



BEYOND the BOW

A Fisheries Needs Assessment of Harpswell 2017









BEYOND THE BOW:

A fisheries needs assessment of Harpswell Final Report 2017



Kendra Jo Grindle, Maine Coast Fishermen's Association

Funded, in part, by the Holbrook Community Foundation of Harpswell.

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BEYOND THE BOW: PARTNERS & ROLES

ABOUT THE MAINE COAST FISHERMEN'S ASSOCIATION

The Maine Coast Fishermen's Association is an industry-based nonprofit which identifies and fosters ways to restore the fisheries of the Gulf of Maine and sustain Maine's historic fishing communities for future generations. Established and run by Maine fishermen, the objectives of the Fishermen's Association are: to provide a voice for our fishing communities, to rebuild the Gulf of Maine ecosystem, and to help build viable fishing businesses on our coast. With members living in coastal communities from Eliot to Cutler, our members represent a diverse range of fisheries but have come together as one voice to weigh in on important management issues facing Maine fishermen.

Maine Coast Fishermen's Association Program Associate Kendra Jo Grindle and Executive Director Ben Martens were the project managers for the Fisheries Needs Assessment of Harpswell. Both helped to shape the stakeholder list and questions for the needs assessment interviews.

The Fishermen's Association, with extensive community engagement experience and Gulf of Maine fisheries knowledge, developed a strategic plan for the needs assessment which included a timeline, a literature review of previously completed work focused on Harpswell's fishing community, all creative materials and media, the development of interview list and questions, interview facilitation, and an analysis of interviews and industry data. This comprehensive final report and condensed user booklet were also created by the Maine Coast Fishermen's Association.

More information about the Maine Coast Fishermen's Association can be found at www.mainecoastfishermen.org.

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ABOUT THE HOLBROOK COMMUNITY FOUNDATION

The Holbrook Community Foundation, an organization based in Harpswell, was instrumental in funding the *Beyond the Bow: A fisheries needs assessment of Harpswell*. Members of the Holbrook Community Foundation Board of Directors were called upon for input on fishing community members to interview and for collaboration throughout the creation of the needs assessment's strategic plan.

Board members Deirdre Strachan and Peter Griffin met with the Fishermen's Association's staff throughout the duration of the project to review findings and ensure that the final report and supporting documents were receivable to the intended *Beyond the Bow* audience.

The mission of the Holbrook Community Foundation is to provide the long-term protection of the coastal heritage of Harpswell by preserving Holbrook's working waterfront, supporting commercial fishing in Harpswell, and providing opportunities for education about our marine environment for the benefit of the local community.

Visit www.holbrookcommunityfoundation.org to learn more about the mission, focus, and ongoing projects of the Holbrook Community Foundation.

Funder Information

Email: info@holbrookcommunityfoundation.org

Address: 984 Cundy's Harbor Road, Harpswell, Maine 04079

Board of Directors: Greg Barmore (President), Deirdre Strachan (Vice President), Peter Griffin (Treasurer), Paige Mangum (co-Secretary), Harriette Griffin (co-Secretary), Ann Flannery, Bernice Kenney, Bruce King, William Mangum, Rachel Miller, and Mackin Pulsifer

AUTHOR'S NOTE

The work detailed in this final report would not have been possible without the support of the Harpswell fishing community. Each person interviewed throughout this process shared their time, knowledge, and experiences which gave me a unique look into the lives of those who make a living on the coast of Maine. Additionally, many of the folks we met with provided the Fishermen's Association with access to their personal and professional networks to ensure that we could gather as much information from as many points of view as possible. We are humbled by and tremendously grateful to the fishermen¹, town staff, business owners, and fishing community members who contributed their time and experiences to this research.

We want to thank the entire Maine Coast Fishermen's Association's staff for their time and support throughout the compilation of the final report. The Holbrook Community Foundation and their Board of Directors also deserve our gratitude for their financial contribution and for their oversight from conception to completion of the *Beyond the Bow: A fisheries needs assessment of Harpswell* final report.

For the strong foundational data, we would like to give thanks to the town manager, selectmen, harbormaster, town planner, marine wardens, and other town support personnel of Harpswell; the Maine Department of Marine Resources; and the National Oceanic and Atmospheric Administration.

Finally, we are indebted to those who will use the *Beyond the Bow: A fisheries needs assessment of Harpswell* to plan and develop projects addressing the needs and bridging the gaps identified by the fishing community. We hope this needs assessment will help those within and around Harpswell to better understand the fishing community and promote increased engagement and connection. Together, we persevere.

¹ "Fishermen" is the preferred occupational title for both men and women in New England's fishing industry.

LETTER FROM THE EXECUTIVE DIRECTOR

Harpswell's connection to the coast defines and shapes its past, its present, and its future. You see

it in the weathered faces of those who harvest its marine resources, on the street signs with the

names of fishing families, and in the development and growth spurred by those who idealize

Maine coastal life. We exist at a juncture where the decisions today will impact what type of

relationship Harpswell will continue to have with its coast and we developed the Fisheries Needs

Assessment to help shape the conversation around these decisions.

Maine's fishing industry is facing new challenges as increased regulations, coastal development,

climate change, and shifting marine resources are making it even more difficult to maintain or

grow a marine business. Through this effort, funded by the Holbrook Community Foundation and

undertaken by the Maine Coast Fishermen's Association, we hope to get to the core of what

Harpswell needs to ensure community-based fishermen are successful.

To that end, the Fishermen's Association wanted to go directly to the fishermen, those who work

with them, and those that surround them in the community, to truly understand their needs as

they define them. This needs assessment aims to ensure the fishing community's perceived needs

are heard loud and clear and to start a dialogue is between the town, the community, and the

fishermen about how to preserve this iconic way of life.

Hundreds of hours of interviews and research were done to complete this needs assessment, but

it is only a drop in the ocean compared to what should be done to build relationships, knowledge,

and understanding within the community. Everyone who was involved in this process is dedicated

to ensuring that fishing is a part of the economic and cultural fabric of Harpswell, now we must

take the time to chart a course to the future we are all striving to achieve.

We hope you find this final report as interesting and informative as we did.

Ben Martens - Executive Director, MCFA

Ben Mark

I. ABSTRACT

This research set out to assess the community and industry needs of Harpswell's fishing community members and businesses. The research is also an attempt to investigate how community partners, the Town of Harpswell, and the State of Maine can best meet those needs. Participants included: men and women in the scallop, clam, mussel, oyster, kelp, lobster, shrimp, aquaculture, marine worm, tuna, menhaden, groundfish, herring, and alewife fisheries; owners and employees of wharfs, boatyards, industry-based businesses, wholesalers, and retailers; town support personnel; community committee members; and government officials. Existing fisheries data and Harpswell community reports were reviewed in order to better understand any previous work completed or attempts made to assess the needs of the fishing community. The standard models for needs assessments and data collection were examined prior to the beginning of the project.

The needs assessment included the collection of quantitative and qualitative primary data through one-on-one and group interviews. The results of the research indicate that the most prevalent needs of the fishing community include matters related to: access, communication, community fisheries knowledge, lifelong workforce, next generation, and business development and investment. The results from the needs assessment also indicate that many people are not aware of the resources already available or the steps the Town of Harpswell has begun to take to ensure the fishing community remains resilient.

This needs assessment identified many areas of concern within Harpswell's fishing community. The Fishermen's Association recommends that those who seek to use the *Beyond the Bow: A fisheries needs assessment of Harpswell* report develop and grow innovative methods of increasing the stability of Harpswell's fishing community. Possible means of achieving this are through youth engagement, a fisheries liaison, a comprehensive economic impact report, and updated visitor information.

