

Harpswell Marine Resource Coordinator
Activity Summary May 22 – June 19, 2014

After an initial meeting and discussion with the Town Board of Selectmen on May 22, followed by a meeting with the Shellfish Committee on May 27, we established the following general priorities for the Marine Resources Coordinator; although the RFP and contract cover a broader range of topics, these items were prioritized as needing immediate attention:

- *Review existing work and/or projects initiated by members of the Shellfish Committee that have not been completed, organize information and identify data gaps, attempt to “wrap up” loose ends and complete these projects. This is a large category, and includes projects ranging from neoplasia studies to shoreline survey work with DMR to open more harvesting areas.*
- *Recruit and organize volunteer efforts to trap European green crabs at key locations in Harpswell, in order to protect areas that were intensively trapped last season.*
- *Begin the process of mapping out pH sediment levels in key coves in Harpswell, to determine suitability for conservation and/or reseeded projects.*
- *Identify partnership opportunities with Bowdoin College and Harpswell Coastal Academy (HCA)*

The following headings detail the work that has been completed by the Marine Resource Coordinator or is ongoing to date:

Review of existing projects

With the help of several Shellfish Committee members, as well as information provided by the Town Administrator, I have been reviewing a large number of documents pertaining to a variety of issues. This is a brief summary of each project and the current status:

Municipal Predator Control Pilot Project (Strawberry Creek Pilot Project)

Harpswell had completed an initial draft for this project and submitted it to DMR, after which DMR returned a series of comments/concerns with the design and scope of the project. I worked with DMR, Harpswell municipal staff, and Shellfish Committee members to iron out the concerns from DMR, redraft the project with the new criteria, and prepare the complete package for the Town Administrator to submit to the DMR.

The new project package now meets the criteria requested by DMR, and includes a control area, two types of predator removal, study areas that will determine the impacts of continuous disturbance of the mud on clam survival and sediment pH, and the effectiveness of surface netting on natural spat recruitment. This project was approved by the DMR to move forward, and pending Town approval of the proposed pilot project area closure, the work will begin on July 1, 2014.

Follow-up on Shoreline Survey and Water Quality Work with DMR

Following an initial review of documents that the Town and/or Shellfish Committee members provided, I contacted the DMR Public Health Division on June 3 to request additional current information from the DMR, since the only information that was currently available to the public on the DMR website on these areas was four or five years old, and did not reflect the current status. I was informed by Kohl Kanwit (DMR Public Health Director) that the DMR required a letter from the Town to designate me as an authorized representative for the purposes of requesting any information on this topic. Kristi Eiane immediately emailed a formal letter to the DMR to authorize me, although we did not get a response from DMR acknowledging the letter until June 15, which has held up any further efforts to request information from DMR on Harpswell Growing Areas until now. Interestingly, despite the long delay in acknowledging the letter to authorize me to investigate these issues, in the interim the DMR submitted a letter to the Town on June 9 informing them that DMR now planned to do some extensive shoreline survey work in Harpswell this summer, and we should expect to see staff knocking on doors and walking through a lot of shoreline this season, and local residents and harvesters reported seeing DMR staff working in the area on June 10. Now that I am fully authorized to review and request all of the available information on Growing Areas in Harpswell, and the DMR seems to have found a renewed interest in working in the area, I hope we will see some additional harvest areas opened this year.

Neoplasia studies in soft-shell clams

Following a series of excellent sampling efforts to assess neoplasia issues in the area, the work was dropped several years ago. I have had discussions with the DMR Biologist (Denis Nault) who was involved with these studies, and he is very encouraging to see more neoplasia work completed Harpswell, however the availability of the researcher who had completed much of the assessments in previous years is now unknown (she has moved on to another University). There is a local company that would be capable of performing these assessments in the clam tissues, but there would be a cost per sample (to be determined), so we will begin to seek out a small grant or other finding source prior to completing further work in this area.

Recruit and Organize Green Crab Trapping Volunteers

In collaboration with the Town and the Shellfish Committee, I drafted a letter which was sent out to all commercial harvesters in Harpswell, requesting their assistance with tending green crab traps in key locations this season. I have already received eight positive responses, and these people are willing to handle traps as soon as we can get them supplied. We now need to assess how many traps the Town has at its disposal at this time, which is an ongoing process, but which I would very much like to wrap up in the coming week, so that we can get traps into the hands of these volunteers and into the waters of Harpswell.

Mapping pH in sediments

Following the guidance from the Shellfish Committee, we have completed pH mapping of two important coves in Harpswell. On June 6, my staff completed a pH survey of Henry's Creek, and on June 12, my staff worked with the assistance of Weston Watts and his airboat to cover Doughty Cove.

