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MR446: Profiles of Sixteen Eastern Maine Fishing Communities

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The PIs oversaw all aspects of the project. Sara Randall, former University of Maine graduate student, drafted preliminary profiles. Marina Garland and Katelyn Ross, advised by Ken Cline and Chris Peterson (College of the Atlantic), conducted the rapid assessment in the communities. Robin Alden and Carla Guenther (Penobscot East Resource Center) identified community reviewers and provided additional guidance throughout the project. Holly Eaton, formerly of the Penobscot East Resource Center, oversaw the groundtruthing and provided valuable feedback on the profiles. Theodore Koboski and Mackenzie Mazur, undergraduate research assistants from the School of Marine Sciences at the University of Maine, updated fisheries and census data and formatted profiles. Advisors to the project include James Wilson from the University of Maine and Aaron Dority and Ted Ames from the Penobscot East Resource Center. Barbara Harrity at the Maine Agricultural and Forest Experiment Station provided technical copy editing for the final document.

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INTRODUCTION

In the United States, a number of legal mandates require social impact assessments of proposed federal fisheries management and other actions. Most notably, National Standard 8 of the Magnuson Stevens Fishery Conservation and Management Act, the federal legislation governing the management of marine resources in the United States, requires that managers “take into account the importance of fishery resources to fishing communities” and “provide sustained participation of” and “minimize adverse economic impacts on such communities” (Clay and Olson 2007; 2008). Under this mandate, fishery-dependent communities are those “substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs” (Clay and Olson 2007; 2008) and are defined as geographic places (Clay and Olson 2007). The National Environmental Policy Act further requires social impact assessments (SIAs) of federal actions that include an appraisal of the cumulative effects of action on the “human environment.” However, too often there are insufficient data with which to conduct SIAs for fisheries management, in part because these data are expensive and time consuming to collect and social science for SIAs is typically underfunded (Ingles and Sepez 2007).

To address this lack of data, we profiled 16 fishing communities in eastern Maine, from Vinalhaven to Eastport (Figure 1), focusing on the communities in eastern Maine currently or historically engaged in the New England groundfish fishery. The project was funded by the Saltonstall-Kennedy grant program and responded to the specific priority area “Fisheries Socioeconomics.” These community profiles contribute data necessary to meet the requirement to consider the impacts of fishery regulations on fishing communities.

The region studied represents approximately half of Maine’s coastline, and it includes the two most fishery-dependent counties in New England—Washington and Hancock (Hall-Arber et al. 2001). Our investigation focused on the following Downeast communities: Vinalhaven, Stonington, Bar Harbor, Northeast Harbor,

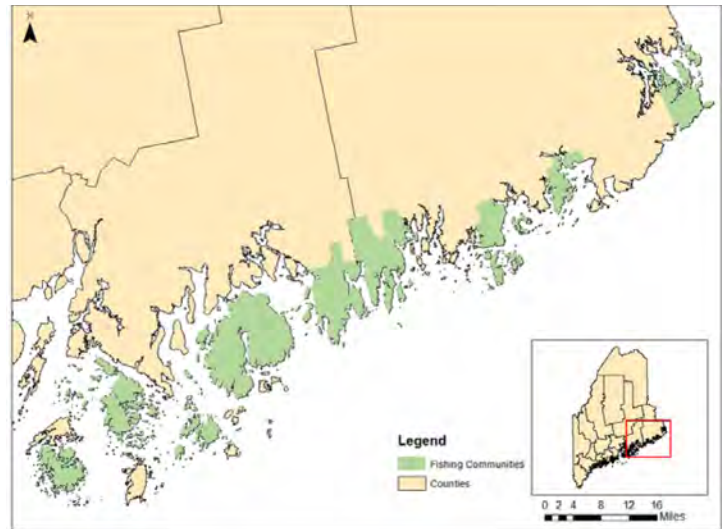


Figure 1. Map showing study area. Source: C. Cleaver.

Southwest Harbor, Bass Harbor, Swan’s Island, Steuben, Winter Harbor, Gouldsboro, Milbridge, Jonesport, Beals, Bucks Harbor, Lubec, and Eastport.¹

In the past, the communities in this region were supported by a diversity of fishery resources including groundfish. Today, however, these communities are almost completely dependent on the American lobster resource, which makes them highly vulnerable should that resource decline as the groundfish stocks did in the 1990s. Like other small-scale operations, fishermen in eastern Maine have been significantly affected by management measures implemented through the New England Fishery Management Council. While not necessarily the intent, the implementation of limited-access fishery management based on regulations of days at sea has left few active groundfish fishermen in this region. This is in part because as stocks of fish in the region declined, fishermen shifted to lobster fishing, with the expectation of returning to the traditional, seasonal groundfish fishery when fish stocks were rebuilt. As managers struggled to reduce overfishing, however, fishermen in the region found themselves lacking adequate fishing histories, due in part to a lack of federal catch-and-effort data from these communities (Wilson 1999). Today, few fishermen from this region qualify to participate in the fishery. Similar stories are heard in other small-scale, fishery-dependent communities (such as Martha’s Vineyard, Massachusetts,

¹ Bass Harbor includes Tremont and Bernard. Gouldsboro includes Gouldsboro, Corea, Birch Harbor, and Prospect Harbor. Bucks Harbor includes Machiasport.

and Long Island, New York), as well as from specific groups of fishermen within larger fishing communities (such as the inshore or day-boat fishermen from places such as New Bedford and Gloucester, Massachusetts, or Portland and midcoast Maine).

Our profiles are based on a rapid assessment to document the current infrastructure capacity of fishery-dependent fishing communities in Downeast Maine.² We updated profiles with social, economic, and demographic data available from the 2010 U.S. Census and with 2011 state and federal license data. The draft profiles were groundtruthed by members of the communities.

Rapid Assessment

Prior to visiting the communities, we created preliminary profiles following a review of existing literature and reports including Northeast Fisheries Science Center's community profiles (which served as templates for most of the preliminary profiles), Hall-Arber et al. (2001), and Acheson et al. (1980). This was followed by Internet searches of municipal websites and historical societies. We conducted the rapid assessment over the course of 11 weeks in the summer of 2011 using a specific protocol that included a checklist modified from a similar list received from NOAA Fisheries social scientist Lisa Colburn. We gathered infrastructure data through interviews and observation, took GPS waypoints and photographs of all important infrastructure sites, and ultimately updated or created community profiles for each community visited.

A key contribution of these profiles is the documentation of current infrastructure in the communities. For most communities, we interviewed the harbormaster in the town, going over a detailed checklist of possible marine infrastructure. We also often asked harbormasters a list of community-oriented questions to get a more qualitative feel for the community. We tried to visit each important point of infrastructure in town (or in surrounding towns if need be)—this usually included municipal wharves and landings, commercial buying stations, fishermen's cooperatives, seafood-processing facilities, marine supply stores, boat repair yards, haul-out facilities, and welding businesses. In

some towns, infrastructure was concentrated in one harbor, while in others it was scattered widely over many miles and on different peninsulas. At all sites with infrastructure, we took a waypoint with our Garmin GPS and photo-documented the site/piece of infrastructure. GPS waypoints were later entered into a spreadsheet and used to create maps in geographic information systems (GIS). Most of our stops were at commercial buying stations, most commonly for lobster, though we also encountered landing sites for mussels, worms, and sea cucumbers. The nature of these commercial wharves/buying stations was such that setting up interviews at each site was not practical and usually impossible. Sometimes we were able to talk with the owner or manager of the site, but more often we talked to any employee available. Visits were usually brief; we explained the project quickly and attempted gather information in an unobtrusive manner so as not to interrupt people hard at work. Accomplishing a rapid assessment in each community took between one and three days.

Social, Economic, and Demographic Data

Following the rapid assessment, we incorporated the newly available 2010 U.S. Census data into the profiles. After reviewing other community profile and consulting with community partners, we identified the socioeconomic data from the U.S. Census Bureau (2010) to include in the community profiles (Table 1). Population data are from the U.S. Census Bureau (2010) and economic data are from the 2008–2012 American Community Survey Five-Year Estimates.³

State and Federal Fisheries Data

In each profile, we report publically available state license and federal permit and dealer data for each community. State license data were purchased from the Maine Department of Marine Resources (DMR), and federal data for 2011 were obtained from NOAA Northeast Regional Permit Data office website.⁴ We recognize that not all of the licenses and permits are active, but nevertheless they indicate a potential capac-

2 NOAA Fisheries fishing community profiles can be found at <http://www.nefsc.noaa.gov/read/socialsci/communityProfiles.html>.

3 Data were from the American Fact Finder. <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>. The region-wide profile used data from the 2007–2011 American Community Survey Five-Year Estimates.

4 These data are updated; our analysis was based on data available October 2011.

Table 1. Socioeconomic data reported in profiles gathered from the U.S. Census.

Socioeconomic Statistics
Population 2010
Percentage population change from 2000
Median age
Percentage of the population identifying as white
Percentage of the population born in state, outside of Maine, and outside of U.S.
Percentage of the population with high school or equivalent
Percentage of the population with bachelor degree or higher
Percentage of the population over 65 years of age
Percentage individuals below poverty line
Percentage of individuals over 65 falling below the poverty line
Percentage households with incomes from Social Security and retirement
Percentage households with food stamps
Median household income
Median per capita income

ity for participation in fisheries (or lack of) in these communities.

For the regional profile, we summarized fisheries landings and permit data at the county level. This analysis focused on the region's groundfish fishery, and landings data are combined for Hancock and Washington counties. We were able to obtain aggregated data from the Maine DMR for Hancock and Washington counties, and the National Marine Fisheries Service (NMFS) provided confidential landings data by port and 13 different subregions that we defined. Whereas NMFS data includes federally permitted vessels, the Maine DMR data includes both federally permitted vessels and vessels without a federal permit (state-water-only vessels). The aggregated data from the NMFS are close (in pounds or value) to the aggregated Maine DMR data. We use the NMFS data only to show annual trends over time for Hancock and Washington counties (aggregated together).

Groundtruthing Profiles

We shared the draft profiles with Penobscot East Resource Center (PERC) staff for review and groundtruthing by members of the communities. PERC initially identified at least two reviewers from each community based on his or her knowledge of the community, particularly the fisheries aspects of the community. An honorarium (\$200) was offered to each and paid upon completion of the review. Participants were mailed and/or emailed the profiles. Depending on the reviewer's preference, they provided us with either verbal or written comments. In some cases, PERC staff followed up with community reviewers over the phone or in person either as part of the review or to clarify some information in the profile or comments received. We incorporated the feedback from the reviewers into the final profiles. Identifying reviewers with time and willingness to participate in this review proved a challenge. A total of 49 reviewers were identified and contacted, and of these, 17 completed a review. Only the Gouldsboro profile did not receive a community-level review although several community members were contacted. PERC staff reviewed this profile, and we conducted additional research via Internet searches for new information on the community.

Organization of the Profiles

Each community profile followed a similar format (Table 2); however, the available information for each section varied across the communities. Information for the "issues facing the communities" came directly from the rapid assessment and community reviewers.

Table 2. Outline of the fishing community profiles.

Geography and History
Demographics and Economics
Fisheries Profile <ul style="list-style-type: none"> • Commercial fishing • Recreational and subsistence fishing • Marine infrastructure • Fishing industry support and government institutions • Cultural attributes related to fisheries and the sea
Issues Facing the Fishing Community

Major Findings

Following are findings that resonated across many of the fishing communities in this study. However, each community has a unique history and culture, and each faces particular social and economic conditions. The reader is encouraged to read the profiles for more details on each community.

- The population of most communities in the region has been declining.
- The majority of the communities are aging, due in part to outmigration and older, retired individuals moving to these communities.
- Some communities are facing threats from gentrification, which can affect access to waterfronts and other aspects of working waterfronts.
- Tourism is an increasing economic activity in these communities.
- Communities still celebrate the fishing heritage; most consider themselves to be fishing communities.
- Most of the infrastructure and commercial fishing activities in the communities are directed at the American lobster fishery.
- In addition to lobster, other important species are scallops, urchins, shrimp, and clams; most fishing effort occurs in state waters.
- Although once important, groundfish is no longer an active fishery in these communities, with the exception of a state-run halibut fishery.

EASTERN MAINE COMMUNITY PROFILE

Geography and History

The 16 fishing communities from Vinalhaven in Penobscot Bay to Eastport in Cobscook Bay, which were historically engaged in the New England groundfishery, are shown in Figure 2. Some of these communities include villages or are otherwise represented in the Census by other municipalities (Table 3).

Demographics and Economics⁵

The population of eastern Maine has been decreasing (Figure 3). In 2010, according to the U.S. Census, the total population of the 16 communities was 23,579 (down from 24,950 [U.S. Census Bureau 2000]). Only five of the 16 communities grew during this time. As a whole, the population of the 16 communities declined 0.06% between 2000 and 2010. At the extremes, Bar Harbor grew 8.6%, while Winter Harbor declined by 47.8%. At the county level, Washington County population declined by 1.2% between April 2010 and July 2012, whereas Hancock County grew by 0.3%.⁶

The population of this region is relatively homogenous; in 2010, 92.1% and 96.9% identified themselves as white in Washington and Hancock counties, respectively (U.S. Census 2010). As for educational attainment, 85.9% of the population of Washington County and 91.7% of the population of Hancock County had a high school degree or higher, compared to 90.2% in Maine and 84.4% in the United States.

The population of the region is aging (Figure 4). The median age in 2010 was 46.1 in Washington County and 46.3 in Hancock County, compared to 42.7 in Maine and 37.2 in the United States. In 2010, 19.6% and 18.3% of the population was 65 years of age or older in Washington and Hancock counties, respectively, compared to 15.9% in Maine (U.S. Census Bureau 2010).

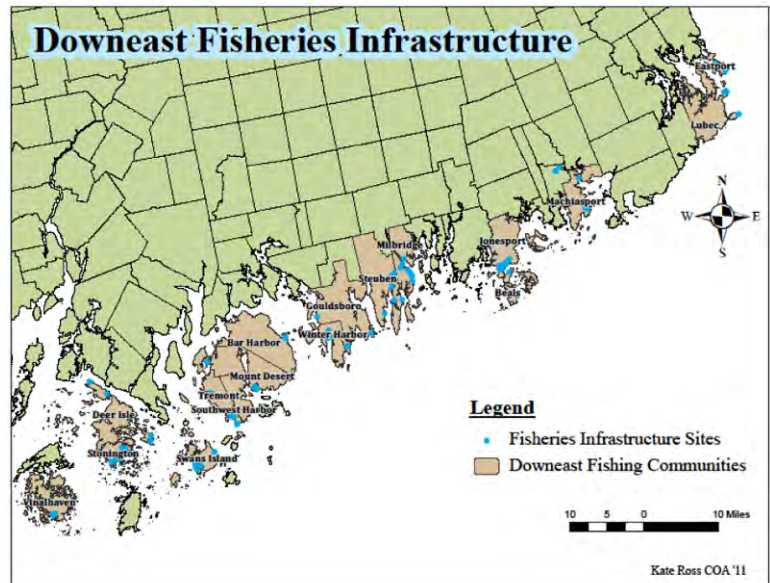


Figure 2. Map identifying the 16 study communities.

The median age fits Maine's trend as an aging state, a trend that is more pronounced in natural-resource-dependent communities (Miltiades and Kaye 2003).

On average, Hancock County is wealthier than Washington County (Table 4). Median household and per capita incomes were lower in Washington County than in Hancock County, and Washington County features more households with incomes from Social Security and retirement than Hancock County (Table 5). Also, more households depend on food stamps in Washington County.

In 2010, 10.9% and 7.4% of people in Washington and Hancock counties, respectively, were unemployed, compared to a state average of 7.1%. Self-employed workers, a category that includes fishermen, accounted for about 16% of all jobs in the region, compared to making up 9.4% of jobs in the state as a whole (U.S. Census Bureau 2010). Agriculture, forestry, fishing, hunting, and mining occupations accounted for 11.4% of jobs in Washington County and only 4.6% of jobs in Hancock County (Table 6).

Fisheries Profile

Commercial

While the tourism industry dominates the towns, fishing remains important to eastern Maine communities. Lobster is the largest fishery in the region. Most fishermen are local and live in town or just on

5 Population data are from the U.S. Census and economic data are from the 2006–2010 American Community Survey 5-Year Estimates. These data were obtained from the American factfinder (<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>).

6 <http://quickfacts.census.gov/>

Table 3. Counties and municipalities of the 16 eastern Maine fishing communities in the study, along with basic demographic information and the number of federal groundfish permits in the study communities.

Communities	County	Municipality and Villages Included	2010 Population*	Percentage Change between 2000 and 2010	Median Age	# Groundfish Permits in 2011**
Vinalhaven	Knox	Vinalhaven	1,165	-5.7	45.1	6
Stonington	Hancock	Stonington	1,043	-9.5	50.7	3
Southwest Harbor	Hancock	Southwest Harbor	1,764	-10.3	48.4	2
Swan's Island	Hancock	Swan's Island	332	1.5	46.3	1
Bar Harbor	Hancock	Bar Harbor	5,235	8.6	45.3	2
Northeast Harbor	Hancock	Northeast Harbor	2,053	-2.7	50.7	0
Bass Harbor	Hancock	Tremont, Bernard, Bass Harbor	1,563	2.2	49.2	4
Winter Harbor	Hancock	Winter Harbor	516	-47.8	51.1	5
Gouldsboro	Hancock	Gouldsboro, Prospect Harbor, Corea, Birch Harbor	1,737	-10.5	50.3	4
Steuben	Washington	Steuben	1,131	0.4	42.4	0
Milbridge	Washington	Milbridge	1,353	5.8	47.3	3
Jonesport	Washington	Jonesport	1,370	-2.7	49.0	4
Beals Island	Washington	Beals (island)	508	-17.8	48.1	11
Bucks Harbor	Washington	Machiasport and Bucks Harbor	1,119	-3.5	43.3	1
Lubec	Washington	Lubec	1,359	-17.7	54.0	1
Eastport	Washington	Eastport	1,331	-18.8	54.5	1

*Data source: U.S. Census 2010

**Data source: NMFS Permit Database

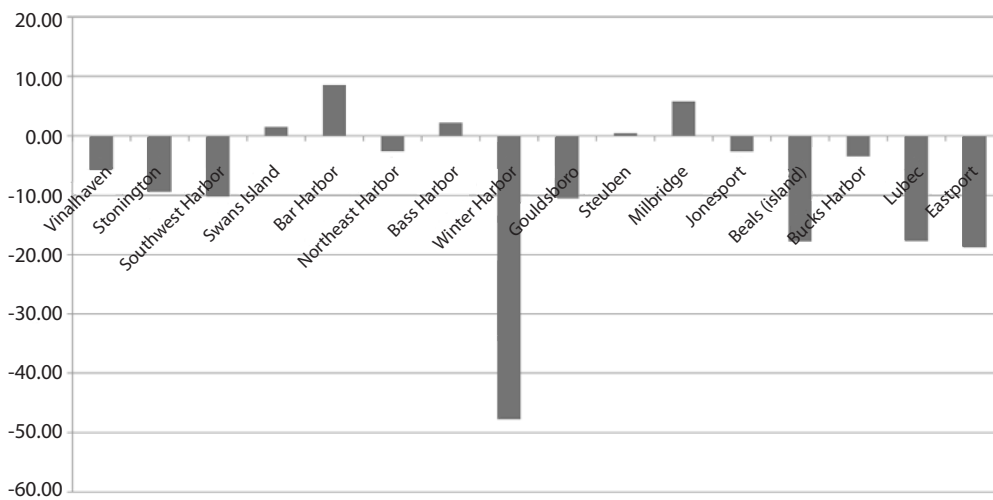


Figure 3. Percentage change in population of each community 2000 to 2010.

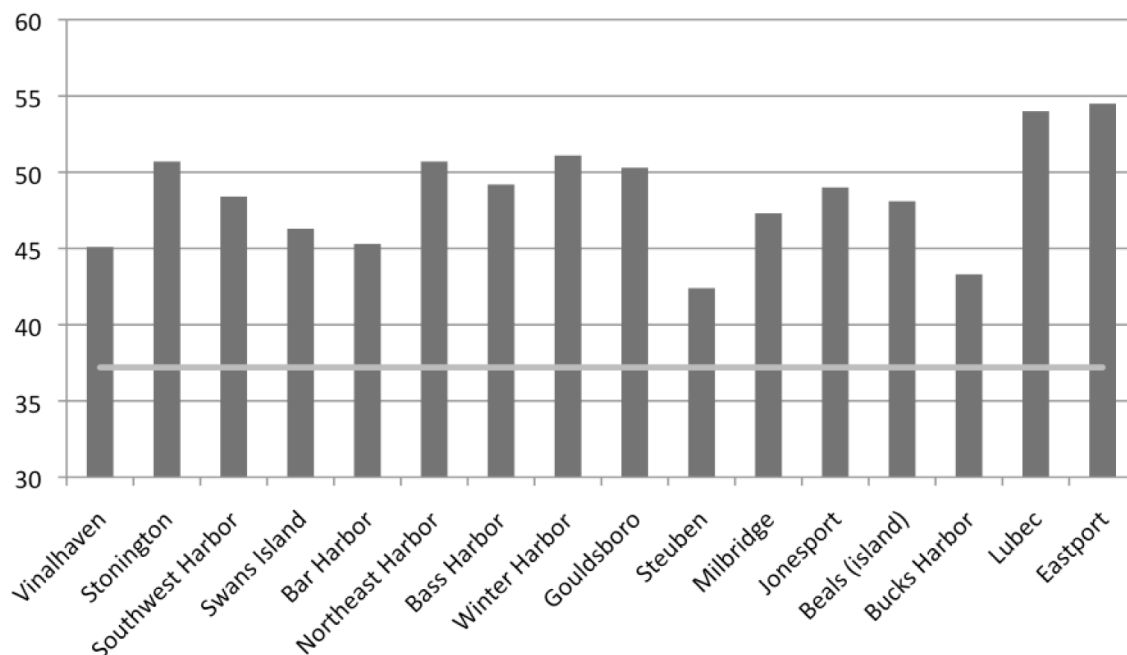


Figure 4. Median age in the 16 fishing communities. Solid line shows median age of the population in Maine.

Table 4. Median and per capita income and percentages unemployed and self-employed in 2010.

	Median Income	Per Capita Income	Unemployment	Self-employment
	----- \$ -----		----- % -----	
United States	52,762	27,915	8.7	6.4
Maine	47,898	26,195	7.1	9.4
Hancock County	47,421	27,227	7.4	16.3
Washington County	35,272	19,527	10.9	16.4

Source: 2006–2010 American Community Survey 5-Year Estimates.

Table 5. Household income from earning, Social Security, retirement, and SNAP in 2010.

Region	Households with Income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- % -----			
United States	79.2	27.9	17.5	10.2
Maine	76.1	32.1	18.9	14.6
Hancock County	77	32.3	18.7	10.9
Washington County	70.1	38.3	20.8	22.4

Source: 2006–2010 American Community Survey 5-Year Estimates.

Table 6. Percentage of jobs in select occupation categories in 2010.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	----- % -----			
United States	1.9	11.5	9.0	22.5
Maine	2.4	13.8	8.3	26.4
Hancock County	4.6	12.1	9.9	26.7
Washington County	11.4	14	7.1	26.4

Source: 2006–2010 American Community Survey 5-Year Estimates.

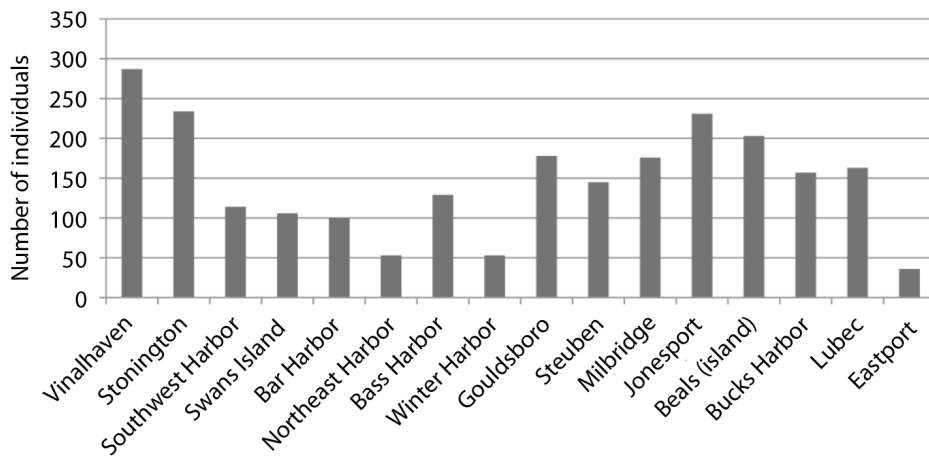


Figure 5. Total number of individuals holding licenses in the 16 fishing communities. Source: Maine DMR 2011.

