewage or pollutants whatsoever into the waters under its jurisdiction. I will ensure that my guests and myself will not discharge sewage or other pollutants into the waters of the Town. I grant permission to the Harbormaster or his designated assistant(s) to board my vessel and/or my guests vessel to inspect marine sanitation devices (MSDs) for proper operation and compliance with applicable U.S.C.G. requirements. I understand that any non-compliance with the above is cause for revocation of mooring permit."

_____

Signature Date

8. Guest Mooring Policy.

Private mooring holders have the right to have guest vessels use their mooring. The permit holder is responsible for the guest(s) vessel, its actions while the guest is utilizing the mooring, and for the safe use of the mooring and its tackle. All such guest use of a mooring must be filed with the Harbormaster as soon as possible.

PRIVATE MOORINGS CANNOT BE RENTED OUT. VIOLATION OF THIS POLICY WILL RESULT IN LOSS OF MOORING PERMIT.

9. Mooring Fees.

(Fee structures for mooring permits are established by individual municipalities)

10. Payment of Fees:

Make all checks payable to the Town of_____.
Send Mooring Applications and Fees to: Office of the Harbormaster
(local address)

Appendix VI: MOORING TACKLE SPECIFICATIONS

GENERAL MOORING TACKLE SPECIFICATIONS

The following mooring tackle specifications are provided as a general guide for mooring under average conditions of tidal flow and surge, bottom holding characteristics and water depth. Vesselowners should consult with local Harbormaster and/or mooring installation service to determine exact mooring tackle specification for their particular requirements.

Length of vessel in feet	Mushroom anchor (in pounds)	Lower Chain Diameter (inches)	Upper Chain Diameter (inches)	Mooring Pendant Dia. (inches)
Up to 20'	150	½	3/8	½
21' - 26'	200 - 250	½	3/8	5/8
27' - 36'	300 - 400	3/4	½	3/4
37' - 45'	500 +	3/4	½	3/4 - 7/8
46' - 55'	750 +	1	5/8	7/8 - 1
56' - 65'	1,000 +	1 - 1 ½	3/4	1 1/4

1. Center pipe mooring buoys are recommended.
2. Use chaffing gear on all mooring pendants.
3. Mooring tackle must be inspected on a three year cycle.
4. Mooring tackle should be removed during winter seas.

Appendix VII: STORM PREPAREDNESS

A. Frequently Asked Questions

What are some preparedness actions that can be recommend for the recreational boater?

One of the critical harbor and shoreline users is the individual boater. Because they are often the primary occupant of the harbor area, they should be given special attention. As part of this element of the harbor plan and related ordinance, each boater should complete and submit to the harbormaster a preparedness plan. There is a growing amount of technical and educational material being developed for individual boat owners about to prepare for storm events. The town should review this information and provide to local boaters relevant parts. The following is a summarization of key points contained in the current literature.

Boat owners will be faced with the decision of what to do with their boats in advance of a storm event. If the decision is made to stay at a dock, all lines should be doubled and chaffing protection provided where dock lines pass through fairleads and chocks over the vessel's side. 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.

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 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 your 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 the 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 harbor, it is important to place fenders on both sided of the boat. Once all precautions have been taken, the boat owner should leave the boat and seek shelter.

Can the municipality tow a disabled vessel?

According to the U.S. Coast Guard, assistance cases fall into two broad categories: distress and non-distress. Distress is defined as imminent danger requiring immediate response and assistance (U.S. Coast Guard COMDTINST 16101.2B, p. 2). If the situation is life-threatening, the historic law of the sea obliges the harbormaster, or any boater, to render assistance.

In cases of distress the Coast Guard should be notified immediately of the situation and of the intent of the harbormaster. The harbormaster plays a key role in the hierarchy of emergency response as he/she

~~is often the first to arrive on scene. If the Coast Guard deems it necessary, it may direct other private/public resources, in addition to its own, to respond. If the Coast Guard arrives and finds a stable situation with the first responders capable of assisting, it may withdraw its response equipment. However, if the Coast~~

Guard finds the situation unstable, and if the first responders are unable to provide the necessary assistance, it will intervene immediately.