II. INTRODUCTION

"I can't begin to describe the changes I've seen. They used to seem small. I've been fishing for over 60 years and [Harpswell] isn't the same. The people changed, the fisheries - the need for them, knowing your kid's gonna do what you always did. But we'd be naïve to think it'd always be the same."

An industry-based fisheries needs assessment was conducted by the Maine Coast Fishermen's Association to assist the Town of Harpswell, State of Maine, and local organizations to determine areas of need within the fishing community of Harpswell. These partners work in many ways to protect, sustain, and restore the fishing community that remains resilient within Harpswell. From November 2016 to February 2018, the Fishermen's Association worked to develop and complete the fisheries needs assessment of Harpswell.

The Fishermen's Association received partial funding for this project from the Holbrook Community Foundation ("the Foundation"). The Foundation is a local nonprofit whose mission is to provide the long-term protection of the coastal heritage of Harpswell by preserving Holbrook's working waterfront, supporting commercial fishing in Harpswell, and providing opportunities for education about our marine environment for the benefit of the local community. Funding from other sources also contributed to the success and completion of the needs assessment.

Harpswell was first identified as the optimal community for a needs assessment in the spring of 2016. Through conversations with Fishermen's Association staff and local community members, it became clear that there were several areas of concern and need within the diverse and active fishing community. To ensure that resources were used appropriately, the Fishermen's Association wanted to first take a step back and determined that a comprehensive needs assessment would be most beneficial in providing a source of information for other audiences, who could use the assessment to identify needs for future projects and then execute those projects.

Similar to the rest of coastal Maine, commercial fishing and its associated industries are important economic and cultural elements of the Harpswell community. Most fishing communities in Maine are struggling to deal with new and evolving issues such as changing resource abundances, regulatory pressures, limited access to permits, rising costs of living, new ocean uses and a shrinking working waterfront, all of which put pressure on small independent fishing businesses. Due to the lack of historical and current data describing the economic and cultural importance of

fisheries, the fishing industry remains an enigma to those outside of it. Additionally, as the fishing community in Harpswell changes and is changed by its surroundings, the broader Harpswell community has only a superficial understanding of how the people, businesses, and nature of fishing respond and adapt to change.

To effectively assess, describe, and analyze the needs of Harpswell's diverse fishing community members, the project managers formulated a timeline, potential interview participants list, and a catalog of questions to be used and adapted during interviews. Community members were interviewed based on their connections to the Harpswell fishing community, fishing businesses, or fishing history. Eligible participants were spoken with and recorded in one-on-one and group interview settings. As a product of each interview, participants were able to recommend community members they felt would add to the project.

"We know there's plenty of other jobs to do now, but Harpswell will always be a fishing town. If there ain't fishermen, then what?"

The significance of the *Beyond the Bow: A fisheries needs assessment of Harpswell* lies in the potential to slow the negative effects of a changing industry on a community by meeting the needs named by its own people. According to the 2013 Harpswell Economic Development Plan, the number one area of focus in the Town is "fishing, aquaculture, and marine related business" (2013, pg. 5). Within this same Economic Development Plan, Harpswell identified "grow[ing] the fisheries sector through the diversification of species, aquaculture, and niche food processing" as one of their three main goals for effectively fostering economic growth in Harpswell. This demonstrates the Town's investment in the future of its fishing industry.

It has been our objective to provide the Town of Harpswell and other organizations, whose mission and goals focus on the sustainability and growth of Harpswell's fishing community, with a community-based guide to the needs of the fishing community. It is the belief of the needs assessment project managers and the Fishermen's Association that the work does not stop here. We welcome all audiences to engage with the needs assessment to realign project priorities, secure future funding for projects aimed at supporting the fishing community in Harpswell, and strategically allocate state, federal, and municipal resources for the betterment of the working waterfront and the families and business which rely on it. It is important to note that this assessment should serve as only one of many sources of information in the strategic planning process of any future project or program inspired by these suggestions.

III. METHODOLOGY

Beyond the Bow: A fisheries needs assessment of Harpswell includes data collected using one-on-one and group interviews. To understand how to undertake a comprehensive community-based needs assessment, the project manager, Kendra Jo Grindle, reviewed several assessments conducted as tools for gaining member-driven information. A review of all available literature on Harpswell's fishing industry was conducted and several additional fisheries impact documents were reviewed for both information and design. Documents reviewed included the 1999 Fishing Profile of the Harpswell Community, the 2013 Economic Development Plan for the Town of Harpswell, Maine, Coastal Enterprises, Inc.'s Maine Based Seafood Distribution Study, and the Maine Food Strategy Fisheries Primer (May 2014).

From the early stages of development, the Fishermen's Association planned to enlist its contacts within the fishing community of Harpswell at the beginning of the interview stage. These contacts were mostly comprised of fishermen and business owners within the groundfish, shellfish and lobster industries.

This list aided in the development of three loosely-structured project phases. Each of the three phases focused primarily on a select number of fisheries with flexibility to accommodate schedules and opportunities. The final breakdown of interview distribution phases was as follows:

- 1.) Groundfish, shellfish, and town support personnel;
- 2.) Aquaculture, bait, tuna, herring, scallop, and lobster;
- 3.) Distributors, marine industry businesses, and retail businesses.

Flexibility within each phase was necessary for the needs assessment timeline. Many interviews were delayed or completed outside of a designated phase due to participants' availability.

It became clear during the first interview that many fishermen and industry personnel would be able to speak on behalf of multiple fisheries. This led to interviews discussing over a dozen fisheries within the community of Harpswell. The Fishermen's Association decided one longer interview per participant with the possibility of follow-up discussions was the best format, rather than trying to focus on one fishery per interview and having to returning to several participants multiple times over the course of the needs assessment. This allowed participants to have the opportunity to discuss the connections between fisheries and explain how different fisheries have similar or different needs.

Each interview participant referenced other members of the fishing community that they believed would be important voices for the needs assessment. This system for gaining participants created a diverse pool of interviewees in areas such as age, gender, employment, location within the Harpswell community, and years spent in the fishing industry. Using each interview to acquire further contacts also strengthened new relationships with a sense of trust and validation.

To broaden the selection of participants and diversify the characteristics of individuals interviewed, invitations to participate were extended to the community in multiple ways. Flyers with contact information were hung at heavily foot-trafficked sites like wharfs, libraries, and general stores. Articles were printed in local newspapers explaining the project and calling for those interested to contact the project manager for more information or an interview. The Zone F lobster license contact list was secured from the Maine Department of Marine Resources and was used to invite over 200 Harpswell license holders to participate.

Each community member or business representative needed to fulfill at least one of the following criteria to be a participant in the needs assessment:

- 1.) Currently or previously hold a permit or license in a municipal, state, or federal fishery while his/her residence or home port is declared in Harpswell;
- 2.) Own or be employed by a business or organization that supports the fishermen and fishing industry of Harpswell;
- 3.) Hold a town or state position within government or community committee as a representative of Harpswell's population; or
- 4.) Be linked to the fishing community by a historical, familial, or geographical connection.

Ninety-four percent of the interviews were held in person. On few occasions, the interview was held on a telephone call with in-person follow-up later if needed. All interview participants remained available throughout the needs assessment process for potential follow-up.

In addition to the interviews conducted, the project managers also attended community meetings. These included meetings of the Marine Resource Committee, Harbors and Waterfronts Committee, New Meadows Watershed Partnership Steering Committee, New Meadows Watershed Partnership Spring Forum, and the 2017 Town of Harpswell town meeting. Information gathered from each meeting was used to build a foundation of knowledge and data. The Fishermen's Association used several meetings as an opportunity to share the project

information and goals of the needs assessment in addition to networking with potential interview participants. The occasion to hold interviews after attending a community meeting occurred on four different occasions.