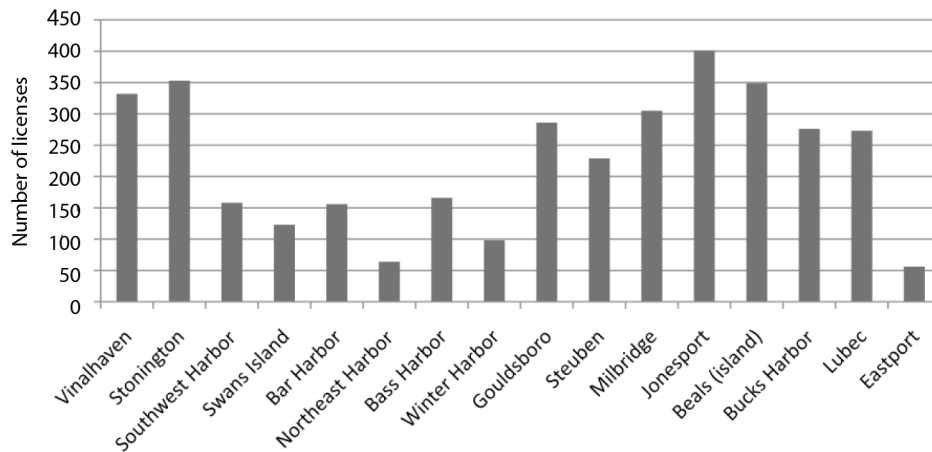


Figure 6. Total number of licenses held in the 16 fishing communities. Source: Maine DMR 2011.

the outskirts. Other commercially important fisheries in the region include shrimp, scallops, herring, urchins, clams. According to the Maine DMR, the only groundfish landed commercially in eastern Maine during the period from 2008 to 2010 have been Atlantic halibut.

State license and federal permit data⁷

In 2011, 2,365 individuals held state licenses in the 16 eastern Maine communities (Figure 5). These individuals held 3,625 licenses (Figure 6), most of which were for lobsters and crabs. In 2011, 435 vessels listing residences in the 16 communities held a total of 764 federal permits (Figure 7). More than half the permits were for American lobster (Figure 8). Few limited-access permits are available in this region (Figure 9).

Recreational and subsistence

Recreational fishing is another tourist attraction. The reader is directed to the individual community profiles for more details on recreational and subsistence fishing.

Groundfish landings in eastern Maine

The following is an analysis of available data on the region’s groundfishery. For the purposes of the following analysis, eastern Maine is defined as Washington County, Hancock County, and four Knox County islands (Isle au Haut, North Haven, Vinalhaven, and Matinicus). Landings data are shown for Hancock County and Washington County combined. Port-level landings data are not publicly available because of confidentiality constraints. We were able to obtain aggregated data from the Maine DMR for Hancock County and Washington County, but not for the four

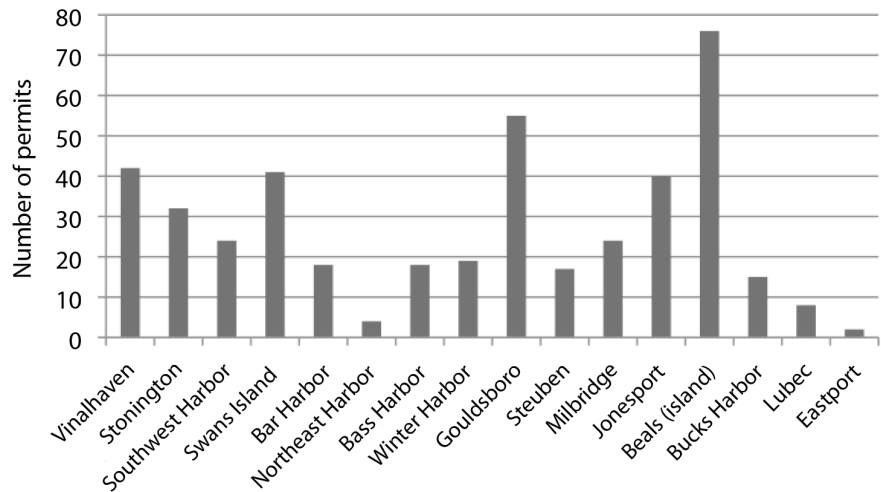


Figure 7. Number of federal permits listing eastern Maine addresses. Source: NMFS Permit Data 2011.

Knox County islands originally intended to be included in our study. The NMFS provided confidential landings data by port and 13 different subregions that we defined. Whereas NMFS data only includes federally permitted vessels, the Maine DMR data includes both federally permitted vessels and vessels without a federal permit (state-water-only vessels). The aggregated data from the NMFS are close (in pounds or value) to the aggregated

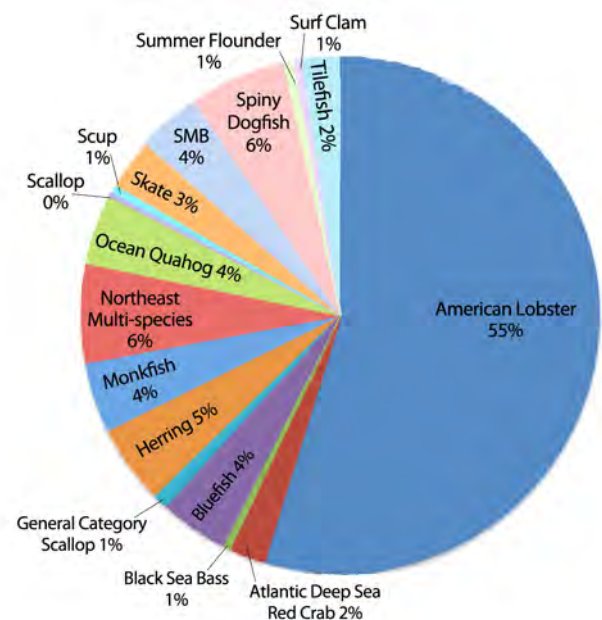


Figure 8. Percentage of total federal permits held for each species in eastern Maine. Source: NMFS Permit Data 2011.

7 Data are from: Maine DMR, Marine Resources Licensing & Enforcement (MRLN) database, Retrieved by Keith Fougere, November 2010 and May 2012 and Northeast Region Permit Database, Available at <http://www.nero.noaa.gov/permits/data/>

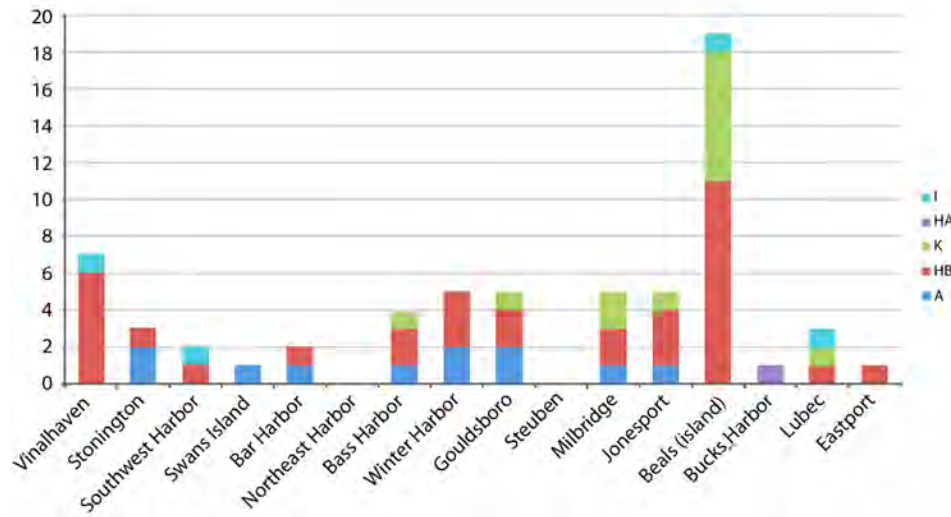


Figure 9. Federal groundfish permits held in eastern Maine communities in 2011. Source: NMFS Permit Data 2011.

Maine DMR data. Here we use the NMFS data only to show annual trends over time for Hancock County and Washington County (aggregated together) (Figures 10 and 11, Tables 7 and 8).

Marine infrastructure

Most of the fishing infrastructure in this region is directed at the American lobster fishery. The reader is directed to the individual community profiles for more details on regional infrastructure.

Fishing industry support and government institutions

The Maine Lobsterman’s Association (MLA), founded in 1954, represents many of the lobstermen in the area. The association was created by Maine lobstermen for the purpose of protecting their livelihoods and the lobster resource. It is now the largest commercial fishing industry group on the East Coast. Some fishermen have been joining the Downeast Lobstermen’s Association (DELA). Cobscook Bay Resource Center and Penobscot East Resource Center are two nonprofit organizations

Table 7. Top 10 groundfish species landed in Washington and Hancock counties by decade, ranked by ex-vessel value.

Rank	1980–1989		1990–1999		2000–2009	
	Species	Value (\$)	Species	Value (\$)	Species	Value (\$)
1	cod	4,357,873	cod	6,491,172	halibut Atlantic	1,729,613
2	hake white	2,061,074	hake white	4,516,319	cod	311,599
3	pollock	2,053,419	pollock	3,761,688	hake white	257,651
4	flounder witch	1,814,980	monkfish	883,030	monkfish	241,709
5	flounder American plaice	1,372,903	flounder American plaice	807,207	flounder American plaice	227,809
6	monkfish	566,817	flounder witch	678,203	pollock	202,037
7	flounder winter	379,251	cusk	502,879	flounder witch	157,214
8	haddock	228,965	flounder winter	138,560	haddock	79,135
9	halibut Atlantic	212,465	halibut Atlantic	126,501	redfish Acadian	16,016
10	cusk	112,421	haddock	53,688	cusk	7,748

Source: Maine DMR

Table 8. Wild marine landings for selected species in Washington and Hancock counties, 2008–2010.

Species	Three-Year Pounds	Three-Year Value (\$)	Average Annual Value (\$)
Lobster	114,529,100	370,660,027	123,553,342
Soft-shell clam	12,721,288	15,734,782	5,244,927
Sea urchin	8,408,430	15,573,988	5,191,329
Marine worm	1,085,851	8,605,454	2,868,485
Mahogany quahog	14,773,638	5,803,498	1,934,499
Blue mussel	41,210,776	5,158,876	1,719,625
Herring	29,079,479	3,535,847	1,178,616
Sea Scallop	3,153,506	2,902,040	967,347
Crab	7,714,514	2,837,973	945,991
Periwinkle	2,770,066	2,423,414	807,805
Groundfish (Atlantic halibut)	151,941	730,548	243,516
Shrimp	1,387,156	639,554	213,185

Source: Maine DMR.

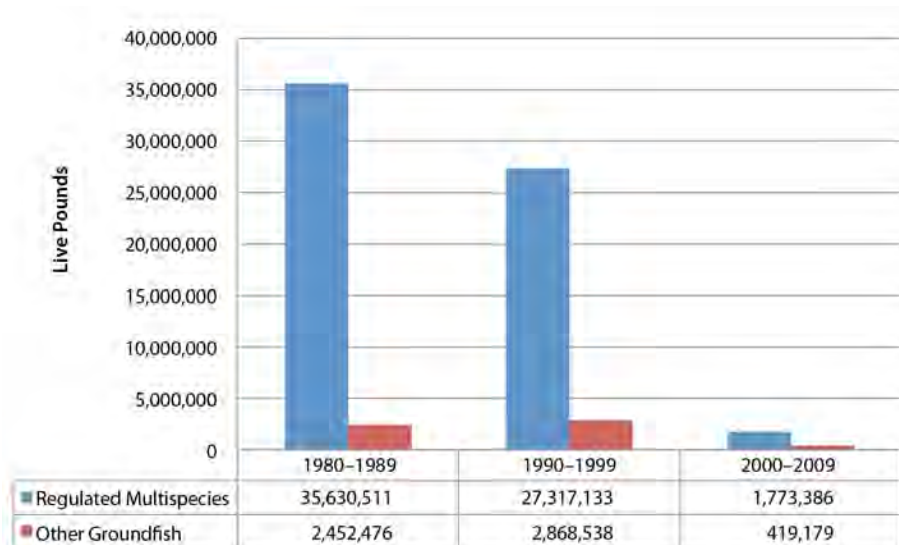


Figure 10. Groundfish landings (live pounds) in Washington and Hancock counties by decade, 1980–2009. Source: Maine DMR.

that help support fishermen and the communities in the region. The region is served by two Sea Grant offices located in Eastport and Bar Harbor. The reader is directed to the individual community profiles for more details on fishing industry support and government institutions in the region.

Cultural attributes related to fisheries and the sea

A number of notable festivals are held in the region. The reader is directed to the individual community profiles for more details on the cultural attributes found in the region.

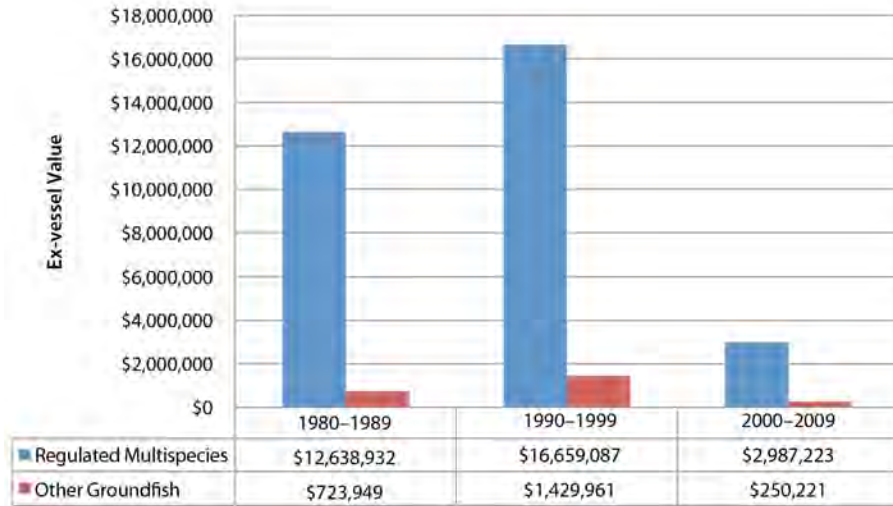


Figure 11. Groundfish landings (ex-vessel value) in Washington and Hancock counties by decade, 1980–2009. Source: Maine DMR.

Issues Facing the Fishing Community

Key issues facing the fishing communities in this region are loss of access to fisheries and the waterfront, outmigration, and gentrification. Each community is faced with unique threats and concerns. The reader is directed to the individual profiles for more details on the issues facing the fishing communities in eastern Maine.

VINALHAVEN COMMUNITY PROFILE

Geography and History

Vinalhaven is an island in the center of Penobscot Bay located in Knox County in the midcoast region of the state (Figure 12). It is Maine's largest offshore community. The island is the largest in Penobscot Bay, encompassing 22.1 square miles of territory (NOAA 2009a), and is situated about 12 miles from Rockland, the nearest mainland town. The Fox Islands Thoroughfare, a narrow straight, separates Vinalhaven from the island of North Haven.

Vinalhaven is accessible by ferry from Rockland. The Maine State Ferry Service operates two ferries, each making six round trip journeys daily carrying passengers, vehicles, and cargo. The trip takes approximately 1 hour and 15 minutes. Penobscot Island Air also flies to the island from the Knox County Regional Airport.

The island's first permanent English settlement was established in 1766, and the population grew rapidly after the Revolutionary War. Traditional occupations included fishing, farming, logging, boat building, and net making.⁸ After high-quality granite was discovered in 1826, granite quarrying became extremely important to the town. Vinalhaven's granite industry grew to be one of Maine's largest. Many immigrants from the British Isles, and later Scandinavia, came to work in the quarries; skilled carvers were also employed. The island's population reached an all-time high during this period. Vinalhaven granite went to diverse ports and projects in cities across the country; decorative granite carvings made in Vinalhaven were featured on many public buildings. The industry began to decline after 1910, as steel and concrete began to replace stone in construction. The largest quarry closed in 1919 although the paving stone industry continued into the 1930s. Overall, Vinalhaven's economic advantage waned as rail and roads took the place of ships for transportation, and the cost of transporting island products (granite, hay, wood, and fish) to mainland markets increased (pers. com. key informant).

Today, the economy of Vinalhaven is primarily based on a combination of fishing (lobstering), building



Figure 12. Map of Vinalhaven within Penobscot Bay.

and other trades, retail businesses, and service occupations. Many people work part time at several seasonal occupations. According to the town manager, the biggest employers on the island are the fisherman's cooperative, the school, the town, the electric cooperative, the medical center, and the grocery store. The downtown offers a variety of restaurants and cafes (mostly seasonal), a grocery store, newsstand/stationery store, variety store, a convenience/fishermen's supply, several gift shops, an art gallery, two hair salons, a gym, and several real estate agents. A lumberyard is nearby. Most of these businesses operate year-round (pers. com. key informant).

Tourism has a limited impact on the island economy: "day-trippers" (tourists who come by ferry for the day, or arrive on private boats) do not contribute much to the economy except in the downtown restaurants and shops. The town has no camping facilities and limited overnight accommodations (one motel and two bed and breakfasts [B&Bs]). Of greater significance economically are the seasonal visitors, a growing population of short-term renters, who spend a longer time and greater amount of money on the island. Seasonal residents are also a significant part of Vinalhaven's tax base (pers. com. town manager).

Since the early 1900s, Vinalhaven has had a number of established summer residents. Large houses were built on the northern end of the island, many facing North Haven and the Fox Island Thoroughfare. Outlying farms were bought up for summer homes, as farming declined in the mid-1900s. For many years these summer residents had less to do with Vinalhaven than with neighboring North Haven, a thriving summer colony. Vinalhaven identified itself as the working island, while North Haven, where proportionally more of the

8 Information about the history of Vinalhaven can be found at the Vinalhaven Historical Society: <http://www.vinalhavenhistoricalsociety.org/>

population worked for “summer people,” was seen as more patrician. However, the relationship between summer and year-round residents began to change as Vinalhaven became a summer destination for teachers, artists, and other more middle-class professionals. Houses in town were purchased as seasonal homes when year-round residents aged or built houses out of town. Gradually, the summer and year-round populations have become more integrated although each has a separate identity. Most of the town’s important volunteer organizations have boards made up of both (pers. com. key informant).

Demographics and Economics

Vinalhaven’s population peaked at 2,855 in 1880. By 1990, the population had fallen to 1,072. It rose to 1,235 in 2000 (U.S. Census Bureau 2000) and dropped again to 1,165 in 2010 (U.S. Census Bureau 2010). For the past 40 years, the population has fluctuated but generally remained around 1,100 year-round residents (pers. com. key informant). In the summer, however, the population swells with the influx of summer residents and visitors. The Island Institute estimates the summer population at 2,200.⁹ Others estimate that at times in the summer the population surpasses 4,000 people (pers. com. key informant).

The population decline since 1880 reflects the loss of the granite industry and other natural-resource-based occupations. The population also decreased during World War II, when many left to become part of the war effort. A more recent factor is young people leaving the island to pursue educational and economic opportunities, many of whom do not return. This decline has been offset by an increase in retirees moving to the island. The island has also seen a small increase in young people seeking to get established on the island, as well as transients who work in the lobster fishery. In the Island Institute publication *Island Indicators* (2012) Vinalhaven was identified as having a significantly

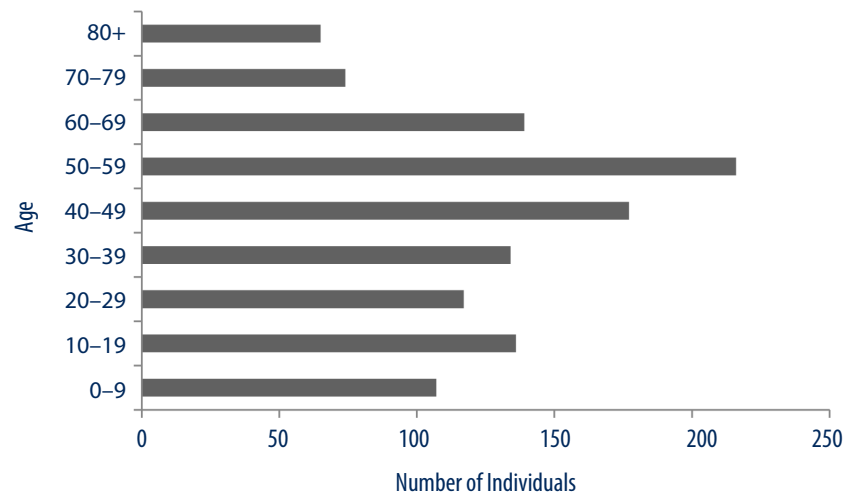


Figure 13. Age structure of the population of Vinalhaven, 2010.
Source: U.S. Census 2010.

lower population by the 2010 U.S. Census than was reported by island leaders. The reason for this may have something to do with the increase in part-time residents who were not on-island at the time of the census.

The population is relatively homogenous; in 2010, 98.4% of residents identified themselves as white (U.S. Census Bureau 2010). With regard to birthplace, 73.1% of residents were born in Maine, 26.0% were born in a different state, and 0.9% of residents were born outside the United States (U.S. Census Bureau 2010). In terms of education, 42.1% of Vinalhaven’s population had a high school degree, while 25% had a bachelor’s degree or higher, which is on par with the state and national rates for bachelor’s degrees.

The town’s age structure is similar to many Maine towns in that it is older than the nation as a whole (Figure 13). The median age was 45.1 in 2010, which is lower than Maine’s median age and higher than the U.S. median age (U.S. Census Bureau 2010). In 2010, 16.7% of the population was 65 years of age or older, higher than the state level (U.S. Census Bureau 2010).

In 2012, median household income in Vinalhaven was \$58,333 and median per capita income was \$33,622, both higher than those rates for the state as a whole (Table 9). Vinalhaven features more households with incomes from Social Security and retirement compared to Maine and the nation (Table 10). In 2012, 12.1% of families and 16.5% of individuals fell below the poverty threshold. This is higher than levels in the state, but fewer households in Vinalhaven depend on food stamps. Elderly poverty rates are also high in

⁹ Island Institute. 2011. Vinalhaven. <http://www/islandinstitute.org/vinalhaven.php>

Vinalhaven, with 15.6% of all persons over 65 falling below the poverty line.

According to the U.S. Census Bureau (2010), 67.3% of the total population 16 years of age and over was in the labor force. Of the civilian labor force, 1.3% was unemployed, much lower than the state unemployment rate (Table 9). Top employment sectors were natural resources, construction, and maintenance occupations (46.3%), service occupations (17.9%), and management, business, science, and arts occupations (16.6%). Self-employed workers, another category in which fishermen are found, accounted for 54.3% of all workers (Table 9). As an employment sector, agriculture, forestry, fishing,

hunting, and mining occupations accounted for 33.9% of all jobs (Table 11).

Fisheries Profile

Commercial fishing

Until the mid-20th century, Vinalhaven had a large fleet of fishing vessels, some bringing home catches of 10,000 lbs or more. Historically, Portland, Boston, and New York were important markets for Vinalhaven. Products have included salted and dried fish, canned lobster, canned fish, fish glue, cut and packed fresh finfish, canned herring, picked crab (pers. com. key informant), fresh lobsters, scallops, shrimp and sea

urchins. In the 1970s, there was an experiment with salmon aquaculture; in the 1980s, there was an attempt to raise mussels on leased bottom. Both of these failed. In 1980, the town built a processing facility to process crabs, fish, and lobsters. It operated until 2004, when the company relocated, citing high transportation costs and lack of a steady supply of seafood. The building was torn down in 2007 (pers. com. town manager). Recently, commercial fisheries in Vinalhaven include lobsters, herring, shrimp, and scallops (NOAA 2009a). Other species landed include crab, urchins, and halibut. Hall-Arber et al. (2001) noted that in 2000 there were two purse seiners landing herring for bait. In 2012, a Vinalhaven fisherman owned a herring seiner, and it was fished out of Rockland (pers. com. key informant). Hall-Arber et al. (2001) estimated that two-thirds of residents were members of fishing families.

Table 9. Median and per capita income and percentages unemployed and self-employed, Vinalhaven, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
	----- \$ -----		----- % -----	
United States	53,046	28,051	6.0	6.3
Maine	48,219	26,464	4.8	9.1
Vinalhaven	58,333	33,622	1.3	54.3

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 10. Household income from earning, Social Security, retirement and SNAP, Vinalhaven, 2012.

	Households with Income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- % -----			
United States	78.7	28.3	17.6	11.4
Maine	75.7	32.9	18.9	15.8
Vinalhaven	81.5	28.2	24.5	11.6

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 11. Percentage of jobs in select occupation categories, Vinalhaven, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	----- % -----			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Vinalhaven	33.9	9.8	4.8	8.3

Source: 2008–2012 American Community Survey 5-Year Estimates.

Today lobster is Vinalhaven's largest and most lucrative fishery. Vinalhaven ranks as one of the top towns in Maine for lobster landings and has done so for at least a decade (pers. com. key informant). An estimate of Vinalhaven's total lobster landings in 2003 is 5 million lbs, with a gradual increase in landings every year since (pers. com. key informant). In 2006 fishermen saw a particularly high catch, exceeding an already high 10-year average (NOAA 2009a). In 2012, the lobster landings rose to record levels—more than 10 million lbs—while the price fell to its second lowest level in 18 years.