When a harbormaster responds to a distress situation, and provides some form of emergency aid, he/she is afforded protection from liability through Title 46, Section 2303 of the US Code which states:

Any person...who gratuitously and in good faith renders assistance at the scene of a vessel collision, accident, or other casualty without objection of any person assisted, shall not be held liable for any civil damages as a result of the rendering of assistance for any act or omission in providing or arranging salvage, tonnage, medical treatment, or other assistance where the assisting person acts as an ordinary, reasonable prudent man would have acted under the same or similar circumstances.

The key phrase here is "act as an ordinary, reasonable prudent..." which dictates that the harbormaster must act in good faith and in a reasonable, seamanlike manner. Any variance from this standard may increase liability.

This potential liability, and the fact that alternatives exist, should dissuade the harbormaster from towing. Other resources that may be able to offer assistance can be contacted. The Coast Guard will issue a Marine Assistance Request Broadcast (MARB) which solicits voluntary response of anyone who can assist the disabled mariner (including Coast Guard Auxiliary Units and good samaritans) (U.S. Coast Guard COMDTINST 16101.2B, p. 2). A harbormaster may also contact a friend or family member of the boater for assistance.

Another viable form of assistance may be sought through professional towing companies that work in the area. The harbormaster can provide the disabled boater with information on how to contact these companies, and their current rates. In most instances these firms will contact the boater directly in response to the MARB. Once the boater decides upon a service and a verbal agreement is made, the harbormaster cannot interfere with that contract.

It is clear that "good faith" actions of harbormasters are protected, to some degree, by the "Federal Boating Safety Act of 1971," but to what extent remains uncertain. Unfortunately, there is no statutory framework from which to formulate guidelines. Issues such as this are decided by customary law, which means each case is reviewed individually by a judge and jury. Because there are so few cases involving harbormaster liability, judges and jurors lack prior judicial decisions which set precedents. It is therefore difficult to predict the extent to which harbormasters will be protected by the state. In order to limit the potential of being found liable, harbormasters must realize the extent of their liability and must make rational, professional decisions which can be supported as reasonable actions before a court of law.

What is the municipalities mooring liability?

The major concern focuses on the harbormaster's involvement with setting mooring standards, placing ground tackle and conducting inspections. In order for a harbormaster to avoid or minimize the amount of liability he/she must exercise reasonable care. This includes:

(1) ~~setting mooring standards which are appropriate for the area. The harbormaster 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 (Taylor, 1992);~~

(2) ~~providing mooring occupants with information on the stress points of moorings and offering advice on dealing with extreme weather conditions; and~~

(3) ~~ensuring that all mooring gear under town control is routinely inspected, and that proper records of these inspections are kept. The question of liability continually arises if the town conducts the inspections itself. Liability results not because the town inspects the mooring, but because it does so improperly or fails to correct a situation in which the mooring does not meet specifications.~~

~~Some towns have opted to place the burden of mooring inspection on the boaters. This is generally a financial decision. However, by doing so, the town relinquishes direct control of the inspection process, and may not be as effective in ensuring that all mooring tackle conforms to the regulations. The harbormaster can choose instead to conduct the inspection and assure that each mooring has in fact been inspected.~~

(4) ~~identifying and correcting situations which may cause damage to a moored vessel. If a harbormaster learns that two boats are hitting one another while on town managed moorings, the situation needs to be rectified quickly. The harbormaster must first stop the vessels from hitting. This can be achieved by removing one of the vessels from its mooring. The harbormaster then decides where to move the vessel. To another mooring? Is that mooring of adequate size? Has it been inspected? Where is the owner and when will the owner return? Are the town guest moorings available and of adequate size?~~

~~If the town acts as a commercial mooring operator, owning and then renting the mooring gear, its liability is greatly increased. The town can be held responsible for the safety of vessels stored on its moorings. This may include providing security patrols, preventing chafing during storms and assuring the general well-being of the vessel. Normally, a town acts as surface manager and the physical mooring gear is owned by the boater. This greatly reduces the potential for law suits against the town, which is not responsible for the gear itself, but for the proper allocation of space and general management of the harbor area.~~

B. ~~Model Hazard Mitigation Plan for Municipal Harbors~~

~~This section presents a model overlay for developing a harbor hazard mitigation plan. Included in the document ***Hazard Mitigation for Rhode Island Recreational Harbor Communities***, developed by the University of Rhode Island Coastal Resources Center for the Rhode Island Emergency Management Agency, are models that can be used by marinas and boaters in preparing their own preparedness plans.~~

~~The model provides the harbor planner, harbormaster and others with an example of what a local harbor hazard mitigation plan may look like. It was developed in conformance with the guidance for municipalities presented in the previous part of this document.~~

The model is included for two purposes. The first is to demonstrate one form that the plans may take. The second is to provide specific strategies and actions that can be used to mitigate potential damage from natural hazards.

