

Project Title: The Massachusetts Aquaculture Permitting Plan Web Interface to Streamline Aquaculture Permitting

Grant Recipient: Massachusetts Division of Marine Fisheries

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Principal Investigators: Dr. Kathryn Ford, MA DMF; Mr. Christopher Schillaci, MA DMF/NOAA; Dr. Michael Tlusty, UMass Boston; Mr. Sean McNally, UMass Boston; Mr. Joshua Reitsma, Cape Cod Cooperative Extension

Project description

The objective of this project was to create a web-based interface that aquaculture growers can use to navigate the permitting pathway in Massachusetts. This tool steps growers sequentially through the state permitting requirements and provides on-line access to permit applications. The Web Interface was developed using standard web design software. To ensure the tool was user-friendly the team communicated with growers one-on-one and at group meetings. In addition to the tool development, several outreach activities occurred, including but not limited to, presentations at regional shellfish meetings and at an aquaculture course at Roger Williams University, as well as listserv and social media announcements of the website.

This project successfully met its goals. The website was developed and is publicly available at <https://www.massaquaculturepermitting.org/> Details of the development process, outreach efforts, and feedback are described below.

Developing the website

The development process first involved brainstorming to define the full extent of the website and clearly define the audience (new growers). Then we assembled the various steps of the permit application process, adding and moving steps over time as we considered how to best communicate with a potential new grower. The steps were first outlined on a white board and then built into the website.

SquareSpace was selected as the website host due to cost and flexible, easy-to-use development tools. The basic layout of the site came relatively quickly and was primarily informed by our review of the Alabama aquaculture permitting website (<https://alaquaculture.com/permit-application-guide/>). However, the order of the steps involved in permitting, and consequently the individual pages and the various links took several months to review and revise with input from other permitting agencies. The final site layout was influenced by the editorial review process until a month before the website was released to the public in July 2020.

The website hosting is anticipated to remain on SquareSpace for several years while we consider if and how to fold it into the Massachusetts state government website. The flexibility of having full editing control over the website has been crucial in being nimble with changes and

developing the website efficiently. We anticipate the first year or two we will encounter areas that need to be improved as new growers use the site and identify changes they would like to see. To capture these changes, we included a “Feedback” button that links to a short survey.

Reviewing the website

Four growers reviewed the first version of the website in the winter¹. We identified three new growers and one experienced grower to provide feedback which was received via one-on-one phone calls with each grower after they had reviewed the site. We documented their comments using Word and then consolidated comments in a spreadsheet. This review process was completed by the second week of March. It helped identify key questions and priorities the growers had, such as timing of permit issuance and costs associated with permitting. This feedback proved extremely valuable in helping us prioritize information from permitting agencies. We ended up creating sections for each permit page titled “Who needs it,” “What does it cost,” “How long does it take to get,” “What is the permit term,” “How to get it,” and “How to get more information.”

For each individual step in the permitting process, we drafted text and then held virtual meetings with each permitting agency². Our initial approach was to send page drafts to the agencies and then receive their edits. For two agencies we hosted in-person meetings to discuss the website. Because of the coronavirus stay-at-work orders, we could no longer meet in person and switched to a virtual format. We found the virtual meetings to be much more efficient and effective than relying on emailed edits or in-person meetings. In the virtual meetings we could convey the purpose of the meeting more clearly than over email and we used screen-sharing technology to make live edits to the website. This was particularly valuable and the agencies appreciated being able to see the changes immediately. We held approximately 20 such meetings and every permitting step in the website has been reviewed and approved by the agency responsible for that permit.

We found the agencies were very willing to participate. Due to competing priorities, having a meetings scheduled on the calendar to solicit their feedback was useful to keep the editing process on time. While it was considerably more time consuming than we initially anticipated, in the end the process served to create a much more useful and accurate product. An added advantage of this approach was the relationship-building that occurred.

The website also received review from DMF administration focused on the appropriateness of website content, link checking, and potential ADA concerns. We also used a free tool to check for bad links (<https://www.deadlinkchecker.com/website-dead-link-checker.asp>).

¹ Kalliope Chute, Craig Rosenquist, Chris George, and Seth Garfield

² Massachusetts Department of Environmental Protection; Natural Heritage and Endangered Species Program; Massachusetts Environmental Policy Act Office; the Board of Underwater Archaeological Resources; Coastal Zone Management Office; U.S. Army Corps of Engineers; U.S. Environmental Protection Agency; U.S. Coast Guard.