Groundfishing: There is currently no groundfishing in Vinalhaven although it was an important landing port for groundfish until the 1960s. For example, the Lane-Libby Fisheries Company (1908–1928) was one of Maine's largest fish processors. It specialized in salted fish and had the first cold-storage plant in New England. The fishery supported tubtrawling, gillnetting and dragging into the 1970s (pers. com. key informant). However, the number of groundfishing boats gradually declined due to increased overhead and decreasing catches (pers. com. key informant). In 1972, C.L. Bickford Fisheries, a division of Bay State Lobster Company, decided it would not continue to buy groundfish (primarily pollock, hake, and cod) at its plant on the west side of Vinalhaven Harbor, forcing fishermen to sell in nearby Rockland.¹⁰ By the mid-1980s, the fishery had collapsed (pers. com. key informant). Acheson et al. (1980) noted three boats (50 to 62 ft in length) that set gillnets offshore and three (42 ft in length) fished within 30 miles of the shore, as well as two to three

¹⁰ At the time, groundfish accounted for half of the plant's business. Important species were pollock, hake, and cod. In that same year, Bickford reported only one boat from Vinalhaven fishing fulltime for groundfish that was rigged for long-lining—the 39-foot *Verleigh J.*, owned and operated by Daniel Sanborn. Mr. Sanborn anticipated that other boats from Vinalhaven were planning to go groundfishing for hake. He further noted that he would have to sell his catch at one of two companies in Rockland, Weona Fish Company or Feyler Fish Company. If this was going to work, he reported prices would have to remain at 8 cents/lb. From an article in the *Bangor Daily News*, June 16, 1972, "Economy Cuts Fish Business."

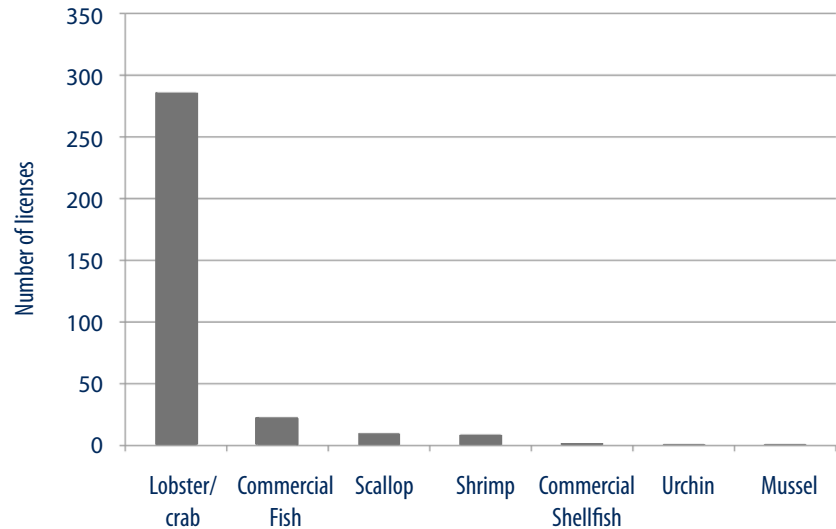


Figure 14. State licenses listing Vinalhaven addresses.
Source: Maine DMR 2011.

lobstermen experimenting with gillnetting. They also noted that no groundfish were processed locally.

State and federal permit data

In 2009, there were 282 individuals with state licenses in Vinalhaven. These individuals held 333 licenses, most of which were for lobsters and crabs (Figure 14). In 2011, 42 vessels with federal permits listing Vinalhaven residences held a total of 65 licenses. The average vessel length of permit holders in Vinalhaven was 39.6 ft. All but two permits included a federal lobster license, and six permits included multispecies groundfish permits (six HB; one I)¹¹ (Figure 15). In 2012, there were two federal dealers listed in Vinalhaven; one deals lobsters, the other deals lobsters and herring.

Recreational and subsistence

There is little recreational fishing from Vinalhaven; according to one local informant interviewed in this study, "The only thing you're going to catch is a mackerel and the odd pollock." Some people may also catch a halibut or a shark, albeit infrequently (pers. com. key informant). According to NMFS, information on

¹¹ Federal Northeast multispecies groundfish permits fall into two main categories—open access (permits HB, which allows fishing for Atlantic halibut, I, J, and K, which allow fishing for silver hake [whiting], red hake [ling], offshore hake, ocean pout, or Atlantic halibut) and limited access (A, C, D, E, F, and HA).

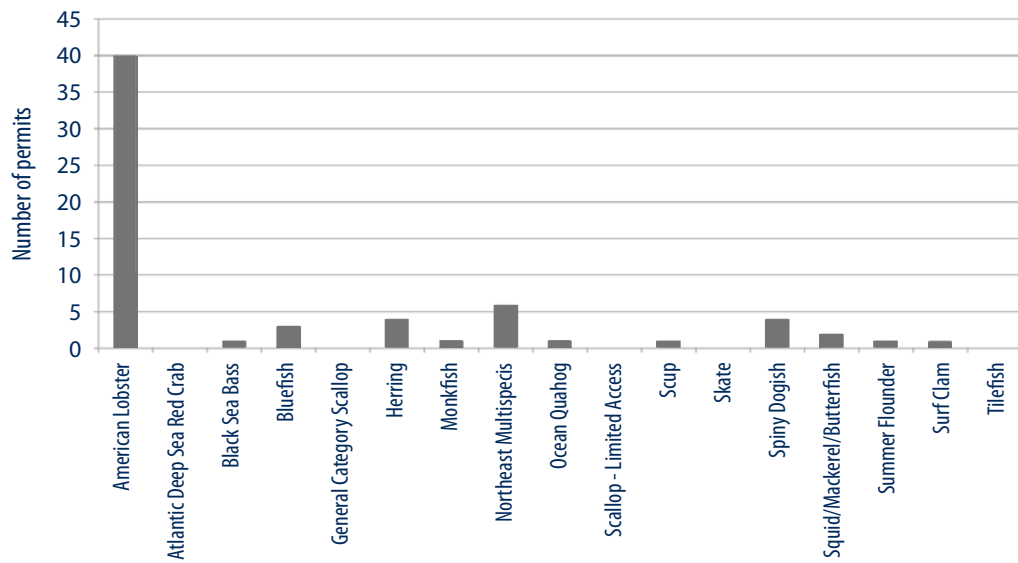


Figure 15. Number of federal permits listing Vinalhaven addresses in 2011. Source: Northeast Region Permit Database.



Lobster boats on moorings in Carvers Harbor, Vinalhaven.



Vinalhaven ferry terminal.



Public boat ramp located near the Tidewater Motel (left) and public landing next to Harborside Wharf (right).

subsistence fishing in Vinalhaven is unavailable through secondary data collection (NOAA 2009a).

Marine infrastructure

Acheson et al. (1980) reported five anchorages in Vinalhaven, the most important being Carvers Harbor, where virtually all the maritime-oriented facilities were (and still are) located, including the fish buyers, boatyards, moored boats, public boat ramp, and ferry terminal. Other anchorages include Old Harbor, Fox Island Thoroughfare, and Robert's Harbor (Acheson et al. 1980). Also in Carvers Harbor is the terminal where the Maine State Ferry makes trips to Rockland six times a day.

Today there are two public town landings on Vinalhaven, both located in Carvers Harbor. Both consist of large parking lots that include a substantial stretch of waterfront. Neither have piers that extend into the harbor. The landing between the Fishermen's Co-op and the Harborside Wharf has two hoists for loading and unloading gear. The other landing is downtown adjacent to the Tidewater Motel and has a ramp leading down to a float where 25 or more punts can be tied up and gear can be loaded/unloaded. The downtown site also has a narrow paved ramp for launching small boats. In addition, there is now a small public dock next to the Ferry Landing (pers. com. key informant).

Carvers Harbor is also home to the island's three buying stations: the Vinalhaven Fishermen's Co-op, the Harborside Wharf, and Americanus.

The Vinalhaven Fishermen's Co-op consists of 360 ft of deepwater frontage on the harbor, a dock, several floats, two buildings, a cold-storage facility, ice machine, fuel tanks, an aerated cove for holding lobsters, member parking, space for gear storage, and a gas station. It is one of the principal buying stations in midcoast Maine, second only to the Stonington Lobster Co-op (pers. com. key informant). The co-op contracts with a local trucking company to transport its lobsters to the mainland (pers. com. key informant). Frozen bait comes to the co-op by ferry; fresh bait is provided by the locally owned seiner, the Starlight. Due to the difficulties with getting bait on the island, the co-op applied for and received a \$178,750 grant from the Working Waterfront Investment Initiative to build a cold-storage facility in 2010. This has led to an increase in bait availability, and with it, more fishermen are buying bait from the co-op and the use of frozen bait is increasing.¹² In 2010, the co-op was able to build a cold-storage facility with a grant from Coastal Enterprises Inc. (CEI). This has enabled the co-op to maintain a steady supply of bait for its members.

The two other buying stations in Carvers Harbor are owned by Linda Bean, but started, and still function, as separate sites. In November 2010, Linda Bean expanded her seafood business by purchasing the wharf adjacent to the ferry terminal from Inland Seafood Company. Newly named Americanus, the company

¹² Maine MDR Working Waterfront Access Pilot Program. Two Mid-Coast Co-ops Protect Working Waterfront. <http://www.wwapp.org/>.



Co-op building to the east of the pound (left) and buying station to the west of the pound.

buys from and provides services for 30 to 40 lobster boats. The company provides bait and fuel for boats that sell to it, has an aerated storage area to store lobsters, a freezer for storing bait, an ice machine (currently out of operation), and trucks for transporting catch off-island to its distribution center in Rockland (pers. com. key informant).

The Harborside Wharf is the second of Bean's operations. For many years, it was known as Calderwood's Wharf, a dock, fuel, and marine supplies facility. Today it is a buying station, purchasing lobster and crab from about 23 boats. The site provides bait and fuel and also has a bait freezer and ice machine. Recent improvements include a newly paved pier and two new 1000-lb-maximum cranes.

In addition to the three island buying stations, some Vinalhaven fishermen sell to what are called "smack boats"—large boats that come from Rockland each day, anchor near shore, buy at a slightly higher price than the official buying stations, and take their lobsters back to the mainland. There are currently two smack boats buying from Vinalhaven lobstermen, one in Sand Cove and one in Old Harbor.

There are currently no processing facilities on Vinalhaven. The town's one processing plant moved in 2000. The Vinalhaven fish plant was demolished in 2007.

In 1980, Acheson et al. (1980) reported that there were six small boatyards on Vinalhaven, with the most important being Hopkins at Carvers Harbor and Skoog's boat shop at Sand Cove. Today there are two boatyards on the island: Jeff Moyer's Boat Shop and Hopkins Boat

Yard. Hopkins Boat Yard has been the only boatyard on the harbor since the 1970s. Moyer's Boat Shop is located in the center of the island (pers. com. key informant). Many locals are also skilled in boat repair and welding and do their own repairs.

Fishing industry support and government institutions

The Vinalhaven Fishermen's Co-op is owned and operated by local lobstermen. Founded in 1972, it currently serves about 60 boats, has 85 members, and supports 100 island families with income from the sale of lobsters and crabs (pers. com. key informant). It is the only facility that is entirely locally owned and is one of only 13 cooperatively owned fisheries co-ops in the state (pers. com. key informant). The co-op is a member of the MLA, which represents the interests of lobstermen along the Maine's coast. A Vinalhaven resident founded the MLA in 1954.

The Island Institute is a nonprofit organization located on the mainland in Rockland. The Island Institute promotes cultural and ecological conservation of Maine's island communities by conducting research on fisheries issues affecting these communities, ranging from lobsters to wind power. The Island Institute supported the Fox Islands (Vinalhaven and North Haven) in their efforts to establish community-owned wind power, which was completed in the fall of 2009. The Island Institute is also active in supporting educational opportunities for Vinalhaven students and teachers, entrepreneurial training for island business owners,



Americanus facilities: boats and sheltered storage (left), bait elevator (right).

and has provided a number of Island Fellows to the community (pers. com. key informant).

Vinalhaven has a five-member board of selectmen, a town manager, and a harbormaster. Since 1993 Vinalhaven has protected its working waterfront property through the use of zoning. The town also has a Commercial Fisheries/Maritime Activities district prohibiting lodging and residential uses (NOAA 2009a).

Issues Facing Fishing Community

Marketing, management of the resource, and the steady rise in costs are probably the top issues facing Vinalhaven's fishing community today.

In 2012, the overabundance of lobsters and their almost simultaneous shedding in July brought some of the lowest prices in almost 20 years. Coupled with steadily increasing costs, this situation created near panic among Vinalhaven's fishermen, as it did elsewhere along the coast. Some small independent buyers shut down because they could not move their product, and some lobstermen were incited to "tie-up" for almost a week in an (failed) effort to raise the price. It was a volatile situation, which ended without resolution. Once fishermen went back to work, they fished twice as hard to make up their costs, maintaining the market glut, and keeping the price low. As a result, there have been efforts at the state and regional level to ensure that this doesn't happen again. Whether lobstermen here will cooperate in any self-regulation to better manage the fishery is yet to be seen. Some fishermen have floated the idea of unionizing to strike for higher prices. However, the Vinalhaven Lobstermen's Co-op, the one cooperatively owned lobster business, was able

to pay the highest bonuses in its history in 2012 (pers. com. key informant).

Other issues facing Vinalhaven in recent years have included loss of waterfront access and gentrification, prohibitive property values along the water, access to a diversity of fisheries, and lack of fishing opportunities for young fishermen (new entry). The exception is lobster: getting a license to go lobstering is not a problem as Vinalhaven is in a zone that is still open (District 7, Zone C). Some resident fishermen feel that access is less of an issue than the "cowboy mentality" of the fisheries today and stress the importance of fishermen sticking and working together.

Climate change is becoming a pressing issue although not all fishermen agree or even recognize there is a problem. The increase in water temperature is affecting everything about the lobster population—from lobster reproduction, to larval settlement, to lobster movement. The almost simultaneous lobster-shedding phenomenon along the entire Maine coast (and into Canada) that produced such panic in the fishery when the price dropped to 15-year lows has been partially blamed on climate change (pers. com. key informant).

Vinalhaven has long been and still considers itself a fishing community. It is a proud, independent, self-reliant island. If lobstering ceases to be viable, the community will become unsustainable. The alternative—a tourist economy—is unthinkable. The pressure to come to terms with the challenges to the fishery is immense. A cooperative approach is needed to solving the problems the islanders face (pers. com. key informant).

STONINGTON COMMUNITY PROFILE

Geography and History

The town of Stonington is a small fishing village located on the southern tip of Deer Isle, an island in eastern Penobscot Bay at the head of the largest archipelago in the state (Figure 16). The island is accessible by bridge from the Blue Hill Peninsula. This single-road access point makes Stonington geographically approachable, though also somewhat isolated (Acheson et al. 1980). The town is located in Hancock County. Ellsworth, the county seat, is 38 miles away, and Bangor, with its international airport, is 62 miles away. Stonington has a total area of 37.8 square miles, of which 9.8 square miles are land. It is one of two towns located on Deer Isle, the other being Deer Isle.

Before 1897, Stonington was part of the town of Deer Isle. The area was settled in 1762 and was known as Green's Landing before it incorporated as a town on February 18, 1897.¹³ Stonington's name reflects its prolific granite industry (NOAA 2009b), and it was once called Granite Town (Acheson et al. 1980). Stonington granite can be found in some major architectural works in the United States including Rockefeller Center, Smithsonian Institution, Boston's Museum of Fine Arts, and George Washington and Triborough bridges in New York City (NOAA 2009b). Limited quarrying still occurs on Stonington's Crotch Island. A statue downtown commemorates the importance of the granite industry to Stonington's history.

Before the Deer Isle-Sedgwick Bridge connected the island to the mainland in 1939, Stonington had been a busy seaport with daily steamboat traffic and a harbor filled with fishing vessels. Historically, the area has been reliant on natural resources for its economic viability, a reliance that continues today with the fishing industry providing the foundation for the town's economy (pers. com. key informant).

Stonington is also reachable via a small, noncommercial airport, which is owned by the town. Built in the 1950s, the Stonington Municipal Airport lacks the basic amenities such as runway lights and fuel, and its runway size limits aircraft traffic to prop planes. Additionally, the Isle au Haut Mail Boat travels from



Figure 16. Map of Stonington located in Penobscot Bay.

Stonington Harbor and provides mainland access to the Isle au Haut community and Acadia National Park (pers. com. key informant).

Demographics and Economy

According to U.S. Census Bureau 2010, the population of Stonington was 1,043, which is a 9.5% decrease from its population in 2000. The population is relatively homogenous; in 2010, 97% of the population self-identified as white (U.S. Census Bureau 2010). Nearly 70% of Stonington residents were born in Maine, 26.2% were born in a different state, and 4.6% were born outside the United States (U.S. Census Bureau 2010). Concerning educational attainment, 41.3% of Stonington's population had a high school diploma, and 19.7% had a bachelor's degree or higher, a rate that is lower than state and national rates.

The town's age structure is similar to many Maine towns in that it is older than the nation as a whole (Figure 17). Consistent with many other small fishing communities, there is a sharp decline in the population as young individuals leave town for college and in search of employment. Stonington's median age in 2010 was 50.7 years old, significantly older than both Maine's and the nation's median age. In 2010, the percentage of the population over 65 was 23.4%, much greater than the state average of 15.9%, and the national average of 13%.

In 2012, median household income in Stonington was \$45,764, and median per capita income was \$25,530, lower than the median income for the state as a whole. Additionally, Stonington features more households with incomes from Social Security than

¹³ Town of Stonington. <http://stoningtonmaine.org/>

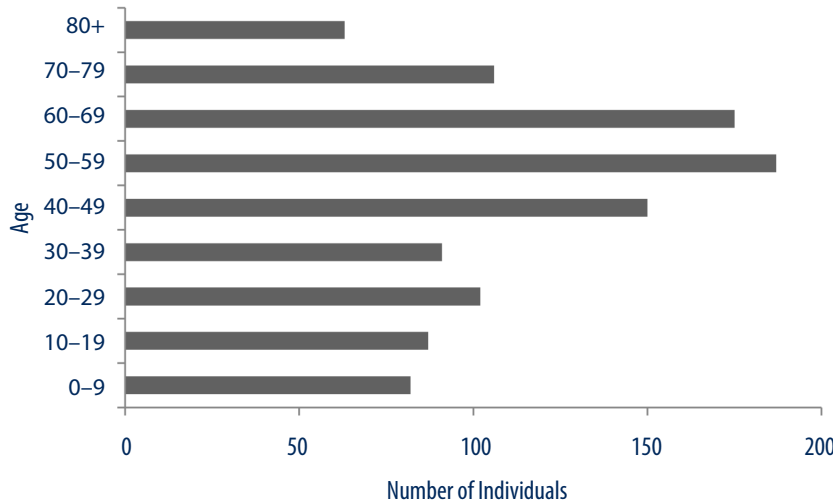


Figure 17. Age structure of the population of Stonington, 2010. Source: U.S. Census Bureau 2010.

Table 12. Median and per capita income and percentages unemployed and self-employed, Stonington, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
	----- \$ -----		----- % -----	
United States	53,046	28,051	6.0	6.3
Maine	48,219	26,464	4.8	9.1
Stonington	45,674	25,530	1.3	41.6

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 13. Household income from earning, Social Security, retirement, and SNAP, Stonington, 2012.

	Households with Income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- % -----			
United States	78.7	28.3	17.6	11.4
Maine	75.7	32.9	18.9	15.8
Stonington	76.8	37.5	15.0	17.3

Source: 2008–2012 American Community Survey 5-Year Estimates.

Maine and the nation (Table 13). In 2012, only 5.7% of families and 9.6% of individuals fell below the poverty threshold, both rates lower than the state rates. Elderly poverty rates are slightly high in Stonington, with 11% of all persons over 65 falling below the poverty line. Also, more households in Stonington depend on food

stamps compared to the nation as a whole (Table 14).

According to the U.S. Census Bureau (2010), 61% of the total population 16 years of age and over was in the labor force. Of the civilian labor force, 1.3% were unemployed, lower than the state unemployment rate (Table 12). Top employment sectors were natural resources, construction, and maintenance occupations (42.6%), sales and office occupations (18%), and service occupations (16%). Self-employed workers, another category in which fishermen are found, accounted for 41.6% of all workers (Table 12). As an industry sector providing employment—agriculture, forestry, fishing, hunting, and mining occupations accounted for 38.4% of all jobs which is significantly higher than the state (Table 13).

Though Stonington is clearly a fisheries-dominated community, it also draws support from its vibrant artistic and retirement communities, as well as a seasonal tourism industry. Situated along the waterfront, downtown Stonington is the heart of the island’s economy and home to an array of restaurants, galleries, and seasonal shops. Vacation rentals are scattered throughout town, and there are also multiple seasonal pleasure cruises that operate out of downtown Stonington, including Old Quarry Adventures, a lighthouse tour, seal watching, sunset cruises, island picnics, and ferry service to Isle au Haut (pers. com. key informant).

Fisheries Profile

Commercial

Stonington has a rich history as homeport to a diverse and innovative fleet of commercial fishing boats, generally ranging up to 50+ ft in length and typically

Table 14. Percentage of jobs in select occupation categories, Stonington, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	%			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Stonington	38.4	7.5	7.5	13.7

Source: 2008–2012 American Community Survey 5-Year Estimates.

making day trips. Lobstering has long been the staple fishery, but Stonington fishermen have also been quick to respond to the opportunities of new markets or species abundance. Boats were able to rig over between gear types and seasonal fisheries throughout the year to put together a living (pers. com. key informant).

The fishermen-owned Stonington Lobster Co-op, started in 1948, was key to the innovation by providing water access and marketing support for new fisheries. From inshore scallops in the 1950s to northern shrimp in the late 1960s to mussels and groundfish in the 1970s, the co-op helped small fisheries to become established throughout the port. The Stonington commercial fish pier, which was completed in 1984, expanded fishermen's and buyers' access to the waterfront and enabled the participation in emerging fisheries such as sea urchins in the 1990s (pers. com. key informant).

Stonington landings reflect the species available to its day-trip fishing fleet and the increases and decreases in abundance of those species. In 1980, landings of lobster and crab, soft shell clams, scallops, mussels, groundfish, and herring were the town's leading species (Acheson et al. 1980). In the 1990s, and into the 2000s, important species included urchins and shrimp (NOAA 2009b). However by 2009, the once-popular urchin fishery had been replaced by lobster, clam, and mussel fishing activities (NOAA 2009b). Today, lobster is by far the largest and most lucrative fishery. Stonington has led Maine ports in lobster landings since 2008, typically accounting for 12% to 14% of the state's total catch. In 2011, 14.9 million lbs of lobster with a dockside value of \$43.3 million were landed in Stonington.

Groundfishing: From the mid-1970s to the mid-1990s, groundfish gillnetting in federal waters was an important seasonal component of the Stonington fishing industry (Hall-Arber et al. 2001). Acheson et al. (1980) identified 10 boats involved in groundfishing in 1978,

three were otter trawls and the rest gillnetters. Three of the gillnetters were from surrounding areas, but landed their catch in Stonington. Acheson et al. (1980) also noted that most of the groundfish was sold to the Stonington Fish Co-op, which handled 2 to 2.5 million lbs annually (the second largest market east of Rockland). No processing of groundfish occurred at that time (Acheson et al. 1980). In the early 1990s, Sheehan and Moore (1998) reported 14 gillnetters. By 1998, only three gillnetters fished out of Stonington; they fished for five weeks in 1999 and then quit after the cod limit was reduced to 30 lbs per day (Johnson 2000).

State license and federal permit data

In 2011, 234 individuals in Stonington held a total of 353 state licenses. Most licenses were for lobsters and crabs (Figure 18). In 2011, 32 vessels with a total of 45 federal permits listed Stonington residences. The average length of federally permitted vessels in Stonington was 38.9 ft. All 32 vessels held a federal lobster permit. Additionally, three had Northeast multispecies (groundfish) permits (one HB; two A) (Figure 19). In 2011, there were seven federal dealers listed in Stonington that handled a variety of species, including lobster, herring, scallop, groundfish, and monkfish.

It is important to note that fishermen who are residents of surrounding towns including Deer Isle and mainland towns use Stonington as their primary port. These boats make important contributions to the Stonington economy, but their numbers are difficult to count since official state and federal license and vessel records show registration in other towns (pers. com. key informant).

