

4-2011

Town of Harpswell Coastal Waters Management Plan

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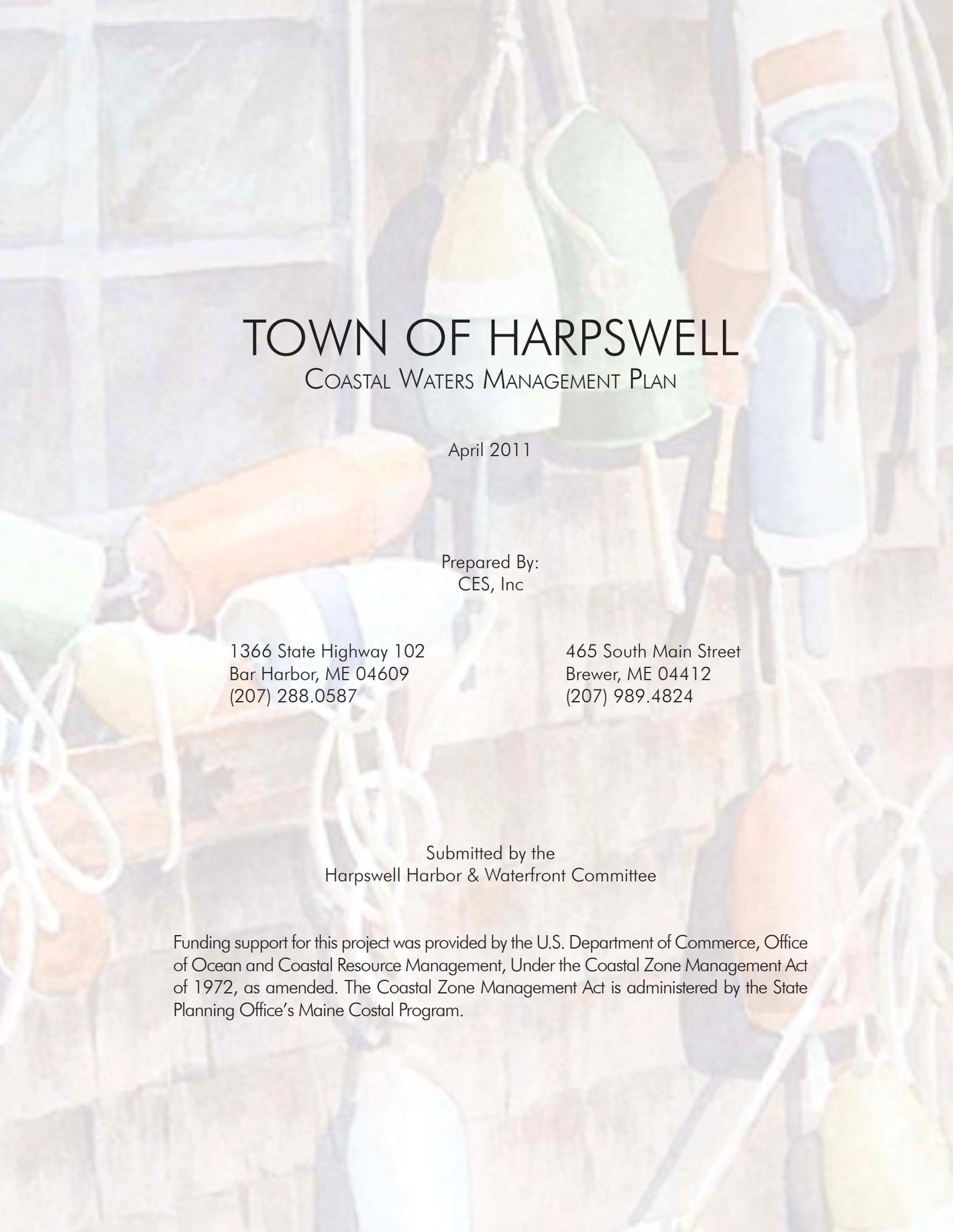


TOWN OF HARPSWELL

COASTAL WATERS MANAGEMENT PLAN



April 2011



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Funding support for this project was provided by the U.S. Department of Commerce, Office of Ocean and Coastal Resource Management, Under the Coastal Zone Management Act of 1972, as amended. The Coastal Zone Management Act is administered by the State Planning Office's Maine Coastal Program.

EXECUTIVE SUMMARY

This document was created as a guide to help the Harbor Master and the Harbor and Waterfront Committee with goal setting for the next 5 – 10 years. The foundation of the plan is an exploration of the existing physical characteristics and setting of the town's waterfront and the 14 major harbor areas throughout town. The Plan ends with a matrix outlining specific goals and timelines for addressing the goals.

Section 1 of the Plan includes a "Resource Inventory" which takes a broad look at mooring areas, public access points, harbor uses and environmental and habitat conditions. Section 2 describes a "waters classification" system which was developed to address the challenges of understanding the unique needs of different parts of Town. The system reflects common characteristics that can be identified using the information from the resource inventory. It includes areas that are predominantly low intensity uses, areas that are a true mix of uses and those areas that are heavily used or even considered major harbors. Section 3 builds on the two previous sections and identifies nine broad issues and outlines recommended tasks to address them. These issues range from public access to ordinance updates.

The plan concludes with a set of goals and priorities to help focus the Harbor Master and Harbor and Waterfront Committee in the future. The most immediate goals (1-2 years) include:

- Improving the data collected for mooring inventory (gps, size, etc.)
- Revisions to the official "waters classification" map to reflect the new understanding of the characteristics of the Town's waterfront
- Develop a working inventory of the Town owned/managed public access points
- Create a priority list and funding strategy to improve the most important access points
- Identify areas where navigational aids are needed and install them
- Support water quality improvement efforts
- Working with the Marine Management Committee, identify important shell fish habitat and priority access points
- Identify areas where mooring realignment will help increase available space and improve access
- Create better management policies for Potts Harbor Town Landing

Overall this report should be considered a "working" document where new information can be added and goals and priorities can be modified as new data is gathered.

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INTRODUCTION



THE TOWN OF HARPSWELL HAS BEEN SHAPED BY ITS COASTAL WATERS. The 216 miles of coastline creates beautiful harbors, distinctive peninsulas, islands, coves and salt marshes. Over time, the waterfront has influenced development patterns, the economy and even quality of life.

Many of Harpswell's waterfront resources have a fixed capacity. Numbers of participants and intensity of demands placed on these fixed harbor resources is growing. It is not uncommon to see different uses such as commercial fishing boats, pleasure craft, sea kayakers, tour boats, aqua culturists, tour boats, shore side developments, fish, shellfish, and marine mammals all trying to use the same harbors. The complexity of the Harpswell waterfronts requires the need for the Harbormaster to coordinate efforts with local boards and committees with management responsibilities. Harbor management is increasingly a joint effort of a policy-making, harbor management committees and a harbormaster with enforcement responsibilities.

In recognition of the exceptional asset provided by the coastal waters and the challenges in managing this vast resource, the Town undertook this planning process to provide a vehicle for consistent discussion and coordination among the different municipal groups to ensure that the common goals are being realized. Specifically, this Coastal Waters Management Plan (CWMP) was created as a guide to help the Harbor Master and Harbor and Waterfront Committee (H&WC) in developing a plan of action for their work.

To help meet the intended purpose of this report, it was important to solicit input from various harbor users and the public. This was done in two ways. First, through H&WC meetings committee members were asked to work on inventory sections and to begin developing a more detailed understanding of the characteristics and uses of the harbors and coastlines. Second, the Town hosted public meetings where town-wide harbor issues were discussed and issues and goals were developed and reviewed.

The result of this planning process is a set of overall objectives for the Town (via the Harbor Master and H&WC) to pursue over the next five to ten years. Below is a summary of the overall objectives that will be worked on in implementing this plan.

Overall the objectives of the CWMP are to:

- Continually examine issues related to mooring management including the safe, equitable and efficient distribution of private and commercial moorings. To review minimum mooring standards to ensure that public health and safety are the primary interests, and continually review the means for the fair and efficient collection and distribution of all fees relating to moorings.
- Provide a vehicle for consistent discussion and coordination among the different committees responsible for waterfront resources - including the Town Lands Committee, Conservation

Commission, Planning Board, Marine Resources Committee, Board of Selectmen, Harbor-master, and local enforcement officials from Harpswell. (See communication plan in Appendix 7).

- Enhance the quality, maintenance and management of public access locations in Town and identify appropriate new areas for coastal access.
- Take appropriate measures to prevent encroachment on, or the impairment of the local commercial fisheries and their resources.
- Identify and provide opportunities for marine related and water dependent industries.
- Identify the characteristics of the coastal waters to better understand existing uses such as conservation, habitat, commercial fishing, recreational boating, shell-fishing, and public access so that better land use planning can be implemented in these areas.
- Recognize the importance of storm preparedness/hazard mitigation plan for all coastal resource and water body uses that will allow Harpswell to effectively, efficiently and safely respond to storm events.
- To assist the H&WC with its role in safeguarding and improving the water quality of the harbors and coastal waters to ensure their continued use for safe recreational and commercial fishing activities.
- Gain the proper balance between the diversity and intensity of activities within the coastal waters.

This document starts by identifying and inventorying many of the Town's coastal resources. Next, it identifies some of the existing and potential issues associated with managing the coastal waters. It concludes with an outline of goals for the H&WC and proposes an implementation approach which includes timeframes for achieving the goals outlined in the plan.

SECTION 1: RESOURCE INVENTORY

Physical Setting

THE TOWN OF HARPSWELL IS SITUATED ON CASCO BAY IN THE GULF OF MAINE. Due to its unique peninsulas and islands it is surrounded by water on almost all sides. As a result, the Town can boast about 216 miles of coast, the most of any other town in Maine. There are four main bays (Middle Bay, Harpswell Sound, Quahog Bay, and New Meadows River) and several coves and harbors.

Moorings

During the 2010 boating season there were over 2500 moorings located throughout the Town's coastal waters. These moorings were a mixture of commercial and recreational boats. Moorings are renewed each year by May 1. Mooring fees are set by the Board of Selectmen. In 2010 the fees ranged from \$18.00 for residential users to \$90.00 for non-residential users. A map representing the moorings throughout the town is included in Appendix 1.