In total, *Beyond the Bow: a fisheries needs assessment of Harpswell* collected data from over 80 members of the fishing community. Interviews lasted between 60-120 minutes on average, with a few interviews exceeding 180 minutes. The data collected from interviews alone amassed over 200 hours of information for the needs assessment.

Following the data collection process, the interviews were analyzed for core themes and compiled into this comprehensive report for project partners and the greater public. The full report was presented at an open community forum on March 15, 2018 at the Cundy's Harbor Community Hall in Harpswell.

A smaller, concise booklet was developed with DP Designs, LLC in Brunswick as a means of distributing the core findings to a wider audience and making the report more accessible. Through the development of the booklet and final report, perspective audiences, funders, and selected participants were asked to share their opinions on designs and optimization of the produced tools. This step was taken to ensure the products of the needs assessment were designed and distributed in the most effective manner for our target audience.

Copies of the final report and the summary booklet were mailed to town support staff, Harpswell delegates, Maine Department of Marine Resources, and local partners. Digital versions of the *Beyond the Bow: a fisheries needs assessment of Harpswell* final report and booklet are stored on the Maine Coast Fishermen's Association's website, the Holbrook Community Foundation website, and the Town of Harpswell's website.

IV. DEMOGRAPHICS & SUPPORTING DATA

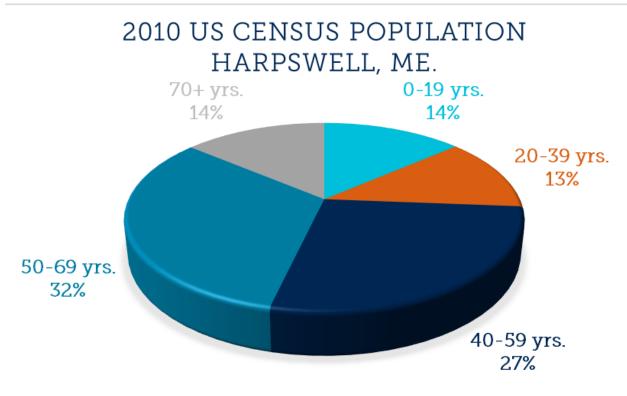
The research and data collected sought to answer two questions: "What are the needs of Harpswell's fishing community?" and "How can the community work to meet those specified needs?" The following section provides a detailed analysis of the data obtained from the Beyond the Bow: A fisheries needs assessment of Harpswell. Participants in the needs assessment included members of Harpswell's fishing community and members of the broader region who interact in some way with the fishing community within Harpswell.

A total of 89 interviews were conducted over the course of the needs assessment process. Seventy-two interviewees were residents of Harpswell and 15 lived in an adjacent community but worked or otherwise interacted with the fishing community of Harpswell.

a. Demographics of the needs assessment participants

i. Overview of Harpswell's Population

Figure 1: Age Distribution of the Population of Harpswell (2010)



Harpswell, as a town, ranks 67th in year-round population size in comparison to the other towns and cities of Maine, with a total population of 4,070 (2010 US Census). Harpswell residents are on average almost a decade older than the average Maine resident, at 53 and 44 years old respectively.

ii. Geographic Distribution of Respondents

Figure 2: Map of Participants by Geographic Distribution

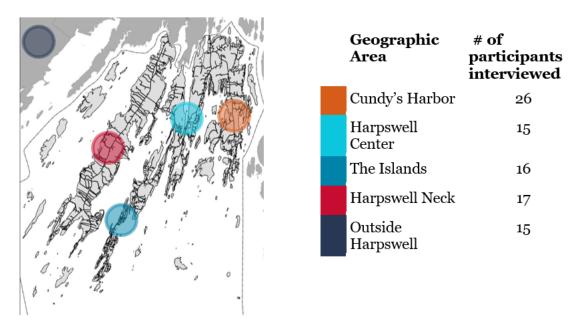


Figure 2 represents the combined geographic distribution of interview participants. As it shows, all geographic sub-communities within the Town of Harpswell were represented in the data collected. Due to the nature of active fishing and businesses in Cundy's Harbor, the quantity of participants was higher in this sub-community.

The unique geography of Harpswell has left a legacy of segregation between each sub-community. The Islands (Orr's and Bailey) were still unbridged in the recent past and several people interviewed recalled the isolation and reliance on one's own neighbors this created. Although all areas of Harpswell are now connected by road, the sub-communities are still very distinct, and many interviewees identified with their sub-community before identifying with the greater Harpswell population. This can be explained by a quote from an interviewed Cundy's Harbor fisherman.

"I've been living in Cundy's for 54 years. I can't tell you the last time I went out to the Neck or down to the Islands. Decades probably. I don't need to. I just wave from the boat when I pass by."

The interview participants from "Outside Harpswell" were fishermen who reside in an adjacent community but identify their home port as Harpswell or businesses and organizations that support Harpswell's fishing communities but are located outside of town boundaries.

iii. Interview Participants Demographics

Table 1.1: Interview Participants Demographics, part 1

	Total	Percentages
Gender		
Male	73	82%
Female	16	18%
Age		
Under 21	3	3%
21-29	5	6%
30-39	6	7%
40-49	21	24%
50-59	41	46%
60-69	11	12%
70 and older	2	2%
Born in Harpswell		
Resident: Yes	61	69%
Resident: No	13	15%
Non-Resident: Yes	3	3%
Non-Resident: No	12	13%

Demographic data in the Table 1.1 shows the interview participants categorized in three different ways: gender, age, and whether the residents and non-residents were born in Harpswell. The final demographic question is unique, but we felt the data would provide an encompassing look at the population we interviewed and create a useful data point for discussion. Based on this data, it is clear that many within the fishing community have called Harpswell home for the entirety of their lives, and for many generations.

Both the gender and age demographics reinforce the concept of the fishing industry being primarily male and "graying". Although there were women interviewed, most worked outside of the fishing sector in a support position or had a historical or familial connection to Harpswell's fishing community. Only four identified themselves as fishermen.

Table 1.2: Interview Participants Demographics by Industry, part 2

	Total	Percentages
Fishing Industry*		
Groundfish	19	22%
Shellfish	14	16%
Lobster (State)	31	35%
Lobster (Federal)	7	8%
Herring	2	2%
Aquaculture (Bivalve)	8	8%
Aquaculture (Other)	3	3%
Marine Worm	2	2%
Tuna	5	6%
Swordfish	1	1%
Scallop (State)	2	2%
Scallop (Federal)	7	8%
Shrimp (Season Closed)	8	8%
Sea Urchin	3	3%
Town/State Officials and Staff		
Harpswell	14	16%
State	4	4%
Marine Businesses*		
Inside Harpswell	16	18%
Outside Harpswell	8	9%
Local Organizations		
Inside Harpswell	3	3%
Outside Harpswell	5	6%

^{*}Due to the nature of the fishing industry, many of the 89 interview participants represented multiple fisheries. In some cases, they also represented a marine business.

Table 1.2 displays the industry participation demographics for the needs assessment participants. As noted above, the complexity and overlap between the fisheries and businesses in Harpswell allowed many participants to represent and discuss the needs of multiple fisheries and industries. For example: a harvester from Harpswell was not only able to speak of the needs within the shellfish fishery, but also of the lobster and sea urchin fisheries. On occasion, there were fishermen and harvesters who also owned or worked for a marine business in or outside of the community.

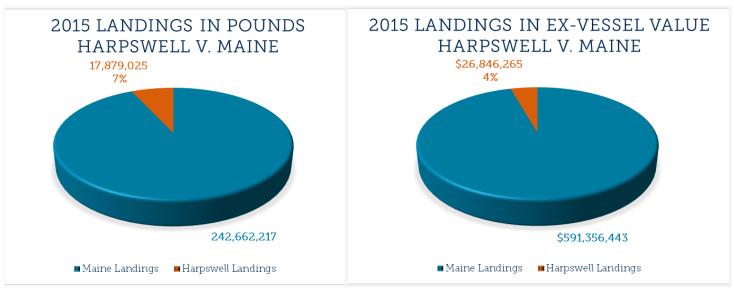
"You mean what I'm fishing right now or everything I've done? Because I've probably done it all."