Recreational and subsistence

Hall-Arber et al. (2001) reported minimal recreational saltwater fishing out of Stonington due to the depleted status of groundfish stocks. There is some

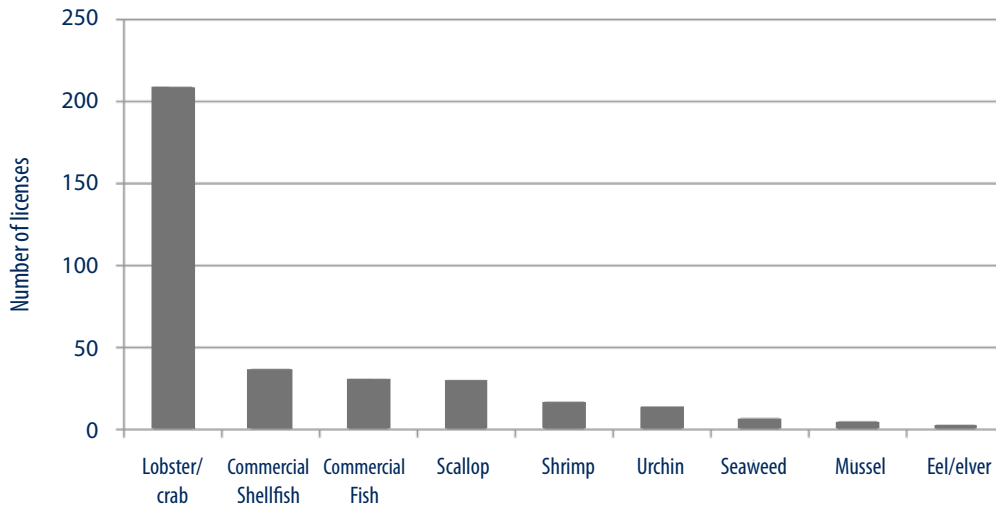


Figure 18. State licenses listing Stonington addresses. Source: Maine DMR 2011.

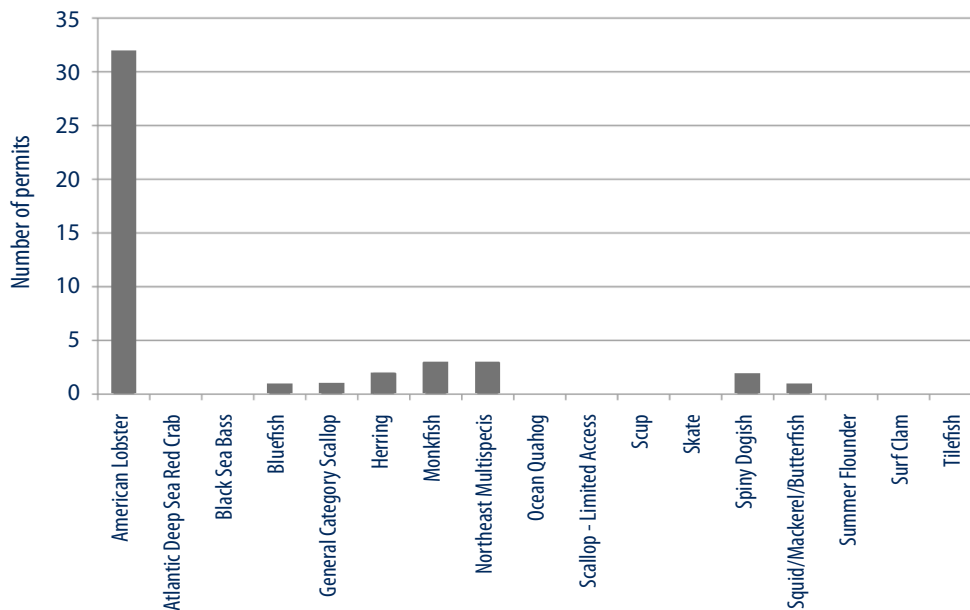


Figure 19. Number of federal permits listing Stonington addresses in 2011. Source: Northeast Region Permit Database.

seasonal hook-and-line mackerel fishing done off wharves. There are currently five state recreational lobster licenses in Stonington, and mussels and clams are also harvested recreationally (pers. com. harbormaster). According to NOAA, information on subsistence fishing in Stonington is unavailable (NOAA 2009b).

Marine infrastructure

The downtown Stonington waterfront includes three municipal access areas, four docks owned by lobster-buying businesses, and one wharf with a large building owned by the private Isle au Haut Company. There are two additional commercial wharves outside of the downtown waterfront as well as one full-service shipyard, Billings Diesel and Marine Service. Marine

and fishing equipment and supplies are available at several businesses.

With the town of Isle au Haut, Stonington co-owns the Colwell Ramp property at the end of Sea Breeze Avenue. A former lobster-buying site, it is being developed as a public dock and has a concrete ramp where trailered boats can be launched.

The town-owned Stonington commercial fish pier, a 320-ft granite pier located in the center of town, is self-supporting through annual user fees and is restricted to commercial fishing use. The fish pier, which was completed in 1984, was built with public funding, including a \$3 million federal grant, money from the state of Maine's first pier bond issue, and town-acquired land. Hagen Dock, which is located across the turning basin from the Fish Pier, was developed as part of the commercial fish pier project and provides free public access to the water with a ramp and floats. The fish pier is set up for vessel offloading (six 300-lb hoists) and fueling (diesel only). The pier area is large enough to accommodate truck trailers that pick up fisheries catch. It also provides pier users with space for vehicle parking and skiff tie-up (NOAA 2009b).

Currently two lobster buyers have paid buyer fees to operate on the pier. Sunshine Seafood is set up at one hoisting station. Damon Lobster runs two boats in the harbor as buying stations and transfers its lobsters to trucks at the fish pier. Both buyers use the pier to provide bait to the boats whose catches they buy. In the past, groundfish, urchin, and mussel buyers have operated on the fish pier.

Located on the Deer Isle Thoroughfare, Billings Diesel and Marine Service, Inc., is a modern, full-service boatyard with facilities and highly trained personnel to handle all the maintenance and repair needs of vessels from the smallest to those over 100 ft. Its site covers several acres on Moose Island and includes separate engine, paint, machine, and welding shops, a ship's store, and a marina. With three marine railways (two covered) with capacities to 275 tons, a 35-ton travel lift, two trailers, and two cranes, the yard also offers boat hauling and storage. In operation since 1967 by the current family ownership, Billings Diesel has long been an important employer on the island with 60 staff located in Stonington (Hall-Arber et al. 2001). Open year-round, the boatyard relies on a customer base that includes fishing boats, commercial vessels, and yachts.

Greenhead Lobster LLC opened in 1997 (NOAA 2009b) and supplies several million pounds of live lobsters purchased from local fishermen to national and international markets each year. Formerly the L. Clyde Conary lobster business, the dock site at the end of Ocean Street has been in operation for at least 60 years and in the past served commercial groundfishermen as well as all lobstermen. Greenhead recently expanded at its harbor location by removing a large area of ledge adjacent to the wharf. The additional land has enabled the construction of a new tank-room facility with chilled and aerated lobster-holding capacity along with increased space for loading trucks and parking for fishermen. The company sells fuel and bait to the 60 to 70 fishermen (fewer in winter) who sell



Billings Diesel and Marine Service, Inc. (left) and Greenhead Lobster LLC (right).



Stonington Lobster Co-op site 1 (left) and Co-op site 2 (right).

their catch at the Stonington site. Greenhead also owns two tidal pounds for lobster storage and leases a buying station on Sunshine in the town of Deer Isle. Unlike most lobster buyers, who sell their lobsters wholesale, Greenhead markets much of its lobster through a sizeable airfreight business to domestic locations and internationally to customers as far away as Hong Kong and Europe. Greenhead owns a site in Kittery, Maine, with proximity to major airports, where graded lobsters can be held and readied for shipping.

The Stonington Lobster Co-op is a wholesale and retail vendor of seafood in Stonington (NOAA 2009b).¹⁴ A group of Stonington fishermen formed the producer co-op in 1948. Operating continuously since that time, the co-op is still run by a board of directors made up of fishermen who are elected from the membership, with an onsite general manager hired by the board. The co-op has two locations on the waterfront in town: co-op 1 on Indian Point Road, the initial site; and co-op 2 at the end of Atlantic Avenue, next to Penobscot East Resource Center. Lobsters are the bulk of the business though the co-op also handles crabs and, during the winter, shrimp. Both docks provide fuel, bait, and some marine supplies to boats selling at those locations. Recent improvements to the infrastructure include a new float at co-op 1 and a new deck on the wharf at co-op 2, which is also the site of the refrigerated bait storage building. Generally considered the largest lobster buyer by volume in Stonington, the co-op primarily sells its catch to wholesale customers who bring their own trucks to pick up catch.

¹⁴ Acheson et al. (1980) reported that 150 fishermen regularly sold there and the cooperative owned two docks.

Little Bay Lobster Company is located on the downtown waterfront at the eastern end of Seabreeze Avenue, at the wharf site originally owned by the quarry operation of John L. Goss Company. The Goss wharf later became the site of the Lobster Transport Co., which was operated for many years by the Long Island, New York-based Perry B. Duryea & Son Lobster Company. Little Bay Lobster, which has been in operation at the site for 10 years, is a division of the Newington, New Hampshire, business of the same name, which markets the catch of the Shafmaster fleet of offshore lobster boats. A recent major improvement at the site was the construction of a new two-story building for refrigerated bait storage and office space. The wharf buys primarily lobster—though herring boats sometimes offload at the facility—and sells fuel and bait to fishermen who sell to it. All lobsters landed at the dock are trucked out of Stonington and distributed by Little Bay Lobster of Newington.

There is a lobster-buying facility about two miles east of Stonington's downtown harbor, at the Settlement Quarry in Oceanville. Built in the early 1990s along a bulkhead site on Webb's Cove, the facility has seen several turnovers in ownership in the last few years and was idle in 2012. It includes a buying station, tank room, and new bait shed. With deep-water access along the bulkhead, the facility has offloaded herring vessels up to about 140 ft and loaded bait trucks. Slips for about 20 lobster boats are located at the site, along with moorings in the cove.

Fifield Lobster is located on Fifield Point on Burnt Cove, which is west of Stonington's downtown harbor. Fifield Lobster is a family-owned and -operated business,



Dock at the Settlement Quarry site (left) and Fifield Lobster (right).

started in 1955. It deals in lobster, buying from 35 boats and providing them with fuel and bait. The company sells its lobsters to wholesalers.

There are two more lobster buyers on Deer Isle, both located on the island of Sunshine in the town of Deer Isle. Conary Cove Lobster Co., which has been in operation for about 30 years, includes a buying station and two tidal pounds for lobster storage. Owned and operated by the Basil Heanssler family, the company provides bait and fuel to its 10 fishermen and fuel to four or five seasonal recreational boats. There is also a marine railway on the site. Product is sold to wholesalers who pick up the lobsters in their own trucks. Heanssler Lobster Co. has operated a wharf and buying station at its Sunshine site since the 1930s managed by generations of the Augustus Heanssler family. Starting in 2010, the facility has been leased by Greenhead Lobster of Stonington. Lobsters are bought from mainland and Sunshine fishermen and marketed by Greenhead.

Though a high volume of lobsters is landed in Stonington, most of the catch leaves town and the island without any additional grading or processing to add value. Lacking adequate infrastructure for onshore handling and holding, live lobsters are packed in crates at the dock and trucked to the mainland for further distribution. During the summer and fall months, when the catch is at its highest, several tractor-trailer loads of live lobsters leave the island daily.

At current overall species-abundance levels, soft shell clams rank as town's second most valuable landings with a dockside value of over \$2 million. Stonington and the town of Deer Isle, which have a reciprocal clam

agreement, have an active shellfish conservation committee. It manages clam flat reseeding and maintenance and participation in those efforts is required to obtain a town-issued commercial resident license. There are 40 to 50 commercial clam diggers.

Stonington Sea Products, which is located about a mile inland from the Stonington waterfront, processes clams and crabs, limited amounts of lobsters, and when seasonally available, shrimp and scallops. In September 2010, new owners took over the facility, which was originally built as a salmon-smoking operation that relied on trucked-in fish. They converted the space for shellfish processing, adding a new building outfitted with lobster tanks in 2012. The operation currently has 10 employees who shuck clams and pick crab and lobster meat. The business model is to buy local product and make value-added products. They only take high-quality seafood to begin with—the proprietor says he tells the harvesters he buys from, “No quality, no job,” and the same applies to himself. Stonington Sea Products sells both wholesale and retail, with a retail fish store that is part of the facility. The proprietor of Stonington Sea Products also owns a downtown restaurant.

There are four other shellfish dealers in Stonington: Carter's Seafood, Ingrid Bengis Seafood, Morning Star Seafood, and Oceanville seafood (NOAA 2009b). Carter's Seafood, located at the head of Webb's Cove in Oceanville, is a shellfish dealer, buying clams and the catch from one mussel dragger. The family-owned business includes a small retail shop at the site, which sells live lobster and crab and fish. Except for the fish, which is imported, its seafood is all local (pers. com.

Carter's Seafood employee). The site is on the waterfront and has a small boat ramp down to the intertidal zone, where clam diggers can sometimes be seen working in the extensive mud flats. Back in the 1970s and 1980s, business founder Ralph Carter also ran a clam-shucking operation at the site, which employed an additional half dozen people.

Oceanville Seafood, which is owned and operated by Ginny and Blaine Olsen, is a shellfish dealer buying clams from diggers. It sells clams (both shucked and in the shell), its own locally farm-raised oysters, smoked Maine mussels, and fresh picked crabmeat. Ginny Olsen's grandfather, Eugene "Junior" Joyce, operated a clam-buying and -shucking business, also in Oceanville, in the 1970s and early 1980s.

The unique and well-established Ingrid Bengis Seafood is another Stonington-based seafood buyer. Depending on the time of year, Ingrid Bengis Seafood sells fish and shellfish to 20 to 25 of the nation's best restaurants. The business has been built on owner Ingrid Bengis-Palei's commitment to consistently deliver the finest seafood, arriving at the restaurants as fresh from the ocean as possible. Long before the growing trend to identify seafood with specific locations or fishermen, Bengis-Palei, who started her namesake company in 1985, was building relationships between high-end chefs and the harvesters of the oysters, crabmeat, clams, scallops, mussels, and lobsters she values. She buys direct from fishermen and fish farmers as well as Greenhead Lobster, often paying her suppliers more to show that the effort to produce top quality has value.

In the late 1970s, there were three seafood-processing operations in Stonington (Acheson et al. 1980), which included the long-closed Joyce and Carter clam-shucking shops. The Stonington Packing Company operated in town under various owners for decades, packing sardines and occasionally mackerel and alewives and employing upwards of 100 people. The site, which is adjacent to the Colwell Ramp property on Seabreeze Avenue, includes the large and refurbished factory building and wharf. Now owned by the Isle au Haut Company, it is used to berth the company's boats, which provide passenger, mail, and limited cargo transport to Isle au Haut, and for vehicle parking.

Fishing industry support and government institutions

Fishing industry organizations in Stonington have included the Stonington Fisheries Alliance, Stonington Lobster Co-op, Deer Isle-Stonington Shellfish Committee, Island Fishermen's Wives Association, the Maine Gillnetters Association (NOAA 2009b), and more recently, the Penobscot East Resource Center. Local fishermen are also members of the statewide MLA and the DELA.

The Island Fishermen's Wives Association (IFWA) is a nonprofit organization focused on the safety and advancement of the island fishing industries and the well-being of local fishing families. IFWA has an ongoing commitment to preserve the fishing heritage of the community and to educate the public about the fishing industry. It also sponsors the Coast Guard-approved safety training classes to ensure that all local fishermen know what to do in life-threatening situations.¹⁵

Penobscot East Resource Center is a nonprofit organization established in 2003 to secure a future for the fishing communities of eastern Maine. The center works to build alliances among fishermen and community members, fosters community-based science projects, and works to strengthen and diversify marine economies. The Zone C Lobster Hatchery, founded and operated by Penobscot East and shut down in 2010, was successful at hatching and rearing lobsters to the juvenile stage, as well as collaborating in lobster research and exploring techniques for restocking locally depleted areas. Penobscot East staff members helped form the Northeast Coastal Communities Sector, one of the groundfish sectors created in 2010.

The Downeast Groundfish Initiative (DEGI) is a campaign designed to rebuild groundfish fisheries in eastern Maine. This project focuses on developing a strategy to purchase groundfish permits to preserve access rights for eastern Maine fishermen (Penobscot East 2011). The organization partnered with the Nature Conservancy to form a permit bank and sector fishermen used quota from this permit bank to initiate a Sentinel Fishery in 2010.

From 2008 to 2011, Penobscot East operated a community-supported fisheries (CSF) program where consumers prepurchased a share of fish or shrimp that

¹⁵ Island Fishermen's Wives Association. <http://www.ifwa.2ya.com/>.

was delivered directly from the boat. The CSF, called “Community Fish,” has suspended services, mostly due to product availability. In addition, Penobscot East facilitates the Community Fisheries Action Roundtable (C-FAR), a fishermen’s leadership training program.¹⁶ They have been using C-FAR techniques most recently to engage fishermen in management issues pertaining to both the scallop and shrimp fisheries, as well as leading conversations toward developing flexible state fishery-licensing structures that would support fishermen’s flexibility to adapt to changes in relative species’ abundance and facilitate ecosystem-based management.

Commercial Fisheries News, a monthly newspaper providing coverage of the Northeast fishing industry, was founded in Stonington in 1973 and has been published continuously since then.

The town of Stonington has a board of selectmen (made up of five individuals) and a town manager (NOAA 2009b). It has a harbormaster/pier manager and a harbor committee (made up of five individuals) that meets monthly. The town also has the Stonington Lobster Working Group (SLWG), which was formed in the fall of 2008 (partially through the efforts of the Penobscot East) as a subcommittee of the Stonington Economic Development Committee. The purpose of the SLWG is to provide support to the lobster industry in Stonington and Deer Isle. Through local efforts, the SLWG focuses on strategies to increase boat prices for local lobstermen. It is currently comprised of eleven individuals.

Cultural attributes related to fishing and the sea

There is an inscribed Fishermen’s Memorial granite marker at the entrance to the Stonington fish pier. The IFWA maintains a “Fishermen’s Hall of Fame,” and each year adds up to three nominated fishermen to the honor roll. A group of volunteers ran the “fish & fritter fry” seafood concession at the town’s Fourth of July celebration on the Stonington fish pier for over a decade. With lobsters and fish donated by local boats and buyers, the money raised by the sales is used to provide scholarships to graduating seniors of fishing families. Though the group disbanded in 2011, scholarships

continue to be awarded from the fund (NOAA 2009b). Also in July the annual lobster boat races are held along the waterfront attracting local boats and participants from all along the coast. The annual Fishermen’s Day celebration, which is also held in July on the fish pier, is organized by the IFWA as a summertime fun event for fishing families. It is a well-attended event with a wide variety of exhibitors, concessions, and activities including Coast Guard demonstrations, whacky row-boat races, and a codfish relay race (NOAA 2009b). In August the “Flash in the Pans” musical performance takes place at the Stonington Fish Pier to benefit the IFWA and the Island Community Center (NOAA 2009b).

Issues Facing Commercial Fishing Industry

The greatest change in the Stonington fleet over the past 20 years has been the loss of diversity that is reflective of the decline of key fish and shellfish stocks. Stonington, like other rural coastal communities throughout Maine, has become dominated by the lobster fishery. Beginning in the 1990s, lobster stock abundance began increasing, while there was an almost simultaneous decline of other species, particularly groundfish. Like other ports in eastern Maine, Stonington fishermen were hit hard by the collapse of groundfish resources and the subsequent loss of access to the groundfishery in federal waters. Penobscot East Resource Center has led efforts at local area management, the groundfish sector, permit bank, community-supported fishery, and the sentinel fishery to revive the groundfish fishery. Additionally Penobscot East has been a leader in looking at the state licensing program as more fisheries have gone to limited-entry systems.

There are currently about 600 lobster boats ported in Stonington, and more lobster is landed there than in any other community in Maine (pers. com. harbormaster). Many lobstermen fishing out of Stonington come from within a 30-mile radius of the town, and there has been an increase in the number of fishermen entering the system within the past 10 years. With so much concentrated fishing activity and such a strong dependency on the fishery, unsustainable lobster populations are a real concern and potential threat to the industry (pers. com harbormaster).

¹⁶ Penobscot East Resource Center. <http://www.penobscoteast.org/>.

SOUTHWEST HARBOR COMMUNITY PROFILE

Geography and History

The town of Southwest Harbor is located in Hancock County, at the southwestern entrance to Somes Sound on Mount Desert Island (Figure 20). Somes Sound is the only natural fjord on the East Coast of the United States.¹⁷ Southwest Harbor contains 13.5 square miles of land area (NOAA 2009c).

Southwest Harbor is a community of two halves. The main community is at Manset, with a smaller community on the northern peninsula at Clark's Point. The community at Clark's Point gained prominence in the 1850s through the vision of Deacon Henry Clark and his wife Caroline. Deacon Clark built a wharf large enough to accommodate steamboats and later a cannery. By 1866, the cannery was boiling 2,500 lobsters a day, providing a new opportunity for fishermen by increasing demand for a product that at that time was sometimes used as fertilizer. The main community at Manset housed the community post office and by 1860, numerous shipyards and fishing outfits (NOAA 2009c).

After the Civil War, steamboats brought travelers to Southwest Harbor on vacation from eastern cities (NOAA 2009c). By the late 19th century, Southwest Harbor was a major center for cod fisheries and provided dried cod for eastern markets (NOAA 2009c). The communities at Southwest Harbor were part of Tremont, which also included McKinley (later Bass Harbor), Bernard, and Seal Cove. Community differences and disagreements in development led to Southwest Harbor incorporating on its own in 1905 (NOAA 2009c).

A large part of Southwest Harbor's economy depends on tourism; there is a large downtown area where visitors can shop, eat, and find lodging. There are also many recreational boats that spend time in Southwest Harbor, staying either at moorings or at Dysart's Marina.

Demographics and Economy

According to the U.S. Census Bureau (2010), the population of Southwest Harbor was 1,764 in 2010 (down 10.3% from 1,966 in 2000). The population is relatively homogenous; in 2010, 96.9% identified



Figure 20. Map of Southwest Harbor (outlined in pink) on Mount Desert Island.

themselves as white (U.S. Census 2010). Approximately 62% of Southwest Harbor's population was born in Maine, 33.2% were born in a different state, and 4.6% were born outside of the United States (U.S. Census Bureau 2010). As for educational attainment, 41.4% of Southwest Harbor's population had a high school degree, while 31.3% had a bachelor's degree or higher, which was higher than both state and national levels for bachelor's degrees.

The town's age structure is similar to many Maine towns in that it is older than the nation as a whole (Figure 21). The median age was 48.4 in 2010, higher than both the Maine and the U.S. median ages (U.S. Census Bureau 2010). In 2010, 26% of the population was 65 years of age or older, also higher than the percentage for the state as a whole.

In 2012, median household income in Southwest Harbor was \$32,169, lower than the state median household income, and median per capita income was \$28,014, higher than the state median per capita income (Table 15). Southwest Harbor features more households with incomes from Social Security, but fewer with incomes from retirement compared to Maine and the nation (Table 16). In 2012, 20.9% of families and 22.5% of individuals fell below the poverty threshold, higher percentages than in the state as a whole. Elderly poverty rates are high in Southwest Harbor, with 16.5% of all persons over 65 falling below the poverty line. Fewer households in Southwest Harbor depended on food stamps in 2012 compared to the state (Table 16).

In 2012, 60.5% of the total population 16 years of age and over was in the labor force. Of the civilian labor force, 2.2% was unemployed, which is lower in the

¹⁷ Southwest Harbor Chamber of Commerce. <http://www.acadiachamber.com/>.

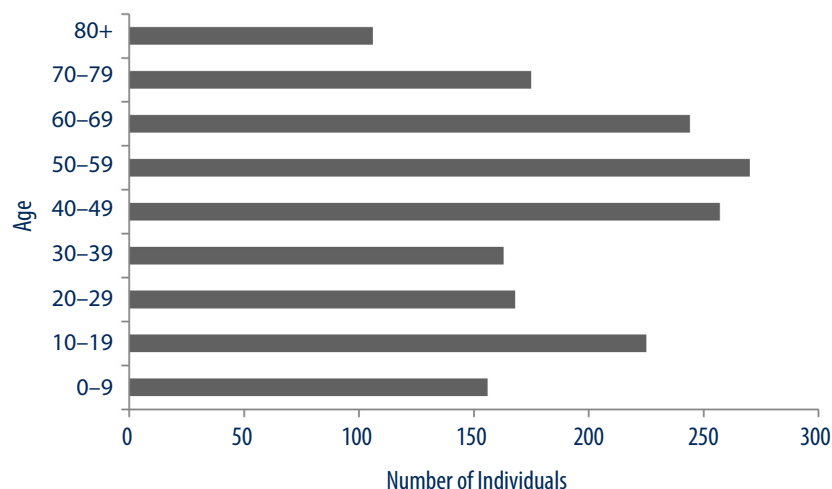


Figure 21. Age structure of the population of Southwest Harbor, 2010. Source: U.S. Census 2010.

Table 15. Median and per capita income and percentages unemployed and self-employed, Southwest Harbor, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
	-----\$-----		----- % -----	
United States	53,046	28,051	6.0	6.3
Maine	48,219	26,464	4.8	9.1
Southwest Harbor	32,169	28,014	2.2	23.5

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 16. Household income from earning, Social Security, retirement and SNAP, Southwest Harbor, 2012

	Households with Income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- % -----			
United States	78.7	28.3	17.6	11.4
Maine	75.7	32.9	18.9	15.8
Southwest Harbor	65.2	36.2	16.2	16.8

Source: 2008–2012 American Community Survey 5-Year Estimates.

state unemployment rate (Table 15). Top employment sectors were management, business, science, and arts occupations (30.1%), natural resources, construction, and maintenance occupations (26.8%), and service occupations (15.5%). Self-employed workers, another category in which fishermen are found, accounted for 23.5% of all workers (Table 15). As an employment sector, agriculture, forestry, fishing, hunting, and mining

occupations accounted for 3.5% of all jobs, which is a slightly higher level than this sector’s performance in the state as a whole (Table 17).