Marinas/Boat Yards

There are a number of private marinas and boat yards throughout Town. They include the Dolphin Marina, Great Island Boat Yard, Webber Boat Yard and Finest Kind Boat Yard. The yacht clubs in Town include the Orr's-Bailey Island Yacht Club and the High Head Yacht Club.



Commercial Fishing

Commercial fishing has historically been, and continues to be, a key source of local employment. According to the 1998 Commercial Fishing Study and the 2005 comprehensive Plan, commercial fishing made up between 50 and 60 percent of local jobs (both full and part-time). Harvested species include (but are not limited to) lobsters, soft shell clams, shrimp, ground fish and mussels. In 1998 it was estimated that a value of between \$12 and \$14 million dollars could be attributed to Harpswell fishermen. This represented about 24% of the overall landed value in Cumberland County.

Updated statistics have not been examined since the 1998 fishing study. According to a public access study by the Island Institute there are over 27 private commercial fishing piers throughout town.

Access Points

As can be expected, the Town of Harpswell has a number of locations that allow people to access the coastal waters. According to a recent study by the Island Institute, the Town has approximately 135 points of access throughout town. At least 43 of those have public access privileges. The study noted 75 private commercial fishing access points. There are 7 sites that provide boat launches and 1 town pier (Potts Harbor). There are 21 public ROW's throughout town. These sites offer access to important clam flats and beach areas among other things. However, many of them are in various stages of usability.



Harbor Areas

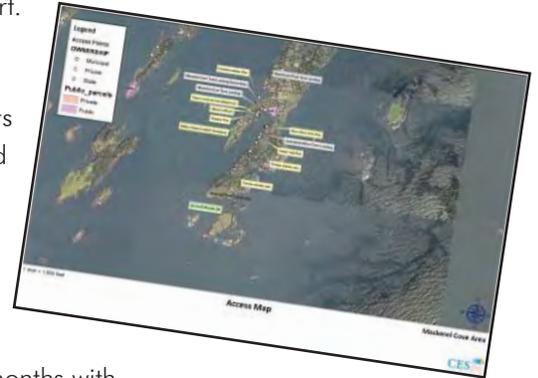
The following pages provide a brief summary of fourteen harbor areas that were identified at the beginning of the planning process. The description of these areas is in many ways incomplete and is intended to provide a brief summary. A more completed inventory can be developed over time to include new data on the Town's other marine resources and activities. Maps for the harbor areas listed below can be found in Appendix 3 of this report.

Mackerel Cove - Bailey Island

Mackerel Cove is one of the Town's best known harbors. Its picturesque setting makes it popular for tourists and its good shelter and access to Casco Bay make it popular for boaters. Mackerel Cove is a designated "town harbor" and a US Coast Guard designated anchorage area.

The harbor is home to a large commercial fishing fleet and is congested with additional recreational boats in the summer months with a total of 132 moorings in Mackerel Cove. These moorings are accessed from the beach for public access and private properties along the shore.

Shoreside the harbor is fully developed with a mix of residential and commercial uses. Glenn's Wharf and Bailey Island Lobster Company both sell fuel and purchase catch from commercial fishermen. A portion of the beach and associated property at the head of Mackerel Cove is owned by the Town. This area is available for public access, parking, a boat launch and boat/gear storage. The Harpswell Heritage Land Trust owns a large parcel adjacent to the Town property which is also available for public use. There are eight residential docks and six commercial piers in the harbor.



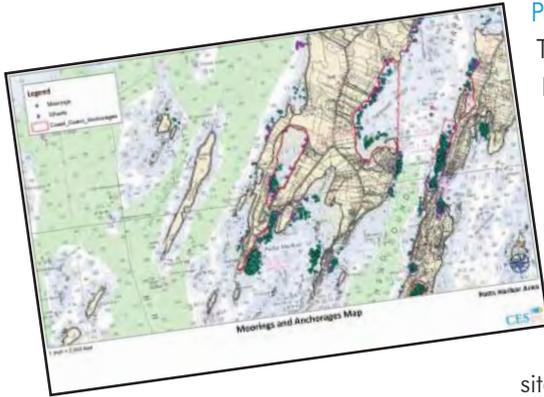
Garrison Cove - Bailey Island

Garrison Cove extends between Bailey Island and Orr's Island. It is framed by the Crib Stone Bridge on one side and extends past the Orr's Bailey Yacht Club.

The uses on the Bailey Island portion of Garrison Cove are principally commercial fishing with a mooring field of 30 moorings. The Town has a small public beach and a boat launch at the head of the cove. Cooks Lobster House restaurant and lobster pound is also located in this area. During the summer season Casco Bay Lines operates a passenger boat that runs from Portland to Cooks twice a daily, and there are several charter sailing, fishing, and sightseeing boats.

The Orr's Island side of the harbor is recreational in nature. Land side access can be found at Prince's Wharf, Orr's/Bailey Yacht Club, or private properties along the shore. There is a boat launch at the north end of the Crib Stone Bridge, a small café and a kayak rental

business and a Town landing off Merritt House Road. Mooring space is congested with approximately 110 moorings in this area.



Potts Harbor - South Harpswell

The Potts Harbor Area encompasses a large portion of South Harpswell, Ash Point, Basin Point and several islands. Due to its size, moorings in Potts Harbor tend to be concentrated in clusters associated with developed areas and suitable access points. There are three US Coast Guard designated anchorages in Potts Harbor.

There are numerous access points throughout Potts Harbor. The Town's only public pier is located on Potts Point. This site (including a nearby boat launch) is heavily used by the public

for swimming, recreational fishing, recreational boating and commercial fishing. The mooring field associated with the Potts Point Town Pier has 38 moorings and is near capacity. Parking is also extremely limited. Further down the road on Potts Point there is a lobster pound and mooring field of approximately 21 mixed use moorings. Estes Restaurant is just north of the Town Pier.

Other Town properties are located at Ash Point, Basin Point, Stover's Point, Interval Road, and Graveyard Point. Dick's Lobster, Reversing Falls Lobster, Ash Cove Lobster and Estes also offer points of access for recreational boating and commercial fishing. The Dolphin Marina on Ash Point provides access to the shore, moorings, food, fuel, and boat services.

Lookout Point - Harpswell Neck

Located at the end of Lookout Point Road, this harbor area offers public access opportunities, parking and access to nearby islands. The area is also home to commercial fishing boats operating out of the adjacent Allen's Seafood Wharf and an Inn for lodging.

Mitchell Field – Harpswell Neck

Mitchell Field is the former Navy Fuel Depot site. It is currently owned by the Town and offers a public beach area and potential for recreational boating, marine related businesses, a new mooring field and a boat launch with deep water access. The Town is in the process of developing more detailed reuse plans for the site.

The Goslings – Middle Bay

The Goslings are two popular islands off Harpswell Neck. The harbor area near the Goslings is dominated by recreational boating. There are 32 private moorings and a US Coast Guard designated anchorage area in this location. LL Bean often uses this site for its coastal kayaking tours.

Mill Cove (Gunpoint) - Great Island

Gun Point/Mill Cove is a long and narrow harbor area dominated by residential moorings. The cove is congested with 41 moorings. These boats are primarily accessed from private sites.

Card Cove & Long Point Sound - Great Island

Card Cove and Long Point Sound mixes recreational boating with commercial fishing. There are several private commercial fishing wharfs in this harbor area including Webber Boat Yard, Quahog Lobster and Waddle's. Bowdoin College sailing also has an access point in this harbor.

Orr's Cove - Great Island

Orr's Cove is a narrow harbor located on Great Island. The Harbor area is dominated by recreational boaters. There is one commercial fishing dock and a boat yard (Great Island Boatyard) located in Orr's Cove. The Boat Yard offers boat repair, a boat launch, and a pump-out station for boats to empty their holding tanks. The shoreline is mostly made up of residential properties. There are 84 moorings in the Cove which are arranged to provide a clear channel for safe passage to the center of the cove.

Brickyard, Rich and Mill Coves – Quahog Bay

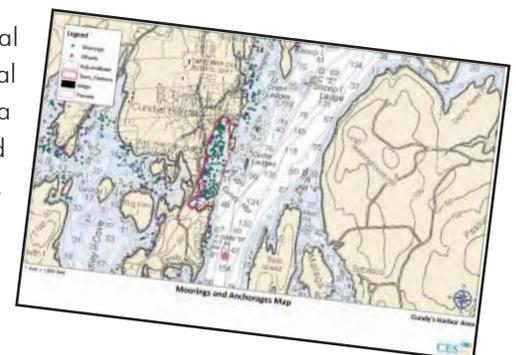
These coves are primarily zoned for residential uses. In Brickyard Cove the moorings mix commercial and recreational boats. In Rich and Mill Coves, the moorings are residential. There are approximately 75 moorings and access is from private properties along the shore. The local charts for the area shows that they can get very shallow and turn to mud flats toward the inlets from shore. Snows Island and Ben Island are to the south and appear to offer protection to these coves.

Ridley Cove – Quahog Bay

Ridley Cove encompasses the southeast portion of Quahog Bay. It includes portions of Bethel Point and Yarmouth Island. Hen Cove is in the northern section of the cove, Leavett and Oakhurst Islands in the east and West Cundy's Point at the southeast point on the cove. Oakhurst Island boasts two commercial fishing wharfs and a marina.

Cundy's Harbor

Cundy's Harbor is home to one of Maine's oldest commercial fishing villages. During summer months the harbor also has several recreational boaters. Shoreside the harbor is fully developed with a mix of commercial fishing docks, gift shops, stores, restaurants and a library. The mooring field is near full capacity with 85 moorings. These moorings are mixed use but are mainly use for commercial vessels. The harbor also provides lodging and marine services.



Dingley Cove – New Meadows River

Dingley Cove is located just up the River from Cundy’s Harbor between the main land and Sheep Island. The Cove has a mix of commercial and recreational uses. The south end is dominated by commercial fishing boats and floats, while the north end has predominately residential/recreational uses. Dingley Island itself is home to a commercial float and pier contractor.