Data was also collected from fishermen who had previously operated within a fishery that they currently were inactive in. This arose when a fisherman held a license for a fishery that is currently closed (i.e.: shrimp); held a license for a fishery he/she currently was not active in (i.e.: active lobsterman who also owns a groundfish permit, but is not groundfish fishing), or a retired fisherman. The flexibility of this technique for gathering data allowed the needs assessment participant to compare needs of each industry and business.

It was the intent of the project manager to ensure that all fisheries in the study were represented by at least two individuals in interviews. This became difficult with smaller fisheries such as swordfish and seaweed aquaculture. Ultimately, we feel that the participant pool adequately represents the fishing community of Harpswell without focusing solely on the largest sectors in the town (i.e. lobster).

b. Statewide Industry Impact Data

Figures 3 & 4: Harpswell's landings in comparison to Maine's, 2015 (pounds and value in dollars)



Data obtained from the Maine Department of Marine Resources.

It is important to understand the impact of this industry has on the state of Maine as a whole. The data provided indicates the economic losses Maine and Harpswell would experience if the fishing businesses in the community ceased to exist. As shown in Figures 3 and 4, the fishing effort from Harpswell's home ported fleet does contribute significantly to the economic revenue of the State of Maine. The numbers may seem small when looking at pounds landed by Harpswell (7%) and ex-vessel value, defined as the market value of seafood landed, (4%), but the resilient and diverse fishing community of Harpswell remains competitive when compared to Portland and Stonington.

V. RESULTS

Participants in the *Beyond the Bow: A fisheries needs assessment of Harpswell* included members of Harpswell's fishing community and members of the larger region who interact in some way with fishing community in Harpswell. A total of 89 useable interviews were conducted over the course of the needs assessment. Seventy-four interviewees were residents of Harpswell and fifteen lived in an adjacent community but worked in or interacted with the fishing community of Harpswell. Over 200 hours of interviews were collected and reviewed to understand the needs of the Harpswell fishing community as well as potential solutions from the community's own perspective.

The research and data collected sought to answer two questions: "What are the needs of Harpswell's fishing community?" and "How can the town and community work together to meet those specified needs?" While asking these questions and reviewing the data collected throughout the interviews, it became clear that the fishing community of Harpswell saw six core needs:

- 1.) Access: On & Off the Water
- 2.) Communication
- 3.) Community Fishery Knowledge
- 4.) Lifelong Workforce: Learnings & Trainings
- 5.) Next Generation
- 6.) Business Development & Innovation

The following section provides detailed analyses of these six core themes gathered from interviews over the past year. Several other needs were also identified by members of the fishing community. Some needs were unique to a specific industry or sub-community while others reverberated throughout the entire fishing community no matter the fishery or geographic location.

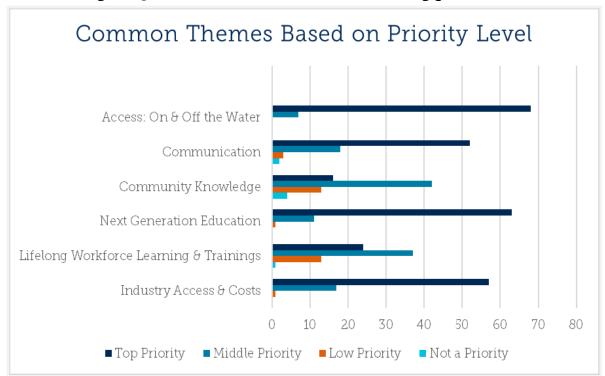


Figure 5: Six common themes individually prioritized

Figure 5 shows how interview participants prioritized the six themes highlighted in the results section. Each need is prioritized individually, not as a whole. "Access: On and off the water" is the only need that interview participants did not distinguish as a 'low priority' or not a priority at all. The five other needs are more variable in terms of priority level, with Community Fishery Knowledge and Next Generation being more typically prioritized as 'middle priority' than top priority.

a. Access: On & Off the Water

"Access isn't just getting your boat on the water. Ask yourself 'Is there parking?' 'Is there a place to put traps?' 'Is there a place to fix your boat?' And it's not just for one quu, there's hundreds who need it."

The core theme of access involves a complex web of issues in the Town of Harpswell. These issues include town-based concerns like access to moorings, convenient or adequate parking, and housing. Industry access needs include access to permits, availability of resources to grow one's business, access to financial support, storage, workspace, and marine businesses.

Like many coastal communities in Maine, Harpswell has experienced an increase in migration to the coast which has led to an increased demand for waterfront property and a loss in available working waterfront. This can reduce the number of places to launch a boat, store gear, live, work, or grow a business. Members of the fishing community are looking for protection from future losses and increased access for today. Identified solutions include more local parking for fishing businesses, dedicated commercial moorings, town-owned storage close to the shore and a focus on the growth and development of new fishing businesses.

Interview participants from fishing sectors noted a decreasing trend in available access. This contrasted with town personnel who felt public access to the waterfront had increased in Harpswell in recent years. Further research into historical public access points should be completed in the future to understand this difference in perception. Some sectors of seafood harvesters have found their own solutions for the perceived shrinking access to the waterfront. For example, some wild-harvest shellfish harvesters who need access to shoreline mudflats to sustain their income work diligently to nurture relationships with local waterfront property owners. Some harvesters gift landowners a portion of their product as a way of saying 'thank you.' Every shellfish harvester interviewed for the needs assessment had "handshake agreements" rather than legally binding contracts with landowners to ensure access to several coves in Harpswell. For the most part, harvesters considered these arrangements to be adequate.

However, many harvesters cited conflicts arising from real estate turnover and development as obstacles to maintaining access even after access has been established. Another common reason cited by harvesters for land owners to withdraw land use privileges for all harvesters is perceived abuse of their property by other mudflat users (e.g. littering, noise, parking obstructions). According to harvesters interviewed, this results in the actions of a few "bad apples" taking away opportunities for the other users who make an effort to work in the mudflats without being disrespectful or disruptive.

"Some of us work hard to gain a landowner's trust and access to get to place so we can dig. It only takes one guy to ruin it for all of us."

"We had a landowner appreciation day once where we invited all the landowners that gave us access to a clambake. It was our way of saying thank you to them and keep their connection to the flats. I don't know why we don't do it anymore, but we should."

-David Wilson, Shellfish Harvester, Harpswell Neck

Fifty-two percent of interviewees cited the lack of public commercial points of access to the waterfront as a top barrier to sustaining a fishing business. To provide insight into this access

issue, the Harpswell harbormaster supplied two points of data. First: there are nine public landings with the capacity to launch a commercial fishing vessel in Harpswell. These public landings are distributed throughout the different regions and communities in Harpswell (see Fig. 2 for map). However, in large part because of the unusual geography of Harpswell but also because of the growing number of commercial and recreational waterfront users, even these nine public landings may be insufficient to meet the needs of individual fishermen working in certain fisheries. This means that more public landings may be needed to meet the needs of certain stakeholders in the fishing industry.

"There are wharfs that you can't use, or you shouldn't use because it's a safety hazard. They are expensive to bring up to code then you have to maintain it. Not many people can afford that alone that's why some of the best wharfs around here are in families. They all carry the cost."

"The best thing we ever did was buy a wharf back when groundfishing was good really good. We couldn't buy one now if we tried. You've always got to be looking ahead like that."

