

G. MARINE RESOURCES

1. Purpose

An understanding of marine resources is an essential element of a comprehensive plan for any coastal community in Maine. It is particularly important in the case of Castine where many residents depend on the harbor and its facilities for recreation. This section aims to accomplish the following:

- A. Describe Castine's marine resource areas, harbor, and coastal water dependent uses in terms of access, uses and importance to the economy of Castine and the region:
- B. Assess the adequacy of existing harbor facilities and public access points to handle current use demands;
- C. Assess the effectiveness of existing measures to protect and preserve marine resource areas and important coastal water-dependent uses.

2. Key Findings and Issues Taken Verbatim From the 1995 Plan

Although Castine is no longer a major maritime center, the town still has a large, attractive harbor and some marine life. Major sources of marine resource based employment include an active boatyard, the Maine Maritime Academy, and the businesses catering to the summer tourist trade.

While the town has a large harbor, the present mooring areas are near capacity. There are several public access points to the water, but parking adjacent to some of these sites is inadequate. Castine has a rich marine life but there are no residents who now make their living from fishing.

3. Key Findings and Issues

Castine's harbor is primarily used for recreation and Maine Maritime Academy purposes. Although there is presently a waiting list for moorings, harbor facilities are generally adequate. Although there are parking congestion problems at the municipal pier, there are no serious congestion issues at the other public access points.

Commercial activity now consists of a limited number of harvesters, of lobsters, sea grass and marine worms. Shellfishing has been curtailed in recent years owing to "red tide" and other forms of pollution.

In 2007 MMA received a preliminary permit from the Federal Energy Regulation

Commission (FERC) to explore the possibilities for energy production by means of the tides in the Bagaduce River. MMA, in co-operation with three private companies, has created TEDEC (Tidal Energy Development Evaluation Center). The impact of TEDEC on the Town of Castine remains unclear at this point.

4. Castine's Marine Resources

A. Shellfish

Most of Castine's shore lands have populations of mussels, snails, and sea urchins. There has been occasional commercial harvesting of sea urchins. As seen on Map 3A, the entire west shore and much of the east shore is closed to all shell fishing due to pollution. The issues related to the sewage treatment plant, a major source of pollution, are addressed in the Public Services and Facilities Chapter E. It should be stressed that areas subject to closure change periodically, so this information is subject to change.

Ram Island, once a major clam bed, now offers little in shellfish. Other areas for shell fishing include scattered beds along the shoreline of the Bagaduce River and the flats around the Negro Islands. Lobster harvesting trends are discussed in Section 6 (Commercial Fishing) below.

B. Worms & Sea Grass

Marine bloodworms and sandworms are dug commercially in Castine's mud flats, particularly in Morse Cove, Wadsworth Cove, and Hatch Cove. Most of the commercial harvesting occurs in Hatch Cove. There is an active market for worms as sport-fishing bait. Hatch Cove is used for harvesting sea grass.

C. Fish

The 2008 season has shown a steep decline in fish population. However, species found in the greater Castine area include herring, striped bass, harbor pollack, mackerel, flounder, rock crab and occasionally bluefish. Dogfish (sand sharks) and the American eel are also frequently found. There are small brook trout in many of Castine's streams. Scallops are still harvested in Castine waters but in far fewer numbers than in 1976, the only good year in recent history.

D. Other Marine Life

Harbor seals are a common sight sunning on the ledges in the Bagaduce, in Smith Cove, and off Ram Island. Porpoises are spotted in the outer bay.

The Bagaduce River is one of the few breeding areas for the horseshoe crab in this part of Maine.

5. Commercial Fishing

There are presently no Castine residents who depend on fishing for a livelihood.

The Maine Department of Marine Resources has recorded an increase in lobster traps fished by Castine residents. Although there has been an increase in trap tags issued over the past several years there has been a decline in traps actually fished.

6. Public Access Points

A. Publicly owned points

Castine has several public access points. The Castine Municipal Piers are located at the foot of Main Street adjacent to Maine Maritime Academy waterfront. There are approximately 240 feet of shore frontage and 0.65 acres of land with approximately 18,000 square feet of paved parking area. Two wooden piers project approximately 45 feet into the harbor with 240 feet of float space and 60 feet of dingy floats. Access to floats is provided by two ramps, one to each section of floats. A preformed concrete launching ramp is located along the easterly property line of the municipal pier area. Presently the ramp is narrow and there are no floats along its sides, however, there are plans moving forward to increase the size of the ramp and install floats along the bulkhead & wharf.