Long Island Sound – New Meadows River

Long Island Sound is located between the Cundy’s Harbor main land and Long Island on the New Meadows River. The harbor is primarily used by recreational boaters associated with on shore residential development. There are commercial fishing activities in the area including Moody’s Sea Food Wharf and the mainland store. The main mooring field is where the Sound empties out at low tide.

SECTION 2: WATERS CLASSIFICATION

ONE OF THE MAJOR CHALLENGES FACED BY HARPSWELL is simply the length of the coastline. At 216 miles, Harpswell's coastline offers several harbors and coves, multiple access points, and abundant habitat for shellfish and shore birds. Often these resources are in demand by conflicting users. Residential development, for example, can disrupt important shell fishing habitat that supports local commercial fishermen.

An outcome of this planning process was to create a simple classification system which can be used when examining the entire coast of Harpswell. The goal of this system is to offer a common understanding of: 1) the character of the shore land; 2) land uses; and 3) activities within the water. This in turn will assist in future planning activities such as mooring management, public access management, and general harbor development. In the future it may also be a consideration in land use regulatory decisions.

WATERS CLASSIFICATIONS

A larger map showing the waters classification can be found in Appendix 1 of this report.

Type 1 Waters – Low Intensity Use Areas

Type 1 Waters or Low Intensity Use Areas have a high scenic value and often only low intensity residential development. The waters in these areas support fish and wildlife habitat which is valuable to commercial fishing activities, recreation and environmental quality. Shallow waters, mud flats, exposed shoreline, or undeveloped shorelines are common. Land Use Zoning is typically Resource Protection or residential. Possible uses include seasonal moorings associated with individual waterfront properties, transient anchorage areas, docks/piers associated with residential uses, high value shell fishing areas, and recreational uses.

Type 2 Waters – Multi-purpose Waters

Type 2 Waters are the most common throughout town. These areas support a variety of commercial and recreational activities. They are important areas for marine resources, lobster fishing and aquaculture. Land uses adjacent to these waters can vary, but are generally residential in nature with some home based businesses related to waterfront activities. Common uses include small independent commercial fishing operations, recreational boating, sport fishing, small mooring areas, aquaculture areas, and residential docks/piers.

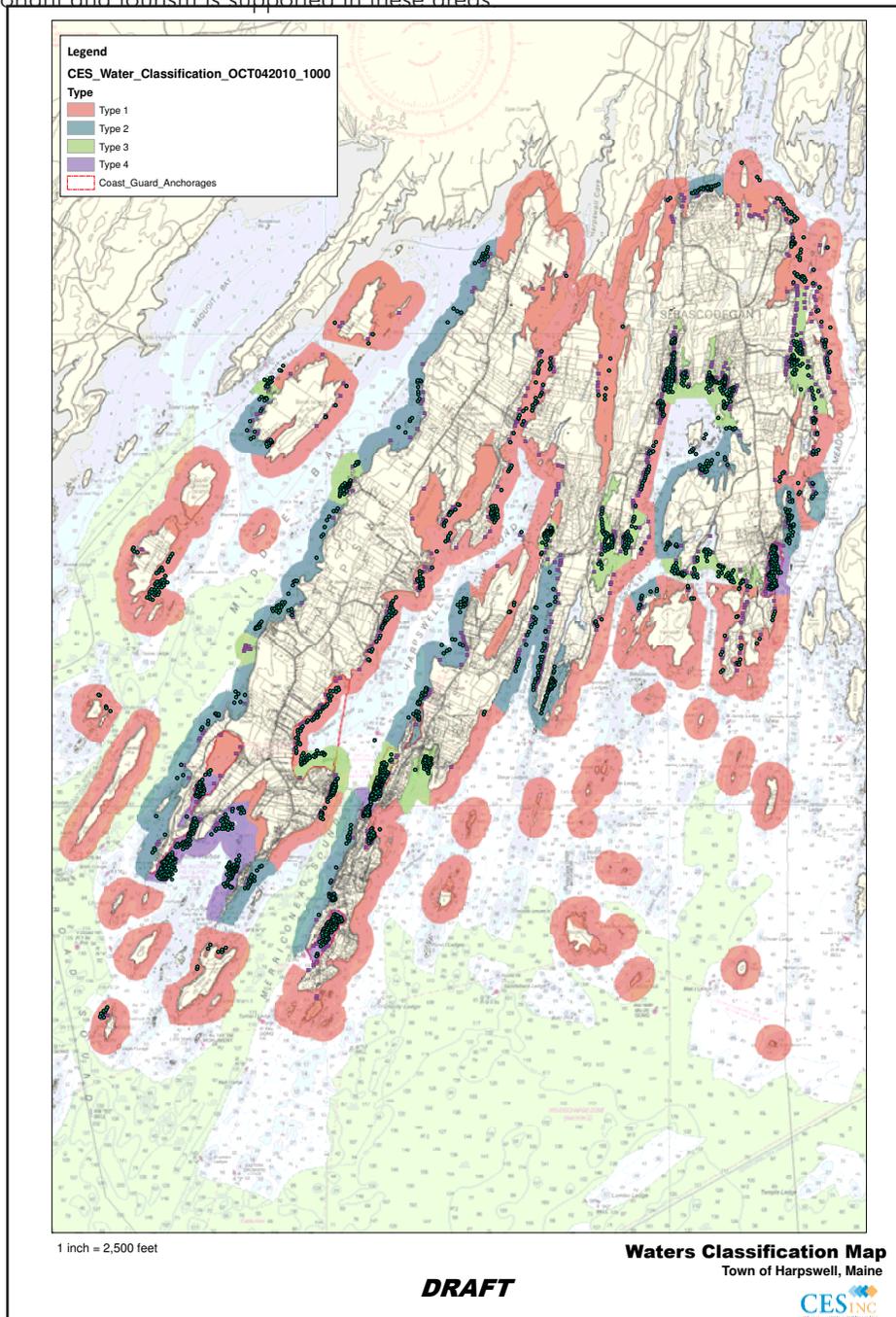
Type 3 Waters – High Intensity Boating

High Intensity Boating areas are characterized by dense concentrations of boating activity. Mooring fields are large, often considered at capacity, and associated with heavily used points of access (either private or public). The dominant type of boating activity (commercial or recreational) depends largely on the adjacent land use and use at the access point. Land uses might include marinas, commercial fishing wholesalers, boat yards, town landings, and water dependent busi-

nesses.

Type 4 Waters – Commercial and Recreational Harbors

There are four Commercial and Recreational Harbors in Harpswell. These harbors support the maximum variety of uses within a confined geographic area. Most of the harbors developed around the Town's Historic fishing villages. Within these harbor waters, moorings and the mooring fields are congested and include commercial fishing vessels and recreational boats. Landside these harbors can be considered mixed use with residential homes, commercial fishing businesses, and other uses co-existing and sharing the limited space. The visual quality of these harbors is important and tourism is supported in these areas.



SECTION 3: ISSUE IDENTIFICATION

T HIS SECTION BUILDS ON THE INVENTORY SECTION by identifying many of the major issues affecting the Town’s harbors and waterfront areas.

Issue 1- Public Access:

The Town is fortunate to have multiple public access points spread throughout Town. Some are heavily used by the public at large, while many others are used by only locals who know where they are. Despite who uses the site and how often they are used, maintenance and planning for future needs is a yearly challenge.

The importance of maintaining and enhancing access was a consistent theme throughout the planning project. Based on the information gathered and discussions throughout the project, the following strategies are recommended to help the Town improve the use of public access points:

- [Develop Public Access Inventory](#)

As discussed earlier in this report, the Town has over 40 sites with public access privileges. The majority of these sites are rights of ways that offer access to a beach or boat launch. According to the Harbor and Waterfront Ordinance, the Harbor Master (and H&WC) has the responsibility of managing Town Landings. In addition, the Town Lands Committee was established with the mission of being stewards of the Town owned lands. One strategy is for the Harbor and Waterfront Committee and Town Lands Committee to work together in the development of a working inventory of the Town owned public access points. The purpose of this inventory would be twofold – first, to describe the existing condition and uses of each site; and second, to identify maintenance needs and opportunities for expansion. The inventory could be enhanced by linking it to the Town’s GIS databases and adding pictures, plans and existing surveys where available. This inventory would be the basis of future budgeting and capital improvement planning.



* See Appendix 1 for larger map

- [Resolve Title Issues at Key Public Access Points](#)

For some public access points there are issues around right, title and interest that are affecting the use and future development options at these sites. It will be important for the Town to address these title issues at key public sites so that use can be maintained and any improvements (such as parking) can be implemented based on recommendations from the inventory report outlined above.

- [Improve Budgeting for Public Access Projects](#)

On a yearly basis there are a number of projects that could help improve the usability of public access points. These projects include road maintenance, drainage improvements,

signage, and general site cleanup. The Harbor Committee and Town Lands Committee should work together to develop a list of projects on a yearly basis that should be included in the annual Town budget.

In addition to general maintenance, there are sites in need of substantial improvements. These projects could range from new structures, added parking and even possible acquisition of land should the opportunity present itself. In these situations the Harbor and Waterfront Committee and the Town Lands Committee should develop a priority list for possible projects and begin to incorporate these projects into the Town's Capital Improvement Planning process. This will help balance out the priorities.

- [Evaluate Opportunities for New Public Access Points](#)

Harpswell has seen the use of its only municipally owned pier increase dramatically over time. While recent improvements to the pier itself have helped with safety and usability, the increased in demand has continued to exacerbate the limitations of the site (parking, mooring availability, etc.). This leads to the question of whether a new facility (or facilities) needs to be developed somewhere else in Town. One step in being able to capitalize on any an opportunity is to develop a reasonable list of viable alternative sites that could be considered for a new Town pier (or piers). The Harbor and Waterfront Committee could work on developing overall criteria for the preferred site and then using the existing GIS data available for a short list of potential sites could be created.