The harbormaster's second point was that 79 wharfs in Harpswell are currently zoned for commercial use. Given the geographical size of Harpswell's coastline (216 miles), further research should be done to determine if this is sufficient number of commercial wharfs to meet current demand for access. This is to say nothing of the state of repair or usability of each wharf and, again, this information does not provide insight into where these landing points are geographically located throughout the community. Further research should be done to gather more information on the spatial distribution of active commercial wharves and how that distribution restricts or enables access to the waterfront. For many fishermen, access to a reliable wharf is established through familial relationships or business partnerships. For many Harpswell fishermen interviewed, the wharf they use is not located in the same sub-community as their place of residence. However, this trend did not hold for fishermen living and working in Cundy's Harbor due to a unique saturation of commercial wharfs located there.

"It sounds strange, but access needs to actually be known and accessible."

Once a fisherman finds a point of access to a wharf or a path to a clam bed, many said that the struggle does not end there. For many, the point of access may come with the frustrations of constraints on vehicle parking. 32% of interview participants noted that they struggled with parking and stressed the need for an increase. All suggested more commercial parking to directly address this need.

b. Communication

Based on the findings of this assessment, there is a clear disconnect in communication between the fishing community and the community-at-large in Harpswell. Both the fishing community and the Town acknowledge the lack of an easy fix for this issue. Similar to the previous case of access points, communication may be at the root of many other issues that appear unrelated or distinct on the surface. Because of that, improving communication between the fishing community and the broader community may help to address other areas of concern.

When it comes to determining who is responsible for maintaining communication, interview participants disagreed with one another. Seventy-two percent felt that the burden of communication is split between the fishing community and the larger community, while the remaining 28% felt that the responsibility lies with the Town and the State.

Many interviewees felt that communication was an area of concern, but a majority of those interviewed provided solutions that they felt would help to open lines of communication and allow information and knowledge to flow openly within the entire community. The solutions were also remarkably consistent across interviewees. The majority (51%) cited a need for the Town to designate a town employee as a liaison for the fishing community, or for a local group or committee to intercept and disperse information to the fishing community as it becomes available.

"It doesn't hurt to know more. I'm on the boat from darkness to darkness and others on the flats all night. Our job makes it hard to reach us at times, but we still want to know what's going on."

"Not a lot of fishermen are involved so there's no direct line to what's going on out here."

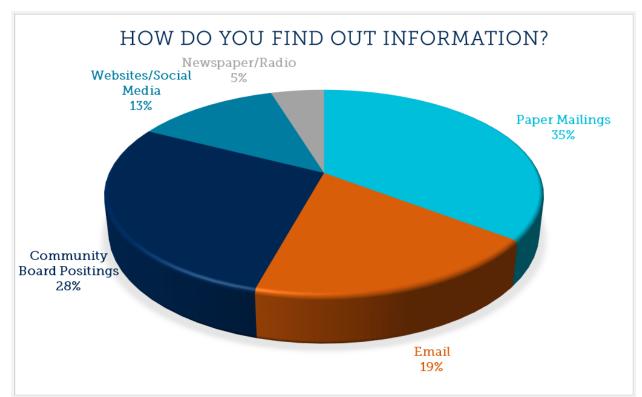


Figure 6: How participants learn about community information

The data in Figure 6 was collected to answer a question often asked of the Fishermen's Association: What is the most effective way to communicate with fishermen? The data clearly showed that distributing hard copies on paper is the best tool to spread information to participants. Whether it is through a direct mailing or via a flyer hung in a heavily trafficked location (i.e.: general stores, post offices, active wharfs), those within the fishing community find information more accessible in these forms instead of through other media.

Only 8% of fishing community members interviewed suggested a designated media tool for improved communications (i.e. social media, fisheries newsletter, or fishing community webpage). This indicates that the vast majority of fishing community members are satisfied with current methods of communication, even as they are asking for increases in communication overall. As a Fishermen's Association, we have found one of the more responsive forms of communication with fishermen to be text messaging and social media. Many fishermen are beginning to integrate new medias for communication into their lives due to increasing smartphone use.

Throughout the study, it became apparent that members of the fishing community and people in support positions in the Town and State as well as marine business operators shared similar priorities about the most pressing needs and issues facing the fishing community of Harpswell. This demonstrates that those interacting with the fishing community are actively engaging and trying to listen to the members of the community.

Despite this alignment of goals, signs of communication breakdown between these two groups remained pervasive. A typical example of communication failure arose when government or local organizations created resources or solutions to address specific problems facing the fishing community, and yet intended users had no knowledge of this resource. These types of disconnects validate the need for better and potentially different lines of communication. Input from interviewees also indicated that these two groups have different ideas of what constitutes "adequate communication." Further research will help to understand why this disconnect occurs and how extensively it negatively impacts both the fishing community and the provider of the resource.

If unaddressed, miscommunication can and will cause future problems and missed opportunities for collaboration and change. Successful community relations are founded in open, transparent communications with all stakeholders being heard.

c. Community Fishery Knowledge

"My family has always been fishing and it's always been the heart of [Harpswell's] community. It doesn't really feel like that anymore. People have other job options and when new people move here, they don't have the connections or family history with fishing."

Visitors and neighbors impact the fishing community in many unexpected ways. Feedback from the Harpswell fishing community on this issue is clear: members of the fishing community want newcomers to develop an understanding of the fishing industry and appreciate the positive impacts it has their community. The members of the fishing community who felt that this understanding was often lacking among visitors and new residents were typically those whose businesses had been negatively impacted by changes that they perceived as having occurred without input from the fishing community. Of those in the fishing community interviewed, 83% felt the greater community lacked a working knowledge of the needs and demands of the fishing industry.

"I think people want to know what's happening in fishing. They hear things like cod is gone and lobster is booming, but that isn't the whole story. They need a way to find out, but I don't have time to explain it. Besides it's pretty damn complicated."

Seventy-three percent of the fishing community members interviewed said they have had a disagreement with a neighbor or visitor over an issue that pertained to their marine business. Stated examples included: disputes with visitors walking on working wharfs who did not realize the extent of the safety hazard for themselves and others; neighbors and visitors complaining about fishing business owners storing vessels, vehicles, traps, and other equipment in plain sight on their property; and marine business building permits being denied or delayed due to disputes with neighbors.

"People need to know when they're looking to live here that lobster boats start up at 4 AM, harvesters are out late at night, and traps are in the yard drying in the offseason. There are sights, sounds, and smells - it's all part of the scenery."

- Amy Watson Saxton, Harpswell Neck/Cundy's Harbor

Another typical issue between neighbors noted in several interviews was the hassle that can be caused by visitors blocking roadways or parking in yards and driveways to photograph working fishermen or sedentary fishing equipment. Neighbors of fishermen were often inconvenienced by this type of tourist activity just as much as the fishermen themselves, and some voiced their frustration to the fishermen for drawing the attention rather than to the tourists for causing the disruption. Fishermen who noted this particular dynamic in interviews often remarked that they felt the need to apologize to their neighbors simply for existing and drawing attention, but also voiced frustration at being treated like a spectacle to be photographed.

"People stop all time when I'm outside mending a trap or painting a buoy. I get that it's part of being a fisherman in Maine, but it can be frustrating."

Many interviewees provided feedback that emphasized the natural "sights, sounds, and smells" of an active fishing port as well as the hazards of visiting active wharfs in the summer season. Interviewees said that both are a typical part of life in a fishing community, and that newcomers and visitors should be respectful of both aspects. For as long as Harpswell is a fishing community, these unique traits of the fishing industry will remain. Of the individuals interviewed who knew about previous efforts to share the uniqueness of living in a fishing community and what one can expect when moving into a commercial fishing area, 27% recommended more tools and pamphlets for newcomers and visitors to understand the nature of living in or visiting a fishing community. This could entail a redistribution of previously-made tools or a campaign in the summertime that highlights the things one will hear and see while visiting or living in an active

fishing community, as well as signage at working waterfronts reminding folks to be respectful of the working fishermen.