The municipal beach is on the westerly side of Castine and consists of a strip of land 600 feet in length along the shore of Wadsworth Cove. This facility is a general recreation area used for picnics, swimming, and boating. Canoes and kayaks can be launched from this site.

Dyce Head Lighthouse, which was re-activated in 2008, is at the western end of the Castine peninsula and consists of a three-acre parcel with approximately 400 feet of shore front on Penobscot Bay. This facility has a public path to the shore. It is used as a scenic overlook, fishing area and picnicking area. It is not suitable for boat launching.

Other publicly-owned sites include Fort Madison, on the southerly side of the peninsula and consisting of approximately 2.7 acres with an estimated 420 feet of shore frontage on Castine Harbor. It is used as a scenic overlook and picnic area. The public also has access to Ram Island, the British Canal, Holbrook Island and Lower Negro Island.

B. Privately Owned Access Points

There are several privately owned businesses that provide varying degrees of public access to their customers. Dennett's Wharf is a shore-front seasonal restaurant on the Harbor, east of Acadia Pier. This facility has a large wood pier and approximately 100 feet of front float space. Eaton's Boatyard, directly northeast of Dennett's Wharf, is a marina that offers fuel, water, power, marine repairs, and boat hauling. This facility has approximately 500 feet of front float space. The Castine Yacht Club is on the harbor shore about 300 yards northeast of Eaton's Boatyard and consists of a 200-foot wood pier with approximately 150 feet of front float space.

C. Adequacy of Access

On heavy marine traffic days the town dock is barely adequate for boating and harbor activity.

8. Coastal Water-Dependent Uses

Castine's existing water-dependent uses are shown on Map 3. Water-dependent uses are defined as those uses that would require direct access to coastal waters and cannot be located away from these waters. These would include fishing operations, piers, etc.

Castine has several sites which, according to the State Planning Office, have the potential for coastal water-dependent use. These are sites that meet the following criteria:

- A. They are generally sheltered from excessive wind and seas year-round
- B. They have at least 5 feet of water within 150 feet of the shore at mean low water, and
- C. They have an average landside slope of 15 per cent or less to 250 feet back from the high tide mark.

Although Castine has several sites that meet these state criteria, they are located off-neck and have poor road access. The Town has no present plans to encourage their development.

Existing coastal water-dependent uses in Castine include:

- A. Seasonal private and commercial fishing of lobsters, crabs, clams, mussels, sea urchins, and scallops.

B. Seasonal commercial tour boats.

C. Marina, boat storage and repair; specifically, Eaton's Boatyard.

D. Institutional users, specifically Maine Maritime Academy. Castine Harbor is the home port of the Academy's training vessels.

E. Recreational users: Castine Harbor is the home port of over 200 recreational private boats, sail and power, and is visited by several hundred private yachts. The size and number of visiting yachts has increased in recent years.

F. Small commercial passenger vessels: in recent years, the town has attracted overnight visits of commercial schooners and other passenger-carrying small cruise ships.

Coastal water-dependent business uses over the last century reflect the town's gradual evolution from a working, commercial oriented port to a recreational, educational, and scenic harbor. It is unlikely that this trend will change.

8. Harbor and Mooring Facilities

A. Harbor Facilities

Castine Harbor consists of a main channel approximately two miles long measured from the CH Bell buoy at the channel entrance to Trott's Ledge At Can buoy #3, located where the Bagaduce River enters the harbor, the channel width averages 500 yards. The narrowest part of the channel is 1,000 yards southwest of Can #3 where the red Nun buoy #2 marks the ledge Middle Ground, and the channel is approximately 400 yards wide. Channel depth in Castine Harbor averages 68 feet at mean low water and 77 feet at mean high water.

Hatch Cove is on the northeasterly side of the Castine peninsula and is 1,500 yards long and 400 yards wide. The entrance to the cove is approximately 1,000 yards northwest of Can #3. It is shallow and drains virtually empty into mud flats at mean low water. Depth at mean high water is 5 - 20 feet.

Wadsworth Cove is on the northwesterly side of Castine Peninsula. It is approximately 1,300 yards wide and 700 yards deep from the entrance. Water depth ranges from 12 feet at mean high water to less than one foot at mean low water. Wadsworth Cove is deeper than Hatch Cove and is also tidal. Approximately half the area of the cove drains dry at mean low water exposing a mix of boulders, gravel, sand, and mud flats.