Issue 2 - Mooring Management:

As noted earlier in this report, the Town had over 2500 moorings registered for 2010 2534 to be exact). The sheer number of moorings makes for a significant mooring management task. Each year the Town needs to send out renewals, enter application data, collect fees and monitor mooring stickers and locations. In addition, the Harbor Master needs to review wait lists, allocate spaces for new moorings, and determine if a mooring area should be closed.

Regardless of the number of moorings, this is one of the areas where local control has the most impact. For the most part, the Town is responsible for the use and allocation of moorings. Below are strategies to help improve the overall mooring management:

- [Improve Mooring Inventory \(See Appendix 1 for mooring map\)](#)

The Town started locating moorings and piers using GPS several years ago. This has been a great benefit and allowed for the development of GIS based maps to show the location of moorings throughout town. Mooring maps have been helpful in determining waters classification, identifying the main harbor areas, and other aspects of the plan. This initiative should continue with new moorings while at the same time the data could be improved by refining the information that is added to the database. Information that is typically found on the mooring application (boat name, owner, size of boat, etc) can be added to the GPS/GIS system. New data will allow the maps to become more diverse. For example maps showing concentrations of boats by use or size could be created.

- **Closed Mooring Fields**

There are several areas throughout Town where the Harbor Master has determined that the mooring fields are full and therefore have been closed to any new moorings. There are many other areas where capacity is close to being reached. The Harbor Master and H&WC can start to address these situations by using mapped mooring data as a planning tool. Information gathered from the task outlined above can help the Harbor Master and H&WC understand the use of various boats on a mooring as well as potential swing and size. This can be translated into maps with will assist in visualizing realignment scenarios in mooring fields. Additionally, the H&WC should begin discussing criteria which would help the Harbormaster in making determinations on when to close an area.

- **Evaluate Mooring Fees**

Based on a comparison of other communities it appears that Harpswell has relatively low fees (see chart below). Mooring fees can be used to help pay for improvements to public access points, for maintenance and for other harbor management functions. The Town should examine the goals for mooring fees and determine whether setting higher fees might be useful.

Category	Freeport	Falmouth	Mount Desert	Harpswell
Residential	\$90/\$105	\$50	\$50	\$18
Non-Residential	\$385	\$250	\$100	\$90

Issue 3 - Management and Use of Type 4 Harbors:

The Town originally identified 14 harbor areas in the initial phase of the planning process. After an in depth look at the characteristics of the waters throughout Town (see waters classification section) it became apparent that there are four core harbor areas – Mackerel Cove, Cundy’s Harbor, Garrison Cove, and Potts Harbor. These harbors support many different users from commercial fishermen to tourists, residents and recreational boaters. Landside these harbors can be considered mixed use with residential homes, commercial fishing businesses, and other uses co-existing and sharing the limited space. In the water, the mooring areas appear to have developed organically over time which is both a positive and negative attribute. The visual quality of these harbors is important and tourism is supported in these areas. The goal for these harbors is to continue to maintain the balance among the diverse activities that make them both unique and locally important.

Below are strategies for the Type 4 Harbor areas:

- **Develop a Harbor Management Plan for each Type 4 Harbor (See Appendix 2 for Harbor maps)**

A harbor management plan specific to each of the Type 4 harbor areas can add more specific management goals that the town can work toward. This planning process would have the added benefit of a public process to seek input and guidance directly from harbor users.

A more detailed and focused harbor plan could provide a template for a preferred mooring field with designated channel areas and anchorages. This would help to balance uses and possibly create more capacity within the harbor. The plan could look at available resources and services to determine if they meet current demands or if expansion is needed (and if so what kind and where). The plan could look more closely at whether different regulatory standards would be appropriate to help maintain the existing uses or allow future needed development. It should be noted that in 2004 the Town had developed a village plan Cundy’s Harbor. This plan may need to be updated to include the water resources.



- **Storm Preparedness and Risk Assessment**

During a storm, wind, wave action, flooding and other events can cause damage to shore side and in-water activities. Boats or floats can come off moorings. Roads and parking areas can be flooded. These events often cause damage and in many cases can be prevented. Due to the intensity of use and mixture of users within the Type 4 Harbors it is recommended that some time be spent in storm preparedness and risk assessment. This planning process would build off the specific harbor plans discussed above. Harbor inventory data collected through the planning process could be re-evaluated so that the effect of a specific threat (flood, wind, storm surge, etc.) on a particular use would be identified. The overall outcome of this process is to help the Town prepare for the effects of a major storm event and also to plan for ways to eliminate potential risks.

Example Chart for Storm Preparedness

Threat	Location	Effect	Result
Wind	Moored Boats	windage	Dragging moorings; broken pennant; damage to adjacent boats, piers, docks
	Commercial Docks	Wind Blown Debris	Structural Damage from debris, personal injury

Issue 4 - Water Related Education:

Protecting the Town’s coastal heritage is a fundamental value held by the residence of Harpswell. This appreciation comes from families whose history is linked to traditional waterfront activities such as commercial fishing and boatbuilding. It also comes from those newer residents who have come to Town because of their love of the coastal environment, community and quality of life. Recognizing this, several efforts have already begun to help communicate this. The Working Waterfront brochure and Save Our Bay pledge campaign are just a few. Through the course of this study a few additional water related education recommendations were developed.

- **Boater Safety Education**
The Town could organize annual boater safety training courses. These courses could be coordinated with the Coast Guard.
- **Support School Programs**
For this task the Harbor and Waterfront Committee should meet with teachers at the local school to discuss the existing programs to support marine education. The Committee could offer to help support or enhance these programs so that there are more opportunities for local kids to learn about the unique area they live in.
- **Water Quality Education**
The Town's Conservation Commission has taken a leading role in promoting the importance of water quality in Town. The Harbor and Waterfront Committee should meet with members of the Commission to discuss ways these efforts can be supported.

Issue 5 - Recreational Boating:

The recreational marine economy is one of the most important economic assets in Town. With 216 miles of coastline, multiple islands, numerous points of access, and a wealth of marine life this is no surprise. The question remains as to what the economic impact of recreational boating is. Understanding this will help with future planning and budgeting initiatives when discussing the need for additional publicly supported points of access, boat pump outs, or other initiatives. Below are strategies for recreational boating:

- **Prepare an Economic Impact Study for Recreational Boating**
The Town has never really studied this industry and its impacts on the Town. There are impacts directly related to the recreational boating economy – mooring registrations, marina fees, etc. – and indirect impacts – provisions, restaurants, inns, etc. Part of the study could identify what resources would be needed to support this industry (on the water/waterfront side) – boat pump-outs, more access, etc.
- **Identify the conflict areas between commercial fishing and recreational boating**
This conflict is an intrinsic issue and not easily resolved. The Harbor and Waterfront committee can start by identifying those areas where it is an existing issue and then start to discuss possible solutions.

Issue 6 - Boat Building:

Boat building continues to be a viable industry in Town. Below are strategies for boat building:

- **Prepare an Economic Impact Study**
As part of the Recreational Boating study mentioned above the Town could also look at the economic impact of boat building.

- [Identify the resource needs for boat building](#)

The Harbor and Waterfront Committee can identify the resource needs of the boat building industry. This would include land area needs, access, and transportation needs. This process could also identify the areas of conflict between boat building and adjacent land uses.



Issue 7 - Commercial Fishing:

The importance of commercial fishing (which can include lobstering, clam and mussel harvesting, aquaculture and fin fishing) to the local economy was discussed earlier in this report. It has been and continues to be an important source of local jobs and economic opportunity. Below are strategies for commercial fishing:

- [New Fishing Industry Study](#)

Updated statistics on the value of the catch, harvest amounts, and number of people involved in the industry have not been examined since the 1998 fishing study. The Town study would be an update to the 1998 Fishing Industry Study.

- [Identify High Value Shell Fishing Areas](#)

The Harbor and Waterfront Committee should work with the Marine Resources committee to identify and map the important shell fish areas and access points. As part of the process the committee members should discuss threats and opportunities for protecting these areas. This information should be communicated to the Selectmen and the Planning Board so that appropriate measures can be coordinated to protect these resources.

- [Review Local Aquaculture Regulations](#)

Aquaculture is a growing business in Casco Bay and other areas throughout the Gulf of Maine. Harpswell itself has aquaculture leases in the New Meadows River, Ewing Narrows, Potts Harbor, and Middle Bay. The impacts and benefits to the local economy may be important. The Harbor and Waterfront Committee should look at the existing regulations for aquaculture and try to identify any areas where conflicts with other commercial fishing may occur. This will help the Harbor Master in offering opinions to the State regulatory agencies in the lease review process.



Issue 8 - Water Quality:

Water quality is important for the health and sustainability of the Town’s coastal resources. The Conservation Commission has taken a leading role in advocating for better water quality through education and outreach efforts. The Harbor and Waterfront committee should work closely with the Conservation Commission and other committees to coordinate efforts. This might include identifying where new pump-out facilities are needed or identifying needs for boat wash down treatment areas.

Issue 9 – Ordinance Updates:

Each year the Harbor committee can review the Harbor and Waterfront Ordinance to make sure it is applicable and up to date with regard to the needs of the community. Additionally, the H&WC can work with other committees including the Planning Board on land use ordinance updates that help to strengthen protections for traditional commercial fishing activities and water quality.



