

Town of Cape Elizabeth Harbors Committee Report



April 30, 2018

Prepared by the

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*Photographs provided by James Casey
Cover photos include Trundy Point (top), Seal Cove (lower left), and Fort
Williams Park (lower right)*

Table of Contents

<u>Narrative:</u>		<u>Page</u>
Section 1.0	Comprehensive Executive Summary	5
Section 2.0	Introduction	7
2.1	Committee Charges	7
2.2	The Committee Process	7
Section 3.0	Coastal Waters and Harbor Ordinance Review	9
Section 4.0	Kettle Cove/Crescent Beach State Park Area Assessment	11
4.1	The Current Situation	11
4.2	The State of Maine Perspective	13
4.3	Potential Solutions	14
4.4	Recommendations	15
Section 5.0	Moorings Map Update	17
Section 6.0	Public Water Access Inventory	19
6.1	Federal Properties	21
6.2	State of Maine Properties	21
6.3	Cape Elizabeth Land Trust Properties	22
6.4	Town of Cape Elizabeth Properties	22
6.5	High Value Plant and Animal Habitats	24
Section 7.0	Public Survey Results	26
7.1	Introduction	26
7.2	Overview	26
7.3	Public Access Importance	27
7.4	Usage and Activities	28
7.5	Possible Shoreline Access Improvements	29
7.6	Demographics	30
7.7	Communication	31
Section 8.0	Comprehensive Plan - Draft Marine Resources Section	32
Section 9.0	Other Related Matters Consideration	34
Section 10.0	Summary and Conclusions	36

Appendix:

- Attachment A Tracked changes Word document with recommended changes to Chapter 10 – COASTAL WATERS and HARBOR ORDINANCE
- Attachment B Cape Elizabeth Fishermen's Alliance November 2017 Recommendations for the Town of Cape Elizabeth
- Attachment C Cape Elizabeth Shoreline Access Survey Results
- Attachment D Correspondence
- Attachment E Kettle Cove & Crescent Beach Deed Information
- Attachment F Maine Municipal Harbor Management: Case Studies in Adaptive Resource Management
- Attachment G Comprehensive Plan - Draft Marine Resources Section

1.0 Comprehensive Executive Summary:

Harbors Committee Recommendations:

- *Accept recommended changes to the Town's Coastal Waters and Harbor Ordinance (Section 3.0, Page 9).*
- *Resolve Kettle Cove/Crescent Beach area access and circulation issues and implement other related changes (Section 4.4, Page 15).*
- *Complete the mooring mapping update process, revise the Town's website mooring section to be reflect current conditions, and continue to support a professional Harbormaster position (Section 5.0, Page 17).*
- *Maintain and improve upon places of public water access (Section 6.0, Page 19).*
- *Maintain a working waterfront by providing a balance between commercial and recreational uses (Section 8.0, Page 32).*
- *Take actions to mitigate adverse sea level rise consequences. (Section 9.0, Page 34).*
- *Conduct a comprehensive review of the Town's marine resources and its management on a time frame not to exceed a 10-year duration. (Section 10.0, Page 36).*

Harbors Committee Charges:

At the behest of the Town Council through assigned charges, the Harbors Committee has conducted a comprehensive review of issues related to Cape Elizabeth's shoreline and harbors. The Committee, in concert with the Town Harbormaster, completed its first charge by reviewing the Town's Coastal Waters and Harbor Ordinance and recommending a modest number of changes.

To complete another charge, the Committee was assisted by Town Staff, the Cape Elizabeth Fishermen's Alliance, State of Maine representatives, and neighborhood residents to develop a list of recommendations for the betterment of the Kettle Cove/Crescent Beach State Park area. Paramount within the recommendations is to relocate the public access area to a nearby location that had been used in the past. While improving the public access, the existing recreational boat launch ramp can then be repurposed to pedestrian-only beach access.

By making these changes and supporting the State of Maine's efforts to encourage non-commercial users of the beach area to utilize the nearby Crescent Beach parking lot, pressures related to the primary Boat Cove launch in the Kettle Cove State Park area can be relieved and its use refocused exclusively for the local commercial fishing fleet and the Town's WETeam. Other recommendations presented by the Committee in relation to the Crescent Beach/Kettle Cove area involve steps to implement the public beach access changes, document access rights with the State of Maine, and make other related improvements to the area.

To address a charge related to the updating of mooring maps, the Committee has coordinated with the Town Harbormaster. The Harbormaster was able to partially complete this task by conducting this mapping exercise in the waters off the southern coast line of Cape Elizabeth, however winter conditions and the removal of mooring balls for the season, prevented the Harbormaster from completing this task along the eastern shore. The Committee strongly

recommends that the Harbormaster complete the mapping exercise in the summer of 2018 so that the Town's GIS consultant can create current maps of mooring locations which should be checked against existing mooring maps to identify moorings that are no longer active or incorrectly mapped. The mooring section and maps on the Town's website should then be updated and kept current with accurate information so that the public can readily access reliable mooring data.

The Committee also underwent an inventory of public water access by visiting the shoreline and conducting a public shoreline access survey to gauge the public's perception of the coastal access within Cape Elizabeth and receive input as to what improvements should be considered. The results of the inventory has been provided based on entity in control of the access which are distributed between the federal government, the State of Maine, the Cape Elizabeth Land Trust, and the Town of Cape Elizabeth. Although public access to the ocean is somewhat limited, the results of the public opinion survey strongly indicates that the residents consider coastal access very important and essential to the character of Cape Elizabeth.

Finally to complete its last charge, the Committee has coordinated with the Town Planner and conducted research and reviewed relevant matters to develop a draft Marine Resource Section of the Comprehensive Plan to assist the Comprehensive Plan Committee. This information has been compiled in a narrative draft section format and provided to the Comprehensive Plan Committee for its consideration. The Harbors Committee anticipates that the Comprehensive Plan Committee will review this information and then revise it accordingly into the overall Comprehensive Plan report.

The Committee strongly recommends that the Town continue to study its coastline at intervals not exceeding ten years and take appropriate steps to meet the changing challenges. The Town Council should also undertake any shoreline decision making efforts by factoring the future effects of climate change and resulting sea level rise.

The last extensive review of the Town's harbors was undertaken almost 30 years ago and this current study often builds upon that past work and revisits many of the issues that were examined back in 1988. The Committee has been pleased to undertake this effort on behalf of the Town Council and trusts that this information will assist the Town in future actions related to the Town's coastal resources and opportunities.

2.0 Introduction:

2.1 Committee Charges:

The Harbors Committee is an Ad Hoc Committee created by the Town Council with the purpose to conduct a review of issues related to Cape Elizabeth's shoreline and harbors to determine how the Town's coastal resources are serving commercial fishing and aquaculture industries as well recreational boating and other public activities needs. In doing so, the Council directed the Committee to review issues related to the following charges:

- Review the Town's Coastal Waters and Harbor Ordinance and recommend any changes it deems desirable to the Town Council.
- Meet with state officials to determine options for boat access in the Kettle Cove/Crescent Beach State Park area and develop a long-range plan for access.
- Update the maps utilized by the Harbormaster showing potential locations for moorings.
- Inventory public water access.
- Assist the Comprehensive Plan Committee with the marine resources section of the Comprehensive Plan.
- Consider such other related matters as the Town Council may request.

In 1988, the Town's Harbors Advisory Committee published a September 1, 1988 Report which documented its efforts in studying various issues related to the Town's coastal resources. The Harbors Committee developed the preliminary version of current Coastal Waters and Harbor Ordinance that was later adopted and also studied issues related to the management of the Kettle Cove area, mooring locations and planning, and future public boat launch locations as well as a variety of other harbors related issues.

Since the 1988 Harbors Advisory Committee report was finalized, no other comprehensive analysis of the Town coastline resources has been undertaken. Seeing a need for a new assessment of these resources, the Town Council created the Ad Hoc Harbors Committee for the purpose of providing an updated review of issues related to the Town's shoreline and harbors issues.