To share information and keep a fishing voice active in the larger community, 34% called for more members of the fishing community to participate in town government. Many recalled a time when more members of the fishing community were involved and said that that higher level of involvement made it easier to keep the fishing communities' needs and interests front and center because their voice was at the table. In response to this call for fishing community participation in town government, the following question was asked of interviewees: "Are you interested in joining town government?"

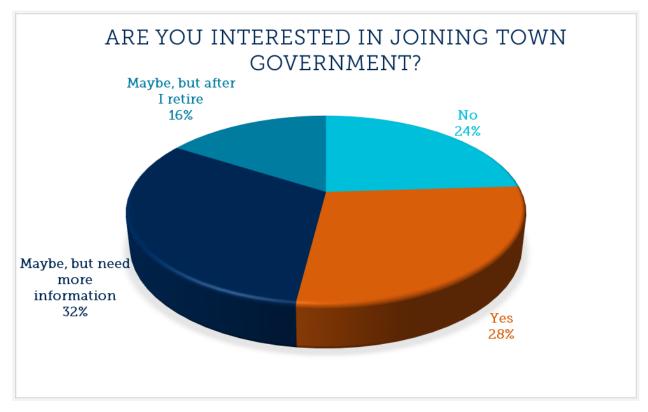


Figure 7: Interview participants interest in joining own government

Although 24% said "no" when asked if they were interested in participating in town government, the majority of interviewees either said they would be interested now or felt they would with more information or when they had more time to allocate to the task. The duration and timing of meetings were consistently the barriers that prevented many fishermen from contributing to local committees and leadership roles. Harpswell has made efforts to accommodate the schedules of fishermen by holding evening meetings; however, for various reasons, most members of the

fishing community have significant constraints on their time and many still struggle to incorporate meetings and other responsibilities associated with town government into their schedules.

d. Lifelong Workforce: Learning & Trainings

"Never. My body will be the only thing to tell me to stop fishing. As long as it lets me, I'll be fishing."

Herman Coombs, Orr's Island fisherman
 [when asked when he thinks he'll retire from fishing]

"I don't feel young and you wouldn't say I'm young. I'm 45 [years old], but I'm still young when it comes to fishing."

The fishing fleet in Harpswell, like the state of Maine in general, is aging. According to the Lobster Survey produced by the Gulf of Maine Research Institute in 2013, the average age of a Maine lobsterman is 50 years old, with the average number of years lobstermen fish climbing to 31 years. With changes in management structures, income stability, and the ability for new entrants to gain a foothold in the industry, feedback from industry interviews called for accessible resources to help members of the current fleet to grow their businesses across the industry. Many fishermen rely mostly or solely on marine resources for their gross income and see potential in expanding their businesses to keep up with increasing costs.

"My whole income comes from fishing. I'm lucky to say that, but I know plenty of people who can't do that anymore."

"I earned all my money from the flats not that long ago. I was a fulltime harvester and it paid well. Now I'm in construction and harvest when I can - nights and weekends usually."

The top challenge industry participants identified for the current fleet was new technology, with 76% of industry participants claiming they had technology on their vessel that remains unused because they do not feel confident using it. Trainings exist for certain pieces of technology, but for many fishermen these trainings are inconvenient and can cause them to lose a day of work (and therefore a day of income) or are located prohibitively far away. Most fishermen encouraged industry partners to develop useful classes for fishermen who need to learn more about the technology they must acquire for their businesses: 84% supported business and workforce trainings for industry members.

As the industry workforce ages, many fishermen see the need to expand their business to include other fisheries. Thirty-five percent showed an interest in acquiring other fishing licenses or investing in aquaculture, but many concluded that they had inadequate knowledge or resources to make the transition. When reflecting on their own businesses, 28% felt there was room to grow their business across the industry and were interested in trainings or tools to increase their revenue. Similarly to technology trainings, some trainings already exist for embarking on an aquaculture business; however, for many closed-permit fisheries, trainings do not exist and the cost to transition gear is high.

"If you'd have asked me 10 years ago if I'd want to go into aquaculture or another fishery like that, I'd have laughed, but now I'm considering it. I already have some of the gear I need, so why not?"

"All I've known is lobstering, but if that's not enough, I want to find another fishery to work in... but I don't really know where to start."

e. Next Generation

Maine's 'greying fleet' trend not only describes the aging of the current population of fishermen, but also indicates the lack of a younger cohort entering the industry to replace them. This is not only impacting current fishermen, but also the marine businesses that support the fishing industry. Consistently, those interviewed within the marine business sector described the difficulty of finding hardworking young men and women in the area.

"It can be hard to get workers in here. If they want to smell like bait, they'll hop on a lobster boat and can make more money. If I can get people to start in a labor position and learn the business, then they have opportunities to move into management and do more, earn more, and get benefits. [My management team and I] can't run this place forever."

- Jennie Bichrest, Purse Line Bait

Many rely on the school district and industry-based organizations to play an active role in the vocational education of the fleet's next generation. Those interviewed encouraged more robust partnerships with local schools and programs built on the successes of similar industry educational tools. When determining which grade levels should integrate fisheries knowledge into the curriculum, 23% saw a need for fisheries education to be increased or introduced at all levels, while 42% felt it was only necessary at the high school and post-secondary levels.

"It can be hard to get started, but one you do, you won't want to do anything else."

Feedback was evenly split between desires for either the school system to take a role in developing the curriculum (48%) or local industry-based organizations to lead the way for future generations (52%). However, for those who encouraged the school to take on a role in developing the trainings or curriculum, all felt fishermen needed to be included in the process to ensure the students were getting the experience and information they would need when they began working on a boat.

When focusing on the needs of younger members of the fishing community, 65% felt a gap lay within business and technology education as opposed to access to fishing techniques and on-boat experience. Many had mastered the labor side of fishing, but they explained that the innate knowledge and techniques older fishermen had about the business and the Gulf of Maine were things they lacked. All felt that a program or class was needed to give younger fishermen the opportunity to listen and learn from the experienced captains and crew members.

"Lobster has the apprenticeship program and I know guys that wouldn't be fishing now without it, but what about the other fisheries? A lot of kids didn't grow up a boat like I did, but we need them."

There is no single answer that explains why the younger generations seem less represented in the current active fishing community of Harpswell. Many interviewed believed it was the result of more career and education options for youth growing up in Harpswell. Others felt that many younger members of the community lacked a relationship with someone on the water. Some even felt young people were too intimidated to approach a fisherman and become involved in the fishing industry. All agreed that something needed to be done to encourage the youth to engage with the fishing industry, whether it be as a skipper on a boat or a working for a marine business.

f. Business Development & Innovation

A major concern for many interviewed was the rising costs of maintaining a career in the fishing industry. They by no means blamed Harpswell, but they noted that costs remain a constant concern for a clear majority within the industry. From the rising costs of permits and overhead to the continued strains of bait and fuel costs, feedback from fishermen and the businesses that support them indicate that they are looking for new and innovative ways to make ends meet.

Participants interviewed all agreed that access to capital was the top barrier for both new and currently active fishermen. Whether the need was for a boat, new gear, purchasing permits or allocation, or investments in infrastructure to support their business, every member of the fishing community interviewed had or knew someone who had struggled to meet the costs associated

with fishing. Some who are investing in aquaculture explained that they are looking at successful businesses that serve as a guideline for what their business could become in two to five years.

A significant majority of interviews also highlighted substantial industry costs as a cause of declined effort in Maine fisheries. The top two costs participants noted as industry obstacles were fuel and bait. While these two issues may be of importance to the lobster fleer, cost was an obstacle that existed in each fishery in Harpswell. Fuel and supply costs were hurdles many marine businesses had to combat to remain active and competitive.