SECTION 4: GOALS & PRIORITIES

Goals/Objectives	Implementation Priority and Responsibility				
	Ongoing	Short Term 1-2 Yrs	Medium Term 3-5 yrs	Long Term 5+ yrs	Responsibility
Goal 1 - Create a common understanding of the characteristics of the Towns Coastal Waters					
a. Finalize waters classification descriptions and maps	X				H&WC
b. Revise the "Official Waters Classification Map" to more accurately reflect coastal waters characteristics	X				H&WC
c. Educate other committees on Coast waters classification		X			H&WC
d. Coordinate land use policy with waters classification			X		H&WC
Goal 2 - Improve mooring management systems and policies					
a. Improve Mooring GPS Inventory	X				Harbor Master
b. Develop a set of criteria to maximum capacity at existing mooring fields			X		H&WC
c. maintain mooring area waiting list	X				Harbor Master
d. Evaluate changes to mooring registration fees and present recommendations to Selectmen	X				H&WC/Selectmen
e. Identify areas for possible new mooring fields (areas with shoreside access, parking, etc)			X		H&WC
f. Prepare a handbook for mooring management process			X		Harbor Master
g. Identify areas where re-alignment would help mooring availability		X			H&WC
Goal 3 - Harbor management within Town's four main harbors (Potts Harbor, Mackerel Cove, Cundy's Harbor, Garrison Cove)					
a. Develop harbor management plan specific to each harbor			X		H&WC
b. Mooring Management in each harbor			X		H&WC
c. Risk Assessment Planning			X		H&WC/Selectmen

	Ongoing	Short Term 1-2 Yrs	Medium Term 3-5 yrs	Long Term 5+ yrs	Responsibility
Goal 4 - Protect and enhance public access throughout Town					
<i>a. Develop a working inventory of the Town owned public access points which addresses the site uses, existing conditions, possible future needs and priority for available funding</i>		X			H&WC/Town Lands Committee
<i>b. Develop a capital improvement plan to fund maintenance and improvements of access points</i>		X			H&WC/Town Lands Committee
<i>c. Develop a set of criteria which can be used to evaluate future public access sites and locations throughout town</i>			X		H&WC
<i>d. Work with Planning Board to protect waterfront access for future economic development opportunities</i>	X				H&WC/Planning Board
<i>e. Create Management Policies for Potts Harbor Town Landing</i>	X				H&WC/Selectmen
<i>f. Develop an expansion plan for Potts Harbor Town Landing and identify possible funding sources</i>		X			H&WC
<i>g. Improve road, drainage and accessibility of Hildreth Road Town Landing</i>		X			H&WC/Selectmen
Goal 5 - Promote public education related to coastal waters and boater safety					
<i>a. Organize boater safety training in Town with Coast Guard</i>			X		H&WC/Recreation Committee
<i>b. Identify areas where navigational aids are needed and Install navigational aids</i>	X				H&WC
<i>c. Work with school system to incorporate coastal waters education into existing curricular programs</i>			X		H&WC
<i>d. Cooperate with the Conservation Commission and others in supporting educational outreach regarding Water Quality and Habitat protection</i>	X				H&WC

	Ongoing	Short Term 1-2 Yrs	Medium Term 3-5 yrs	Long Term 5+ yrs	Responsibility
Goal 6 - Maintain and enhance recreational boating in throughout town					
<i>a. Develop a set of criteria which can be used to evaluate future public access sites and locations throughout town</i>		X			H&WC/Town Lands Committee
<i>b. Analyze economic and environmental impacts of recreational boating in Town</i>				X	H&WC
<i>c. Develop a business development and retention plan specific to recreational boating</i>				X	H&WC/Selectmen
Goal 7 - Protect the Working Waterfront and Commercial fishing heritage of the community					
<i>a. Update Harpswell Commercial Fishing Study to better understand changes in commercial fishing industry</i>				X	H&WC
<i>b. Develop a business development and retention plan specific to Commercial Fishing</i>				X	H&WC/Selectmen
<i>c. Identify and map high value fishing areas and ways to protect them</i>			X		H&WC
<i>d. Work with Marine Management Committee to identify high value shell fish habitat and seed areas and ways to protect them</i>	X				H&WC/Marine Management
<i>e. Support efforts to target overboard discharge sites which will help open up shellfish harvest areas</i>	X				H&WC/Code Office
<i>f. Identify aquaculture areas</i>			X		H&WC
<i>g. Create local aquaculture review process</i>			X		H&WC

Goal 8 - Maintain and develop the Towns Boat Building Industry	Ongoing	Short Term 1-2 Yrs	Medium Term 3-5 yrs	Long Term 5+ yrs	Responsibility
<i>a. Develop a business development and retention plan specific to boat building</i>				X	H&WC/Selectmen
Goal 9 - Continue to improve Harbor Ordinance	Ongoing	Short Term 1-2 Yrs	Medium Term 3-5 yrs	Long Term 5+ yrs	Responsibility
a. Revise Harbor Ordinance to improve process of assigning moorings		X			H&WC
b. Create language manage dinghy tie-ups at Potts Town Landing		X			H&WC
c. Update mooring fees and late fees	X				H&WC/Selectmen