2.2 The Committee Process:

The Harbors Committee has been meeting regularly since February 2, 2017 in public meeting forums and conducted a land based field review of public coastal access points. The Committee has received input, technical expertise, and guidance from a variety of stakeholders as well as Town Staff and State representatives. The Committee has received several emails and direct comments from private citizens with a focus near the Crescent Beach/Kettle Cove area which generates a higher rate of impact to area residents due to the many ongoing and, often conflicting, activities in that neighborhood. Copies of this correspondence as well as other documents that the Committee received from various sources is included in the appendix section of this report as Attachment D.

In order to gauge interest and receive public input from users of the Cape Elizabeth shoreline, the Committee conducted an on-line public survey through Survey Monkey which raised several questions regarding the various activities being conducted along the shoreline and their importance to the respondents of the survey. The survey also asked for opinions on

various topics associated with the Town's coastal resources and ways in which they may be improved. The survey's findings are discussed within the context of Section 7 (Page 26) of this report and the full results of the survey are included within appendix section of this report as Attachment C.

The Cape Elizabeth Fishermen's Alliance (CEFA), which is a consortium of local commercial fishermen and aquaculturists, has participated in the meetings, routinely providing testimony and insight into activities and interests associated with Cape Elizabeth's commercial fishing fleet. In addition, CEFA also provided the Committee with their November 2017 "Recommendations for the Town of Cape Elizabeth" document which outlines recommendations that CEFA would like to have implemented by the Town. This document is discussed within the context of Section 4 (Page 11) of this report and CEFA's recommendations document is included within the appendix section of this report as Attachment B.

With the assistance of Town Manager Matthew Sturgis, the Committee also has communicated with representatives of the Maine Department of Agriculture, Conservation, and Forestry's Bureau of Parks and Lands. Kurt Shoener, who is the Manager of Crescent Beach, Two Lights, and Kettle Cove State Parks, and Gary Best, who is the Acting Regional Manager, have participated in two meetings with the Committee to share their insight into the State's programs and direction related to the Crescent Beach/Kettle Cove area.

The Committee has been served on an ongoing basis by Town Engineer, Stephen Harding, acting as the Committee's Town Staff liaison. In addition, Town Manager Matthew Sturgis and the Town Harbormaster Ian Anderson have been frequent participants in Committee meetings and have made valuable contributions to the process. Town Planner Maureen O'Meara and Police Chief Neil Williams have also attended specific Committee meetings to provide their expertise and knowledge into the local coastal issues.

In addition, the Town's Webmaster, Wendy Derzawiec, has been instrumental in the posting of information related to the Harbors Committee's work on the Town website to ensure the timely distribution of information to the public, and the Town Clerk, Debra Lane, has provided valuable administrative guidance to ensure that the Committee operated transparently.

Finally, using its connections within the State of Maine Department of Marine Resources the Committee was able to receive recent local licensure data for Cape Elizabeth resident fishermen which allowed for an analysis of trends to be established for commercial fishing activities in comparison to data from the 2005 period which was included in the Town's 2007 Comprehensive Plan report.

Using the information gathered, the Committee has been able to address each charge that was presented to it by the Town Council and has worked with the Town Harbormaster to begin to provide an updated mapping of mooring locations. The following report has been organized by Council charge and outlines the Harbors Committee's findings and recommendations to the Council.

3.0 Coastal Waters and Harbor Ordinance Review:



Maiden Cove

Charge Item Executive Summary: The Harbors Committee has accomplished this Council charge by engaging the Town Harbormaster, CEFA, and the public. Although the Committee considered a wide-range of possible changes, the final list of recommended changes is specific and limited. To complete their work on this charge item, the Harbors Committee has already sent the proposed changes to the Cape Elizabeth Ordinance Committee for further evaluation. The Ordinance Committee will ultimately

forward their recommendations to the Town Council for consideration and possible implementation.

One of the charges given to the Committee was to review the Town’s Coastal Waters and Harbor Ordinance and recommend any changes it deems desirable to the Town Council. To accomplish that charge, the Harbors Committee actively engaged in the ordinance chapter review with the Cape Elizabeth Harbor Master, Ian Anderson, and also received input from the Cape Elizabeth Fishermen’s Alliance as well as several Cape Elizabeth residents. In addition, the Committee also had the opportunity to review these proposed changes and the process within which the changes would be considered with Town Planner Maureen O’Meara.

Based on this review process, the Committee prepared a tracked changes Word document regarding potential Ordinance changes to “Chapter 10 – COASTAL WATERS and HARBOR ORDINANCE”. This document has been included within the appendix section of this report as Attachment A. While the Committee considered a wide range of potential changes to the Ordinance language, the following fairly modest specific revisions have been recommended to be implemented by the Harbors Committee:

1. Under Article I, Section 10-1-2 (a), change “black can buoy ‘C-1’” to “can buoy ‘C-1’” as the buoy has been painted green. The Committee has determined that the reference to the color of buoy should be deleted as the buoy may get repainted to another color in the future.
2. Under Article II, Sections 10-2-1(i) Definitions, add a definition for “Houseboat”. The definition for a houseboat was proposed in consultation with the Harbormaster based on his experiences in other municipalities. There is currently not a houseboat issue in Cape Elizabeth, however, the Committee and the Harbormaster determined that in adding the definition at this time that future potential issues associated with houseboats could be mitigated before becoming a problem for the community.
3. Under Article II, Sections 10-2-1 (l) Definitions, add a definition for “Outhaul”. The need for a definition for outhaul arose from a citizen comment received by the Committee and follow up consultation with the Harbormaster. The new definition will aid in the resolution of any future potential issues with an outhaul.

4. Under Article IV, Section 10-4-1, eliminate the word “extreme” in the phrase “extreme emergency”. In the Committee’s opinion, the existing Article II definition of the word “emergency” is sufficient on its own and does not need to be qualified. The word “extreme” unnecessarily qualifies an emergency level and adds subjectivity to the description of what constitutes an emergency situation.
5. Under Article V, Section 10-5-16, add provisions and requirements associated with houseboats to regulate their use in the community. As noted previously while there are no current issues with houseboats in Cape Elizabeth, this added section will mitigate future potential issues that may arise with houseboats as has occurred with houseboats in other southern Maine communities.
6. Under Article V, Section 10-5-17, add limits to the size of vessels covered by the outhaul provisions and requirements associated with an outhaul. The inclusion of this section will assist the Harbor Master to effectively respond to outhaul related issues as they may arise.

In a December 13, 2017 memorandum to the Town Manager, the Committee provided these recommendations to the Cape Elizabeth Ordinance Committee for their review and further action. It is understood that the Ordinance Committee will ultimately send their recommendations to the Town Council for the Council’s consideration and possible implementation.

4.0 Kettle Cove/Crescent Beach State Park Area Assessment:

Charge Item Executive Summary: The Committee has accomplished this charge in consultation with the Town Harbormaster and Police Chief, the Cape Elizabeth Fishermen's Alliance, neighborhood residents, and local park representatives of the State of Maine. The conclusion of our work resulted in eight recommendations to the Council which range from the relocation of the existing public access to a historical boat launch area and the necessary steps to complete the relocation, the repurposing of the existing public boat launch area to pedestrian only access, improving signage in the area overall, and securing easements for the exclusive use of Boat Cove by the commercial fishing fleet and the Town WETeam. The recommendations also include building upon the current collaborative efforts with the State and documenting future interactions and agreements in writing for posterity.

4.1 The Current Situation

The Kettle Cove/Crescent Beach area is the one coastline area within Cape Elizabeth that currently needs solutions as it represents an ongoing challenge of varying commercial and recreational uses, State and local jurisdictional boundaries and responsibilities, and often conflicting neighborhood interests. These challenges are compounded by the natural conditions and physical space limitations of the area as well as the overall popularity of the area among its users, particularly during the summer months.

Please refer to the following Exhibit 1, Kettle Cove/Crescent Beach Access Plan, which depicts the existing conditions of the Kettle Cove area and proposed improvements.



**EXHIBIT 1: KETTLE COVE/
CRESCENT BEACH ACCESS PLAN**

One of the main issues is the limited area available for commercial fishermen to use the boat launch area of Boat Cove which is within the Kettle Cove property controlled by the State of Maine. While the State prioritizes the exclusive use of this boat launch area to the commercial fleet and the Town's WETeam, recreational users sometimes encroach upon this area which creates operational and safety issues diminishing the functional ability of the intended users of the launch to effectively use this area.