The specific mechanism to incorporate comments received was to use a Google spreadsheet to keep track of the “to do list” for the website. Project partners could access the spreadsheet and indicate when tasks were complete. This was a simple and effective approach for this project. We kept track of the “done” items and recorded any decisions that were made and how the item was addressed. This helped limit back tracking due to reconsideration of certain complex topics.

Steering committee meetings

The steering committee met monthly to discuss project progress and needs. The steering committee was instrumental to identifying reviewers, providing review and comment on the website, and helping identify and address outreach needs. These meetings were held by phone until May, when Zoom became the preferred meeting method. The steering committee has agreed to continue to meet regularly for another year or so to address feedback we receive about the website.

Outreach

Outreach efforts to shellfish stakeholders began in November and included a discussion at the Coastal and Estuarine Research Federation conference in November, a presentation to the Massachusetts Shellfish Officer’s Association in December, outreach to the Massachusetts Aquaculture Association in January, a presentation at the Southern New England Chapter of the American Fisheries Society in January, and a lecture at a course in aquaculture at Roger Williams University in February.

To announce the website, the state of Massachusetts released news of the site on Mass DMF social media accounts. The text used as the basis for the announcements is as follows:

Massachusetts Aquaculture Permitting Website

The Division of Marine Fisheries has developed a website outlining the process to permit aquaculture projects in Massachusetts. The website, www.massaquaculturepermitting.org, provides a one-stop shop for prospective aquaculture growers in Massachusetts to navigate the permitting process. Throughout the website, important information focused on costs, timelines, and how to get permit applications is provided. Resources for new growers are provided and the annual reporting process for existing growers is described. Information related to preventing negative impacts to fisheries habitats, protected species, and public access of our shared coastal waters is also provided. The website was built with partners from University of Massachusetts-Boston, NOAA Greater Atlantic Regional Fisheries Office, and the Cape Cod Cooperative Extension with funding from the Atlantic States Marine Fisheries Commission.

An email with similar text was prepared and distributed to the networks of the steering committee members. This included the Massachusetts Shellfish Officers Association, the Massachusetts Aquaculture Association, the Massachusetts Shellfish Initiative, the Southeastern and Northeastern Massachusetts Aquaculture Centers, Eastcoast Shellfish Growers’ Association,

ASMFC, Woods Hole and MIT SeaGrant, NOAA Office of Aquaculture and NOAA Habitat Newsletter, the National and Global Aquaculture Associations, Mass DEP, Mass CZM, the Massachusetts Bays Program, and the Buzzards Bay National Estuary Program.

Each grower that reviewed the website was provided with a thank you email including the spreadsheet with their comments and how we addressed them.

All agency personnel who assisted with the project received a thank you email with notification of the website being publicly available. Some agency personnel in turn forwarded the announcement to their networks.

Feedback & website analytics

We have received considerable praise from growers and other aquaculture representatives from the Southeastern and Northeastern Massachusetts Aquaculture Centers. Some of the feedback includes:

“helpful tool”

“wish I had this when I was starting out”

“knowing what to prepare for and save for is helpful”

“like the information up front”

“good mix of information with visually palatable graphics”

“links to authoritative information are great, really helpful”

“should accelerate and standardize the process”

“great step in the right direction”

“you did an exemplary job”

“you have moved us forward impressively”

During website development we kept the website behind a password. During that time we recorded the following website analytics:

Wed Jan 1 – Tue, June 23, 2020

Pageviews = 2,012

Unique visitors = 176

Visits = 314

Geography of Visits =

- 265 MA
- 16 RI

- 15 AL
- 8 CT
- 5 MD
- 3 ME
- 2 GA
- 2 CA
- 1 FL
- 2 CA
- 1 WA

Significant changes from original proposal

We introduced the website to the aquaculture class at Roger Williams University as part of a guest lecture on permitting taught by DMF instead of the Aquaculture Growers Course taught by the Cape Cod Cooperative Extension (CCE), since the CCE course was not taught in the grant period. Outreach activities, including 1-on-1 interaction with growers, was originally scheduled for the fall but didn't occur February and March since website development and interfacing with other state agencies took priority in the fall. PI Chris Schillaci moved from DMF to NOAA but remained on the steering committee and served in an advisory role for the project. His work on the project was completed by Chrissy Petitpas, the new DMF aquaculture coordinator, Gabe Lundgren, and Kathryn Ford at DMF.