B. Model Harbor Hazard Mitigation Plan

This model harbor storm preparedness plan has been written in conformance with the guidance detailed in the previous part of this document. The model harbor contains many of the physical attributes found in a typical harbor in Rhode Island. In developing the features from Wickford Harbor located in North Kingston, Rhode Island were drawn upon heavily for the model.

Model Harbor Summary

- RIDEM Water Quality Designation: SB
- CRMC Use Type Designation: Type 3
- FEMA Flood Zone(s): 445404 0009 B - 445404 0013 B - - V16 and A13 zones, subject to 100 year storm flooding and wave action.
- Land Use: The land use along the shores of this harbor have been a mix of high density residential and water dependent commercial development, such as marinas and boat yards. The Army Corp of Engineers constructed two break-waters along the eastern face of this harbor in 1962. These structures are at times submerged during storms and high tides.
- Moorings: The town regulates 3 mooring fields in the Harbor for a total of 230 boats. The town sets and enforces standard mooring gear with the average scope of 2.5:1 resulting 50% overlap between moored vessels.

100. Authority:

The primary authority for carrying out the responsibilities detailed in this plan is vested with the harbormasters, 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 town departments including the: planning board, police and fire departments, town planners, building code official, 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.

Although this plan strives to eliminate all damage from natural disaster, providing that level of protection clearly impossible. Therefore, the plan seeks to provide the greatest degree of protections from storm events while allowing traditional waterfront uses to continue.

300. Risk Assessment

310. General Harbor Characteristics:

The bottom consistency is generally mud, with a minimum depth of 3 feet. This bottom type provides good holding for moorings. The harbor opens eastward with a man-made breakwater marking the entrance. The breakwater separates the harbor from a stretch of open water extending eastward approximately five miles. The breakwater provides limited protection from surge and swell, but will be topped with a surge exceeding 3.6 feet.

The town manages 330 moorings in the harbor. The mooring field is divided into three sections. The lower mooring areas which is contained by the breakwater and natural harbor entrance (120 deep water moorings). The middle mooring field which is contained by the main harbor (140 large and medium size moorings) and the upper mooring field (70 moorings) which is a string of small boat moorings extending up into the shallowest part of the harbor.

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

1. Open space - this use is limited to 3 acres around the harbor area and is predominantly located in the northeast section.

2. Residential - this use totals approximately 70% of the land use surrounding the harbor area. Generally, the single family dwellings are built upon lots that range from 10,000 square feet to 1 acre.

3. Commercial - commercial waterfront uses such as marinas dominate the southwest section of the harbor. There are five marinas located in the harbor. Their total in-water capacity exceeds 1,000 boats. Two facilities operate a fuel dock. All the marinas provide upland storage and limited repair facilities.

In addition to the marinas, there is a commercial strip that fronts main street and backs up to the west end of the harbor. This commercial is generally retail sales. There are no high hazard uses (i.e., gas stations, chemical storage, etc...) bordering the harbor area.

All waterfront structures are built to local building code (ordinance 33-104). A full time building inspector ensures that the codes are adhered to during construction.

320. High Hazard Areas:

> ~~According to FEMA flood insurance maps, all of the land surrounding the harbor is within the 100 year storm flood plain.~~

Historically, the land uses in the upper part of the harbor within 300 feet of the shoreline have received significant surge damage.