The Commercial fleet relies on this launch area to gain access to the ocean to not only launch boats, but also to transfer gear and bring in their catch to transport to markets. While limited use of the nearby sandy beach area of Kettle Cove is sometimes made by commercial fishermen at non-peak periods of recreational use of the beach, these instances are rare and the nearby beach is not a suitable reliable option for the commercial fleet.

Likewise, the Town of Cape Elizabeth WETeam relies on Boat Cove as its only suitable launch site in Cape Elizabeth. While the WETeam can use the nearby sandy beach area of Kettle Cove under ideal situations due to limitations often created by tide and surf conditions, the Boat Cove launch site is the only reliable area for the WETeam's use. The limited parking area of Boat Cove along with its limited suitable launch area further exacerbate any recreational use of these facilities.

Another issue related to the Kettle Cove/Crescent Beach area is the conditions related to the launch area promoted for the public. This public access is currently located along a narrow gap between two portions of the Crescent Beach landholdings by the State of Maine. It is located to the north of the State's Kettle Cove Parking Lot and is accessed by a gap in the boulders which line the west side of Kettle Cove Road. The Town currently employs a resident permit system to allow for the public use of the vehicle beach access.

The relatively steep public use ramp is maintained by the Town and often requires the replacement of gravel caused by the loss of material to wave action due to the ramp's open exposure to the ocean. The launch's proximity to residences across Kettle Cove Road often creates conflicts with the neighborhood residents when users prolong the unloading of equipment and the launching of recreational crafts or use the launch area inappropriately.

Further, an open drainage course which crosses the beach area nearby to the northwest of the launch site often temporarily erodes a channel which cannot be passed over by most recreational vehicles. This situation creates a very restricted area near the launch site for users and prevents the access of the much wider and protected sections of Crescent Beach to the west.

4.2 The State of Maine Perspective:

During the course of the Harbors Committee's work, the Committee and Town Manager Matt Sturgis have enjoyed an ongoing positive discussion of the Kettle Cove/Crescent Beach area issues with Kurt Shoener and Gary Best of the Maine Department of Agriculture, Conservation, and Forestry's Bureau of Parks and Lands. Mr. Shoener manages Kettle Cove, Crescent Beach, and Two Lights State Parks which are close in

proximity, but have very divergent needs and uses. Mr. Best is the Acting Regional Manager who works closely with Mr. Shoener and has been involved at the Cape Elizabeth parks for a long period of time. At one meeting, the Committee also met with Town of Cape Elizabeth Police Chief Neil Williams and the State representatives to discuss State/local jurisdictional and cooperative efforts.



Kettle Cove Beach

During the discussions, it was noted that it is the State's preference for people if they want access to Crescent Beach or the areas around Kettle Cove State Park to park at Crescent Beach State Park parking lot which is less than a two mile drive from Kettle Cove parking lot. The State is also now actively directing organized groups that want to access Crescent Beach or the areas around Kettle Cove State Park to go to Crescent Beach, where there is ample parking, rather than contribute to the congestion at Kettle Cove. In doing so, the access to the non-commercial users of Crescent Beach will be reduced to allow the commercial users more exclusive use of Boat Cove.

The State representatives also described the State's overall guiding document of an Integrated Resource Policy for all State parks. This policy focuses on the preservation of the human experience of the parks that they operate as well as promotes the obligation to protect wildlife and their natural habitat from human intervention. For the Kettle Cove State Park, the New England Cottontail and the federally protected Piping Plover species are prioritized and the State is actively pursuing a grasslands policy in the park to protect species that rely on that environment. Therefore, despite the appearance of ample land to do so, the State is not planning on expanding the parking lot capacity at Kettle Cove to promote more convenient visitor use.

Copies of both the Kettle Cove State Park deed and the Crescent Beach State Park deed as provided by Mr. Best are included in the appendix section of this report as Attachment E.

4.3 Potential Solutions:

The Cape Elizabeth Fishermen's Alliance (CEFA) and residents of the Town have proposed a relocation of the existing Town public beach access to a historical boat launching area further to the northwest off of Kettle Cove Road. The use of the boat launch was curtailed many years ago due to its improper activities and access to the area is currently restricted by a series of large boulders placed by the State along the west side of Kettle Cove Road. It is believed that the gravel placed for the original launch area is predominately still in place and is now overgrown with vegetation.

The State representatives stated that the State would be very much behind the effort to move the public vehicle beach access and would not impede its progress, however, any improvements to reuse it would need to be funded by the Town. Further, the improvements would need to be engineered and properly permitted. To do so, there

would need to be a comprehensive agreement between the State and the Town that stipulates each party's responsibilities. That agreement would then need to be followed by an easement which would allow the Town to construct and maintain the improvements as well as operate the boat launch.



Existing Public Boat Launch

If this change were pursued, the existing boat launch could be utilized as a pedestrian-only access point to that section of Crescent Beach and vehicular use of the current launch would then be prohibited. The Committee believes that the Town should devise a means through stairs, vehicle barriers, and signage to clearly demonstrate the location of the access and its purpose in providing pedestrian access to the beach area. In doing so, the rights of the public to access and enjoy the beach area would be clearly identified and enhanced by providing a safe, year-round means to readily access the beach by foot.

The clear separation of uses and proper signage stipulating these uses would resolve much of the conflict within the Kettle Cove/Crescent Beach area. By providing an improved public beach access and launching capabilities, the public users would be more inclined to use the more accessible public area and less apt to attempt to use the more restrictive Boat Cove launch area which should be limited to commercial users and the Town's WETeam. Also by moving the public vehicle beach access area to the northwest, conflicts with the drainage channel would be mitigated. In addition, the new public beach access location would create a buffer between boat launch activities and the nearby residential homes along Kettle Cove Road.

Finally, the Committee recognizes that while the State currently does not intend to restrict either the commercial fishing fleet or the Town's WETeam from using the launch area at Boat Cove, there is no definitive easement in place with those access rights being clearly documented and recorded. Recognizing that future conditions may arise that might affect the State's desire to continue this arrangement and the disastrous effect that such a restriction or limitation of use would place on the Town's commercial fishing community and its water related emergency response abilities, the Town should negotiate with the State to obtain a recorded easement for the continued and unabated rights of its commercial fleet and WETeam to utilize the Boat Cove launch area.

4.4 Recommendations:

The Harbors Committee recommends that the Town Council take the following steps:

1. Enter into an agreement with the Operations and Maintenance Division of the Maine Department of Agriculture, Conservation, and Forestry's Bureau of Parks and Lands stipulating each parties' understandings and responsibilities associated with the relocation of the public vehicle beach access to the historical boat launch area to the northwest off Kettle Cove Road.

2. Follow up with steps to secure an easement from the State of Maine that would allow the Town to construct and maintain the improvements and then operate the new public vehicle beach access site.
3. Investigate and seek grant opportunities that could be used to assist in the funding of the new public access location. The Maine Department of Transportation's Small Harbors Improvements Projects (SHIP) grants have historically included a 50% local match up to \$250,000 in funding. SHIP grants must improve access to an existing access area. Also, the State provides Shore and Harbor Planning grants which dedicate up to \$30,000 with a local match that could be used to begin the planning work for this new launch.
4. Design, permit, construct, maintain, and operate the new public vehicle beach access area while repurposing the existing beach access area to provide safe pedestrian-only access to Crescent Beach. The pedestrian access should be enhanced with stairs or some other suitable means to allow for safe and secure year-round access to the beach. Further, vehicle barriers should be placed off the edge of Kettle Cove Road to not only restrict vehicular use of the access, but to also demarcate the entrance for pedestrians. Finally, signage should be added to direct visitors to this beach access location for foot traffic.
5. Install signage to clearly designate uses and restrictions on Town-owned property and encourage the State to clearly designate areas within their control for specific uses and restrictions. Of particular interest would be the parking and associated turnaround area and the boat launch at Boat Cove to be restricted to the commercial fishing fleet and the Town's WETeam exclusive use.
6. As a long-term step and to show its commitment to the local fleet and emergency preparedness, work with the State of Maine to secure an easement for the uninterrupted use of Boat Cove for use by the Town's commercial fishermen and WETeam.
7. Continue to support the collaborative activities of the Town's Police Department in providing enforcement and support to the State of Maine resources in the Kettle Cove/Crescent Beach area.
8. Encourage the State of Maine to share and promote their management goals and priorities for the Crescent Beach, Kettle Cove, and Two Lights State Park. Continue to build upon the ongoing cooperative discussion with State of Maine representatives. Clearly document any future collaborative interactions and agreements in writing so that mutually accepted policies and procedures will remain constant despite the eventual change in personnel over time at both the local and State levels.