APPENDIX 1: BASE MAPS

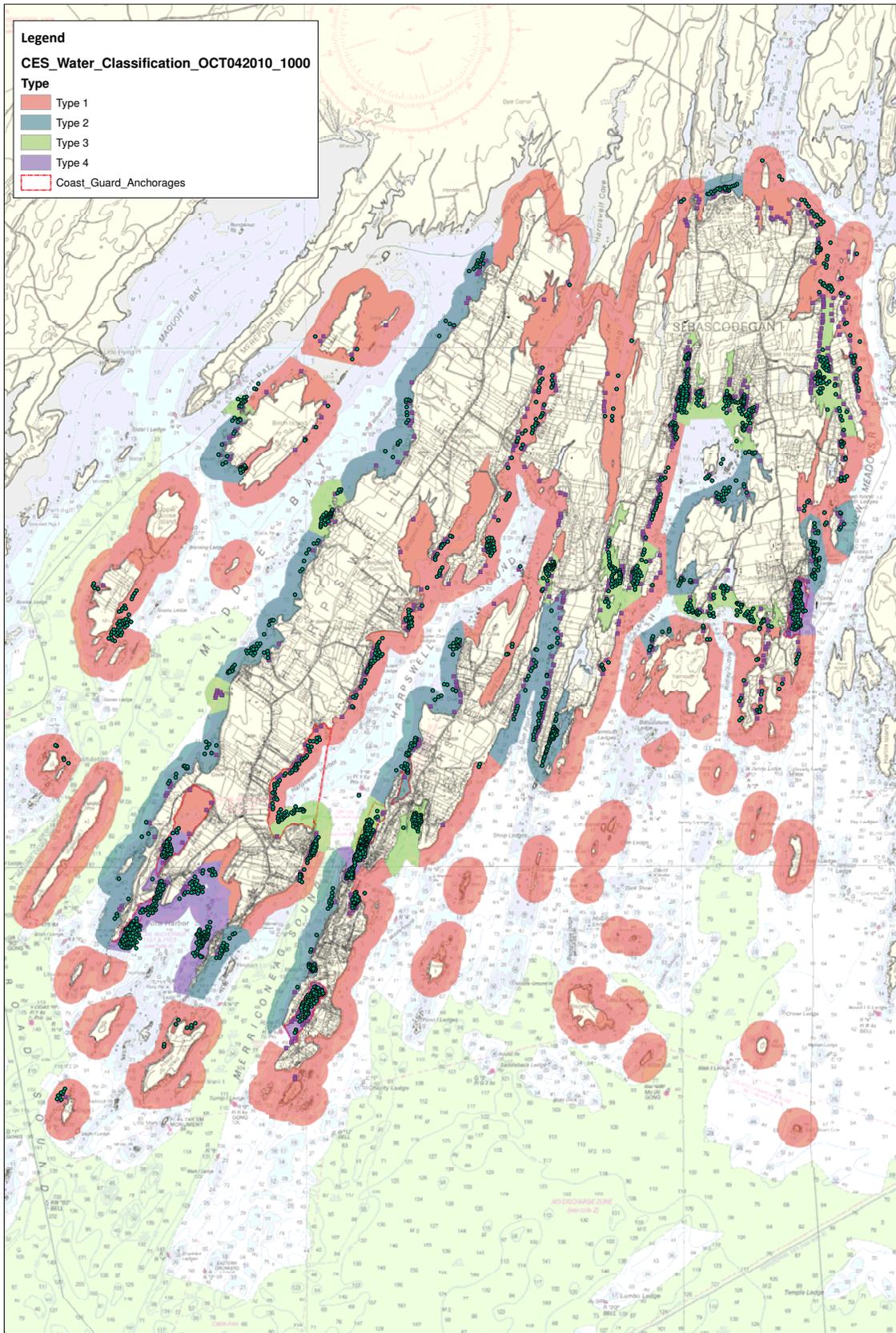


HARBOR PLAN BASE MAP
 HARBOR MANAGEMENT PLAN
 TOWN OF HARPSWELL



Source: MEOGIS, ESRI, Town of Harpswell, NOAA





1 inch = 2,500 feet

Waters Classification Map
Town of Harpswell, Maine

DRAFT



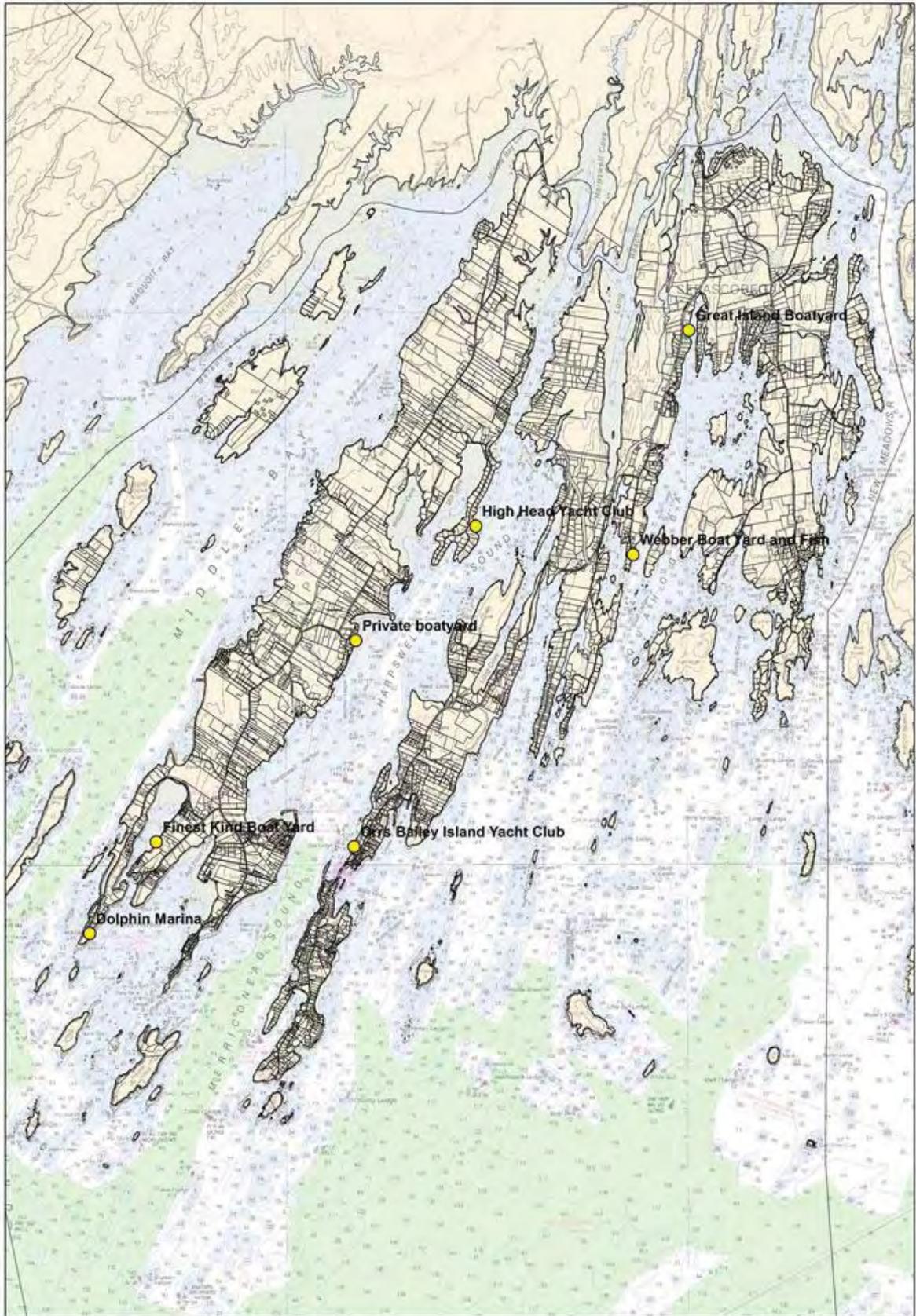


ACCESS POINTS MAP
 HARBOR MANAGEMENT PLAN
 TOWN OF HARPSWELL



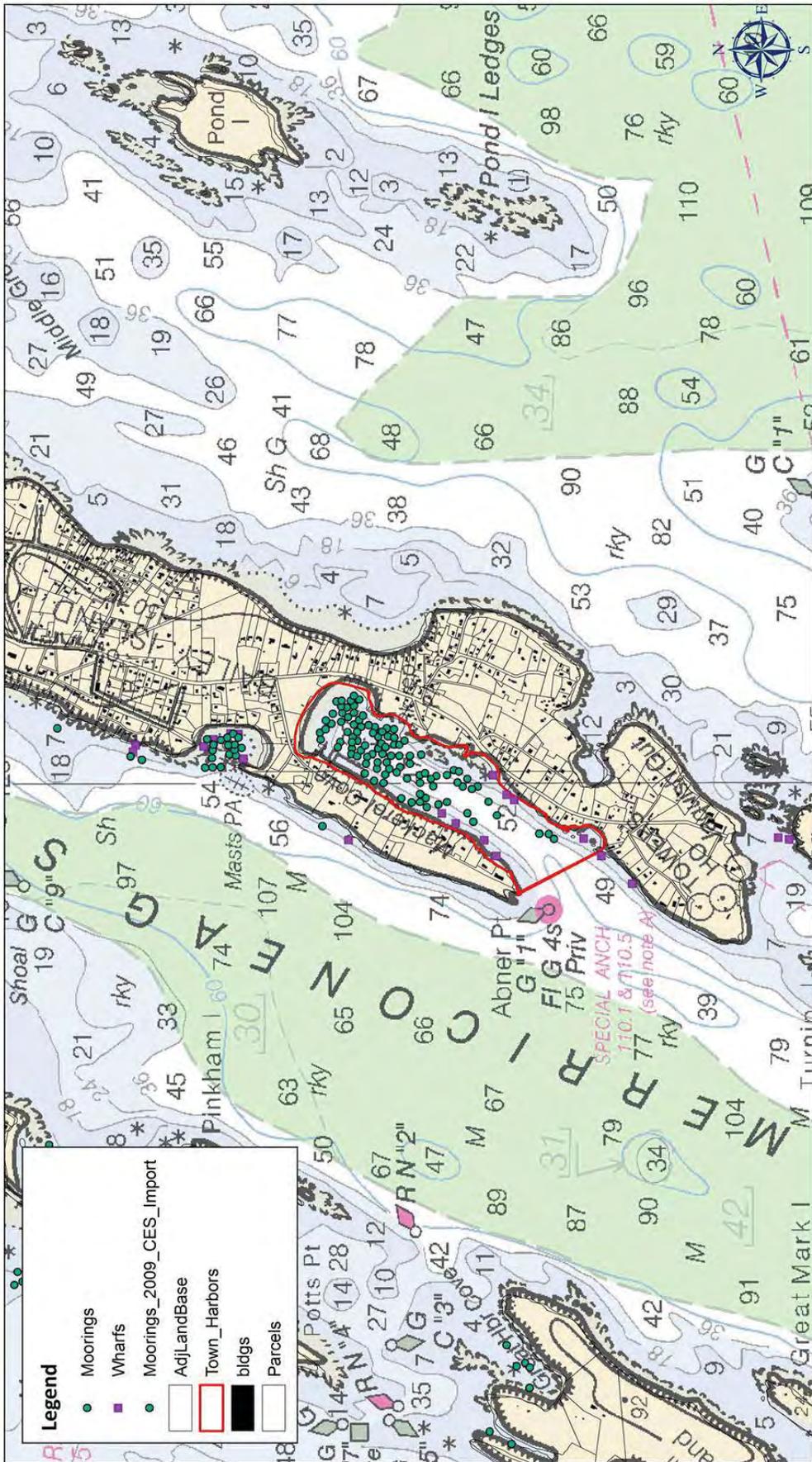
Source: MEOGIS, ESRI, Town of Harpswell, NOAA, Island Institute