Some barriers within the fishing industry are unique to specific fisheries. For example, groundfish fishermen specifically noted the high cost of permits and allocation as limitations for access and expanded effort, whereas lobstermen pointed to the lengthy waitlist for licenses as a barrier.

The fishermen interviewed have seen the volume and ex-vessel prices of their landings fluctuate over time. Many interviewees described long-term trends of abundance variability in all fisheries, and many remarked that they felt their participation in multiple fisheries helped them to weather periods of low abundance and/or value in certain fisheries when they occurred. While some fishermen felt that business growth and expansion into new industries was the solution to financial instability, a narrow majority felt that the solution instead required raising prices. Fifty-two percent of fishermen interviewed felt that the only way to manage overhead costs was a general increase in product prices. Most stated their belief that consumers would pay more if they knew the true costs of landing seafood.

Some younger fishermen interviewed were hopeful that new outlets for selling seafood would help to compensate for the increasing instability of the fishing industry. Sixty-two percent of younger fishermen were looking into ways to sell to local markets and local restaurants, breaking from the traditional route of selling to processors and distributors. Three fishermen interviewed were also investing in new gear to experiment with different fishing techniques which they hoped would increase the quality of their product and their ability to target specific species.

"People want local Maine stuff and they come here for the seafood, so why aren't we giving them both? There's a way to make it work, but I'm still figuring it out."

The dependence of the fishing community on an often-unreliable industry is becoming a significant vulnerability, and future changes to the industry could greatly change the face of the community of Harpswell if fishermen and fishing businesses cannot keep up.

g. Additional themes of note

i. Business services

A majority of the participants interviewed identified other business concerns, such as access to and understanding healthcare or financial services, as obstacles they face within the fishing industry. Of the industry members interviewed, 18% had forgone healthcare coverage for the 2017 year while 44% relied on spousal healthcare coverage. Those who had foregone healthcare coverage listed the cost of adequate healthcare plans for their line of work, a lack of understanding of how to obtain coverage, and opposition to the current healthcare mandates as reasons why.

"In my opinion, the biggest expense is your health."

"I need someone who can tell me what I need for healthcare and I'll get it. I should have because fishing is dangerous, but I can't figure it out."

"Some months I can afford it and other months I can't, so I don't have it. I'm healthy and I try to be safe out on the boat, but I know I'll be in a tricky spot if something happens out there."

Thirty-two percent also relied on their spouse or a family member to handle anywhere from a majority to all of the administrative tasks, bookkeeping, and associated "dry land" work for their business. Top reasonings for this were cost and convenience. Of the thirty-two percent, half felt they would not know how to take over these tasks if it were needed.

"My mom handled the business side and now my wife does. I don't know the first thing about it anymore. I just bring the fish in."

ii. Lack of necessary local support businesses

Due to the relatively remote location of Harpswell, many of the typical marine businesses needed to support the fishing industry lie outside of the community. Bait, fuel, ice, buyers, and the groundfish auction are much more accessible in Portland, and at times, those necessities are available there at lower prices. Keeping in mind the changes in industry demands, varying abundances of different fish stocks, and increasing prosperity of the fishing industry in Harpswell, a third of participants felt there would be value in marketing Harpswell as a hub for both fishing businesses and fishing-related support enterprises.

"I go Portland for everything – ice, bait, fuel. I used to get it all here, back when you could, but now it's all there."

"I tie up at the auction now because it's cheaper, plus I'm unloading down there. It'd be great to do everything in Harpswell, but we aren't that kind of town anymore."

VI. RECOMMENDATIONS

The results of this assessment show that the needs of Harpswell's fishing community are not being fully met despite the efforts of the Town, State, and local partners to dedicate time and resources to the sustainability and growth of the fishing community. The results also indicate that the larger non-fishing community of Harpswell is perceived to lack sufficient understanding and knowledge of the fishing community, and the fishing community itself is not fully aware of the resources currently available to them. Accordingly, the following recommendations incorporate suggestions for increased outreach and education and ideas about developing innovative approaches to tackle the material needs and knowledge gaps within Harpswell's fishing community.

We hope the community-based ideas and solutions garnered from the data collected here will stimulate big-picture thinking and visionary conversations. These suggestions originate from the central themes of the interviews as well as direct input from interview participants. Please note that neither the overall feasibility nor the specific details of these ideas have been fully researched, as that was not the goal of this study. Additionally, we make these recommendations based on community suggestions with an awareness that implementation of certain goals would require a significant investment of capital which is currently not secured or may be unfeasible for other reasons. It is important to note that this assessment should serve as only one of many sources of information in the strategic planning process of any future project or program inspired by these suggestions.

a. Town-Owned Storage

For some fishermen, the lack of storage units and available space to continue their off-water work such as cleaning, fixing, and building fishing gear is a major stressor. One suggestion was for a large community building with spaces to be leased to fishermen for trap storage, winter-season workshop needs, and protection for unused gear and equipment. This recommendation would help to both combat a lack of access and provide many fishermen with an opportunity to strengthen their businesses through proper equipment maintenance and upkeep.

"People keep asking what to do with Mitchell Field. Ask fishermen and we'll give 'em a few ideas they've never thought of. They're all about fishing though because I don't think about anything else."

b. Updated Visitor Information

Navigating conflict between fishing community members and their neighbors and local visitors can be challenging. However, events and media tools can be utilized to directly spread information about the fishing community to large portions of the greater Harpswell community and its visitors. A brochure outlining *What it's like to Live in a Fishing Community* was formerly produced. This was a unique, forward-thinking piece of media that should be updated and redistributed on an annual basis in high-traffic areas. This type of outreach is essential during the parts of the year when Harpswell sees an increase in tourism and real estate turnover.

c. Youth Engagement

Data gathered from interviews made it clear that the absence of an emerging next generation of fishermen and industry workers was a concern for many in and outside of the fishing industry. Many saw the value in a summer immersion program for local youth to partner with Harpswell fishermen for work opportunities. Others interviewed believed that the best route to today's youth was through the school system. They stated that a reinvigorated partnership between the Harpswell Coastal Academy, the fishing community, and marine businesses could result in the development of an apprenticeship program for those interested in the industry but lacking a familial or geographical connection.

"There's kids from Topsham, Lisbon, even here in Harpswell that see what we do and want to do it. They don't know how to get started because it's not like it was for me anymore. Just about every guy in my family fished. We need to do something to let them know there's opportunities to get on a boat."

"I've brought school groups down on the flats before. They think it's cool, but you can tell some of them want to do it. There should be a way to let them know they can. They'd learn more out here. It's not from a book, but it's still education."

d. Commercial Moorings

Out of the 2,187 resident and non-resident tax payer moorings in Harpswell, it is unknown how many are currently commercial. It was suggested that an update to the leasing agreement would better track the number of commercial-use moorings in Harpswell. Further analysis should be done to examine what other communities do to preserve commercial moorings and explore what

steps Harpswell could take to best utilize these finite resources. This would be one step toward ensuring access to the waterfront for marine businesses.

"I tie up in Portland now because I land at the Fish Exchange. It cuts a cost, but then I have to drive down there and back. I'd rather just tie up here [in Cundy's Harbor]."

e. Economic Impact Report

The economic value of the fishing industry in Harpswell can be estimated based on the number of active vessels and other currently available industry statistics demonstrating the level of activity; however, this dollar-value estimate fails to fully grasp the full impact Harpswell's fishing community has, not only on Harpswell, but on surrounding communities and the State of Maine's economy. Many coastal fishing communities throughout the country rely on economic impact reports to describe the vitality of their industries and the far-reaching impact that fishing and its related business enterprises have on a community. The results of this study suggest that the Town of Harpswell would be well served by conducting a complete Economic Impact Report of its fishing industry and related support businesses in order to fully grasp the importance of fishing in the community. This information could be enormously useful in future discussions of municipal policy decisions about waterfront access and allocation of town resources.