Fisheries Profile

Commercial

Southwest Harbor is ranked as one of the top 10 commercial fishing harbors in Maine. In the 1970s, lobster fishing was the most important fishery in Southwest Harbor, followed by scalloping, with crabbing and finfish fishing being incidental fisheries (Acheson et al. 1980). Herring processing was significant to the community, but local herring fishing was not.

Today, key species in Southwest Harbor include lobsters and scallops. Other commercially fished species include shrimp and urchins. Many fishermen participate in different fisheries depending on the time of year; the same boats are used for all fisheries, but the equipment differs and how the boats are rigged is modified (pers. com. key informant). Over the past few years, participation in the shrimp fishery has increased moderately due to increased infrastructure and boat price. Additionally, due to an increased demand on the state’s elver fishery, several fishermen who have held on to elver licenses have started using them to diversify their portfolio (pers. com. key informant). Some boats have seines used to fish for herring to use as bait, and others still set halibut trawls either while they are hauling lobster traps, or during recreational spring day trips (pers. com. key informant). Southwest Harbor has strong ties to the Bass Harbor fishing community, and many fishermen fish out of both harbors and use the infrastructure in both places (pers. com. key informant).

Table 17. Percentage of jobs in select occupation categories, Southwest Harbor, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	----- % -----			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Southwest Harbor	3.5	8.6	18.3	19.3

Source: 2008–2012 American Community Survey 5-Year Estimates.

Groundfishing: By the mid-1990s, it was estimated that there was only one fish dragger left in Southwest Harbor and another in nearby Bar Harbor; both were medium-sized vessels that fished close to shore (Hall-Arber et al. 2001). By 1996 “regulations had already dismantled much of the gillnetting portion of the groundfish fleet, and [those fishermen] had switched to other fisheries” (NOAA 2009c).

State and federal permit data

In 2011, there were 114 individuals with state licenses in Southwest Harbor. These individuals held 158 licenses, most of which were for lobsters/crabs (Figure 22). Other licenses included urchin, scallop, shellfish, eel/elver, and halibut. In 2011, 24 vessels with federal permits listing Southwest Harbor residences held a total of 33 permits. All but one permit included a federal lobster license and two permits included a multispecies groundfish permit (one HB and I; one J) (Figure 23). The average vessel length of permit holders in Southwest Harbor was 38.2 ft. In 2012, there were

two federal dealers listed in Southwest Harbor. One dealt with lobster while the other dealt with lobster, groundfish, and scallop.

Recreational and subsistence

In terms of recreational fishing, there are a few charter boat operations based in Southwest Harbor. A deep-sea fishing charter, called Vagabond Deep Sea Fishing, uses Beal’s Lobster Pier on Clark Point Road. Recreationally targeted fish include striped bass, mackerel, and pollock. Recreational fishing is limited from town docks and is prohibited between 8:00 AM and 5:00 PM. Recreational fishermen may fish within the harbor from skiffs or their own private docks. Fishermen can buy gear at the local hardware store, Hamilton Marine (on Clark Point Road), or West Marine (adjacent to Dysart’s Marina) in town. There are no bait dealers for recreational fishermen (pers. com. key informant). In terms of subsistence fishing in Southwest Harbor, data are unavailable through secondary data collection or the practice does not exist (NOAA 2009c).

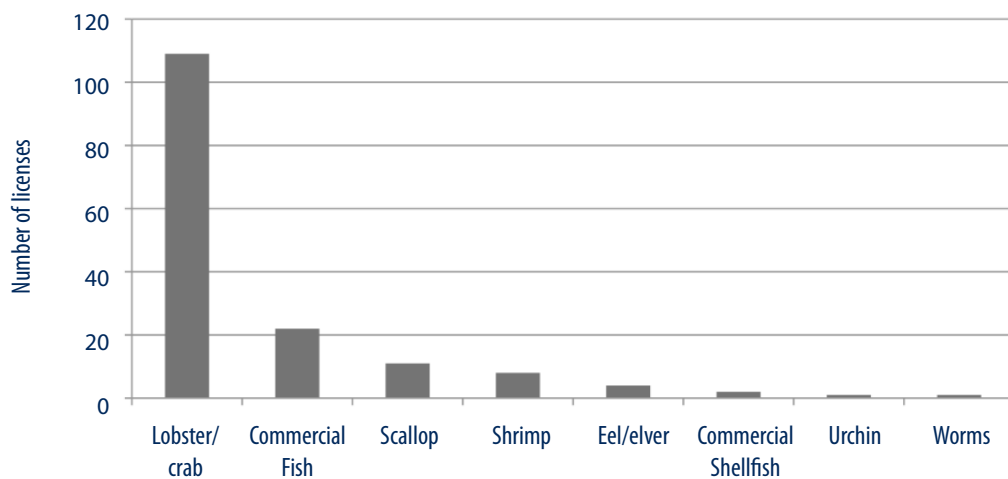


Figure 22. State licenses listing Southwest Harbor addresses. Source: Maine DMR 2011.

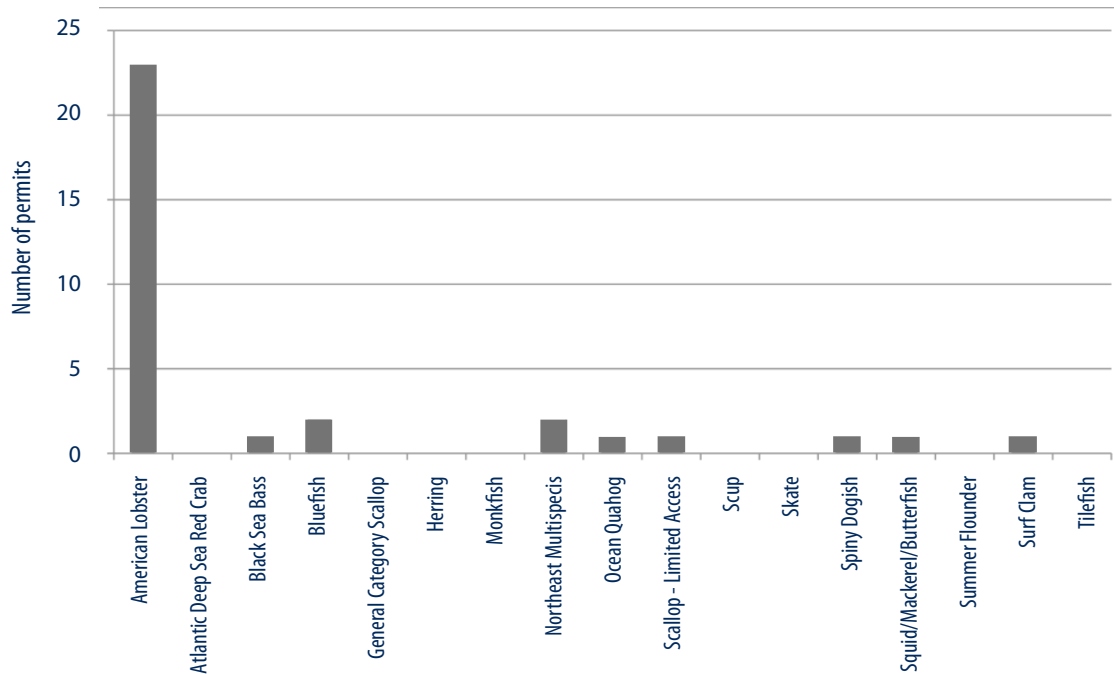


Figure 23. Number of federal permits listing Southwest Harbor addresses in 2011.
Source: Northeast Region Permit Database.

Marine infrastructure

There are more than 10 boatyards and boat-building firms in Southwest Harbor, many of them known around the world for the quality of their ships. Boat-building companies in Southwest Harbor include Wilbur Yachts, Hinckley Company, John M. Williams, Ellis Boats, and MDI Yacht.

Southwest Harbor has a good anchorage with deep water and ample room (Acheson et al. 1980). The town of Southwest Harbor has three town docks: an upper town dock, a lower town dock, and a town dock in Manset.

The upper town dock is located off Clark Point Road and has a small parking lot with space for approximately 50 vehicles, plus one parking space for a large vehicle or vehicle with a trailer. The entrance would be feasible, albeit narrow, for large trucks. Narrow wooden steps and pier (97 ft in length and 5 ft wide) lead down to two 24-ft by 16-ft floats. This is also the site for the Cranberry Cove ferry to Cranberry Isles. This ferry serves Great Cranberry, Islesford (Little Cranberry), and Sutton Island with several runs daily. The dock is in good condition, but due to the stairs



The upper town dock (left) and the lower town dock (right).



Dysart's Marina.

and its narrowness, it is not convenient or practical for loading and unloading fishing gear.

The lower town dock is adjacent to Beal's Lobster Pier at the end of Clark Point Road. The concrete pier measures 200 ft in length and 28 ft wide. It bears three 24-ft by 16-ft floats. There is also a concrete boat launch next to the pier. The dock is a concrete pier that has two winches, one gallows style and not currently mechanized and the other mechanized and apparently in use (has a 300-lb maximum weight).

On the other side of the harbor, the Manset town dock is the largest of the town docks, at 188 ft in length by 18 ft wide. It is also adjacent to a wide, concrete boat ramp, similar in width to the dock. There were a total of two floats off the dock when we visited in May 2011, but the plan for summer is to have four floats (pers. com. key informant). There is a \$5 launch fee for residents, \$10 for nonresidents. Smaller boats can be hauled out from the launch by trucks.

Companies with trucks for launching/hauling and storage include A.W. Pettegrow, MDI Yacht, and Ocean House. All of these launching/hauling/storage companies are local to Southwest Harbor. There are two hoists that are most commonly used for loading and unloading bait and catch, both located at the Manset town dock. Vessel owners pay a hoist fee per use. The harbormaster's office is located above this dock. Down the road to the east of the Manset town dock is Hinckley Yacht Boatyard that hauls out large boats too big to be hauled out by truck; it has the only travel-lift in town.

At the top of the harbor is Dysart's Marina, where fishing vessels and sightseeing vessels dock. During

the winter months, all boats using the marina are commercial vessels, mostly fishing boats. Winter rates are significantly lower than summer rates. There is no storage on the docks or on shore, but there is a hoist for onloading and offloading bait and catch, for which there is a charge per tote. Fuel is available for purchase. Patronage shifts away from commercial vessels and towards transient pleasure crafts in the summer months. Only two lobster boats remain on the dock during the summer, under the agreement that they "stay tidy." Higher summer docking fees allow the businesses to provide services for fishermen in the winter (pers. com. marina personnel).

There are two seafood retailers in town: Southwest Lobster & Fish Unlimited (also known as "Timmy Harper's") and Beal's Lobster Pier. Beal's Lobster Pound, which is part of Beal's Lobster Pier, is located at the end of Clark Point Road and sells fresh seafood, fuel, bait, and ice, and provides moorings and tie-up floats (NOAA 2009c). Beal's manufactures ice with their ice machine. It sells bait and fuel to anyone, but has prices that are more appealing to fishermen who sell their catches to the business. There are no haul-out facilities or lifts at Beal's, but there is a ramp and a winch at the town dock next to it. Beal's sells retail off the dock and also sells wholesale to restaurants and other buyers. Vagabond Deep Sea Fishing, which uses the pier, serves as free publicity for the lobster pound and attracts tourists. Beal's currently has accounts with 35 restaurants on Mount Desert Island, as well as a few commercial accounts and one account that buys Beal's entire surplus. Beal's selects and delivers



Beal's Lobster Pier (left) and Southwest Boat (right).

lobster to the restaurants using two insulated trucks and two pickup trucks. Recently, fewer fishermen are selling to Beal's and Southwest Lobster in favor of selling directly from the dock to trucks. There are currently about 25 boats that still sell to Beal's (pers. com. Beal's Lobster Pier owner).

Southwest Lobster & Fish Unlimited is also located on Clark Point Road, near the upper town dock. The company does not provide bait, but does sell fuel and allow fishermen who sell directly to it to store their bait and gear on the dock (pers. com. key informant.) The company owns at least two trucks for delivery (observation).

In the 1970s, H.R. Beals and Sons and R.D. Lunt were important lobster buyers in Southwest Harbor. Village Electronics sold and serviced different kinds of marine electronics. Stinson Canning Company was built in the 1930s, and in 1980 it employed 110 people canning herring steaks and fillets (Acheson et al. 1980). Manset also used to be home to a sardine cannery, but it is no longer in existence. There are currently no packing or processing facilities in Southwest Harbor. Catch is sold to wholesale retailers, including Beal's, Southwest Lobster, RDR LLC from Trenton (shellfish dealer), and Trenton Bridge Lobster Pound. The Trenton Bridge company transports catch by boat, while the rest use trucks.

Gear storage is available on town docks for only 24 hours, and most fishermen store gear in their own yards or on personal floats. There is also a Coast Guard station in Southwest Harbor, adjacent to Beal's Pier at the end of Clark Point Road. Currently there are at least

two boat insurance companies located in Southwest Harbor: Butler Marine Insurance LLC and Hinckley Insurance Group. Butler Marine Insurance LLC is an independent agency that provides boat insurance for boat and yacht owners.

Fishing industry support and government institutions

Fishing industry organizations include the DELA and the MLA (NOAA 2009c). The Harbor House, founded in 1965 and located in Southwest Harbor, provides services that conserve and enrich the quality of life for people on Mount Desert Island.¹⁸ Southwest Harbor's local government is comprised of a town manager, and five selectmen serving three-year terms. Southwest Harbor has a harbormaster and a harbor committee consisting of seven to twelve members appointed by the board of selectmen for three-year terms. There is also a shellfish committee that is made up of five members appointed by the selectmen for three-year terms.

According to the town's Coastal Waters and Harbor Ordinance, "our harbor is an integral part of the town's economy and character....the Harbormaster and Harbor Committee are there to help protect water dependent activity and public access to the water. This, in turn, ensures that the Harbor remains a working harbor."¹⁹ This mission statement embedded in the town code reflects the importance the town's access to the sea and

¹⁸ Harbor House MDI. 2011. Mission and Achievements. <http://www.harborhousemdi.org/index.php/about-us/mission-a-achievements>.

¹⁹ Town of Southwest Harbor, Maine. 2011. <http://southwestharbor.homestead.com/index.html>

the importance of a working waterfront. Fishermen are involved in governance through the harbor committee. There are currently three fishermen on the committee, which advises the select board and town manager concerning issues such as town ordinances. The committee seeks to create ideas for supporting infrastructure to promote a fishing community while allowing for tourism opportunities (pers. com. key informant).

Cultural attributes related to fishing and the sea

The Quietside Festival and Boat Show in Southwest Harbor is a weeklong event (usually in July) and features a parade, Coast Guard open house, and Centennial Concert (NOAA 2009c).

Issues Facing Commercial Fishing Industry

It is becoming harder to fish in Southwest Harbor for any type of fisherman. Living costs are increasing, forcing more and more fishing families to move away and to commute to the harbor each day. Commuting puts great strain on the fishermen who sometimes make many trips to the dock each day with gear (pers. com. Beal's Lobster Pier owner). As fishermen struggle to make a profit, fewer of them are selling to local retailers, which hurts the retailers who need to make money to keep up with maintenance and repairs of their buildings. Typically, seaside buildings last 65 to 70 years before they need serious repair from the damage caused by the ocean water and weather (pers. com. Beal's Lobster Pier owner).

Access to ice is also a potential barrier in terms of infrastructure for groundfish fisheries. Currently there is no icehouse in Southwest Harbor. Beal's Lobster Pier has one icemaker that does not seem to be in high demand. The harbormaster speculated that larger vessels would make their own ice if they began groundfishing. However, an ex-groundfish fisherman who grew up groundfishing out of Southwest Harbor explained that large vessels meant a maximum of 50 or 60 ft—not large enough to make their own ice.

According to a local fisherman, there is little concern over young people accessing the lobster industry, and they feel that there is continued good recruitment of young fishermen into the lobster fishery. The concern is about the lack of diversity within the industry, which

they see as a way to keep young people engaged as lifelong fishermen (per. com. key informant).

Storage is another issue faced by fishermen in Southwest Harbor. Except for limited storage at Southwest Lobster for those who have accounts and 24-hour storage on town docks, there is no storage available in town. For the most part, fishermen store gear in their yards, or own their own floats in the harbor.

SWAN'S ISLAND COMMUNITY PROFILE

Geography and History

The town of Swan's Island is located in Hancock County. Toothacher Bay and Jericho Bay surround the island town (Figure 24). Swans Island is 5 miles long and almost 4 miles wide at its widest point (Acheson et al. 1980). It has a total area of 82.4 square miles, of which 68.4 square miles (83%) is water (NOAA 2009d).

Swan's Island is divided into three communities: Swan's Island Village, typically called "the Harbor," on the western shore of Burnt Coat Harbor, Minturn on the eastern shore of Burnt Coat Harbor, and Mackerel Cove on the northeastern shore. Burnt Coat Harbor is about 1.5 miles long and 450 yards wide (Acheson et. al 1980).

Swan's Island was first charted in 1606 by Samuel de Champlain's expedition and at the time it was used by local Indians as a seasonal hunting ground. James Swan purchased the island in 1786, and in 1791, David Smith—a Revolutionary War veteran—became the first man of European descent to settle on the island. David Smith became known as "King David," due to his strength and the 24 children he fathered. Even today most of the native island residents can trace somelineage to King David (pers. com. key informant).

Through the 1800s, the island settlement grew and prospered. By the turn of the century, Swan's Island was a thriving community of more than a thousand people engaged in fishing, farming, and quarrying (pers. com. key informant). The farms of Swan's Island complemented the annual cycle of fishing, and many made their living in this way. Cod fisheries, in Penobscot Bay and on the Grand Banks, formed the backbone of the community. Small boats were used in the local fisheries, with larger vessels used as the fishing spread toward the offshore fishing banks. The herring industry assumed importance by 1890 along with lobster fishing. Boat ownership was an important goal for every fisherman, and by 1895 almost a quarter of the taxpayers on the island were listed as boat owners (NOAA 2009d). Fish processing was an important part of the economy from the early 1900s to the 1930s when it was discontinued due to changing economic factors (pers. com. key informant).



Figure 24. Map of Swan's Island with Jericho Bay to the west and Mount Desert Island to the Northeast.

Demographics and Economics

According to U.S. Census Bureau (2010), the population of Swan's Island was 332, a 1.5% increase from its population in 2000. The population is relatively homogenous; in 2010, 97.9% identified themselves as white (U.S. Census Bureau 2010). As for place of birth, 67.3% of residents were born in Maine, 27.1% were born in a different state, and 5.6% were born outside the United States (U.S. Census Bureau 2010). Of Swan's Island's population, 34.2% had a high school degree, while 26.9% had a bachelor's degree or higher, which was similar to the state and national level for bachelor's degrees.

Swans Island's age structure is similar to many Maine towns in that it is older than the nation as a whole (Figure 25). Consistent with many other small fishing communities, there is a sharp decline in the population as young individuals leave town for college and in search of employment. The median age in 2010 was 46.3 years old, higher than both the state and national median ages. In 2010, 17.5% of the population was over 65, again higher than the state and national levels.

In 2012, median household income on Swan's Island was \$57,708 and median per capita income was \$30,654, both higher than the state medians (Table 18). Swan's Island features more households with incomes from Social Security compared to Maine and the nation (Table 19). In 2012, 0% of families and 1.6% of individuals fell below the poverty threshold, both are much lower than the these percentages in the state as a whole. This lower level of poverty is reflected in the relatively lower percentage of Swan's Island residents

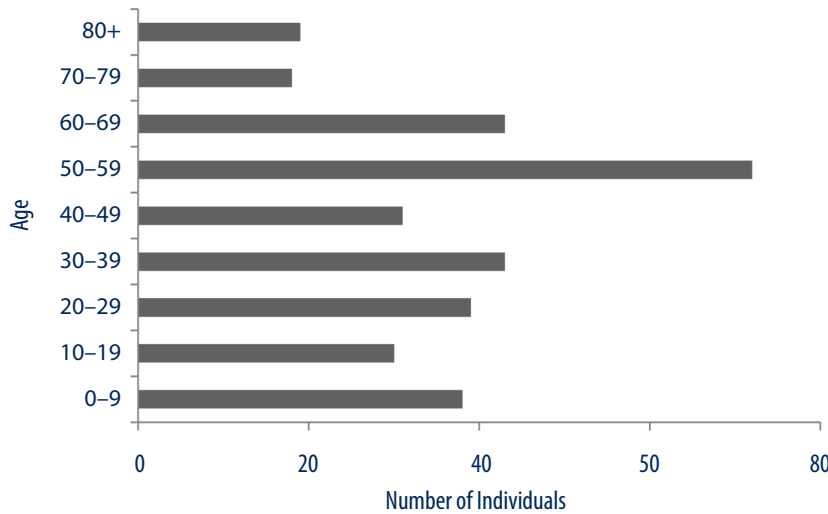


Figure 25. Age structure of the Swan's Island population, 2010. Source: U.S. Census Bureau 2010.

Table 18. Median and per capita income and percentages unemployed and self-employed, Swan's Island, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
	----- \$ -----		----- % -----	
United States	53,046	28,051	6.0	6.4
Maine	48,219	26,464	4.8	9.1
Swan's Island	57,708	30,654	5.7	52.3

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 19. Household income from earning, Social Security, retirement and SNAP, Swan's Island, 2012.

	Households with income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- % -----			
United States	78.7	28.3	17.6	11.4
Maine	75.7	32.9	18.9	15.8
Swan's Island	68.9	43.6	21.7	5.6

Source: 2008–2012 American Community Survey 5-Year Estimates.

using food stamp programs (Table 19). Elderly poverty rates are also low in Swan's Island, with only 1.1% of all persons over 65 falling below the poverty line.

In 2012, 56.3% of the total population 16 years of age and over was in the labor force. Of the civilian labor force, 5.7% was unemployed, higher than the state unemployment rate (Table 18). Top occupations

were natural resources, construction, and maintenance occupations (51.8%), management, business, science, and arts occupations (20%), and sales and office occupations (14.9%). Self-employed workers, another category in which fishermen are found, accounted for 52.3% of all workers (Table 18). As an employment sector agriculture, forestry, fishing, hunting, and mining occupations accounted for 49.0% of all jobs, significantly higher than in the state as a whole (Table 20).

Fisheries Profile

Commercial

The economy of the island is mostly dependent on income derived from lobstering. Fishermen or their families own many of the businesses on the island (pers. com. key informant). Other fisheries on Swan's Island include scallops, which is down drastically in the last couple years from a small fleet to only one boat (pers. com. key informant), and other state-managed species including crabs and clams (NOAA 2009d). There is no aquaculture currently operating on Swan's Island though there was a salmon farm that employed many people in the community (pers. com. key informant).

Groundfish: Groundfish was once an important fishery in the community, but has not been for the past 20 years or more. Today, there is one groundfish permit in Swan's Island: a limited access permit (A).

State and federal permit data

In 2011, 106 individuals held a total of 123 state licenses in Swan's Island. Most licenses were for lobster/crab, with some others for commercial fish and shellfish (Figure 26). In 2011, 41 vessels with federal permits listing Swan's Island residences held a total of

Table 20. Percentage of jobs in select occupation categories, Swan’s Island, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	----- % -----			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Swan’s Island	49.0	10.1	0.0	14.8

Source: 2008–2012 American Community Survey 5-Year Estimates.

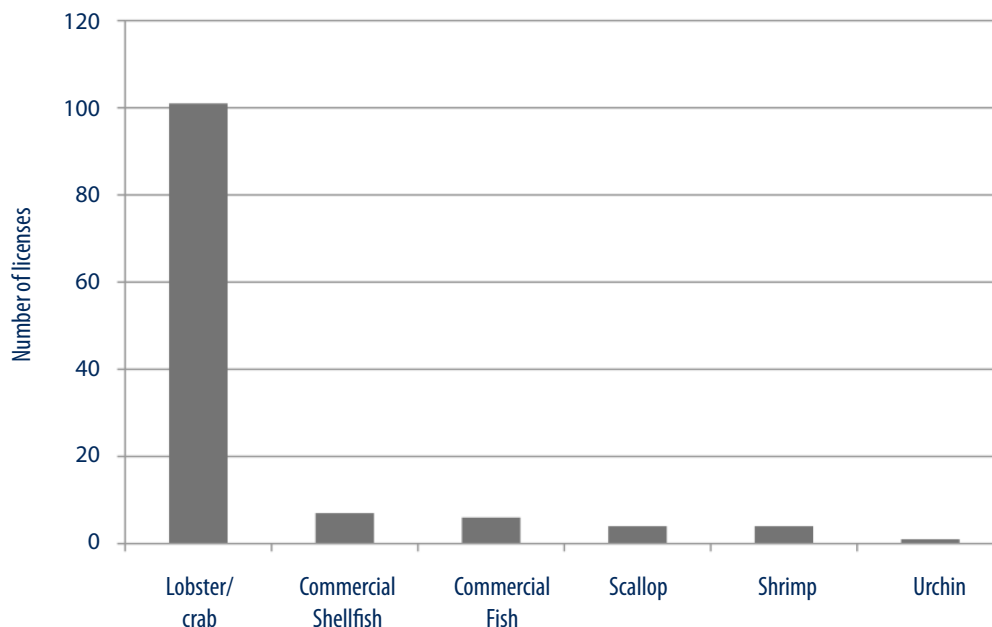


Figure 26. State licenses listing Swans Island addresses. Source: Maine DMR 2011.