5.0 Moorings Mapping Update:

Charge Item Executive Summary: The Harbors Committee has worked with the Town Harbormaster who has partially gathered mooring location coordinates to update the Town's mooring map information. This mapping exercise should be completed in the summer season of 2018 to identify all active and inactive moorings. This information should then be provided to the Town's GIS Coordinator to develop a current mooring location map. This current map should then replace the outdated mooring information on the Town's website to reflect accurate mooring information. The Town's website mooring section should then be made current and updated as information changes so that the public can readily access reliable mooring information. Finally, the Town should continue to support the Harbormaster position in a professional manner.

Currently, the Town conducts the administrative duties of the Harbormaster position through its staff within the Police Department and provides a Harbormaster presence on the water by sharing its Harbormaster with the adjacent Town of Scarborough. While the Town of Scarborough employs the bulk of the Harbormaster's time, this arrangement allows for the Town of Cape Elizabeth to have a certified enforcement officer with full arrest powers through the Maine Criminal Justice Academy. The Harbormaster has access to several boats and being well-versed in marine law is able to respond appropriately to possible criminal and emergency situations. The Town of Scarborough also provides the Harbormaster with an equipped response vehicle that can be used on calls in Cape Elizabeth.

By staffing the current Harbormaster position in this fashion, the Town has greatly improved both the functionality and the professionalism of the Harbormaster role. Past Harbormasters were not formally trained in law enforcement and were required to use their own boats to conduct their work. Further, past Harbormasters operated with little supervision and provided very little documentation of their activities. By elevating the Harbormaster position to a higher level, the Town now has greater control of the ongoing harbor activities and is in a much better position to respond to issues as they occur.

The charge of providing a mooring mapping update has been partially completed. The Committee worked with the Town's Harbormaster in an attempt to complete the entire mapping exercise, however, the mapping update was not able to be completed during the optimum period of the 2017 season. The Harbormaster was able to complete a mapping of Seal Cove near Kettle Cove and Crescent Beach State Park which includes all of the commercial fleet mooring locations. Due to adverse weather conditions and the seasonal lowering below the water surface of many of the mooring buoys during the winter season, the Harbormaster was unable to conduct the mooring mapping along the eastern shore which consists of entirely recreational moorings.

The Harbormaster should complete the mooring mapping update in 2018 and utilize that information to address any discrepancies in the Police Department's official mooring records. The updated information should then be added to the Town's website and the website's mooring pages made current so that users of this information can be assured of its reliability.

The Town of Cape Elizabeth administers moorings with its Police Department and its part-time Harbormaster. According to Town records, there were 59 registered moorings. By comparison, the 2007 Comprehensive Plan listed 104 registered moorings in 2006. The number of moorings by location were as follows:

LOCATION	2017 MOORINGS	2006 MOORINGS	CHANGE
Alewife Cove	3	7	-4
Broad Cove	1	1	0
Cliff House Beach	3	3	0
Crescent Beach	14	32	-18
Kettle Cove	13	15	-2
Maiden Cove	10	19	-9
Ram Island	1	1	0
Staples Cove	5	9	-4
Pond Cove	1	1	0
Trundy Point	3	10	-7
Zeb Cove	5	6	-1
TOTAL	59	104	-45

Source: Town of Cape Elizabeth Police Department

The number of moorings appears to have been significantly reduced over the past decade. There are a number of factors which may be involved with this situation. According to the Town's Police Department, Maiden Cove is the only cove in Town with a mooring waiting list, currently at five. Rather than this location being less popular for moorings, it is more likely that the cove was historically too crowded so fewer moorings are now allowed. Likewise, the Crescent Beach area was once considered to be over-crowded so a reduction of moorings allowed in this location is also entirely possible.



Staples Cove

Many recreational mooring locations are accessed entirely by nearby private residential properties. Therefore, the replacement use of these moorings is restricted from the overall general public due to accessibility limitations. When past moorings are released, they can only be reactivated by people with access to the cove which may not readily occur.

Other possible theories for the reduction in moorings include that some moorings in the past may not have been actually in use, but had been continually carried forward on the mooring location list. Another possibility is that the past documentation was not accurately kept which has led to some discrepancies. Now that the Harbormaster position has been elevated, and Police Department is now actively involved in the record keeping process, the mooring information will be much more reliable in the future.

6.0 Public Water Access Inventory:

Charge Item Executive Summary: In order to inventory public access points to the shoreline, the Committee utilized local knowledge and conducted a field review of public coastal access areas. These areas are controlled by various entities including the federal government, the State of Maine, the Cape Elizabeth Land Trust, and the Town of Cape Elizabeth. There are several coves along the shoreline that the Town issues mooring permits, however, these moorings are accessed from private property and no direct public access rights exist. Further as discussed in Section 7 (Page 26) of this report, the Committee also conducted a Public Shoreline Access Survey to gauge the importance of coastal public access and to gain public opinion as to the condition and potential improvements to these locations. The results of the survey indicate a high value is placed on these public spaces by its users and there is a high level of interest in maintaining and improving upon these areas.

Please refer to the following location map, depicting the various public properties and coves along the Cape Elizabeth coastline.

Town of Cape Elizabeth Harbor Committee Location Map



0 1,300 2,600 5,200
Feet

Map Created by: Planning Department
May, 2018

See 2019 Comprehensive Plan for further discussion.

6.1 Federal Properties:

The federal government through the U.S Coast Guard controls the access to the ocean from the lands associated with its facility at the end of Two Lights Road.



Dyer Cove

This cove is accessed from the end of Two Lights Road. The land beyond the paved section of Two Lights Road is owned by the U.S. Coast Guard as part of an approximate 10 acre property along the coastline. The Coast Guard allows the public to access the rocky beach via a gravel parking lot beyond the paved roadway. While the Coast Guard property includes approximately 2,500 linear feet of ocean frontage, the beach area extends for less than 350 feet in length along the shore. The beach area is generally used for sightseeing, scuba diving, paddle boarding, and kayaking. Although there was historical use of a past mooring use here, the cove is exposed, frequently choppy, and subject to strong coastal currents. In the Harbormaster's opinion, this cove does not represent a viable opportunity for mooring use.

6.2 State of Maine Properties:

The State of Maine owns and operates three state parks within the Town limits. These three parks are in close proximity to one another and are currently managed by one person.



Two Lights State Park

This park is accessed from Tower Drive off Two Lights Road and encompasses approximately 42 acres with approximately 2,200 linear feet of coastline. This park opened in 1961 and features a rocky coastline with sweeping views of ships entering the Portland harbor and the Atlantic Ocean. The park offers a network of paths crossing through forested lands and along seaside rock ledges. Popular activities include walking, sightseeing, picnicking, and sunbathing.



Kettle Cove State Park

This approximately 67-acre area with approximately 4,400 linear feet of shoreline is accessed from Kettle Cove Road and includes a paved parking lot for users of the park. The park features public beach access and the Town's only commercial boat launch, a sandy beach area, and supports a variety of coastal activities and wildlife habitat. Despite its open exposure and often rough seas, a large mooring field is located here. The Town's commercial fishing fleet and the Town's WETeam uses Boat Cove within the park limits for boat launching. A more detailed discussion of this area with recommendations for improvements is included in Section 4.0 (Page 11) of this report.