The British Canal is a man-made saltwater estuary beginning at the west end of Hatch Cove and running approximately 400 yards westerly. The canal is approximately 10 feet wide and five feet deep. The canal and the surrounding flood plain is a saltwater marsh directly affected by tidal action and fresh water runoff. At one time, the canal extended another 200 yards westerly to Wadsworth Cove. However, in the 1930's the west end of the canal was cut off to make a salt water pond. The pond fills and empties by tidal action.

Morse Cove is located at the northerly end of Castine approximately 3.5 miles northeast of Wadsworth Cove on the Penobscot River. It is approximately 1,000 yards in length and 500 yards in width. One half of Morse Cove is located in the town of Penobscot. Water depth is 13 feet at mean high water and drains to mud flats at low water.

Castine Harbor is used largely on a seasonal basis with only a few fishing vessels using the port during the winter. The majority of boat traffic over the summer months is recreational craft. Other users include Maine Maritime Academy's fleet, small commercial cruise schooners, occasional tour boats, and seasonal, private, low-volume fishermen.

The large size of Castine Harbor in comparison to other harbors in the Penobscot Bay region is the main reason Castine does not suffer from massive congestion on the water. The depth of the harbor is also adequate.

The congestion is mainly at the access points. Access often is difficult during the summer when pier and parking areas are filled to capacity by largely transient visitors. Academy use of the municipal parking area is an issue and needs resolution.

Castine has a Waterfront Ordinance. Its purpose is to set standards for use of the mooring area, public landings, boat ramp, harbor channels and other related properties in Castine waters. It also deals with the safe operation of vessels within Castine harbor and grants authority for the harbor master to enforce the ordinance.

B. Mooring Facilities

The municipal harbor mooring area is west of channel buoy Nun #2 and covers an area approximately 1,000 yards in length from the municipal pier northeasterly along the shore of the Castine peninsula. Within this main mooring area there are approximately 200 seasonal moorings. There is presently a waiting list for moorings. The town is in the process of developing a mooring plan that would promote more effective utilization

of limited space in the prime mooring areas.

A secondary mooring field extends from the westerly end of Maine Maritime Academy's waterfront facility, westerly along the southerly shore of the Castine Peninsula as far as Fort Madison. There are about 30 seasonal moorings in this area. There is limited room for additional moorings within easy reach of the public access points without infringing into the navigation channels. There are other private seasonal moorings scattered along the shore of Castine extending easterly from Trott's Ledge along the easterly shore of Castine within the waters of the Bagaduce River to Grindal's Eddy and northerly along the westerly shore of Castine within the waters of the Penobscot River from Wadsworth Cove to Morse Cove.

9. Existing Ordinances and Protective Measures

Castine has several measures that help protect marine resources. First, it has stormwater runoff and erosion control measures in its zoning ordinance. Second, the town meets all current state DEP requirements for shoreland zoning. These ordinance provisions help protect marine water quality. The stormwater runoff standards, however, are fairly general and do not offer the Planning Board detailed guidelines.

10. TEDEC

Cianbro Corporation and Maine Maritime Academy, through TEDEC (the Tidal Energy Evaluation Center), are collectively researching the potential of producing electricity in several locations in the Bagaduce River and bay area.

TEDEC presently has permits to investigate the possibility of harnessing the power of tidal energy to run underwater turbines near the Castine Harbor. Access to this equipment would likely be on Maine Maritime Academy property which abuts the municipal pier.

TO DO LIST

TEDEC could dramatically impact the already serious parking congestion at the water front. The Town of Castine should be monitoring the progress of this project to insure that any current and future effects are positive to all stakeholders.

- C. Predict whether harbor improvements will be needed to accommodate adequately the use demands of the projected population;
- D. Predict whether the viability or productivity of marine resource areas, commercial fishing and other important water-dependent uses will be threatened by the impacts of growth and development.

The Harbor Committee has discussed the addition of floats near the newly developed eastern mooring field. A right of way to access these floats via a proposed parking lot on the lower end of the town owned property at the corner of Spring Street and Water Street would help alleviate the congestion at the municipal pier.

The Castine Merchants Association and the Castine Harbor Committee feel strongly that the harbor is a valuable and untapped resource. Development of this resource is critical for the economic growth of Castine and will require major expansion of the facilities including docks, wharfs, floats, guest moorings and launch services.

The 1995 plan stated that Castine harbor appeared to meet the needs of both commercial and recreational users. It predicted that, in time, traffic would likely increase and a specific overall harbor plan, would be necessary. This was an accurate prediction and the time has come to create a harbor plan. Given the projected increase in summer population, the demands on the harbor are likely to continue to increase over the next ten years.