

# **MARINE RESOURCES COMMITTEE**

## **Town of Bar Harbor**

Agenda

Regular Meeting

Wednesday, February 17, 2020

### **ITEM 1**

CALL TO ORDER – 4:00 p.m. Join Zoom Meeting

<https://us02web.zoom.us/j/88410653034?pwd=a3FrSThBS0ZPa3ViZXFqMVo0dDJHQQT09>

Meeting ID: 884 1065 3034

Passcode: 101895

If you do not have internet access you can also phone in using this number: 929-205-6099 and then follow the instructions for meeting ID and PW.

### **ITEM 2**

APPROVAL OF MINUTES - December minutes

### **ITEM 3**

OLD BUSINESS:

- A. Update on materials for recreational clambers
- B. Maine Shellfish Restoration and Resilience Grant – update

NEW BUSINESS

- A. Potential changes in ordinance – review and update
  - i. 4” maximum for soft-shell clams
  - ii. Adding other species to ordinance
- B. Spring plans
  - i. What to do with seed stock in the spring?
  - ii. Recruitment experiment year 5

### **ITEM 4**

ITEMS FOR NEXT MEETING

### **ITEM 5**

PUBLIC COMMENT PERIOD

### **ITEM 6**

ADJOURNMENT

**TO ENSURE YOUR COMPLETE PARTICIPATION IN THIS MEETING, PLEASE INFORM US OF ANY SPECIAL REQUIREMENTS YOU MIGHT HAVE DUE TO A DISABILITY. PLEASE CALL 207-288-4098.**

## Summary of work done on Bar Harbor 2020 Maine Shellfish Restoration and Resilience Grant Submitted by Chris Petersen, Chair, Bar Harbor Marine Resource Committee

### Overview

Despite the pandemic, the Bar Harbor Marine Resource Committee is happy to report that we had a successful field season in 2020 with support from the Maine Shellfish Restoration and Resilience Grant. We have completed our proposed experiment, examining recruitment and survivorship in soft-shelled clams on six mudflats in Bar Harbor. This work engaged diverse community members and also sparked some new ideas for the future. Below we summarize our work from 2020 and propose how we would like to spend the remainder of our funds in 2021.

Starting in May 2020, we collected cores from six sites around Bar Harbor to get background clam densities. Our six sites included one in Otter Cove, two at Hadley Point, one between Thomas Island and the Twinnies, and two in Blue Hill Bay – one at Clark’s Cove and one north of Clark’s Cove that we call Windaway. In May and early June we deployed a total of 66 recruitment boxes among these six sites. These boxes allowed larval clams to settle into the sediment and excluded predators (specifically green crabs). We retrieved all of the boxes in late October along with a second set of cores, which were not protected from predators, and counted and measured the clams.

Each of the six sites had 1-3 years of previous data on recruitment and survival. While some sites have higher recruitment than others, and this pattern is consistent across years, recruitment was substantially lower in 2020 compared with previous years and showed a reduction at all sites. In 2020, we also observed low pH values among sites, but it was not correlated with either recruitment or survivorship among sites. In the table below, we give averages for number of clams per square foot in recruitment boxes. To make the patterns easier to see, we color-coded the densities, from red for low densities and to purple for the highest densities.

Survival of clams was estimated as the difference in density in the fall between the cores from open area and the density in the protected boxes. This value ranged from 0% at Otter Cove and the two sites in Blue Hill Bay, where no soft-shelled clams were found in the cores, to approximately 50% in upper Frenchman Bay. We are still working on our survival estimate for Frenchman Bay, we had a high number of small clams in the spring in the cores at these sites, and they have made it difficult to determine what clams in cores in the fall came from summer recruitment and which ones represent clams that were there before June. We are working on a more detailed analysis of these and other results from 2020.

After counting and measuring clams, we divided the clams, mostly soft shelled clams (*Mya arenaria*) (approximately 6000), and quahogs (*Mercenaria mercenaria*) (approximately 1200), into 12 fine mesh bags. These bags were then placed in two lantern nets, one of which

was placed at an aquaculture site managed by COA and the other at a site run by Alex de Koning, both in Frenchman Bay, to study their potential as growing sites for small clams.

Table 1. Average number of soft-shelled clams per square foot in predator exclusion areas (nets in 2017, boxes in 2018-2020). The numbers in Hadley Point in 2020 represent two different sites at Hadley Pont East. Note that the densities for 2020 represent the lowest densities for each site through all years.

	Site	Year				
		2017	2018	2019	2020	
Upper F. Bay	Thomas Is.		1634	1607	167	
	Hadley Point	1713	387	1320	16/43	>500
						100-500
Western Bay	Windaway		34	37	7	50-100
	Clark's Cove			99	19	10-50
						0-10
Otter Creek	Upper			78	4	
	Lower			50		

### Outcomes and Outreach

Despite the logistical challenges of the pandemic, we felt that we were able to accomplish the main goals for this work. We collected a set of data that has contributed to our growing understanding of the spatial and temporal patterns of recruitment and survivorship of soft-shelled clams. This study also allowed us to engage with the aquaculture community and with a commercial harvester. We now have two species of clams growing in nets, which should give us some insights into the possibility of providing a refuge for juvenile growth away from predation. We also invited individuals from nearby towns to our November Marine Resource meeting where we presented the first draft of our results. Out of that meeting came a suggestion that our committee create a 4" maximum for harvesting soft-shelled clams, which we are considering. Our data on quahogs from this study also has us considering adding them to our ordinance, and the committee decided to assess that resource in 2021 which is a requirement from the state.

## Budget

We have used approximately half of our grant (~ \$1900 of the original \$3800 grant). Our expenses included paying for supplies and work to build recruitment boxes, survey work by a commercial clammer, field work in placing and retrieving recruitment boxes, boat transportation to field sites and the aquaculture sites, and counting clams. The group that received compensation included one committee member (for building boxes), three aquaculturists, one commercial clammer, and three College of the Atlantic students. In addition, we had a similar amount of in-kind contributions, particularly from approximately a dozen students at College of the Atlantic in counting clams.

Plans for 2021. We plan to use several hundred dollars to examine growth of clams on the aquaculture sites and potentially move them to clamflats under nets. This should leave us with several hundred dollars left in our budget. We would like to be able to use those funds towards one of our 2021 projects:

1. A repeat of our recruitment experiment on a smaller scale.
2. A census of quahogs in the shoreline along Blue Hill Bay. We have talked to the DMR and they would like us to survey this population before we request that it be added to our ordinance. Those surveys would be done in the spring and early summer of 2021.
3. An experiment outplanting some of our clams from the aquaculture site to our less productive sites, particularly Otter Creek, and protect those clams with netting to evaluate the potential of clam enhancement at that site.

If you could let us know if that is an acceptable way to spend the remaining funds, we feel that this will benefit both the natural resource and the capacity of our town committee and collaborators. Thank you for your support of this project.