Boat Yards and Marinas

APPENDIX 2: TYPE 4 HARBORS



Mackerel Cove Area

Moorings and Anchorages Map

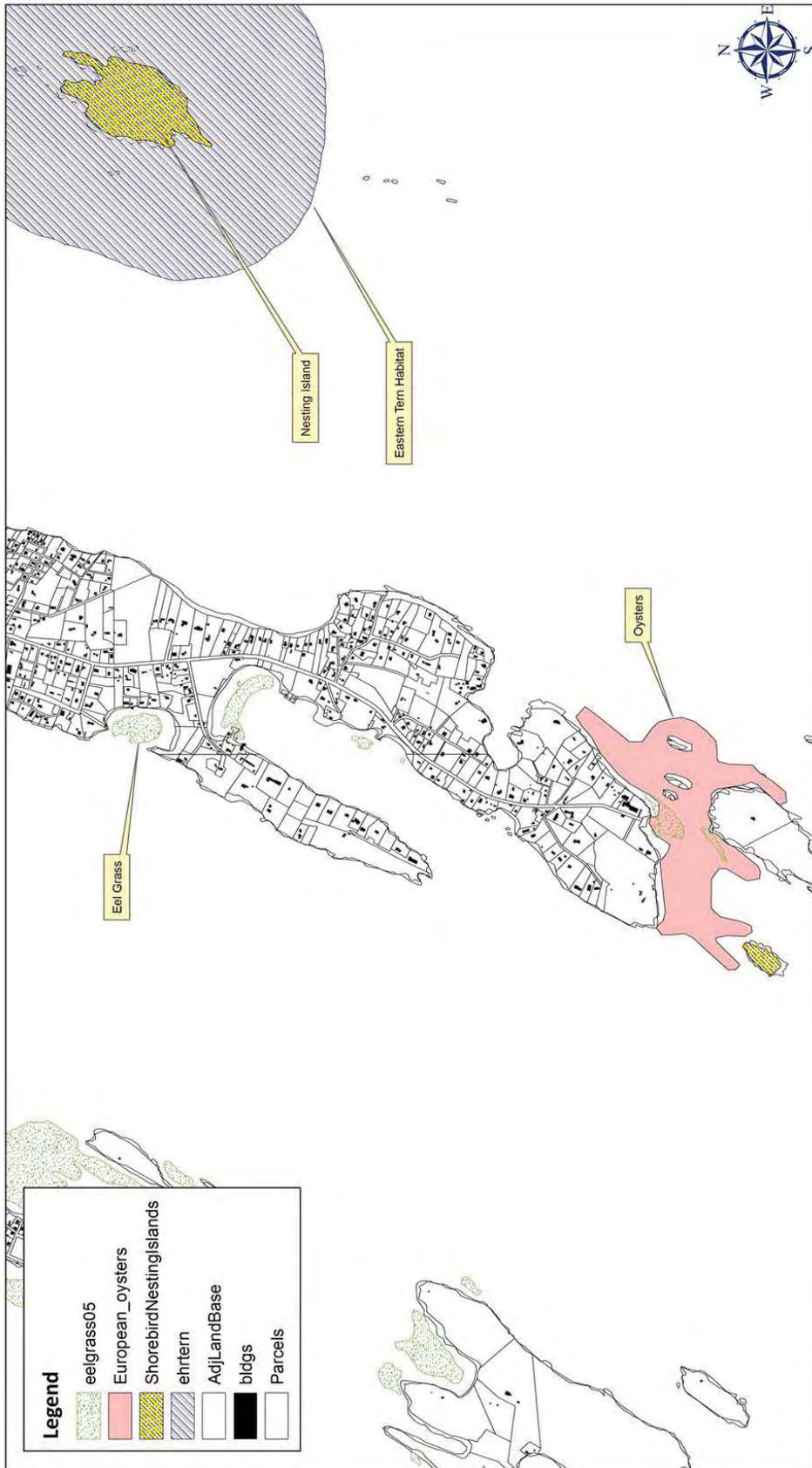




Mackerel Cove Area

Access Map

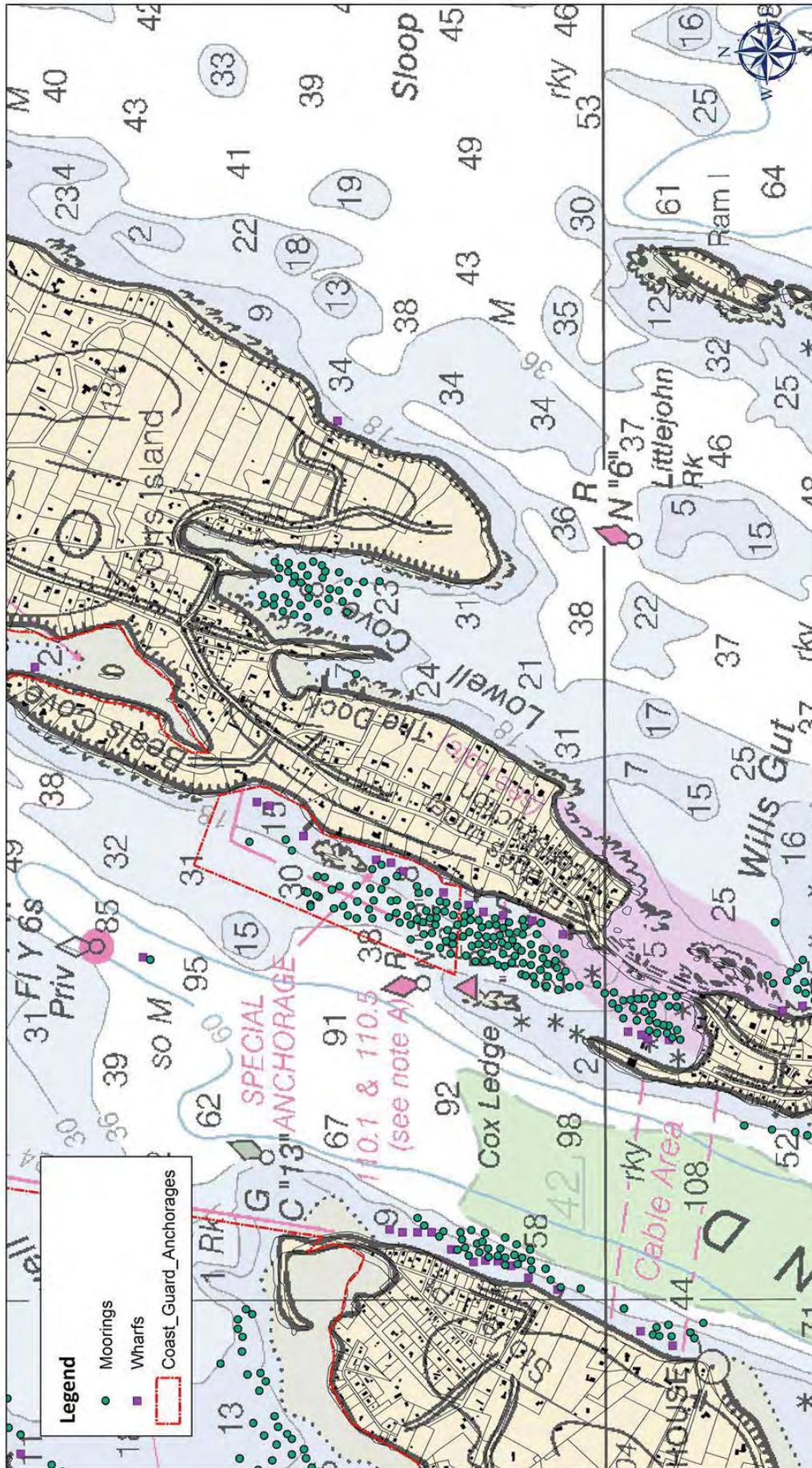




Mackerel Cove Area

Habitat Map





Garrison Cove Area

Moorings and Anchorages Map





Garrison Cove Area

Habitat Map



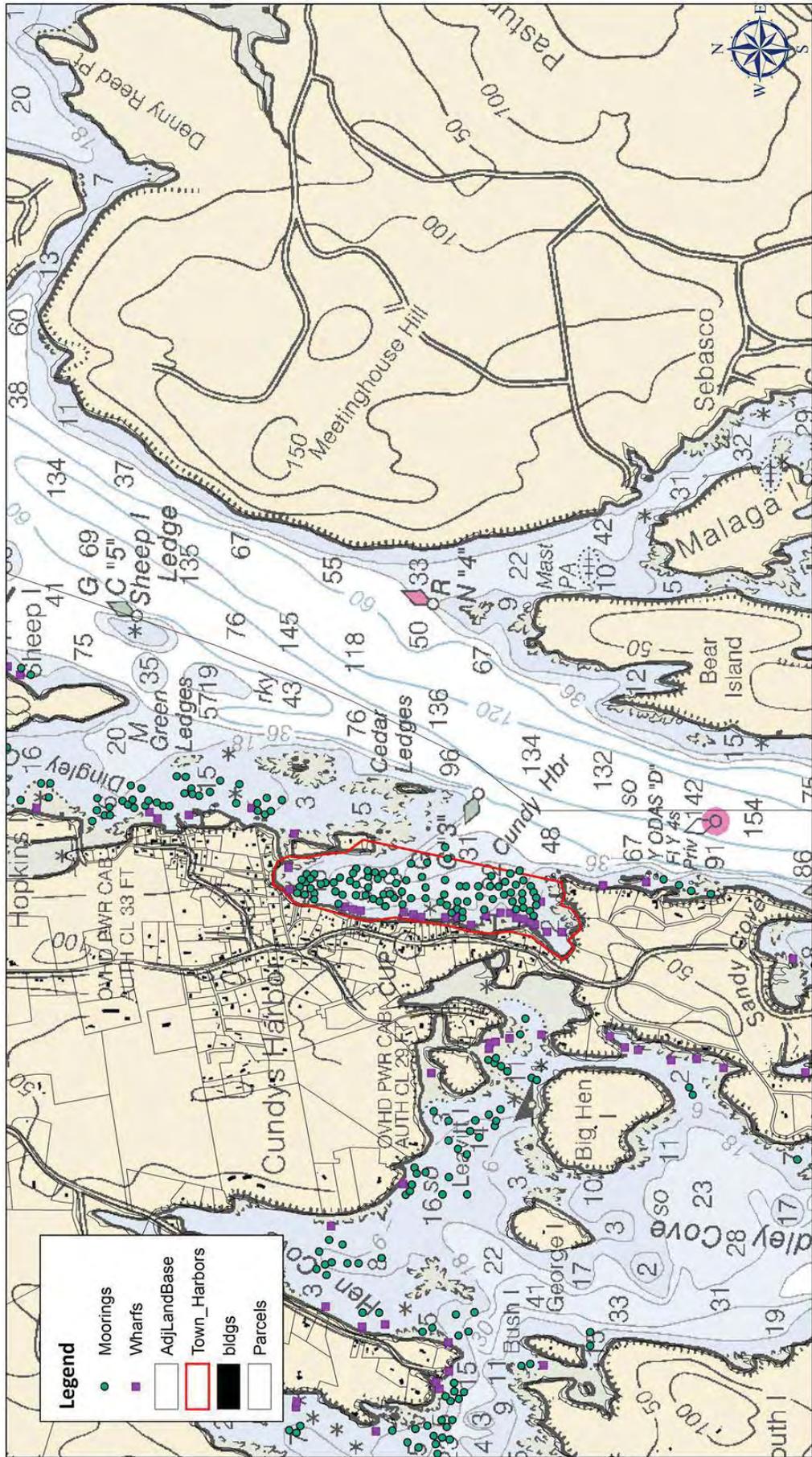


1 inch = 800 feet

Access Map

Garrison Cove Area





Cundy's Harbor Area

Moorings and Anchorages Map





1 inch = 1,000 feet

Access Map

Cundy's Harbor Area



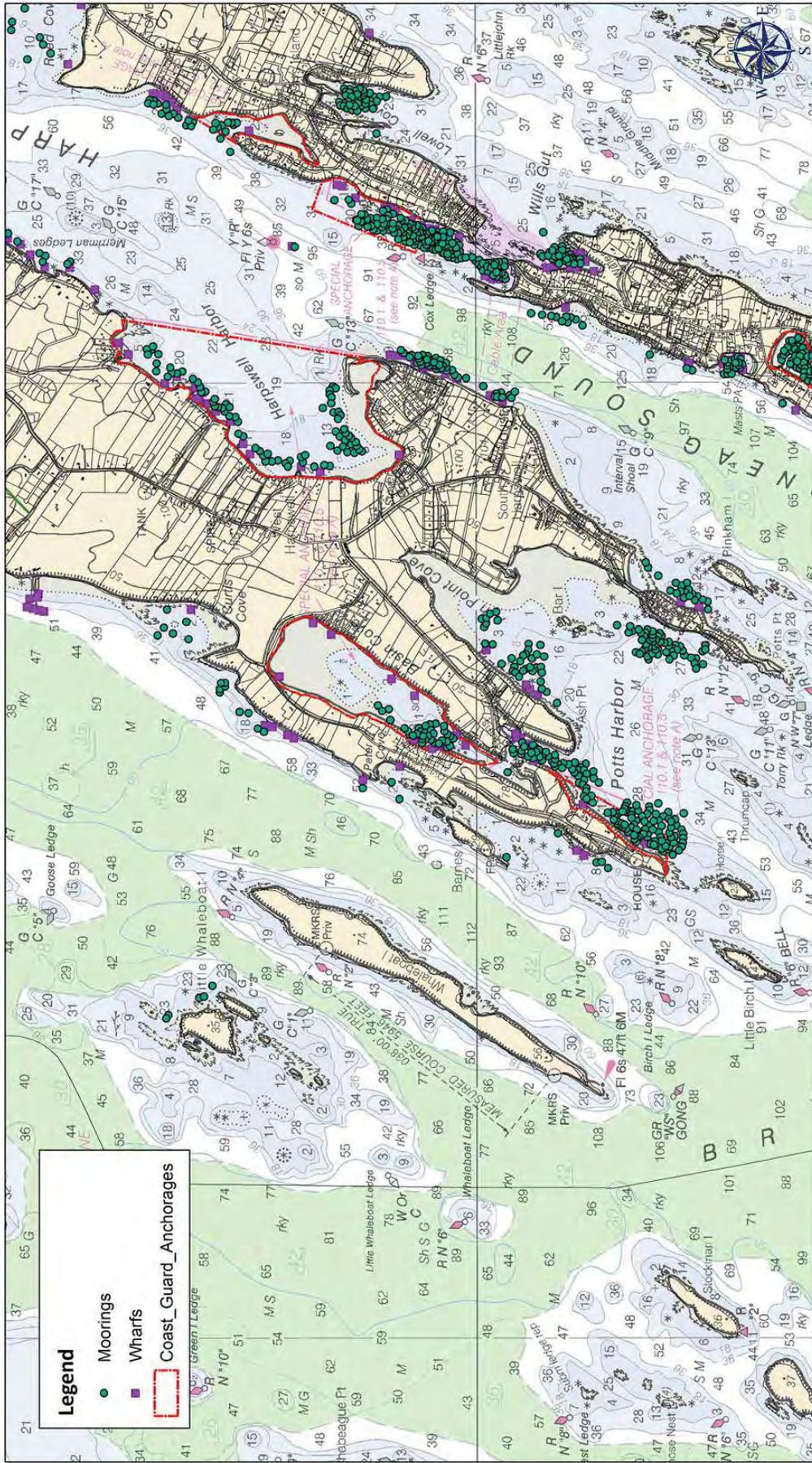


1 inch = 1,000 feet

Habitat Map

Cundy's Harbor Area





Potts Harbor Area

Moorings and Anchorages Map





1 inch = 2,000 feet

Access Map

Pott's Harbor Area





Pott's Harbor Area

Habitat Map

1 inch = 2,000 feet



APPENDIX 3: HARBOR INVENTORY MAPS



LEGEND

- Harbor Area
- East Harbor
- Harpswell Harbor
- American Oysters
- European Oysters
- Black Blowers
- Atlantic Surf Clams
- Pea Clams
- Soft-shell Clams
- Blue Mussels
- Reddish-brown mussels (T. nitida)

Expanses 84d

- no expansion
- 0-10%
- 10-40%
- 40-70%
- 70-100%

% COVER

- Search bearing data
- 2003 Harpswell CES Project
- West_CES

**HARPSWELL HARBORS
RIDLEY COVE**
14

CES INC
COASTAL ENGINEERING SERVICES

0 250 500 1,000 Feet

1:6,000

PROJECTION: NAD83 UTM ZONE 18 METER
PREPARED BY: RST
DATE: 2-23-2010
JOB NO: 10007

SOURCE: MEDGIS, ESRI, NOAA, TOWN OF HARPSWELL





APPENDIX 4: RESOURCE LIST

Below is a list of resources that the H&WC and Harbor Master can use to help with future data gathering and with implementation of the matrix.

- Maine Department of Environmental Protection - www.maine.gov/dep/
- Maine Department of Marine Resources - www.maine.gov/dmr/
- Maine Department of Inland Fisheries and Wildlife - www.maine.gov/ifw/
- Maine Department of Transportation - www.maine.gov/mdot/
- Maine Coastal Program - www.maine.gov/spo/coastal/
- United State Coast Guard - www.uscg.mil/
- US Army Corps of Engineers - www.usace.army.mil/
- Maine Harbormasters Association - www.maineharbormasters.org/
- The University of Maine Cooperative Extension - <http://extension.umaine.edu/>
- Maine Natural Areas Program - www.maine.gov/doc/nrimc/mnap/
- Friends of Casco Bay - www.friendsofcascobay.org
- Casco Bay Estuary Project - www.cascobay.usm.maine.edu/
- Island Institute - www.islandinstitute.org
- New Meadows River Watershed Project - newmeadowpartnership.org
- Fishing Families of Harpswell - www.fffh.org
- Holbrook's Wharf Foundation - www.holbrookcommunityfoundation.org

APPENDIX 5: ISLANDS

There are 111 exposed ledges and islands in Harpswell waters:
(also known as)

Bailey Island - (Newwaggin;The Twins;Willi's Island)	Raspberry Island	Little Bull Ledge
Ballastone Ledge	Rat Island	Little Iron
Bar Island	Rogue Island	Little Island
Barnes Island	Scrag Island	Little Mark Island
Bass Island	Sheep Island	Little Ram Island
Ben Island	Shelden Island - (Williams Island)	Little Whaleboat
Berry Island	Shelter Island	Little Yarmouth Island - (The Branch)
Big Hen Island	Shapher Island	Long Island North
Birch Island	Snow Island	Long Island South
Black Rock	South Ledges	Long Ledge North
Blacksnake Ledge	Stover's Island - (Strawberry Island)	Long Ledge South
Bombazine Island	The Goslings	Long Point Island
Bragdon Island	The Sisters	Long Reach Island ?
Bush Island	Thrumcap	Lower Goose Island
Cedar Island	Tondreau's Island	Mark Island
Cedar Ledge	Turnip Island	Mark Island Ledge Monument
Center Island	Two Bush Island	Martha's Island
Cleveland Island	Uncle Zeke Island	Mouse Island
Crow Island	Upper Flag Island	Nubble Island
Dingley Island	Upper Goose Island	Oak Island
Dog Fish Island	Whale Rock	Oakhurst Island
Dog Head	Whaleboat Island	Orr's Island - (Little Sebascodegan)
Doll's Island	White Bull	Potato Island ?
Doughty's Island	Whites Island	