42 permits. The average vessel length of permit holders in Swan’s Island was 35.2 ft. All permits held a federal lobster license, and one of these permits was bundled with a multispecies groundfish fish permit (1 A) (Figure 27). In 2011, there were three federal dealers listed in Swan’s Island and all dealt with lobster.

Recreational and subsistence

According to NOAA (2009d), minimal recreational fishing takes place in the community. Due to the large number of access points on the island, it is likely that visitors and residents fish recreationally from their own vessels. None of the commercial piers on the island allow recreational fishing, due to the level of loading, unloading, and other activities that take place there, but the town dock in Minturn is a common spot for recreational fishers and tourists. Freshwater fishing

commonly takes place at Goose Pond (pers. com. key informant).

Additional information on subsistence fishing in Swans Island is unavailable through secondary data collection and it is obvious that little of the practice exists (NOAA 2009d).

Marine infrastructure

Since 1960, the town has been accessible by a 40-minute ferry ride from Bass Harbor (pers. com. key informant), which runs six times a day in the summer and four in the winter.

Hockomock Head Lighthouse, built in the 1800s, marks the entrance to Burnt Coat Harbor and overlooks Harbor Island directly across the channel along with Gooseberry and Marshall Islands to the west. It

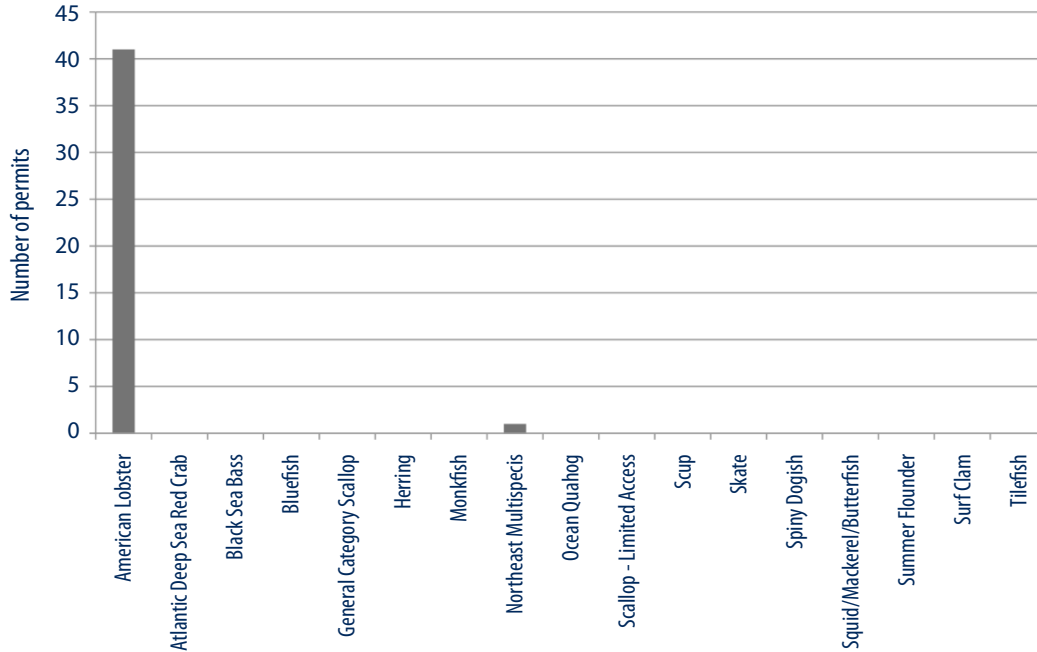


Figure 27. Number of federal permits listing Swans Island addresses in 2011. Source: Northeast Region Permit Database.

was operated manually until 1974 when the light was automated.

Burnt Coat Harbor is one of the most protected harbors on the Maine coast and provides anchorage for hundreds of fishing and pleasure boats. The harbor is the hub of the fishing and lobstering industry on Swan’s Island. All three of the island’s commercial docks and the public dock are located in Burnt Coat Harbor. Kent’s Wharf and Swan’s Island Fisherman’s Co-op are located on the western side of the harbor,

and Underwater Taxi and the Quarry dock are located on the eastern side in Minturn.

Mackerel Cove and Burnt Coat Harbor have anchorages. In addition to the three commercial wharves, the town dock, called the Quarry Dock, located in Burnt Cove Harbor on the Minturn side has offloading facilities. There are two public boat launches on the island—one at the Quarry Dock and one at the ferry terminal. Also at the ferry terminal is a small public float available for rowboats.



Kent’s Wharf (left) and the Swan’s Island Fisherman’s Co-op (right).



Underwater Taxi.

Kent's Wharf has been in operation for roughly 27 years. Currently, the dock serves only commercial lobstermen, and it is unknown whether the dock served groundfishermen in the past. The dock provides bait and fuel for the 20 or so boats from which it buys lobsters, including boats from Frenchboro (pers. com. key informant). The business mainly does wholesale, but it sells retail to locals and tourists occasionally. The company has its own trucks for transporting catch. The wharf is wide and in good condition, and there are two hoists at the end of the wharf and a few floats below (pers. com. Kent's Wharf employee).

The Swan's Island Fisherman's Co-op has been in operation for more than 30 years. Today they serve only lobster boats, but the dock may have served groundfishermen in the past. Approximately 40 boats sell to the co-op, most being local fishermen. There are about eight fishermen from Brooklin (on the mainland) who sell to the co-op and several more from Frenchboro (pers. com. co-op employee). The co-op sells wholesale and retail. Wholesale orders are transported by Inland Lobster, and bait is delivered by J & K Lobster Bait, Inc. The co-op also sells gas and diesel fuel to its fishermen. The dock is new as of 2010 and has three hoists, two of which are also new. The co-op also has a lobster pound and tank room that can hold 80,000 lbs of lobster (pers. com. co-op employee).

Underwater Taxi has been in business as a lobster buyer since 1998 and buys from island fishermen as well as fishermen from Frenchboro (pers. com. key informant). It does not provide fuel directly, but fuel is trucked in daily. Bait is available, and unlike most other

commercial wharves, Underwater Taxi will sell bait to anyone—not just its own fishermen. All lobsters are sold wholesale and shipped by its trucks to Rockland or Searsport. The company used to buy and sell clams, but no longer does so. There are processing facilities on site, but they are the remains of a salmon aquaculture business that previously operated there and are no longer in operation (pers. com. Underwater Taxi owner).

There is one boat repair shop on the island, Thomas Rydel's, which also includes a boatyard. A welder from the mainland sometimes comes to the island for clients who need repairs, but for the most part, fishermen must travel off-island for supplies, repairs, and electronics (pers. com. key informant).

Fishing industry support and government institutions

Fishing industry support organizations for Swan's Island fishermen include the DELA and the MLA. There is also a Swan's Island Fisherman's Co-op, which formed in 1971 and had 40 members and five employees in 1980 (Acheson et al. 1980).

Swan's Island's town government consists of a three-member board of selectmen (NOAA 2009d). Swan's Island has a harbormaster, two shellfish wardens, a five-member Shellfish Conservation Committee, and a 13-member Lighthouse Committee (pers. com. key informant).

Swan's Island Electric Cooperative (SIEC) is investigating wind power for the island. Six different sites on the island are under review for the town as potential turbine sites (pers. com. key informant).

Cultural attributes related to fisheries and the sea

The Swan's Island Lobster and Marine Museum features antique fishing equipment and displays on old-time fishing techniques for cod, haddock, mackerel, halibut, swordfish, herring, and lobster. A century-long collection of lobster gear, historic navigation equipment, boat models, and photographs are also on display. There is also a natural history museum adjacent to the Lobster and Marine Museum.

Issues Facing the Fishing Community

The biggest issue facing Swan's Island fishermen is access to the fishery and necessary services. As an island community, it is hard to keep the much-needed, but highly specialized, fishing and boating services in business locally. Though many fishermen do their own boat repairs, it can be much more difficult to repair electronics or navigational equipment. There is also no marine supply store in town. Additionally, catch must be transported by truck and ferry, which is complicated by the busy tourism season. Luckily, despite the fact that fishing and tourism make up the majority of Swan's Island's local economy, the two do not seem to conflict nearly as much as in some Downeast towns. Gentrification was not cited as an issue on the island, and the community has managed to keep its working waterfront intact despite the high numbers of seasonal residents and summer day-trippers (pers. com. key informant).

BAR HARBOR COMMUNITY PROFILE

Geography and History

The town of Bar Harbor is located on the northeastern portion of Mount Desert Island in Hancock County (Figure 28). Mount Desert Island is the largest island off the coast of Maine and second largest on the East Coast of the United States. Bar Harbor is roughly 42 square miles in area and is 28 miles wide. The downtown is located on Frenchman Bay and is nearly surrounded by Acadia National Park.

Bar Harbor was first named Eden after Sir Richard Eden, an English statesman. The name was changed to Bar Harbor in 1918 in reference to a gravel and sand bar that is exposed for about two hours on either side of low tide. Shipbuilding and fishing were early industries although the town quickly became known as a summer resort destination. Bar Harbor's rugged maritime scenery brought luminist artists such as Thomas Cole and Frederic Church to the area in the 1840s. Their paintings, in turn, brought an influx of the extremely wealthy. The first hotel, Agamont House, and the first pier were built in 1855 to accommodate an increasing number of visitors. Enormous "cottages" emerged throughout the end of the 19th century, an era called the "Gilded Age." By 1880, there were 30 hotels to accommodate visitors arriving by train and ferry. The Bar Harbor fire of 1947, when more than 17,000 acres burned over a two-week period, ended the wealthy landowner era, as the fire destroyed many summer homes of the wealthy.²⁰

Boston native George B. Dorr worked with Charles W. Elliot and later with John D. Rockefeller Jr. to bring about a national park. The project was organized in 1916 as Sieur de Monts Monument and in 1929 became Acadia National Park. Some of the largest parts of the park are within in the town of Bar Harbor, including the notable Cadillac Mountain. Acadia National Park brings more than 2 million visitors to the area each year.

Today, tourism is the largest industry in Bar Harbor. The town is a popular vacation destination due to its

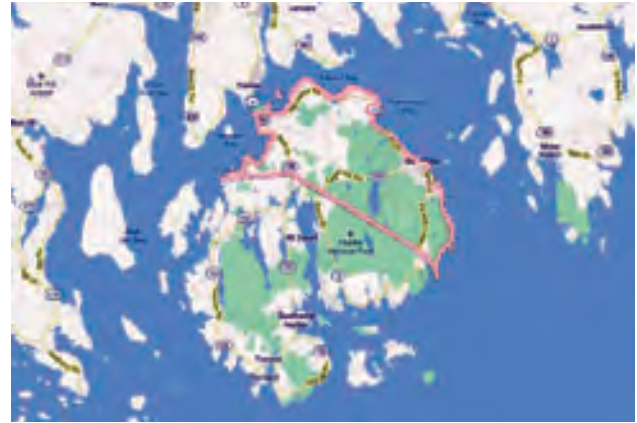


Figure 28. Map of Mount Desert Island. Bar Harbor is outlined in pink.

proximity to Acadia National Park. There are several large oceanfront hotels, a few motels, and a dozen or more quaint B&Bs in the downtown area. The town is highly seasonal, with many shops and restaurants operating from May through October. In 2011, 108 cruise ships visited Bar Harbor, and 135 were scheduled to visit in 2013 (Trotter 2012). In addition to the huge number of day-trippers, Bar Harbor also has many seasonal rental cottages, and many young people come to town to work for the summer season. Bar Harbor is also home to Jackson Laboratories, a renowned cancer research facility, Mount Desert Island Biological Laboratory, and College of the Atlantic, a small liberal arts college.

Demographics and Economics

Bar Harbor experienced a population boom, growing from 1,946 residents in 1890 to 4,379 residents in 1900, a 125% increase (U.S. Census Bureau 1890, 1900). The boom is most likely a result of the luxurious lifestyle synonymous with the town. Throughout the mid-20th century, Bar Harbor's population declined until 1980' it has been steadily increasing since then.

According to the U.S. Census (2010), the population of Bar Harbor in 2010 was 5,235 (up 8.6% from 4,820 in 2000 [U.S. Census Bureau 2000]). The population is relatively homogenous; in 2010, 94.7% identified themselves as white (U.S. Census 2010). As for place of birth, 39.5% of Bar Harbor residents were born in Maine, 53.1% were born in a different state, and 7.4% were born outside the United States. With regards to educational attainment, 20.1% of Bar Harbor's population had a high school degree, and 48.2% had a bachelor's

20 Information about the history of Bar Harbor is from the Bar Harbor Historical Society (<http://www.barharborhistorical.org>); Bar Harbor Chamber of Commerce (<http://www.barharborinfo.com/>); Discover Acadia (<http://www.discover-acadia.com/bar-harbor-fire.html>); and City-data (<http://www.city-data.com/city/BarHarbor-Maine>).



Harbor panorama.

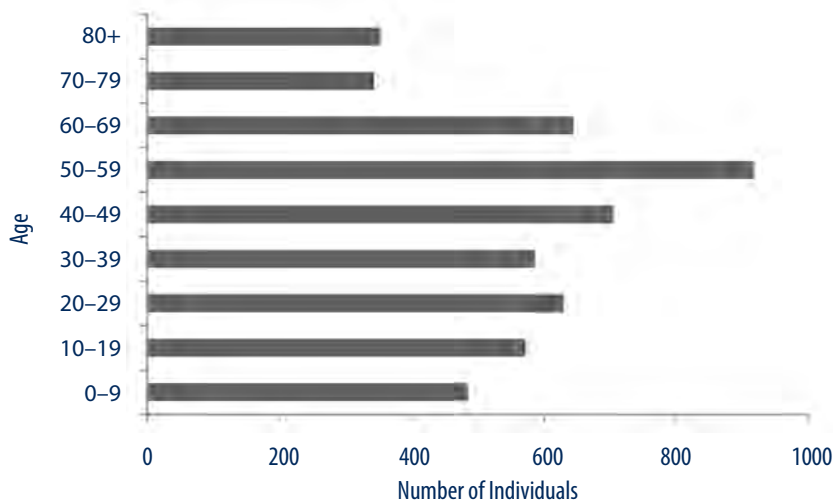
degree or higher, which is a much higher rate than either the state or national levels for bachelor's degrees.

Bar Harbor's population is similar to many Maine towns in that it is older than the nation as a whole (Figure 29). The median age in 2010 was 45.3, higher than the median ages in both Maine and the United States. In 2010, 18.1% of the population was 65 years of age or older, which is also higher than the state rate (U.S. Census Bureau 2010).

Bar Harbor is relatively wealthy compared to other coastal communities in eastern Maine. In 2012 in Bar Harbor, median household income was \$53,782 (higher than the state median) and median per capita income was \$30,563 (lower than the state median) (Table 21). Bar Harbor features fewer households with incomes from Social Security than Maine and the nation (Table 22). In 2012, only 2.7% of families and 11.2% of

individuals fell below the poverty line. These are both much lower than the rates for families and individuals in the state as a whole. The elderly poverty rate is 8.4% in Bar Harbor, and fewer households depend on food stamps than in the state (Table 22).

In 2012, 73.7% of the total population 16 years of age and over was in the labor force, and 4.6% of the population was unemployed. Educational, health and social services (25.9%), the arts, entertainment, recreation, accommodation, and food services (17.0%); and professional, scientific, management, administrative, and waste management services (18.9%) were the primary occupations. Self-employed workers, a category in which fishermen are found, accounted for 15.1% of jobs. As an employment sector, agriculture, forestry, fishing, hunting, and mining occupations accounted for 2.2% of all jobs (Table 23).



*Figure 29. Age structure of the population of Bar Harbor, 2010.
Source: U.S. Census 2010.*

Fisheries Profile

Commercial

While the tourism industry dominates the town, Bar Harbor has been identified as “having significant fishing activity or a significant number of people who fish” (Hall-Arber et al. 2001), with lobster being the largest fishery in town. As of 2011, there were 26 lobster vessels home-ported in Bar Harbor. Most fishermen are local and live in town or just on the outskirts. Other vessels that call Bar Harbor their homeport have owners from Hulls Cove and Ellsworth. Some resident

Table 21. Median and per capita income and percentages unemployed and self-employed, Bar Harbor, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
	-----\$-----		-----%-----	
United States	53,046	28,051	6.0	6.3
Maine	48,219	26,464	4.8	9.1
Bar Harbor	53,782	30,563	4.6	15.1

Source: ACS.

Table 22. Household income from earning, social security, retirement, and SNAP, Bar Harbor, 2012.

	Households with Income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	-----%-----			
United States	78.7	28.3	17.6	11.4
Maine	75.7	32.9	18.9	15.8
Bar Harbor	78.5	23.5	13.8	6.2

Source: ACS.

Bar Harbor boat owners list different homeports, such as Southwest Harbor, Bass Harbor, and the Cranberry Isles. Fishermen sell their catch to wholesalers or to the Trenton Lobster Pound, and trucks at the town pier pick up some lobsters.

Some fishermen also fish multiple species on a seasonal rotation. Other commercially important fisheries in Bar Harbor include shrimp, scallops, and herring. The town grants commercial licenses for harvesting soft shell clams.

Groundfishing: As recently as 15 years ago, there were roughly 20 groundfishermen out of Bar Harbor. There are currently two multispecies groundfish permits in

the town: one is a group HB, the other is a group K.

State license and federal permit data

In 2011, 100 individuals held 156 state licenses in Bar Harbor, most of which were for lobsters and crabs (Figure 30). In 2011, 18 vessels with federal permits listing Bar Harbor residences held a total of 27 permits. The average vessel length of permit holders in Bar Harbor was 38.5 ft. All permits included a federal lobster license, with only a few including additional permits for species such as herring, dogfish, and bluefish (Figure 31). In 2011, there was only one federal dealer listed in Bar Harbor—a herring dealer.

Recreational and subsistence

Recreational fishing is another tourist attraction, although locals have referred to it as an “ambience activity” mainly for families with small children. Tourists can participate in fishing charters, but also tend to fish right off the town pier. Downeast Windjammer Cruises offers four-hour fishing trips from Bar Harbor aboard the *M/V Tiger Shark*. Recreational species include cusk, pollock, mackerel, cunner, sculpin, black sea bass, and red fish. During the spring months, recreational fishing is common among locals, but it is mainly for freshwater species, such as brook trout, white perch, and small-mouth bass in the many ponds around the island (pers. com key informant). Recreational shellfishing for soft shell clams takes place in Bar Harbor; both residents

Table 23. Percentage of jobs in select occupation categories, Bar Harbor, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	-----%-----			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Bar Harbor	2.2	5.8	17.0	25.9

Source: ACS.

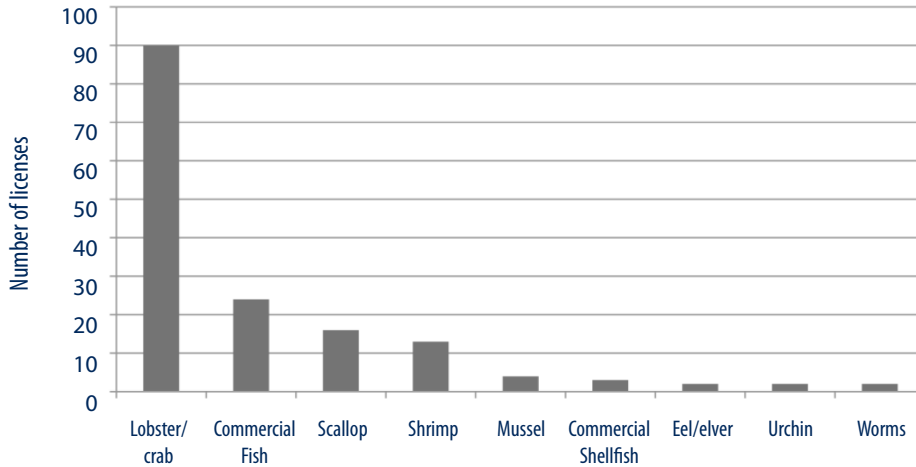


Figure 30. State licenses listing Bar Harbor addresses. Source: Maine DMR 2011.

and nonresidents can purchase licenses to do so. Blue mussels are also harvested.

Information on subsistence fishing in Bar Harbor is either unavailable through secondary data collection or the practice does not exist (NOAA 2009e).

Marine infrastructure

The municipal dock—the town pier—is the only dock in Bar Harbor. There are two public floats on the east side of the pier that are used for short-term dockage

and can be rented by cruise ships or yachts, but are rarely used by fisherman. A third float on the western side of the town pier is for commercial fishermen only and is used for loading and unloading traps and gear and for storing skiffs. The 18 lobster boats are mostly kept on moorings in the harbor, and many of them are moved to Northeast Harbor in the winter. There are two hoists at the end of the pier, one of which is new. There is a large concrete boat ramp right at the town pier and an unpaved launching area that is located on

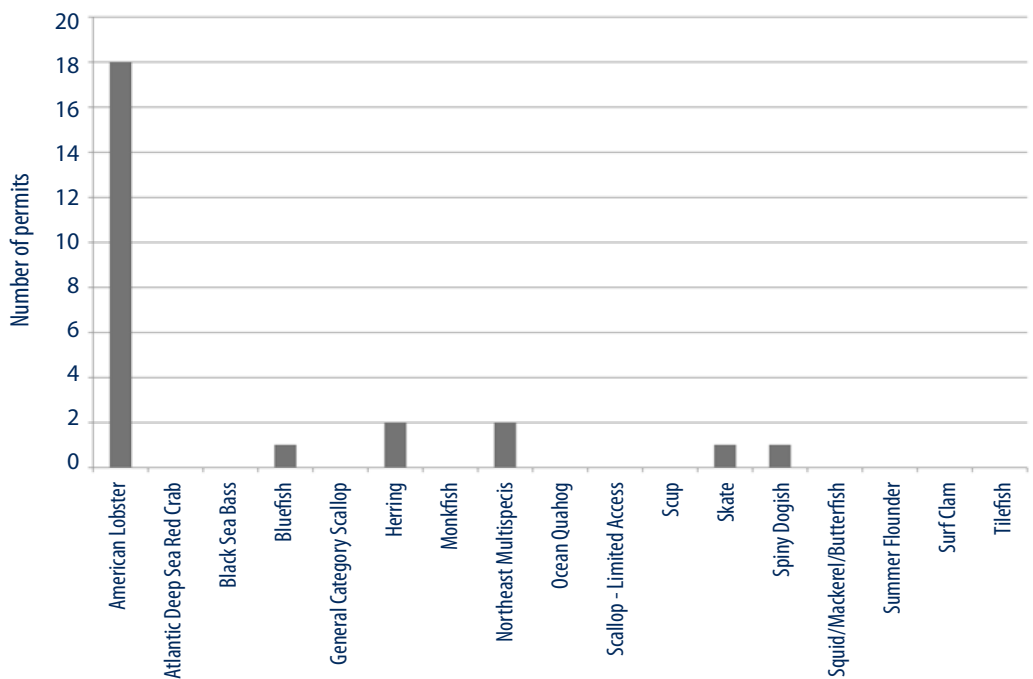


Figure 31. Number of federal permits listing Bar Harbor addresses in 2011. Source: NMFS Permit Data 2011.



Town dock (left) and lobster boats in the harbor (right).

Bridge Street. With no commercial wharves in town, bait, fuel, and catch are all transported by truck to the town pier.

Most amenities such as haul-out facilities, processing plants, packinghouses, and gear are not available in Bar Harbor. Most of the necessary gear and supplies can be purchased at Hamilton Marine in Southwest Harbor, and some fishermen travel off-island for what they need. Some basic items like paint, tools, and rope can be found at the two hardware stores in town (Greenpoint Auto and Paradis True Value), but it seems that mainly recreational fishermen or boaters use these stores. Bait and fuel are trucked in daily from Trenton and Ellsworth. While the local icehouse has gone out of business since the collapse of the groundfishery, the owner (a former groundfisherman) stated that he would have the resources to revive ice facilities in the nearby town of Trenton if the fishery were to return.

An international ferry, which was most recently operated by Bay Ferries, ran between Bar Harbor and Yarmouth, Nova Scotia. This ferry had been in operation since 1956, but was discontinued in 2010 (Trotter 2011).

Fishing industry support and government institutions

The MLA represents many of the lobstermen in the area. Some fishermen have been joining the DELA though membership is still small (pers. com. key informant).

The Maine Sea Coast Mission, headquartered in Bar Harbor, provides spiritual, health, and youth

development programs in coastal and island communities from midcoast to Downeast Maine. It is a non-denominational service and operates from a boat, the *Sunbeam*, which travels to islands providing health care, serving as a meeting place, and sometimes serving as an icebreaker to clear harbors.