Crescent Beach State Park

Opened in 1966, this approximately 212-acre park area is accessed publicly from its main entrance and parking area off of Bowery Beach Road (Route 77). As part of the 212 acres, the State leases approximately 100 acres from the adjacent Sprague Corporation. There is secondary access to this park from Kettle Cove Road, but it is restricted to authorized personnel only and is not for public use. Beachgoers frequent the beach area and recreational boat and other marine related recreational equipment can be launched from this beach area as well. The park's sandy beach extends approximately 4,400 linear feet in a crescent shape that connects to the east with Kettle Cove State Park lands. In addition to picnicking, sunbathing and swimming, the park offers walking trails and opportunities for fishing, kayaking and paddle boarding/sailboarding.

6.3 Cape Elizabeth Land Trust Properties:

Another entity with control along the Cape Elizabeth is the Cape Elizabeth Land Trust (CELT). The CELT operates independently from the Town, but its lands are open to the public. CELT properties may also contain additional restrictions associated with their use depending on the specific terms agreed upon during the property acquisition process.



Trundy Point

This less than 2-acre property area is located off Reef Road and contains approximately 1,300 feet of coastline. This area can be accessed on foot by people in the nearby neighborhoods or from vehicles parking alongside the road. There are no off road parking spaces that are dedicated to this property. There are Town permitted moorings in nearby coves which are all non-commercial related. The area contains a small rocky beach with walking and sightseeing opportunities along Trundy Point that offer sweeping views of the Atlantic Ocean.



Pond Cove from Shore Road

This 1.25 acre area is accessed from Shore Road and encompasses approximately 300 feet of rocky shoreline. Parking is available on the inland side of Shore Road near the CELT owned Robinson Woods. A short CELT trail starts at Shore Road and then leads onto the rocky beach at Pond Cove. A mooring is sometimes used in Pond Cove, but due to its exposure, it cannot be used in any inclement weather conditions.

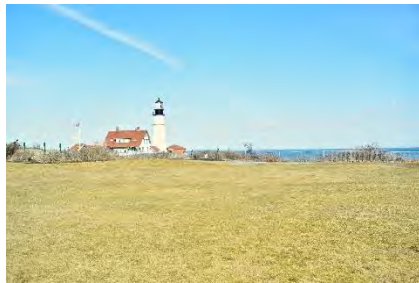
6.4 Town of Cape Elizabeth Properties:

Beyond the very popular and heavily used Fort Williams Park, the Town actually owns few other limited landholdings with very little coastline access under its control. The Town maintains two coastal properties and restricts the public's use of these areas to occur

from sunrise to sunset. The Town also owns land alongside the Spurwink River which is tidally influenced, but the Town's land rights do not actually extend to the Atlantic Ocean.

There are also situations in Cape Elizabeth neighborhoods that include right-of-way access to the shore, however, these accessways are typically deeded and limited to nearby residences. Therefore, the general public cannot legally use these neighborhood shore access points.

It should also be noted there are often no public access to places where the Town issues moorings, such as at Maiden Cove off Cottage Lane and Staples Cove off Hannaford Cove Road. In doing so, the Harbormaster is not providing any assurances that a mooring holder will have public access to the mooring. While it may not be practical to access a mooring from another harbor, it is theoretically possible. This situation is common along the Maine coast where many moorings in Maine are located near and accessed from privately held adjoining land.



Fort Williams Park

This 96-acre property located off Shore Road is a former military installation which was sold to the Town in 1964 and later designated as Fort Williams Park in 1979 by the Town Council. In addition to its approximately 5,700 feet of coastline access, the park features an iconic lighthouse and is a very popular destination by both tourists and residents

of the Town. In addition to sightseeing, historical points of interest, and picnicking opportunities, the park features various recreational opportunities through walking trails and open play and ball fields, playgrounds, and a small, approximately 300-foot long, rocky beach.



Cliff House Beach

This quarter of an acre property on Danforth Cove is located off Sea View Avenue and includes a rocky beach of about 200 feet in length. The area can be accessed on foot by people in the nearby neighborhoods or from vehicles parking alongside the road. Currently in disrepair, there are steep concrete stairs that allows access from the grass bluff area alongside Sea View Avenue to the rocky

beach below. The Town is actively exploring actions to repair the stairs to provide a more secure means to access the beach area.



Spurwink River Marsh

This tidally influenced area is located off Bowery Beach Road at the municipal border with the Town of Scarborough. A Rachel Carson Preserve parking lot is located on the Scarborough side of the river which allows visitors to access and to view the Spurwink River. The Town owns a large tract of land

along the thread of the Spurwink River that encompasses the Spurwink River tidal marsh and extends inland to the school properties in the Town Center and to the sanitary sewer treatment plant, Public Works facility, and the Town owned cemetery, recreational fields, and Town farm lands. The Spurwink River provides an opportunity for fishing, but is poor for kayaking due to sand bars and the low water levels due to the fluctuating tides.

Access to the Cape Elizabeth side of this area is publicly available through the adjacent Town Cemetery parcel off Bowery Beach and Spurwink Avenue. The Cape Elizabeth Conservation Commission is actively planning to improve and extend a trail to the Spurwink River point area for pedestrian and mountain bike use which would be located beyond the adjacent Town Cemetery active limits. Tidal marshes represent a significant permitting and construction obstacle to improving access to this area.

It should be noted that the Town's property along the Spurwink River is well inland and does not reach the Atlantic Ocean so technically this land would not qualify as coastal access.



Surfside Avenue

This area is a 2,000 linear foot section of a paper street that is located off Pilot Point Road which extends along a bluff area overlooking the rocky coastline with views of Broad Cove and the Atlantic Ocean. The Town does not own this paper street outright. Surfside Avenue is a paper street, however, on which the Town has the incipient rights of

dedication. These rights are currently extended to October 2037, with the Town maintaining its rights to either accept the paper streets or vacate the municipal interest.

During the Committee's review of coastal access issues, there was a separate and spirited review undertaken by the Town Council regarding the rights associated with Surfside Avenue and the limitations of those rights. After significant input, study, and deliberations, the Town Council eventually voted to extend its current rights in this area for the foreseeable future.

6.5 High Value Plant and Animal Habitat:

According to Maine Department of Inland Fisheries & Wildlife provided mapping, the shoreline of Cape Elizabeth offers high value plant and animal habitat. Beginning in the northern portion of the Town at Danforth Cove and then along the shoreline of Fort Williams Park is located habitat for Harlequin Duck which is a threatened species. Fort Williams Park also offers habitat for the endangered New England Cottontail Rabbit.

Moving further to the south beyond Broad Cove, past Trundy Point and around Dyer Cove, and then along the southern shoreline associated with Two Lights State Park and Kettle Cove State Park are areas of habitat for Harlequin Duck and large swaths of the New England Cottontail Rabbit habitat.

Once along the coastline of Crescent Beach on the southerly shore, shorebird habitat extends for the endangered Piping Plover. A Pitch Pine Dune Woodland natural community is located westerly of the Crescent Beach State park parking lot. Further to the west extending toward the Spurwink River are Dune Grassland natural communities, additional Piping Plover habitat, and a pocket of habitat for the endangered Beach Plum species.

Clearly the shoreline of Cape Elizabeth, particularly in its southwesterly area, offers essential habitat of considerable value. Contributing to the ability of these habitats to thrive is the sparse development in this portion of Town and the Town's stringent wetland and coastline zoning which further protects plant and animal habitats from impacts of development.

7.0 Public Opinion Survey

7.1 Introduction:

The Harbors Committee was one of the subjects studied as part of University of New England student Madison Whatley's Marine Resource Capstone project "*Maine Municipal Harbor Management: Case Studies in Adaptive Resource Management*". As part of her research in making decisions in natural resource management, Ms. Whatley reviewed the communities of Cape Elizabeth and Brunswick, Maine as case studies and presented her research findings to the Committee. A summary of Ms. Whatley's report is included in the appendix section of this report as Attachment F.

During her presentation, Ms. Whatley emphasized that stakeholder involvement is important throughout the process citing Brunswick's online survey as a different way to engage stakeholders that may not be reached through traditional methods. The Harbors Committee decided that an online survey would be an excellent manner to solicit input from citizens in addition to the input that the Committee received from local residents' written and spoken testimony, the local fishermen's association, State representatives, and Town Staff.