330. Risk Assessment Table

Threat	Marine interest	Effect	Result -1	Result -2
Flood/surge	Boaters on moorings Lower Middle Upper	decreased scope	Dragging	threaten shoreline homes threaten shoreline business threaten auto bridge
	Marina facility	flooded facility Docks topping piles	floating debris spills of hazardous material freed docks and boats	threaten surrounding wetland
	Private residences	flooded property Docks topping piles	freed docks and boats	
Wind	Boaters on moorings Marina facility	windage windborne debris	Dragging or pennant breakage structural damage	

400. Strategies for Preparedness, Response and Recovery

410. Town - The harbormaster will coordinate all harbor activities related to preparation, response and recovery. This will be done in coordination with the emergency management officer and department of transportation.

410.1 Preparedness - The town, through its harbormaster, 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. Maintain radio watch
7. Alert local port community, encouraging boat owners to seek safe refuge, remove boats from

~~water, or take action to minimize damaging effects~~

8. ~~Alert local marinas, marine interests, holders of mooring permits, and occupants of special anchorage areas to impending emergency.~~

9. ~~Keep MSO Providence appraised of hazardous conditions in harbor~~

~~LEVEL 2 48 HOURS~~

1. ~~Continue to perform activities in level 3~~

2. ~~Contact those town mooring holders who are not complying with their preparedness plan.~~

3. ~~Assist marina/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 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.~~

~~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 425.2)~~

3. ~~Fuel harbormaster vessel~~

4. ~~Haul and store harbormaster 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.~~

410.2 ~~Response - The town'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 force unless revoked by the police chief or the Town Manager.~~

~~The harbormaster will remain on-station in the harbor's or police department to address any harbor related issue. This will also allow the harbormaster vessel to begin operation immediately at the conclusion of storm.~~

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

~~Priority 1:~~
~~Reestablish the harbormaster department 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 department, correct deficiencies~~
   - ~~reestablish radio communications.~~
2. ~~Complete rapid appraisal of damage~~
3. ~~Provide damage assessment information to town's public information center 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's public information center and MSO Providence~~

8. ~~Track time and resource allocation of harbormasters department 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 manager.~~

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. ~~Marina facilities - As part of the Town's harbor hazard mitigation plan, all marina facilities as defined by CRMC, will submit a hazard mitigation plan to the harbormaster within 90 days of~~

~~this document being approved. The facility's plan will be updated annually and any changes will be reported to the harbormaster by January 1 of each year.~~

~~Facility plans will include:~~

- ~~Primary contact person primary and secondary phone numbers.~~
- ~~VHF channel that is monitored~~
- ~~List of facility staff who are expected to assist in preparation, response and recovery phases.~~
- ~~List of hazardous material stored on site (i.e. waste oil, fuel tanks, solvents). This information can be extracted from the facilities Environmental Operations and Maintenance Plan.~~
- ~~Inventory of potential recovery equipment (heavy equipment, generators), including outside contracts for special equipment for recovery phases~~
- ~~Debris disposal plan~~
- ~~Special assistance requested from town~~
- ~~List of preparation, response and recovery activities and timing~~

422. ~~Boaters - Boats moored on 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. This 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 autobilge 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.~~

423. ~~Waterfront business (excluding marinas) - All waterfront business are expected to take the necessary precautions to protect their property.~~

424. ~~Shorefront home owners- All shorefront homeowners are expected to take the necessary precautions to protect their property.~~

425. ~~Special Hazards~~

.1 ~~Commercial Dock- all vessels shall be cleared of the town commercial dock 12 hours prior to expected storm event.~~

.2 ~~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~~

.3 ~~Passenger vessels and ferries- As deemed necessary by the harbormaster, local passenger vessels and ferries will submit individual plans to the harbormasters. These plans will include information about planned preparedness, response and recovery actions.~~

~~500. Inventory of longer term mitigation projects~~

1. ~~Maintaining the existing seawall. Although it does not provide complete protection, there is a measure of safety gained by having the seawall properly maintained.~~

2. ~~Methods to increase scope within the harbor without losing surface area maximization should be explored. Actions may included 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

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
    - distribute a storm checklist for 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 floodproof 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 who 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 Department of Public Works to establish the working relationship between it and the harbormaster for completing the following activities:

preparing pubic waterfront property hauling and storing the harbormaster vessel

The harbor commission shall work with the planning board and planning department 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: (the following has been adapted from Florida Department

~~of Environmental Protection)~~

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. (these policies have been adapted from the Florida Department of Environmental Protection)~~

1. ~~The town 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.~~