

SHELLFISH MANAGEMENT PLAN for GOULDSBORO

Gouldsboro submits the following information as required by DMR Regulation Chapter 7.20, which states that the Shellfish Management Plan shall consist of:

- A. A written statement of goals and objectives the municipality plans to achieve as a result of its conservation program,
- B. A description of the various conservation measures the municipality intends to employ to reach those goals.

Statement of Management Goals and Objectives

The Town of Gouldsboro is committed to sustaining its commercial clam fishery. With determination, thinking outside the box, and support from the Maine Shellfish Restoration and Resilience Fund and private donors, Gouldsboro has worked to improve clam flat restoration and soft shell clam harvesting for commercial and recreational harvesters in Gouldsboro.

Description of Conservation Measures

We have implemented conservation closures to maximize harvest in peak demand months and conserve and restore flats in other months. These closures are determined by market demand and ease of access to the flat based on the time of year. We have established volume limits in certain areas to maximize harvest without depleting the resource. We have also adopted the State Pollution Closures as conservation areas so that the Town benefits by receiving fines collected from enforcement of these closures. In addition, adopting State Pollution Closures as conservation areas allow the Shellfish Committee to control when these areas reopen. For conservation purposes, it is important that the Shellfish Committee has the option to keep the Pollution Closure areas closed beyond the date on which the State lifts the Pollution Closure.

In addition, we have implemented many other policies, and practices to conserve the resource, restore mudflats to productivity, and to address other issues related to the health of the fishery as an essential part of the community, in addition to its existence as a living system on the mudflats. We summarize these innovations, policies, and practices below. Most are ongoing and essential to what we plan to do in the future.

Size Limits

- We adopted an ordinance that states it is illegal to possess clams when more than 5% of the catch is under 2 inches. This is stricter than the DMR Law, which is 10%. We do this because allowing clams to reach reproductive capacity benefits the fishery.
- Gouldsboro was the first Municipality to put a maximum size limit on clams that are 4 inches in the longest diameter. A harvester cannot have over 10% of harvested clams over 4 inches. The upper size limit is because a larger clam produces more spat. We hope that more spat will make it to the flats with the potential to grow into legal clams. We understand that spat from Gouldsboro may go elsewhere. Good practice is good for the fishery.

Conservation Practices

- We follow the state guidelines for non-resident licenses, allocating 10% for non-residents.
- We require conservation time of 7 hours and 3 meeting hours to purchase a commercial license.
- We do not permit harvesters to buy release from conservation work. We believe that conservation work is part of sustainable harvesting practice.
- We have no Sunday Digging from April 1st to November 1st, allowing Sunday digging from November 1st until April 1st. We did this to allow the diggers to compensate for the daylight loss.
- We constantly update conservation closures to reflect the amount harvested from an area.
- We also have an exception for Sunday digging after at least three consecutive days of state rainfall closure that includes the whole Town of Gouldsboro. The following Sunday will be open to commercial harvest for that Sunday only.
- We have no night digging from April 1st to November 1st, allowing night digging from November 1st until April 1st – 2 hours before sunrise and 2 hours after sunset to allow for shortened daylight hours.

Pollution Control

As a result of a pollution closure in one of our open areas., we proposed an addition to the Town Shoreland Zone Ordinance that requires getting a permit from the CEO for any work on a septic system within the Shoreland Zone, except for routine pumping. After public meetings and a town meeting, the rule was added to the Shoreland Zone Ordinance.

Predator Control

- We organize green crab capture events in late May. These events to remove green crabs from under the rocks before they move out over the flats.
- We have built green crab traps that allow the diggers to set a trap before they go out to harvest clams and tend it on the way home.
- We support non-harvesters who volunteer to catch and kill green crabs in front of their homes. We are working on a special license arrangement with DMR to make disposing of the crabs captured in this predator control work easier.
- Drawing upon green crab research by Grosholz et al.¹, we sort the crabs and return the large males to the flats to eat other crabs.
- When we place juvenile clams out on the flats as seed clams, we cover the area with predator nets to protect them from green crabs.

¹ Grosholz, E., Ashton, G., Bradley, M., Brown, C., Ceballos-Osuna, L., Chang, A., de Rivera, C., Gonzalez, J., Heineke, M., Marraffini, M., McCann, L., Pollard, E., Pritchard, I., Ruiz, G., Turner, B., & Tepolt, C. (2021). Stage-specific overcompensation, the hydra effect, and the failure to eradicate an invasive predator. *Proceedings of the National Academy of Sciences*, 118(12), e2003955118. <https://doi.org/10.1073/pnas.2003955118>

Clam Culture and Restoration

- We applied for and received grants to build a shellfish resilience lab to grow clams from the age of a few weeks to juvenile, one-year-old clams that can be used as seed clams. We built the lab to have more clams each year to put on our flats while reducing costs.
- We do plant pot projects in May or early June to determine the growth rate in certain areas, allowing us to decide where to place our seed clams.
- We place brush on the flats in May to encourage spat settlement.

Community Engagement and Support for Other Communities

- We engage the rest of the town in the work of the shellfish committee with events (at least annually) that get people out on the flats, tell them about what harvesters do, and encourage them to consider providing access to the shore for harvesters.
- We engage an increasing number of community volunteers in the work of the Shellfish Lab.
- We work with schools to introduce them to the intertidal zone and the work of clam harvesters.
- In collaboration with the Schoodic Institute and others, we welcome groups of college students, high school students, and interested adults for tours in our lab during the warm months to share our work with folks from near and far,
- We share what we have learned with other municipalities and other organizations on the Gouldsboro Shore website and in forums such as the Fishermen's Forum.
- Team members have presented our work and the importance of clam harvesting and shore access at many venues.

Shore Access

- We recognize that access to the shore is essential to maintaining the fishery. Last winter, the shellfish committee spent most of two meetings identifying shore access areas that are essential to their work.
- Working with Maine Coast Heritage Trust (MCHT) and other local land trusts, we successfully protected several access points in perpetuity.
- We are currently working with MCHT on a model licensing agreement we will use to make it easier for property owners to arrange for access across their property.
- The shellfish committee has worked with other programs in Gouldsboro to create a brochure called *Scuttlebutt* to inform newcomers and current residents about the importance of shore access for harvesters and to encourage them to consider providing access.
- The upcoming Maine Policy Review special issue about "Our Shared Ocean" will include two articles about our work on shore access and the "on foot" working waterfront.

Partnerships and Support for Research

- We place Beal Boxes in May or early June in different locations throughout town to see if we are getting spat by fall and share our findings with other communities.

- We work closely with Schoodic Institute, sharing resources and information.
- We work with municipalities around Frenchmen Bay (the Bar Harbor and Frenchman Bay Regional shellfish committees) on issues concerning the bay, focusing primarily on recruitment.
- Work closely with Down East Institute on many projects. Most recently, we have worked with them on a study to gather information about the timing of clam and crab settlement.