7.2 Overview:

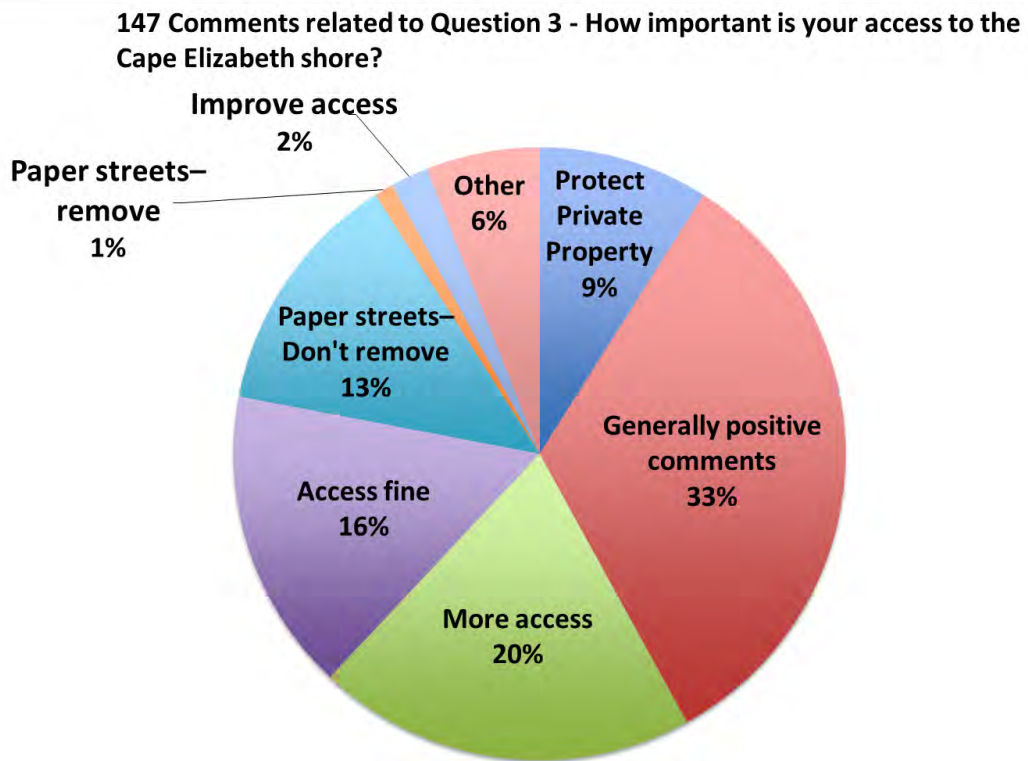
In order to gauge the public's opinion of the Cape Elizabeth coastline issues, the Harbors Committee conducted a public opinion survey in which 497 people responded. Over 95 percent of the respondents were Cape Elizabeth residents. The overwhelming opinion of the survey indicated that public access to the shoreline is either extremely or very important to the public (over 90 percent) and a highly valued aspect to living in Cape Elizabeth. A wide variety of users enjoy this natural resource through relatively passive activities such as picnicking, sunbathing, and sightseeing to more strenuous activities such as walking, swimming, kayaking, paddle boarding/sailboarding, surfing, and scuba diving. This resource is also used for recreational boating and fishing while being essential to the livelihood of the Town's commercial fishing and aquaculture industry.

The respondents also provided suggestions for improving access points and the use of these public access areas. In addition to providing valuable data as to the particular activities enjoyed at the various public access areas, the survey wholeheartedly demonstrated that the coastline of Cape Elizabeth is a valued treasure in the community and that its protection and improvement is very much supported.

7.3 Public Access Importance:

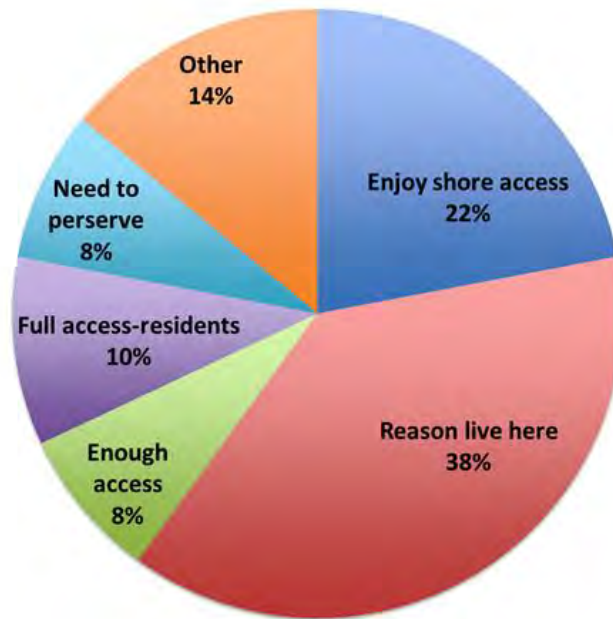
It should be recognized that a sizable percentage of the responses to the importance of public access were motivated by the ongoing debate regarding public access to the Surfside Avenue paper street which is located along Broad Cove and is located off Pilot Point Road. The comments associated with the importance of public access, however, were clearly supportive of public access to the shore with people being generally satisfied with the level of public access and another group of respondents urging the Town to increase the public's access to the coast.

The Harbors Committee recognizes that the Surfside Avenue paper street issue is extremely sensitive and a very complicated issue for the Town Council and affected residents to resolve. The Committee also understands that the purchase of additional shoreline access is nearly impossible for the Town to obtain due to the lack of availability and the extremely high cost of coastal property. Regardless, the Harbors Committee recommends that the Town Council identify and pursue any possible opportunities to expand its public shoreline access while partnering with other entities within the Town, such as the State of Maine and the Cape Elizabeth Land Trust, to improve upon existing public access points to the coast.



When asked why the respondents valued their access to the shoreline, over 50 percent of the 400 individual responses indicated that people not only enjoyed the shoreline access, but that it was the reason that they live or moved to Cape Elizabeth. Another approximately 20 percent of the responses touted the shoreline as a great asset and one that the Town needs to preserve. Clearly, many of the citizens of Cape Elizabeth consider the shoreline to be a local treasure worthy of the efforts underway to improve upon and preserve its important functions.

400 comments related to Question 4 - Based on your answer to Question 3, why do you say that?