Bar Harbor is governed by a seven-member town council and has a harbor department, a harbor committee, and a marine resources committee. The marine resources committee issues recreational and commercial shellfishing licenses. There is a shellfish warden in the town who also serves as the harbormaster. One of the stated goals in the Bar Harbor comprehensive plan is “to protect Bar Harbor’s marine resources industry, its coves and harbor and to promote access to the shore for commercial fishermen and the public” (NOAA 2009e).

Cultural attributes related to fisheries and the sea

Bar Harbor hosts a Working Waterfront Celebration each year in June, and proceeds go to the Fishermen’s Health Fund. The celebration includes the Mooring Ball, Seafarer’s Memorial Service, and a Blessing of the Fleet.²¹ According to a local fisherman this event is not very well known or attended although it continues annually.

The Mount Desert Oceanarium in Bar Harbor features a lobster museum and a working lobster hatchery, where visitors can learn about lobsters and the history of lobster fishing in Maine. Additionally, the George B.

21 <http://www.discover-acadia.com/acadia-bar-harbor-calendar-of-events.html>

Dorr Natural History Museum, located at the College of the Atlantic, provides interpretive exhibits on the natural history of Maine (NOAA 2009e).

There is one tour in town, the Lulu Lobster Boat tour, that takes passengers on a lobster boat to learn about lobsters and the lobster industry and to observe lobster traps being pulled. Bar Harbor Whale Watch also offers a lobster tour where passengers take part in pulling lobster traps and have a chance to see and touch crabs, lobsters, sea urchins, and other sea creatures (NOAA 2009e).

Issues Facing the Fishing Community

Unlike many other towns in the Downeast region, Bar Harbor does not seem nearly as dependent on the fishing industry. While fishing is important to the community, it is not the dominant industry. There are a few future fishermen enrolled in the high school, but most of them are children of current fishermen (pers. com. key informant). Additionally, while many young people stay local, they often move to nearby towns due to the high cost of real estate (pers. com. key informant).

Because of the high levels of tourist activity that occur for almost half the year, Bar Harbor has many other businesses such as retail shops, restaurants, lodging, and special events and festivals.

Since 2000, Bar Harbor has steadily increased as Maine's most popular cruise ship port of call. In 2005, the Center for Tourism and Outreach at the University of Maine tabulated the economic impact of the cruise ships to be \$13.7 million per year (Noble 2009), but as cruiseliners mushroomed into megaships, the town council took action. The town created the Cruise Tourism Destination Management Plan and the Bar Harbor Cruise Ship Task Force. As a result, passenger fees changed, and the number of passengers allowed to dock was curtailed (Noble 2009). In 2011, 118 cruise ships were scheduled to visit Bar Harbor throughout the summer, bringing hundreds of tourists who visit the park and eat and shop in town.

Bar Harbor has little to no working waterfront and in many cases has set an example for other island fishing communities in terms of what not to do. The town once had an active waterfront with a large town wharf, but this property was sold and turned into Stewman's Lobster Pound—a restaurant. Today, much of the waterfront property in Bar Harbor is devoted to

restaurants or hotels. Recently, a large lot across the street from the town pier was bought and is now home to a new hotel and parking garage.

MOUNT DESERT/NORTHEAST HARBOR COMMUNITY PROFILE

Geography and History

The town of Mount Desert on Mount Desert Island is comprised of several villages, of which Northeast Harbor is one. Other villages include Otter Creek, Somesville, Seal Harbor, Hall Quarry, and Pretty Marsh (Figure 32). The town of Mount Desert has a total area of 55.2 square miles, of which 36.9 miles are land and 18.3 square miles are water (U.S. Census Bureau 2010).

Northeast Harbor has a significant seasonal population and has long been a quiet enclave of wealth and prestige. Summer residents include the Rockefeller family. The village was at one time so popular as a summer resort among Philadelphians that it was sometimes called “Philadelphia on the rocks.” While the year-round resident population is the major component of Northeast Harbor’s economy, tourism contributes significantly, as it does in other villages in Mount Desert. Known for its quieter, more relaxed pace in comparison to Bar Harbor, Northeast Harbor also has several galleries, restaurants, and attractions. The village is internationally known for its Asticou Azalea Garden and Thuya Gardens, as well as its hiking paths and access to Acadia National Park.

Demographics and Economy

According to the U.S. Census Bureau (2010), the population of Mount Desert in 2010 was 2,053, down 2.7% from 2,109 in 2000. The population is nearly homogenous; in 2010, 98.1% identified themselves as white (U.S. Census 2010); 54.0% of Mount Desert residents were born in Maine, and 44.4% were born in a different state. In 2010, 37.1% of Mount Desert’s population had a high school degree, while 42% had a bachelor’s degree or higher, which was higher than both the state and national percentages of the population with bachelor’s degrees.

The town’s age structure is similar to many Maine towns in that it is older than the nation as a whole (Figure 33). Consistent with many other small fishing communities, and as a consequence of high real estate values, there is a sharp decline in the population as young individuals leave town for college and in search of employment. The median age in 2010 was 50.7 years

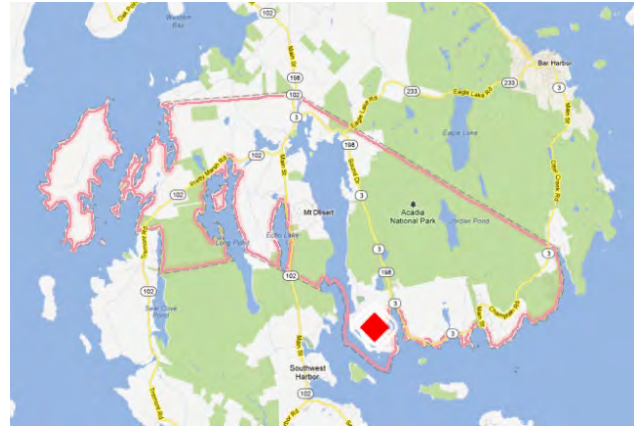


Figure 32. Map of Mount Desert Island. Mount Desert town is outlined in pink. Northeast Harbor’s location is marked with a red diamond.

old, much higher than both the Maine and national median ages. In 2010, the percentage of the population over 65 was 21.4%, also higher than the state and national percentages.

In 2012, median household income in Mount Desert was \$57,091 and median per capita income was \$36,220, both higher than the state median incomes (Table 24). Mount Desert features more households with incomes from earnings compared to Maine and the nation (Table 25). Poverty levels are extremely low in Mount Desert. In 2012, 5.4% of families and 8.1% of individuals fell below the poverty threshold, lower than the state poverty levels. Elderly poverty rates are also low in Mount Desert, with only 2.6% of all persons over 65 falling below the poverty line. Also, considerably fewer households in Mount Desert depend on food stamps compared to Maine and United States (Table 25).

In 2012, 67.2% of the total Mount Desert population 16 years of age and over was in the labor force. Of the civilian labor force, 0.8% was unemployed, much lower than the state unemployment rate (Table 24). Top occupations were management, business, science, and arts occupations (45.5%), service occupations (22%), and sales and office occupations (15.1%). Self-employed workers, another category in which fishermen are found, accounted for 19.6% of all workers (Table 24). As an employment sector, agriculture, forestry, fishing, hunting, and mining occupations accounted for 6.4% of all jobs, slightly higher than in the state as a whole (Table 26).

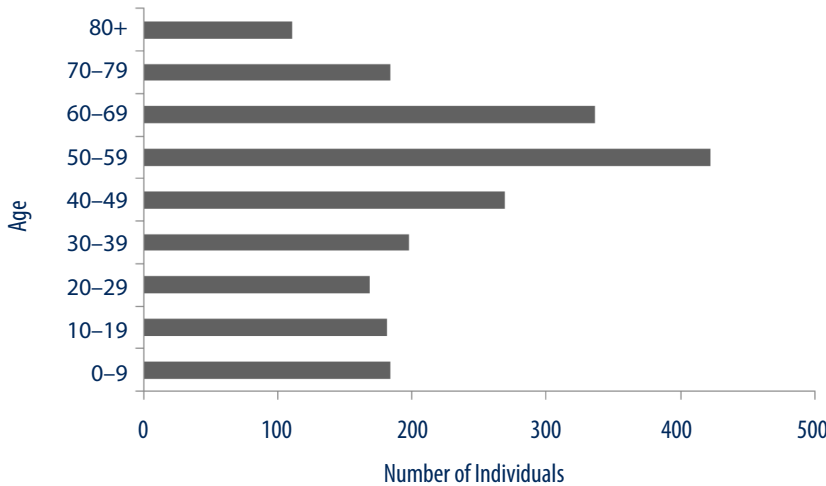


Figure 33. Age structure of the Mount Desert population, 2010. Source: U.S. Census 2010

Table 24. Median and per capita income and percentages unemployed and self-employed, Mount Desert, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
	----- \$ -----		----- % -----	
United States	53,046	28,051	6.0	6.3
Maine	48,219	26,464	4.8	9.1
Mount Desert	57,091	36,220	0.8	19.6

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 25. Household income from earning, social security, retirement, and SNAP, Mount Desert, 2012.

	Households with income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- % -----			
United States	78.7	28.3	17.6	11.4
Maine	75.7	32.9	18.9	15.8
Mount Desert	80.9	39.2	22.0	2.7

Source: 2008–2012 American Community Survey 5-Year Estimates.

Fisheries Profile

Commercial

Commercial fishing is an important part of the Mount Desert community, with vessels operating out of three major harbors: Northeast Harbor, Seal Harbor, and Bartlett’s Landing. During the summer months these boats are kept on moorings, and during the winter

most fishermen store their boats at the docks in Northeast Harbor.

Lobster is the largest and most important fishery in Mount Desert. Other commercially important species include shrimp, scallop, crab, and sea urchin.

Groundfishing: Although groundfishing was once a significant fishery (pers. com. key informant), Acheson et al. (1980) did not report any groundfishing activity; they noted that two boats did “some otter trawling.” Today, groundfish fishing is not significant and there are no groundfish permits in Mount Desert or Northeast Harbor.

State license and federal permit data

In 2011, 53 individuals held a total of 64 state licenses in Mount Desert. Most licenses were for lobster/crab, with some others included for commercial fish and mussel (Figure 34). In 2011, four vessels listing Mount Desert residences held a total of four federal fishery permits. The average vessel length of permit holders in Mount Desert was 34.5 ft. All permits held a federal lobster permit, and no permits held a multispecies groundfish fish permit (Figure 35). In 2012, there were no federally registered dealers listed in Mount Desert.

Recreational and subsistence

Recreational fishing is moderately important within the community, and target species include mackerel, striped bass, pollock, cod, flounder, and halibut. Recreational fishing takes place on the town docks. There are also several charter and cruise companies in town (pers. com. key informant). Beal and Bunker, a mail boat and ferry service, provides year-round travel to and from Great Cranberry, Little Cranberry, and Sutton Island. Sea Princess Cruises offers narrated nature tours, sunset cruises, and private charters.

Table 26. Percentage of jobs in select occupation categories, Mount Desert, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	----- % -----			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Mount Desert	6.4	8.3	13.7	17.9

Source: 2008–2012 American Community Survey 5-Year Estimates.

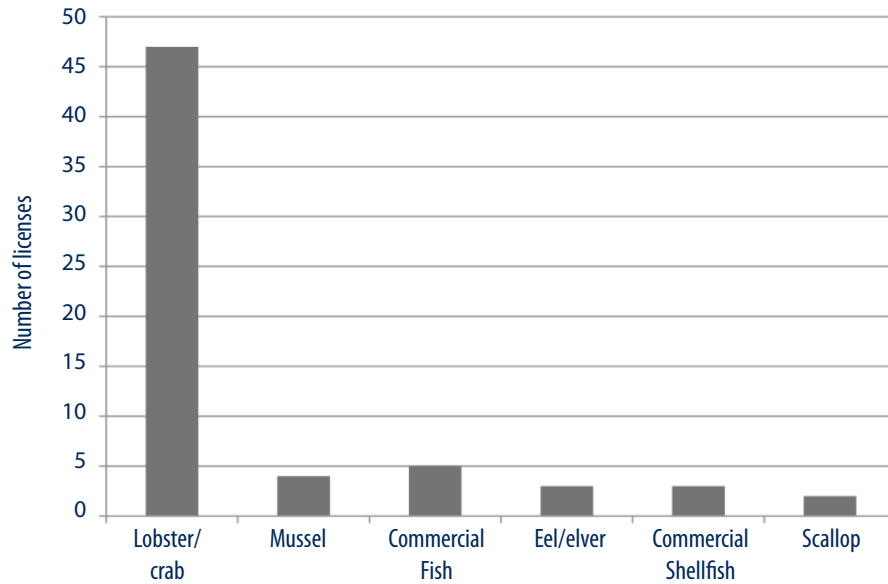


Figure 34. State licenses listing Mount Desert addresses. Source: Maine DMR 2011.

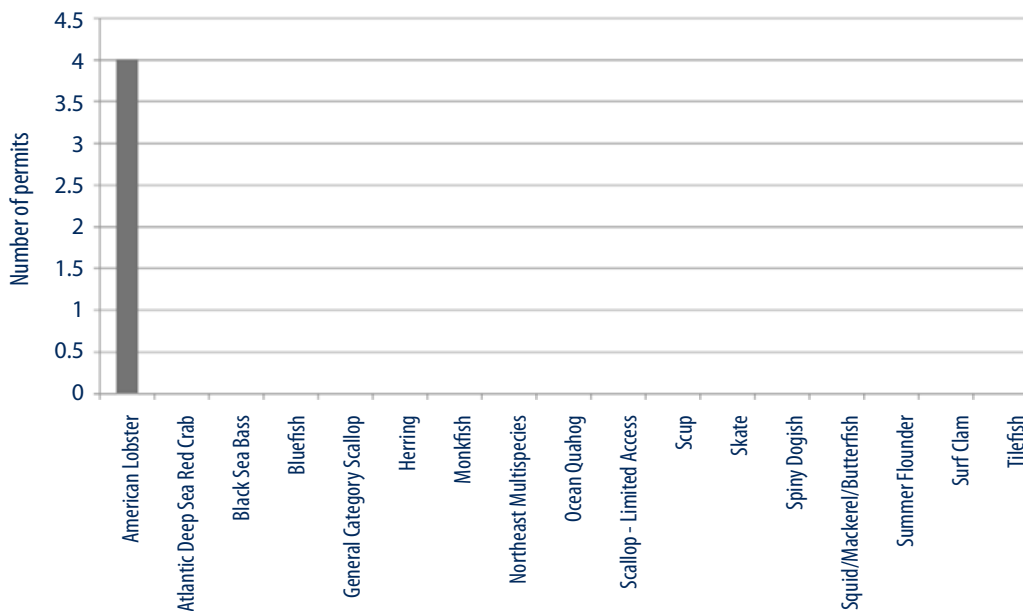


Figure 35. Number of federal permits Mount Desert addresses in 2011. Source: Northeast Region Permit Database.

Asticou Cruises offers private and customized trips which include whale watching, nature tours, fishing, and lobster picnic trips. The owner is also an accredited marine surveyor (pers. com. key informant).

Marine infrastructure

The town of Mount Desert includes the villages of Otter Creek, Seal Harbor, Mount Desert, Northeast Harbor, Somesville, Hall Quarry, and Pretty Marsh. There are five boatyards in town—Morris Yachts, Mount Desert Boat Yard, Bar Harbor Boat, Chuck William, and Abel's Boat—all of which service commercial and recreational boats (pers. com. key informant). Additionally, two boatyards in the nearby town of Bar Harbor cater exclusively to recreational boats.

The town has three municipal docks located in Northeast Harbor, Bartlett's Landing, and Seal Harbor. The town pier in Northeast Harbor is the largest of the three and consists of three docks. The two larger docks include slip space for 25 boats or more, and the central dock includes a paved pier with two hoists for loading and unloading from the exclusively commercial portion of the dock. Additionally, a third and smaller dock is for public access (pers. com. key informant). During the summer, the majority of boats stored at the town pier are pleasure boats, but during the winter, all boats at the pier are commercial fishing vessels. In addition to storage of local boats, whether at the docks or on moorings, many fishermen from other communities throughout Mount Desert Island bring their boats to Northeast Harbor during the winter months, as it is a well-protected harbor (pers. com. key informant).



Ferry services and charter trips operate from the town pier, and tickets can be purchased from a small booth next to the harbormaster's office.

The municipal docks at Bartlett's Landing and Seal Harbor both have limited parking (roughly 12 to 15 spaces) and have floats for tying-up and recreational fishing. There are five public boat launches within the town. Ramps located at Bartlett's Landing and Northeast Harbor are paved and can accommodate large, commercial vessels. Morris Yachts, located next to the town pier, also owns a cradle hoist.

There are four marine railways in town at Morris Yachts, John M. Williams Boat Co., Abel's Boat Yard, and Mount Desert Yacht Yard. Smaller ramps at Bartlett's Landing and at Somes Sound provide easy access for small crafts, canoes, or kayaks. Another small ramp is located in Seal Harbor, but gets little use due to limited parking (pers. com. key informant).

Fuel is available at Clifton Dock, which is right in town and near the municipal dock. Local trucking companies, Acadia Fuel and Coastal Energy, also provide fuel (pers. com. key informant).

There are no local bait houses. Bait is trucked in from or picked up at Pettegrow and RDR LLC, both located in Trenton. Recreational bait and supplies are available at F.T. Brown in downtown Northeast Harbor.

Catch is transported by truck, and there are several dealers who buy from Mount Desert fishermen: Trenton Bridge Lobster Pound, RDR LLC, Beal's Lobster Pound, Southwest Lobster. A few fishermen are members of the Islesford co-op. The Pine Tree Market on Main Street in Northeast Harbor is the only seafood retailer in town (pers. com. key informant).



Northeast Harbor (left) and Seal Harbor float (right).

Fishing industry support and government institutions

The town of Mount Desert's Marine Management Committee has 12 members, including several local fishermen (pers. com. key informant). Many local fishermen participate in the MLA or the DELA (pers. com. key informant).

Cultural attributes related to fishing and the sea

While there are no fishing-related festivals that take place in the town of Mount Desert, many fishermen participate in such activities elsewhere. Several local fishermen reported that they attend the annual Fishermen's Forum, held in Rockport, which brings together fishermen of all kinds, aquaculturists, fisheries managers, state representatives, congressional representatives, and senators.

The Great Harbor Maritime Museum is located in downtown Northeast Harbor. The museum does not feature specific exhibits relating to the area's fishing history, but there are a variety of exhibits relating to the local history and relationship to the sea.

Issues Facing the Commercial Fishing Industry

One of the biggest issues facing fishermen in Northeast Harbor is accessibility. While there are roughly 50 fishing vessels home-ported in the town of Mount Desert, the town—and especially Northeast Harbor—is geared toward tourism during the summer months. Although there are several floats and slips at the town marina, these are mainly used for pleasure boats. During the summer, hundreds of pleasure boats use the harbor, and while the fishermen will keep their boats at moorings during this time of year, they need to use the town piers for offloading and selling catch. With no commercial buying stations in town, the three public piers are where trucks meet the fishermen to buy and transport catch. All of these areas experience high tourist traffic. Additionally, few or no fishermen live on the waterfront. They are spread throughout the town of Mount Desert and a few come from off-island.



The Great Harbor Maritime Museum.

BASS HARBOR AND BERNARD— TOWN OF TREMONT COMMUNITY PROFILE

Geography and History

The town of Tremont encompasses the southwestern portion of Mount Desert Island (MDI) in Hancock County (Figure 36). Mount Desert Island is the largest island off the coast of Maine. In addition to Tremont, MDI is home to the towns of Southwest Harbor, Bar Harbor, and Mount Desert. Tremont includes the villages of Bass Harbor, Bernard, West Tremont, Seal Cove, and Gotts Island. Bernard and Bass Harbor face each other across Bass Harbor. The town of Tremont covers 10,329 acres, 3,000 of which are located within Acadia National Park.²² The Maine State Ferry service provides year-round transportation from Bass Harbor to Swan's Island and Frenchboro (NOAA 2009f). The Bass Harbor Head Lighthouse marks the southernmost point of Mount Desert Island and is a major landmark for seafarers.

The name Tremont is derived from the French phrase *tres monts*, meaning three mountains, for the three local mountains: Beech, Bernard, and Mansell. The town was called Mansell when it was first settled in 1762, which was the name the original settlers of the Massachusetts Bay Colony gave to the island. The town was incorporated in 1848 when it split off from the town of Mount Desert (NOAA 2009f) and renamed Tremont. In its early years, the town was mostly made up of fishermen, mariners, and boat builders. Most of the fishing crews were made up of extended families, and trips for cod and mackerel took the crews as far as the Grand Banks and Labrador (NOAA 2009f).

Along with Southwest Harbor, Tremont (more specifically, Bass Harbor) was known for shipbuilding. The town also had a canning factory—the Underwood & Co. Cannery—that canned lobster, clams, and sardines. When the cannery closed in 1978, it was transformed into luxury condominiums (NOAA 2009f). During the late 1800s, Tremont also became a tourist destination as more and more people wished to see the rustic beauty



Figure 36. Map of southwest Mount Desert Island. Tremont is outlined in pink.

of Mount Desert Island. To this day, tourism remains a major part the local economy.

Demographics and Economics

Tremont's population nearly doubles during the summer, and an increasing number of those who spent summers in Tremont are now living there year-round. According to U.S. Census Bureau (2010), the population of Tremont was 1,563, which is a 2.2% increase from 2000. The population is relatively homogenous; in 2010, 97.3% identified themselves as white (U.S. Census Bureau 2010). With regard to region of birth, 66.9% of residents were born in Maine, 31.7% were born in a different state, and 0.4% outside the United States (U.S. Census Bureau 2010). In terms of education, 38.9% of Tremont's population had a high school degree, while 30.7% had a bachelor's degree or higher, which is higher than both the state and national percentages of population with bachelor's degrees.

The town's age structure is similar to many Maine towns in that it is older than the nation as a whole (Figure 37). Consistent with many other small fishing communities, there is a sharp decline in the population as young individuals leave town for college and in search of employment. The median age in 2010 was 49.2 years, older than both the median ages in Maine and the United States. However, in 2010, the percentage of the population over 65 was 9.7%, lower than both the state and national level.

In 2012, median household income in Tremont was \$38,462 and median per capita income was \$26,196, both lower than the state median incomes (Table 27). Tremont features more households with incomes from

²² Information on the history and geography is from the official website of the Town of Tremont, Maine 2011: <http://www.tremont.maine.gov/Pages/index> and the Southwest Harbor and Tremont Chamber of Commerce 2011: <http://www.acadiachamber.com/>

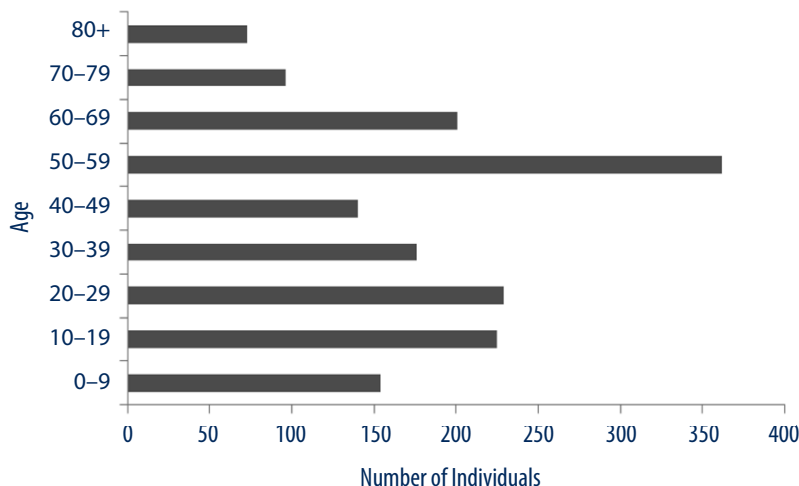


Figure 37. Age structure of the Tremont population, 2010. Source: U.S. Census 2010.

Table 27. Median and per capita income and percentages unemployed and self-employed, Tremont, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
	----- \$ -----		----- % -----	
United States	53,046	28,051	6.0	6.3
Maine	48,219	26,464	4.8	9.1
Tremont	38,462	26,196	5.9	27.2

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 28. Household income from earning, Social Security, retirement, and SNAP, Tremont, 2012.

	Households with Income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- % -----			
United States	78.7	28.3	17.6	11.4
Maine	75.7	32.9	18.9	15.8
Tremont	79.1	35.3	9.7	9.7

Source: 2008–2012 American Community Survey 5-Year Estimates.

Social Security and earnings compared to Maine and the nation (Table 28). In 2012, 15.2% of families and 19.9% of individuals fell below the poverty threshold, which is higher than the state poverty levels. In Tremont, 10.6% of all persons over 65 fall below the poverty line (U.S. Census 2010). Also, fewer households depend on food stamps (Table 28).