"There's a value in having us [fishermen] down at the dock. We bring in more money than people know. Does one guy bring in millions? Probably not, but together we do."

f. Fisheries Liaison

The role of fisheries liaison would be a dedicated position within the Harpswell to intercept fisheries information, policy, and needs and transmit it between the fishing community and the broader Town of Harpswell. A person in this position would attend fisheries-related meetings, support the community's Marine Resources and Harbors and Waterfronts Committees, and field questions and concerns brought forth from the fishing community and other residents of Harpswell. Town officials could assign the fisheries liaison to update selectmen and committees on the status of Harpswell's fisheries. Although this could be a newly created position, it may be more beneficial to structure it as an update to existing town employee positions. The fisheries liaison could also be employed by a local industry-based organization that sees value in having open lines of communication with Town officials.

"The marine resources committee really only focuses on shellfish, and it should because they're making decisions that affect the flats in town, but there should be another group that knows what's going on in other fisheries, so the town can find out."

"Not many people in town positions have the connection to fishing like they used to. Selectmen and everybody else used to be a fisherman or related to one. It's not a bad thing that they aren't because the people now have experience to help run the town, but they need to know what's happening in our industry. It affects a lot of people here."

VII. CONCLUSION

Beyond the Bow A fisheries needs assessment of Harpswell seeks to contribute to the understanding of where the fishing community felt there were needs or gaps in support for the fishing industry. The project also aimed to cultivate a platform for community-based ideas to be heard by the community partners who have the resources to turn them into solutions for the identified needs. The results of the needs assessment show that the needs of Harpswell's fishing community are not being fully met, despite the efforts by the Town, State, and local partners who have dedicated significant time and resources in supporting the fishing community.

Given the difficulty of implementing a solution for every identified need, this assessment seeks to make suggestions for those areas of greatest need as determined by interviewees. The results showed that access, communication, community fisheries knowledge, next generation, lifelong workforce, and business development and investment are among the most common obstacles to success for the fishing community of Harpswell.

Members of the fishing community indicated access as the need that most directly impacts the day-to-day operations of the fishing industry. Access concerns ranged from physical access to the water in the forms of parking, moorings, and public access points capable of launching a commercial vessel; as well as access to the industry itself and its breadth of fisheries for current and emerging fishermen. For the many people interviewed who were not employed as fishermen but instead work in roles which support the fishing industry, they consistently cited access on and off the water as a need that should be addressed. The town officials interviewed for this needs assessment acknowledged that access is a frequently-recurring issue, and they are currently working on a range of solutions. In 2017, Harpswell was tasked with hiring a new harbormaster, and with it came the opportunity to reassess the role of the harbormaster within the world of marine resources. The new harbormaster has brought with him a new perspective on the issues

facing the fishing community of Harpswell, as well as the ability to tackle some of the needs mentioned in this report.

The results of this needs assessment have also highlighted better communication as the need that most directly impacts the fishing community's relationship with the greater Harpswell community. Men and women working both within the fishing industry and in support positions specified communication struggles equally when asked about needs. This is also an area in which the Town and State have recently been focusing their efforts; however, this focus has evidently not closed the communication gap yet. Many interviewees from both the fishing community and Town and State employees discussed instances where one group felt they were communicating clearly and effectively but the other did not. This was especially apparent when resources explicitly meant for the fishing community had been developed by local or state government and yet a clear majority of the community members were unaware of their existence.

Based on the results of this needs assessment, the areas of greatest need are also those being prioritized by local partners. Both the literature reviewed prior to the study and the data collected over the course of the assessment have shown that the Town and State are aligning their initiatives to most effectively address the needs of the fishing community and to provide resources and services for the most pressing areas of concern. To ensure that organizations and local partners can help most effectively, the responsibility lays with the members of the fishing community to continue to communicate and bring forward their issues and ideas for solutions to local and state government. For the resources and services created to be sustainable, an active role must be taken not only by the Town of Harpswell, but by the entire community of stakeholders invested in the current and future success of Harpswell's fishing community and the people who make up its working waterfront.

VIII. FUTURE USE & LIMITATIONS

The research completed for *Beyond the Bow: A fisheries needs assessment of Harpswell* sought to assess the needs of a facet of Harpswell's community that uses the town as their home port, their marine business location, or their landing port. The needs assessment proposes ways for the community, state, and local organizations to best meet those needs. If nothing else, we hope that the data collected and displayed in the final report and booklet will ignite conversations and reinvigorate broad support for Harpswell's fishing community.

The data collected in this report identify needs from the perspectives of the fishing community and the town officials who interact with those community members and marine businesses. The qualitative data has provided ideas about how interested parties can work together to better meet those needs. This assessment has uncovered plenty of opportunities for additional research, and future projects could benefit from lessons learned through our experiences performing this assessment. This section addresses how future assessment processes could be improved and acknowledge the methods that we found to be effective.

From the beginning of the interview process, we recognized that performing research and interviews on a strict timeline that broke up different fisheries and sectors into different "phases" was not workable, and that the phases as we had created them could only be used as guidelines. It would have been immensely difficult to begin the process without the phases guiding the focus of contacting participants. However, as scheduling, weather, and emerging opportunities began to disrupt the original interview schedule, the program manager had to allow the research phases to become fluid over the course of the timeline.

Due to the nature of open-ended questioning and qualitative research, the analysis of the collected data needed more time than was originally allotted and further research and outreach was needed. Tools used for data analysis were adequate for the task but were relatively simple in nature. More advanced analytical tools would have been necessary to run other variation formulas and multiple cross-tabs. Consulting a statistics or data analysis expert early in the planning process would be beneficial for future interview-based needs assessments. Future research would benefit from additional data collection and research, additional time spent on analysis, and the development of more sophisticated analysis processes. It would also be useful to identify different software options for analysis and data processing for use in future research.

Due to the time intensive nature of the needs assessment, additional staff resources would also be beneficial for future fishing community needs assessments due to the long lists of potential interview participants and the significant time investment of interviewing them. This may lead to costs associated with the hiring of additional interview facilitators and/or data analysts due to the high volume of work. The addition of new staff, some of whom may not have fisheries experience, may also lead to a longer completion timeline because of training needs. However, the addition of dedicated assessment staff would also likely result in improvements to the project outcomes as

well as an expansion in project scope which would make those costs, in our opinion, potentially worthwhile.

The question of whether printed and mailed surveys would be useful tools for interviewing the fishing community and gathering data was raised several times during the pre-planning stage of the needs assessment. It was ultimately determined that a written format would have been too restrictive, and many surveys would probably have been left unreturned or incomplete. As the data was analyzed, we began to understand more and more that written surveys would not have been a good choice for the intended audience. However, it may have been beneficial for the quantitative data collection to have succinct data points from participants, which could have been gathered with a mail-in survey (yes-or-no questions, multiple choice questions, etc.).

Open-ended questioning was an effective component of the needs assessment. Each question generated several topics of conversation that were catalysts for the recommendations that there be increased collaboration with the Harpswell community to address unmet needs. Many members of the community were included in the needs assessment timeline. Community members were engaged through interviews, connecting the study authors with potential interview participants, and helping the study authors develop a useful and engage final product for the intend audience. One key area for fostering engagement with community members was through the Harpswell-based Holbrook Community Foundation which also served as one of the primary funders for *Beyond the Bow: A fisheries needs assessment of Harpswell*. We felt that a high level of community involvement was a critical component of our success. We encourage all future researchers to engage interested community members wherever possible during all stages of their work.

"I hope they listen. We're not just talking about our futures in the industry – it's Maine's too."