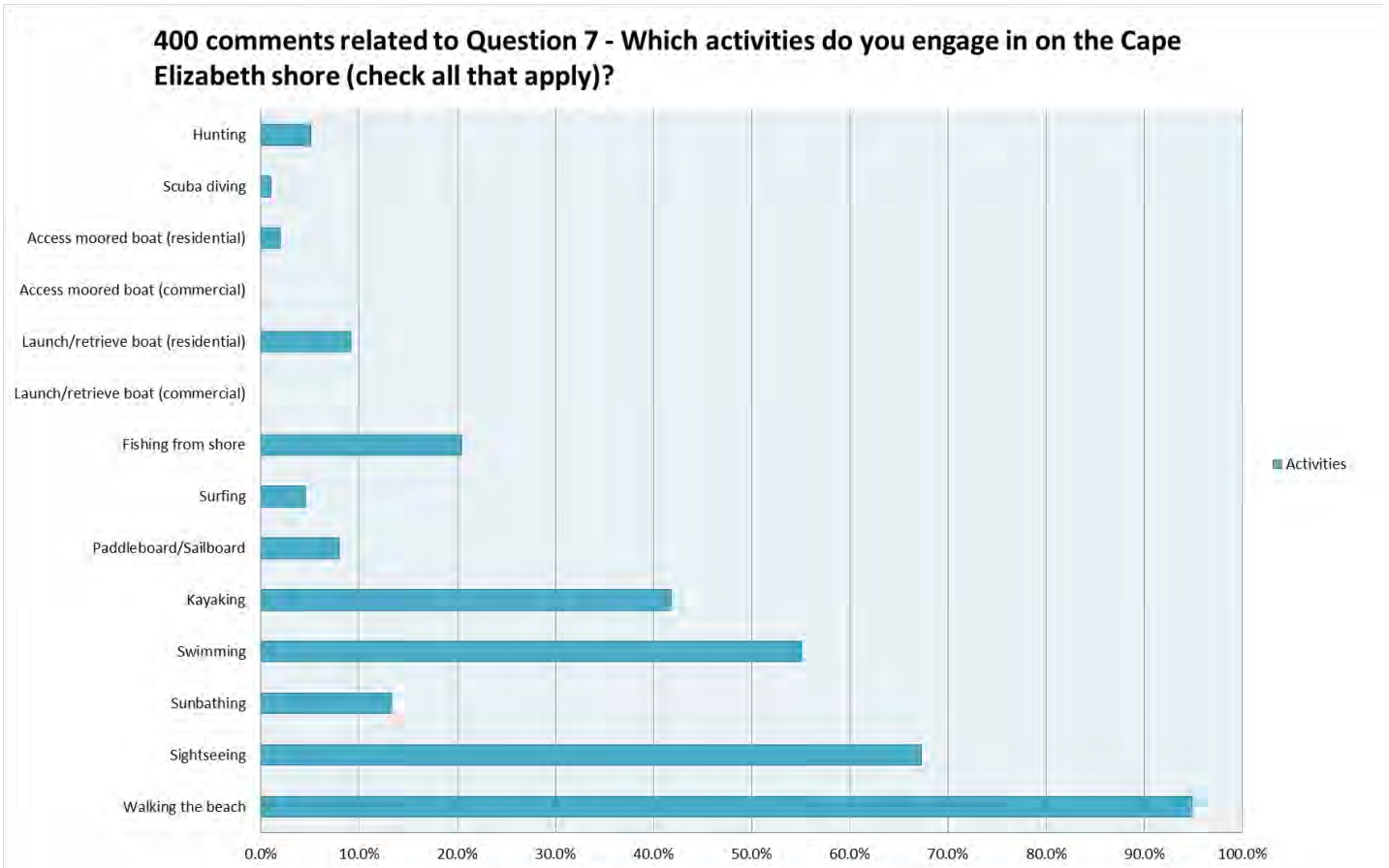


7.4 Usage and Activities:

The survey also revealed that the respondents frequently visited the Cape Elizabeth shore particularly during the months of June, July, and August. While Fort Williams Park is the most popular location to visit for shoreline access, the survey indicated that Kettle Cove was a close second and overall ranked as the most popular location in the Town in terms of public coastal access.

Given that Crescent Beach was a close third in popularity to Fort Williams Park and Kettle Cove in destinations to visit and considering Crescent Beach's close proximity to Kettle Cove, the results of the survey strongly demonstrates the need to proactively take action to resolve the congestion of the Kettle Cove/Crescent Beach area as outlined in Section 4.0 (Page 11) of this report. It should also be noted that other public water access locations within the Town were also robustly supported by the respondents indicating strong support for these locations and the need to explore opportunities to improve upon these access points for the continued balanced enjoyment and usage of these facilities.

As for the activities that people enjoyed on the Cape Elizabeth shoreline which are indicated in the following chart, walking the beaches was an overwhelming favorite enjoyed by over 95 percent of the responders. Sightseeing and swimming were also popular activities for approximately 60 percent of the survey takers. Sunbathing and kayaking were noted by another 40 percent of the survey responses followed by paddle boarding/sailboarding and fishing from the shore near 25 percent. Boating activities were then well distributed by commercial and recreational users with surfing, scuba diving, and hunting activities also noted.



Clearly, the coastline of the Town is host to a wide variety of activities in both diversity and levels of intensity. It is also clear that this resource is important not only for its economic contributions, but also for the health and recreational well-being of the community.

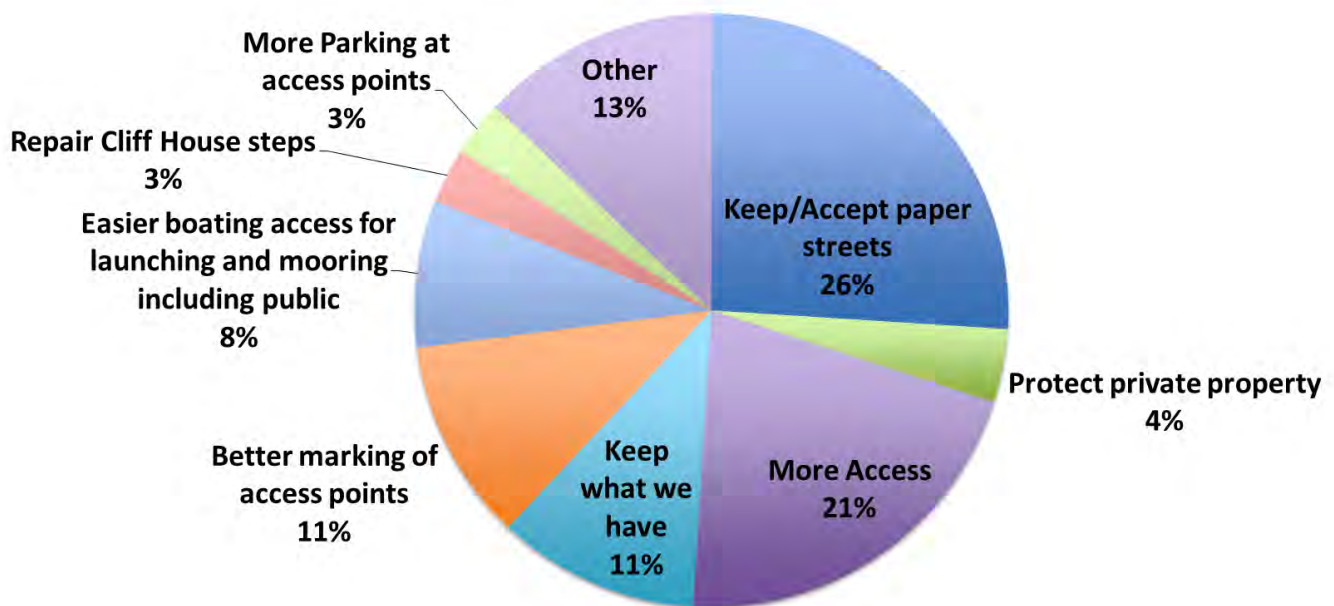
7.5 Possible Shoreline Access Improvements:

When asked what the Town could do to improve upon the existing public access to the coast, many responders noted that increasing shoreline access as a high priority. Again, many of the respondents to this question weighed in from perspectives associated to the controversial Surfside Avenue paper street access issue. While this ongoing discussion may have influenced this particular response, it cannot be dismissed that increasing the

public access opportunities to the shoreline is a strong sentiment of the survey results which the Town Council should not take lightly.

The “more access points” response was the lead response followed in order by responses suggesting the improved amenities of better trails, more parking at the access points, and the installation of restrooms, improved boat launching facilities, and increased mooring availability. The individual comments listed in the survey responses contained many broad recommendations associated with the ongoing paper street discussion and several specific suggestions such as better marking of the access points and the repair of the Cliff House Beach stairs.

316 Comments related to Question 11 - Please tell us how the Town of Cape Elizabeth can improve public access to the shore and waters?



While the Committee recognizes that some of these suggestions may not be economically feasible such as installing restroom facilities or physically possible in some cases such as expanding mooring availability, the Committee does recommend that the Council review the individual comments presented in the Public Survey to get a flavor of the type of improvements that the public is interested in accomplishing so that future improvement assessments can be factored with this survey’s responses in mind.

7.6 Demographics:

While only five percent of the responders fit the 18 to 34 year old category, the four other age groups from 35 to 44 years old, 45 to 54 years old, 55 to 64 years old, and those over 65 years old were evenly represented between 20 to 30 percent per age group. This distribution clearly indicates that the Cape Elizabeth shoreline resources are enjoyed by a broad range of age groups and it is safe to assume that this enjoyment also extends to

individuals under 35 years old. Therefore, it is important for the Town to protect and improve upon its shoreline resources for the benefit of all residents no matter what demographic category they may represent.