Duck Ledge	Whites Point	
Duck Roack	Woodsy Island	
Eagle Island - (Heron Island; Sawungun)	Wyer Island	
East Brown Cow	Yarmouth Island	
Elm Island East	Yellow Rock	
Elm Island West	Haddock Rock	
Flag Island Flash Island	Ham Island - (Hamloaf Island)	
Flash Island	Hammon Island - (The Three Is- lands)	
Gallows Island	Haskell Island - (Damariscove Island)	
George Island	Hayward Island	
Grass Ledge	Hen Island	
Great Island - (Great Sebascodegan Island)	Hopskins Island	
Great Mark Island	Horse Island	
Gull Island	Irony Island	
Pinkham Island	Jaquish Island	
Plum Island	Jaquish Ledge	
Pole Island	Jenny Island	
Pond Island	John & George Islands	
Ragged Island	Leavitt Island	
Ram Island	Little Birch Island	

APPENDIX 6: HARBORS & COVES

This list is incomplete because there are a number of more with names which have not been recorded to date.

Ash Cove	Long Cove O.I. & G.I.	The Basin
Bar Island Cove	Long Island Sound	The Narrows
Beal's Cove	Wilson Cove	Tide Mill Cove
Bethel Point	Wood Landing Cove	Widgeon Cove
Brewer Cove	Long Reach	Wills Cove
Brickyard Cove	Lowell Cove B.I.	Wills Gut
Card Cove	Lowell Cove O.I.	
Clamflat Cove	Mackerel Cove	
Clark Clove	Merriconeag Sound	
Cromwell's Cove	Merriman Cove	
Crotch Cove	Merry's Cove	
Cundy's Harbor	Middle Bay Cove	
Curtis Cove	Mill Cove	
Diamond Cove	Mill Cove	
Dingley Cove	Mingo Cove	
Dipper Cove O.I.	New Meadow River	
Dock Cove	Northeast Cove	
Doughty's Cove	Orr's Cove	
Duck Cove	Oven Cove	
Dyers Cove	Peter Cove	
Eisenhower Cove	Pinkham Point	
Ewing Narrows	Potts Harbor	
Fish House Cove G.I. & Harpswell	Quahog Bay	
Flag Cove	Reed Cove O.I..	
Frest Water Cove B.I.	Rich Cove	
Garrison Cove B.I.	Ridley Cove	
Gun Point Cove	Round Cove	
Gurnet Strait	Saltworks Cove	
Harpswell Cove	Sandys Cove	
Harpswell Habor (Pinkham Island Sound)	Simons Cove	
Harpswell Sound	Skip Rock Cove	
Hen Cove G.I. & Harpswell	South west Cove	
Henry Creek	Spruce Cove	
Hingham Cove	Stover Point	
Laurel Cove	Stovers Cove	
Lish's Cove	Strawberry Creek	
Little Harbor	Sunset Cove	
Lombos Hole G.I.	Swamp Landing Cove	

APPENDIX 7: COMMUNICATION PLAN

GOAL FOR COMMUNICATION PLAN

This basic plan was developed to guide the Harbor Master and H&WC in communicating the plans goals to residents and waterfront users during the process of implementation.

OBJECTIVES FOR COMMUNICATION PLAN

- Increase Awareness of the Planning Process
- Establish relationships with Key stakeholders
- Solicit input and participation to address harbor/waterfront issues

AUDIENCES

- Internal:
 - H&W Committee Members
 - Selectmen
 - Town Administrator
 - Planning Department
 - Related Committees – Below is a list of committees and their relationship to the Harbor and Waterfront Committee:
 - Comprehensive Plan Committee - The Harbor Management Plan is a working document which is in part was a derivative of the marine section of the Comp Plan.
 - Conservation Committee - Natural Resources, Open Space, Public Education.
 - Town Lands Committee - Town Landings, Access to the shore.
 - Marine Resources Committee - Clam Flats, Mussel Beds, Water Pollution, reseeding and aerating clam beds, Aquaculture.
 - Mitchell Field Committee - Pier and Boat Launch
 - Planning Board - Access to the shore, Aquaculture, Rental moorings for business expansions, etc.
 - Recreation Committee – Boater safety programs, Water Recreation
- External:
 - Commercial Fishermen (Lobster, Shellfish, ground fish, etc)
 - Harbor Business Owners
 - Waterfront Landowners
 - Orr’s Baily Yacht Club
 - Public at large

MESSAGES

- The Coastal Waters Management Plan is a working document that will need to be updated and improved over time.
- As the H&W Committee begins the process of implementing the goals outlined in the plan continued input from commercial fishermen, business owners, residents, and others will be critical to success.