I plotted the data points and put them on a maps, which are included in this packet. As far as clam spat survival and environmental stress, anything above 7.5 is really good, 7.0 - 7.5 is fair. You can see on the maps that for the most part, the interior of Henry's Creek looks favorable to clam survival, and is in better shape than most of Doughty Cove. I was actually quite surprised to see the lower pH scores at some of the sites, and given this variability between coves I think it is important for us to complete a survey of as much area as possible in Harpswell, prior to putting resources toward re-seeding or conservation projects, so that we can select the most favorable sites and improve our chances of success.

I would like to begin the process of training Harpswell staff, harvesters, and residents who have an interest and affinity for pH measurements, and to send them out to add to our coverage area.

Identify Partnership Opportunities

I met with Dave Carlson, the new head of Bowdoin's Marine Field Lab, on May 28. We discussed possible collaborations between Bowdoin and Harpswell, and Dave seems genuinely interested in learning how Bowdoin can begin to direct their research projects toward topics that might generate information to directly benefit Harpswell marine resource users. At the present time, Dave has a grant in place to fund work by his students on assessing the diet of European green crabs; while this particular topic may

or may not be of immediate use to Harpswell, I asked Dave if he would consider adding a component to study the diet of milky ribbon worms as well, for now, and to consider expanding his future projects to include priorities that come from the Town of Harpswell. I grilled him on what types of equipment and capacity he currently has at the lab, including neoplasia histology and scanning electron microscope capacity (both of which would help further some of the incomplete projects on Harpswell). He does not have these capabilities in his immediate lab, but might be able to work on collaborations with other professors at Bowdoin who do have these capabilities. Dave was very receptive, and I think he will be an excellent partner going forward, but I want to caution the Town not to have any expectations of an immediate response from Bowdoin – grant funding cycles and collaborations on projects like the ones we would like to see will realistically take years to put in place, but at least we are turning the ship in the right direction now.

I have had a relationship with Harpswell Coastal Academy for several months now, since one of my boys won a spot in the lottery this spring and will be starting 9th grade at HCA in the fall. My staff has provided time and the loan of our equipment to Micah Depper, the science teacher, and we have worked with the kids to do some pH work and minor water quality observations. I have had several discussions with John D’Anieri (Head of HCA) about integrating the school into the local area and having long-term projects and research work. The Harpswell Shellfish Committee and HCA staff are both favorable to the idea of establishing a local cove which HCA will “adopt” as its site for ongoing projects, with guidance from Harpswell and from me as to projects and ongoing work. We have yet to determine which cove will be an appropriate choice, but everyone is very excited about this long-term collaboration. I mentioned at a recent HCA symposium that even though Bowdoin might eventually pick up projects that are more meaningful to local stakeholders, HCA students have the potential to have more immediate and direct impacts in this area, because of their flexibility and willingness to take direction from us.

I should also mention at this point that since my relationship as a future parent of a student and with my company established as a community supporter of HCA prior to my contract with the Town of Harpswell, I will continue to provide updates to the Town on work that we are doing with HCA, but I will not be charging the Town for any of the time that I spend working with HCA, since I would have been doing this work anyway.

Media contacts

I met with Peter McGuire (Forecaster) on June 12, to educate him on shellfish and public health regulations in Maine, and he was particularly interested in learning about how and why Overboard Discharges (OBDs) are still allowed and licensed by DEP,

despite the fact that they have significant impacts on closing shellfish harvest areas around the state, AND the fact that the majority of these OBDs are licensed to property owners whose primary residence was not in Maine.

I met with Tom Allen (Anchor) on June 13, to discuss my new position and some of the priorities and projects we hope to accomplish during my tenure with Harpswell. I also encouraged him to include a note that I would like to work with community volunteers on the pH mapping project, and may have additional projects that would be appropriate for volunteers, and he agreed to mention this in the article and encourage people to get in touch with the Town office to reach me.

I will be going out with Elizabeth Ryote (OnEarth Magazine) on June 18 to show her sites where we are actively trapping green crabs and to discuss the impact that green crabs and global climate change has had on our native marine resources. We will cover areas in both Brunswick and Harpswell.

Other Activity

I am in the process of collating and organizing a draft of the Harpswell area with local names for coves and bays, provided to me by members of the Shellfish Committee. Once I have a final draft that has been reviewed by the Shellfish Committee for completeness and accuracy, I would like to make a large-format copy of the map available to the public either on the Town website, or at the Town office, or both.

I would also like to be able to make available the results of our ongoing projects, such as the pH mapping, as they become available. If there is space, I would like to be able to post them in an area at the Town office, but if there is not enough room to do that, then I would like to create a webpage for the Town website that will have all of our information available to the public.

I would like to be sure that everyone in the Town of Harpswell who would like to reach me has all of my contact information, and was hoping that could be added to the Town website as well.

Henry's Creek, Harpswell Maine

Avg. pH readings

June 6, 2014



Doughty Cove, Harpswell Maine

Avg. pH readings

June 12, 2014