7.7 Communication:

The Committee also believed it was important to determine how the survey responders found out about Town government activities and news. The overwhelming method according to this survey was through the Cape Courier newspaper (88 percent) and the Town's website (66 percent). These two sources were followed by Portland Press Herald newspaper and social media in around 40% of the responses and the Forecaster newspaper (28 percent). It is recommended that the Town continue to promote their activities through these resources in order to communicate effectively with the public.

8.0 Comprehensive Plan - Marine Resources Section Draft:

Charge Item Executive Summary: The Harbors Committee met with Town Planner Maureen O’Meara who provided direction on the State requirements for the Marine Resources section of the Comprehensive Plan and comments on the draft content. Based on this assistance and the information that the Committee has developed through their work, the Harbors Committee created the draft version of Comprehensive Plan Marine Resources section for the Comprehensive Plan Committee’s consideration.

The Harbors Committee met with Town Planner Maureen O’Meara who provided direction on the State requirements for the Comprehensive Plan and the Marine Resources section. She also described the Comprehensive Plan report outline being devised by the Comprehensive Plan Committee so the Harbors Committee could focus on the information that needed to be included in the Marine Resources section.

The Harbors Committee then developed a draft Marine Resources section to address this charge item and provided it to the Comprehensive Plan Committee. It is envisioned that the Comprehensive Plan Committee will review and revise this section to fit within the context of the overall Comprehensive Plan. A complete version of the draft Marine Resource Section as provided to the Comprehensive Plan Committee for their use is included in the appendix section of this report as Attachment G.

As part of its research and deliberations on the Marine Resource Section, the Harbors Committee received input from various sources which emphasized the importance of balancing the needs of both recreational and commercial uses for the Town’s coastline resources. The Town should continue to support its commercial fleet while recognizing the value that Cape Elizabeth residents place on their shoreline activities. Paramount to this issue is the need to address specific concerns regarding access to the Kettle Cove to maintain a working waterfront and enhanced public access to the water in a manner that respects the local neighborhood.

One specific piece of information that the Committee received reflects the levels of recreational and commercial fishing activity in Cape Elizabeth. As a means to track the trends of the local fishing and shellfish harvesting activities both recreationally and commercially, the Maine Department of Marine Resources has historically tracked marine licensure information for various communities throughout the State of Maine. A review of the changes in licensure levels from 2005 to 2016 indicates that the total number of permits have remained essentially steady, however, there was a noticeable drop in commercial licenses which has been primarily offset by an increase in non-commercial marine related licenses.

TYPE OF LICENSE	2016	2005	CHANGE
Commercial Fishing Crew (CFC)	8	8	0
Commercial Fishing Single (CFS)	6	2	4
Commercial Shellfish (CS)	1	0	1
Commercial Shellfish Under 18 (CSU)	1		1
Elver Dip Net (E0)	1		1
Lobster/Crab +70 (LCO)	1	6	-5
Lobster/Crab Apprentice (LA)	1	1	0
Lobster/Crab Class 1 (LC1)	19	20	-1
Lobster/Crab Class 2 (LC2)	16	28	-12
Lobster/Crab Class 2 +70 (LC20)	1		1
Lobster/Crab Class 3 (LC3)	8	6	2
Lobster/Crab Non Commercial (LNC)	44	35	13
Lobster/Crab student (LCS)	6	14	-8
Recreational Saltwater Fishing Operator (SWRO)	2		2
Recreational Saltwater Registry (SWR)	3		3
Scallop Diver with Tender (SDT)	1	1	0
Scallop Dragger (SD)	2	3	-1
Scallop Non Commercial (NCS)	1	3	-2
Seaweed (SW)	3	1	2
TOTAL	125	128	-3

Source: State of Maine, Department of Marine Resources

The regulations currently in place makes it difficult to gain a new Lobster/Crab license with the limited entry system restrictions in both of the two zones that straddle Cape Elizabeth. It should be noted that the current regulatory system also incentivizes the student entry process by making it difficult to gain a new license. While the number of student licenses has decreased in Cape Elizabeth, this reduction may be due to cultural trends which tend to diminish the younger generations from entering the commercial fishing industry and the Town's lack of a pier which other communities use to develop and foster the sustainability of their commercial fleet. While the drop in commercial licenses is a trend that is reflective across nearby states, Cape Elizabeth has been able to sustain a working waterfront.

9.0 Other Related Matters:

Charge Item Executive Summary: To date, the Town Council has not requested that the Committee consider any other related matters. During the course of the Harbors Committee's deliberations, however, the Committee reviewed the June 2015 "Cape Elizabeth Sea Level Rising Vulnerability Assessment" report as prepared by the Portland Council of Governments. The Harbors Committee has chosen to include the Executive Summary from this assessment report below as a means to emphasize that sea level rise affects must be taken into account in any future improvement project to the Town's shoreline access points and in any future planning along the Town's coastline. While the Town of Cape Elizabeth is fortunate to be in a much more resilient position than many other Maine coastal communities, the adverse effects from the potential sea level rise cannot be minimized and the Committee encourages the current and future Town Councils to be diligent in their actions to mitigate adverse sea level rise consequences.

Cape Elizabeth Sea Level Rising Vulnerability Assessment's Executive Summary

For several reasons, Cape Elizabeth is uniquely situated to be more resilient than most communities to the effects of sea level rise, coastal flooding, and storm surge. First and foremost, the Town's **rocky coastline** severely limits the area that is vulnerable to sea level rise and coastal flooding. According to the Maine Geological Survey's (MGS) Coastal Bluff Maps, most of Cape Elizabeth's coastline is considered "stable," with little risk of landslide or erosion.

In addition to this natural fortification, the Town has adopted several **strict policies to regulate development in low-lying, environmentally sensitive areas**. For example, roughly one-third of the town is regulated by local wetlands zoning; the Town recently amended its shoreland zoning regulations to consider the implications of three feet of sea level rise; and new structures in flood-prone areas are required to be raised at least two feet above "base flood elevation" in most zones.

Lastly, the majority of Cape Elizabeth's **public buildings and facilities are located a safe distance inland from any coastal flooding hazards**. The Town office, police and fire departments, schools, and library are all clustered together in the Town Center, and by all appearances out of harm's way.

However, this is not to say Cape Elizabeth is immune to the impacts of sea level rise. This assessment has identified several potentially vulnerable areas. In particular, key elements of the Town's transportation and public sewer infrastructure, including Sawyer Rd., Shore Rd., Spurwink Ave., Starboard Dr., and a pumping station on Spurwink Ave. (Discussed in greater detail in the report).

Private property in Cape Elizabeth may also be at risk – mainly coastal residences and private access roads. However, this report focuses solely on impacts to public infrastructure. This report does not provide an exhaustive list of every action the Town could take to prepare for sea level rise; rather, it highlights the **top projects and strategies** believed necessary to protect public infrastructure and increase public safety. For Cape Elizabeth, these are:

- Evaluate risk to PWD’s wastewater pumping station on Spurwink Ave.
- Raise Sawyer Rd. and minor span.
- Raise Shore Rd. and improve culvert.
- Raise Spurwink Ave. and improve culvert.
- Review capacity and design of culverts Town-wide.
- Coordinate with PWD and South Portland to evaluate risk to underground utilities.
- Improve accuracy of GIS layer for “Normal High Water Line” (HAST+3ft).
- Include sea level rise language in next comprehensive plan update.
- Revise septic ordinance to consider impacts of sea level rise.
- Incorporate Low Impact Development (LID) techniques in land use ordinances.

10.0 Summary and Conclusions:

The Harbors Committee has been pleased to undertake the charges as requested by the Town Council and believes that this report will provide the impetus for improving the Town's harbors and coastline. During the Committee's study and deliberation period and as evidenced by the public participation at both Committee meetings and through the public input survey, it is readily apparent that the shoreline and harbors are important to fabric of the community of Cape Elizabeth and an essential component to its residents.

The recommendations in this study will provide the Town Council with a framework to begin to address local coastal issues, however, the issues related to the Town's harbors and shoreline will continue to evolve. Given that the last formal review of the Town's coastal resources occurred over 30 years ago, the current Harbors Committee strongly encourages the Town Council to revisit the marine resources within the Town's shoreline on a more frequent basis that should not exceed a 10-year time frame.



Kettle Cove