In 2012, 66.5% of the total population 16 years of age and over was in the labor force. Of the civilian labor force, 5.9% was unemployed, higher than the state unemployment rate (Table 27). Top occupations were education and health services occupations (18.2%), construction occupations (10.6%), and management, business, science, and arts occupations (27.0%). Self-employed workers, another category in which fishermen are found, accounted for 27.2% of all workers (Table 27). As an industry sector providing employment, agriculture, forestry, fishing, hunting, and mining occupations accounted for 14.7% of all jobs, significantly higher than the state (Table 29).

Fisheries Profile

Commercial

Hall-Arber et al. (2001) identified Tremont and Bass Harbor as fisheries-dependent communities, and a local fisherman confirmed that this remains true today. Most of the fishing activity for Tremont is located in Bernard and Bass Harbor. Locals describe fisheries activity as the heart of the town and estimated that as much as 45,000 lbs of catch crosses the town wharf every day. Two private docks also handle catch daily (pers. com. key informant). Today, lobster is the largest and most lucrative fishery in Bass Harbor, as in other Maine communities, followed by crab. Urchins and scallops are fished in the fall and winter, and at a smaller level, shrimp continues to be landed in

the winter (pers. com. key informant).

The harbormaster asserted that fisheries are, without a doubt, the economic engine for the town of Tremont. In addition, he described the harbor as a “semi-regional facility”—fishermen from all over MDI and the coast use the harbor—and he emphasized that the harbor is welcoming of fishermen from all over,

Table 29. Percentage of jobs in select occupation categories, Tremont, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	----- % -----			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Tremont	14.7	12.6	7.0	18.2

Source: 2008–2012 American Community Survey 5-Year estimates.

unlike some fishing communities that are extremely territorial and independent.

Groundfishing: Acheson et al. (1980) reported three boats groundfishing out of Bass Harbor in the 1970s. Two were otter trawlers, and one was a gillnetter. Today there are four groundfish permits in the town of Tremont. These allow fishing for silver hake (whiting), red hake (ling), offshore hake, ocean pout, or Atlantic halibut. These are not limited-access permits.

State license and federal permit data

In 2011, 129 individuals held a total of 166 state licenses in Tremont (72 in Bass Harbor, 56 in Bernard, and 38 in Tremont, West Tremont, and Seal Cove). Most licenses were for lobster/crab, with some others included for commercial fish and scallop (Figure 38). In 2011, 18 vessels with federal permits listing Tremont residences (nine in Bass Harbor, six in Bernard, and three in Tremont, West Tremont, and Seal Cove) held a total of 40 permits. The average vessel length of permit holders in Tremont was 38.4 ft. All permits held a federal lobster permit, and four permits held a multispecies groundfish permit (two HB; one A; one K) (Figure 39). In 2011, there were no federally registered dealers listed in Tremont or any of its villages.

Recreational and subsistence

Most recreational fishing in Tremont is small scale. There is only one cruise boat in the community, and it departs from Bass Harbor (pers. com. key informant). The “island cruises” tour uses an old lobster boat, and in addition to taking passengers on a tour of the nearby islands, it gives passengers them the experience of hauling lobster traps. Captains in and around Tremont offer deep-sea fishing trips and salt water fishing from the beach or a boat, all of which are popular activities for tourists. In general, however, the fishing community

is too independent to cater to recreational fishermen (pers. com. key informant).

According to NOAA, information on subsistence fishing in Tremont is either unavailable through secondary data collection or the practice does not exist (NOAA 2009f).

Marine Infrastructure

Historically, Bass Harbor was home to two sardine canneries (both of which have now been turned into condominiums) and the C.H. Rich lobster dock (which still exists and has grown over the years). The current site of the town wharf was historically the site for groundfish processing. Ownership changed hands over the years; names of previous owners include Daemon, Smith, and Higgins, who owned the site in the 1960s at the height of the groundfish fishery (pers. com. key informant).

Today, both Bernard and Bass Harbor (on either side of the harbor) have a privately owned lobster pier where lobstermen can unload and sell their catch: C.H. Rich Co., Inc., in Bass Harbor and F.W. Thurston Co. in Bernard. Both companies provide bait and limited dock space to lobstermen who sell to them. F.W. Thurston Co. has two hoists for loading and unloading catch and gear. Because there is not enough space for all fisherman to store gear, storage space is seniority-based, with fishermen who have been fishing longest getting priority over newer, younger fishermen. The company also owns an adjacent restaurant, which is leased to another business that handles the operation. F.W. Thurston sells 8% to 12% of its lobsters to the restaurant, and 80% to 90% is sold elsewhere, mainly to one customer. The C.H. Rich wharf has two hoists and is the only place in town that provides ice to fishermen, sold by the shovelful. An employee told us that the pier has “plenty of space” for loading, unloading, and

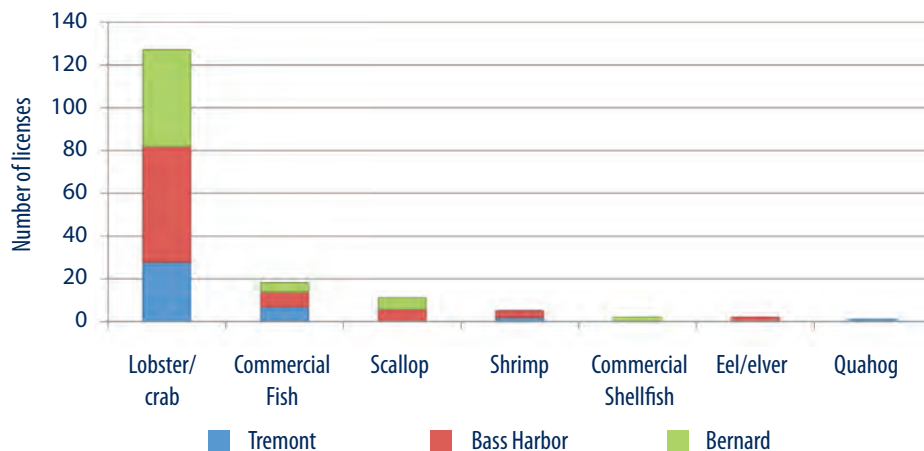


Figure 38. State licenses listing Tremont, Bass Harbor, or Bernard addresses. Source: Maine DMR 2011.

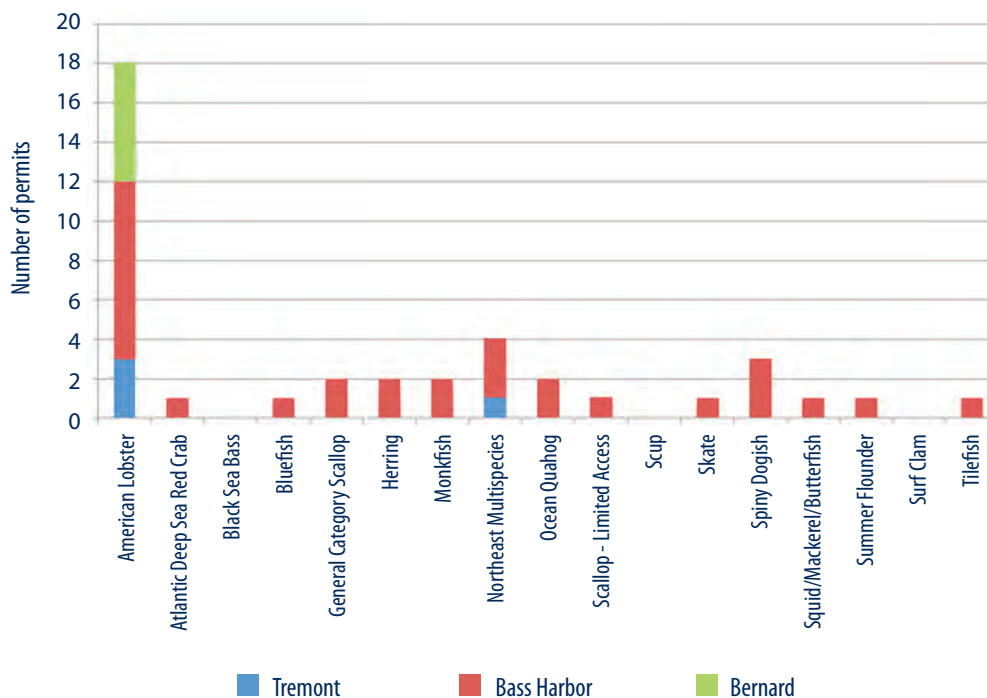


Figure 39. Number of federal permits listing Tremont, Bass Harbor, and Bernard addresses in 2011. Source: Northeast Region Permit Database.

gear storage, but there is not enough space for every lobsterman to store gear. C.H. Rich also wholesales and retails lobsters. The company also purchases crab and shrimp (pers. com C.H. Rich employee).

Vessels typically unload at F.W. Thurston, the town wharf, or C.H. Rich. While some of the lobster landed is sold to local restaurants, including The Wharf and Sea Food Ketch in Bass Harbor, most is packaged and shipped for distribution. Maine-ly Delights, a restaurant in Bass Harbor, has three of its own boats that fish for lobster, crab, and clams (NOAA 2009f). There are no

local processing operations for lobster, so what is not sold locally is shipped out of town. There is some processing locally of both crab and shrimp (pers. com. key informant). In addition to C.H. Rich and F.W. Thurston, the two other main buyers are Canobie Seafoods, Inc., from Trenton, and D.C. Air from Winterport, Maine. Both companies have refrigerated trucks that pick up catch at the town wharf daily (pers. com. key informant).

Most fishing (lobster) boats are moored in Bass Harbor. Moorings are divided into two pools: the A Pool (from the inland town wharf) and B Pool (from



Private wharf in Bass Harbor.

the town wharf toward the mouth of the harbor). There are currently 111 registered moorings for commercial vessels: 89 in A Pool and 22 of 60 in B Pool.

The town also operates a wharf where fishermen can dock their boats (for unloading/loading purposes only) at a subsidized rate. The wharf has three hoists for loading and unloading catch and gear and is also home to the harbormaster's office. The town purchased the wharf in 1989, and the boat ramp was built in 1993. Fishermen pay an annual fee of \$12.50 per vessel foot for a yearlong permit to use the town facilities. This money goes directly into a wharf reserve, which pays for maintenance of the wharf and related facilities, so that the infrastructure is paid for by those who use it rather than by tax dollars. Buyers who use the town wharf to purchase directly from fishermen (loading catch directly into trucks) pay an annual fee of \$2,500 apiece.

The Up Harbor Marina is located at the innermost part of the harbor and caters to recreational boats, providing many services including dockage for up to 50-ft yachts; power and water available; heads, showers, and laundry facilities; and yacht services, haul outs, and winter storage. Parking on shore and dock is limited, and there is no hoist on the pier, so the dock is not important fisheries infrastructure.

In addition to commercial and public facilities, a number of homes located on the waterfront have docks where owners can tie up and unload their lobster boats. Almost every dock along the shore of the harbor bears lobster traps or other fishing gear. A local fisherman

estimated that at least seven private docks are used or leased by fishermen.

Tremont's zoning ordinances include a mixed-use harbor shoreland zone and a commercial fishery/maritime activity shoreland zone reserved exclusively for commercial fishing and other marine activity (NOAA 2009f). The land surrounding the lobster piers in Bernard and Bass Harbor is zoned for commercial fishery/maritime activity (NOAA 2009f). Despite these ordinances, one local estimated that fishermen own less than 5% of the waterfront (pers. com. key informant). Non-fishermen own almost all private docks and then lease them to lobstermen to get a tax break (pers. com. F.W. Thurston employee).

Bass Harbor has a haul-out and repair facility with a marine railway, and there is also a boat ramp in Seal Cove operated by the town (NOAA 2009f). Fishermen may also go to Southwest Harbor for haul-out facilities from A.W. Pettegrow, Inc. (pers. com. key informant).

Boat builders and repair companies in town include Mitchell Cove Boat Co., James H. Rich Boat Yard, Classic Boat Shop, Bass Harbor Boat, Inc., and Morris Yachts. For welding services, fishermen either possess the skills themselves or use the boat repair companies.

In terms of fuel, fishermen are supplied by one of two commercial docks—C.H. Rich or F.W. Thurston—or buy fuel from the two companies that truck fuel to the town wharf: Acadia Fuel and Coastal Energy.

Ice is available from the C.H. Rich pier, but there is no longer an icehouse that could support a groundfish



Ferry terminal and docks in Bass Harbor.

fishery. Historically, the large gray building adjacent to the ferry terminal was an icehouse used for groundfish. Currently, cold storage is left to individual fishermen. Some fishermen rent refrigerated “roll-offs,” or trailers, which they keep on their own property to store bait. Bait is another challenge to the lobster fishery in particular. Since the Stinson’s sardine cannery in Prospect Harbor closed in 2010, getting bait has become much more difficult. Fishermen can still buy bait from the two commercial docks in town and rent refrigerated trailers to store it, but coordinating is substantially more difficult than it was in the past (pers. com. key informant).

Gear is mainly stored on fishermen’s own property though the two commercial docks provide limited space. A few fishermen also own floats in the harbor on which they store gear.

Fishing industry support and government institutions

The MLA represents many of the lobstermen in the area. Some local fishermen have also joined the DELA, and the numbers are still growing (pers. com. key informant).

The Maine DMR, working with the Land for Maine’s Future (LMF) program, provides funds to help purchase, preserve, and protect key properties on the coast that provide access to and support commercial fisheries activities. The Davis Wharf in Tremont received \$265,000 from the LMF board to purchase a covenant

on its property to preserve waterfront access for the commercial fishing industry.²³

Tremont’s local government is comprised of a town manager and five selectmen.²⁴ Tremont also has a harbormaster and a harbor committee. According to the Tremont Harbor ordinance, the harbor committee consists of seven people serving two-year terms. The harbor committee recommends rules and regulations for use of Tremont’s harbors, which are to be enforced by the harbormaster. The harbor ordinance dictates that at least two members of the harbor committee must be commercial fishermen, one member must be a representative of resident boat storage/repair business using the harbors, and another should be a riparian property owner. The harbor committee appoints the harbormaster.

Cultural attributes related to fisheries and the sea

Tremont has a sea memorial located next to the town wharf dedicated to those from the Tremont area who have been lost at sea (NOAA 2009f):

In honor of our relatives, neighbors, and all those who lost their lives to the sea from our shores. We will cherish their memory.

23 Maine’s Working Waterfront Access Pilot Program: <http://www.wvapp.org>

24 Official website of the Town of Tremont, Maine 2011: <http://www.tremont.maine.gov/Pages/index>

Bass Harbor also has also recently begun holding an annual blessing of the fleet and lobster boat races, joining a growing trend in coastal Maine fishing communities.

Issues Facing the Fishing Community

Several fishermen mentioned overregulation of fisheries as an important issue. They believe that overregulation makes it difficult to work efficiently, and that management officials don't know much about fisheries science and management (pers. com. key informant). Locals also felt negatively about the amount of regulation imposed by the Maine DEP regarding waterfront development. The time it takes to receive necessary permits and have environmental assessments performed is perceived as a big hindrance to much-needed improvements to the working waterfront (pers. com. key informant).

Most of the tourism surrounding the harbor is small-scale and aimed at folks who want to get away to a small Maine town. There are a number of B&Bs, small gift shops, and art galleries. There are also a number of seafood restaurants in town including F.W. Thurston, Seafood Catch, and Nemo's (also the local bar).

As with other MDI fishing communities, gentrification is a potential threat to the fishing industry. Though the town has done extensive zoning to keep the shore a working waterfront, property near the water—and in general on MDI—is so valuable that many fishermen have already opted to sell their homes and move off-island, even though they still fish out of Bass Harbor. One local estimated that as of 2011, only about three fishermen live on the water (pers. com. key informant). Others, such as some who work in local boatyards, feel that gentrification has already taken place, considering they catered exclusively to fishermen until the late 1980s, and they now cater almost solely to rich people.

While gentrification is an urgent problem to many, there is a bright side. In 2005, Maine passed a working waterfront law called the Current Use Taxation Law, which allows fishermen to apply for their land to be assessed based on its current use, rather than its "highest and best use." By zoning strategically, locals have kept the maritime character of the community (pers. com. key informant). Recently, third-generation fishermen Wayne and Robert Davis sold a covenant to the state on their family-owned 0.57-acre property, Davis Wharf in Goose Cove in Tremont. The covenant



Gift shop in Bass Harbor, Maine.

secures the property's capacity to support local fishing activities. Davis Wharf is believed to be the last full-service nondealer-owned fishing wharf on MDI. The fund allocation refinanced the business and improved the wharf infrastructure, adding additional tie-up space, more efficient loading and unloading capacity with a new electric hoist, and installing a large float and ramp that allows better access between tides. With the covenant in place, the family will assure that the fishing tradition continues on the property.

Yet another threat to the fishing community is a threat directly to the infrastructure itself. As one local asserted, fishermen are already their own infrastructure. Since the town bought what is now the town wharf, many fishermen have been selling directly to the trucks that ship lobsters elsewhere rather than selling to the two commercial piers in town, essentially cutting out the middleman. This is much more lucrative for individual fishermen, though it takes more coordinating overall, but it is undermining the two commercial docks. If the two commercial docks go out of business and are purchased and turned into condominiums (as was the former Underwood Company cannery), the town's infrastructure will be reduced to only the town wharf, which itself is vulnerable because it could be sold or put out of use by a town vote (pers. com. local boatyard owner).

WINTER HARBOR COMMUNITY PROFILE

Geography and History

Winter Harbor is a separate town from Gouldsboro, but is on the same peninsula (Figure 40). Winter Harbor has a total area of 65.7 square miles, of which 51.3 square miles (78.1%) are water. Winter Harbor is accessible from Bar Harbor by the Bar Harbor Ferry in the summer.

Winter Harbor was settled in 1762 as a plantation called Mosquito Harbor. It was renamed Winter Harbor in 1854 because the harbor never froze, and it was used by mariners seeking shelter from storms. In 1856, Winter Harbor Light was constructed on Mark Island to guide vessels to the harbor and to warn of nearby ledges. Winter Harbor was incorporated on February 21, 1895, after the state legislature approved the petition and granted it official status. Prior to this it had been one village on the map of Gouldsboro. Schooners transported lumber and laths back and forth to Boston and the Canadian provinces in the 1830s. For much of the 1800s, most of the men in town were employed in the cod groundfishery (NOAA 2009g)

Winter Harbor has a small number of tourist services, including shops and galleries, cottage and condominium rentals, bakeries, and restaurants near the water. The town also has a grocery store, bank, historical society, public library, and the newly constructed Municipal Public Safety Building, which houses the town office and police and fire departments. The Bar Harbor Ferry and Winter Harbor Water Taxi at the marina operate during the spring and summer season. There is also a private yacht club and golf course located near Sand Cove. Winter Harbor is also the home of Schoodic Arts for All, a nonprofit organization that brings art and culture to the Schoodic Peninsula and surrounding communities. Also, many original buildings are still maintained and occupied, resulting in a nice historic downtown area.

Demographics and Economy

According to U.S. Census Bureau (2010), Winter Harbor's population was 516 in 2010, a 47.8% decrease from its population in 2000, which is due mostly to the closing of the Naval Group Support Activity. The population is relatively homogenous; in 2010, 96.9%

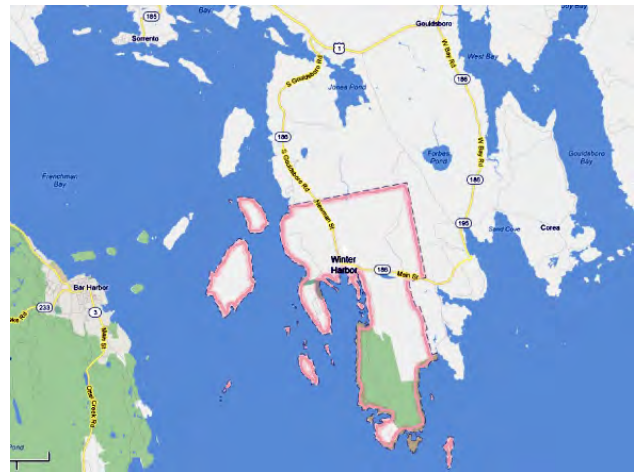


Figure 40. Map of Winter Harbor with Bar Harbor and Mount Desert Island to the west and Gouldsboro to the east.

identified themselves as white (U.S. Census 2010). As for place of birth, 65.9% of residents were born in Maine, 31.5% were born in a different state, and 2.6% were born outside the United States (U.S. Census Bureau 2010). In 2010, 52.2% of Winter Harbor's population had a high school degree, while 14.3% had a bachelor's degree or higher, which was lower than the state and national rates.

The town's age structure is similar to many Maine towns in that it is older than the nation as a whole (Figure 41). Consistent with many other small fishing communities, there is a sharp decline in the population as young individuals leave town for college and in search of employment. The median age in 2010 was 51.1 years, older than both the Maine and national median ages. In 2010, 25.8% of the population was older than 65, also higher than the state and national levels.

In 2012, median household income in Winter Harbor was \$38,281 and median per capita income was \$29,529, both lower than the state median incomes (Table 30). Winter Harbor features fewer households with incomes from Social Security compared to Maine (Table 31). In 2012, 9.5% of families and 14.9% of individuals fell below the poverty threshold, which is much higher than the state poverty rates. Elderly poverty rates are also high in Winter Harbor, with 21.6% of all persons over 65 falling below the poverty line. Also, fewer households depend on food stamps compared to the state (Table 31).

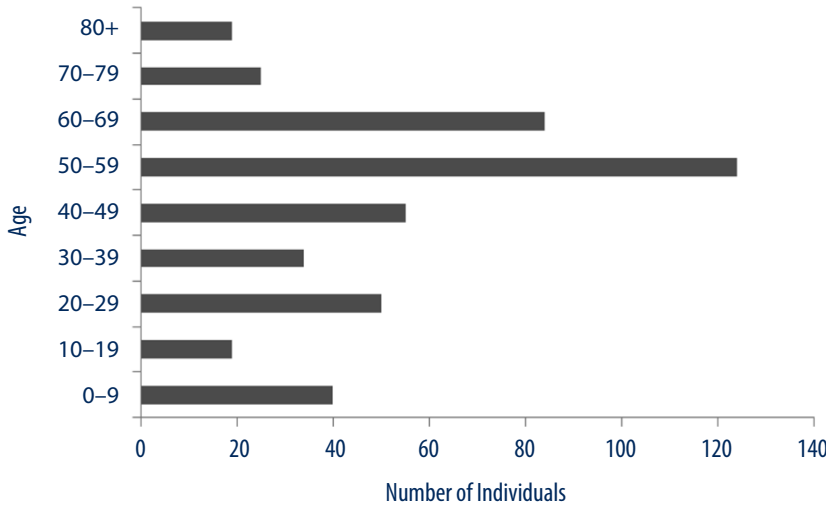


Figure 41. Age structure of the Winter Harbor population, 2010. Source: U.S. Census 2010.

Table 30. Median and per capita income and percentages unemployed and self-employed, Winter Harbor, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
		\$	%	
United States	53,046	28,051	6.0	6.3
Maine	48,219	26,464	4.8	9.1
Winter Harbor	38,281	29,769	4.4	17.4

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 31. Household income from earning, Social Security, retirement, and SNAP, Winter Harbor, 2012.

	Households with income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	%			
United States	78.7	28.3	17.6	11.4
Maine	75.7	32.9	18.9	15.8
Winter Harbor	75.5	25.5	20.4	12.3

Source: 2008–2012 American Community Survey 5-Year Estimates.

In 2012, 61.1% of the total population 16 years of age and over was in the labor force. Of the civilian labor force, 4.4% were unemployed, quite close to the state unemployment rate (Table 30). Top occupations were natural resources, construction, and maintenance occupations (36.7%), service occupations (27.6%), management, business, science, and arts occupations

(23.1%), and sales and office occupations (11.1%). Self-employed workers, another category in which fishermen are found, accounted for 20.1% of all workers (Table 30). As an employment sector, agriculture, forestry, fishing, hunting, and mining occupations accounted for 9.5% of all jobs, higher than the state (Table 32).

Fisheries Profile

Commercial

As in other Downeast Maine fishing communities, lobster is the largest and most lucrative industry in Winter Harbor. Though the hey-day of urchins is past, there is still some urchin harvesting in Winter Harbor. Acheson et al. (1980) report that during the spring of 1979, seven lobster fishermen rigged for otter trawling in Winter Harbor.

State and Federal Permit Data

In 2011, there were 53 individuals who held a total of 98 state licenses in Winter Harbor. Most licenses were for lobster/crab, with some others included for commercial fish, scallop, and shrimp (Figure 42). In 2011, 19 vessels with federal permits listing Winter Harbor residences held a total of 61 permits. The average vessel length of permit holders in Winter Harbor was 41.2 ft. All permits but two held a federal lobster permit, and five permits held a multispecies ground fish permit (three HB; two A) (Figure 43). In 2012, two federal dealers were listed in Winter Harbor. One dealt with lobster, and one dealt with lobster, ground fish, tuna, herring, skate, scallop, and monkfish.

Recreational and subsistence

There is little recreational fishing today in Winter Harbor; according to one local, “mackerel is about the only fish left that anyone catches.” For fishing from

Table 32. Percentage of jobs in select occupation categories, Winter Harbor, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	----- % -----			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Winter Harbor	9.5	11.6	3.5	26.6

Source: 2008–2012 American Community Survey 5-Year Estimates.

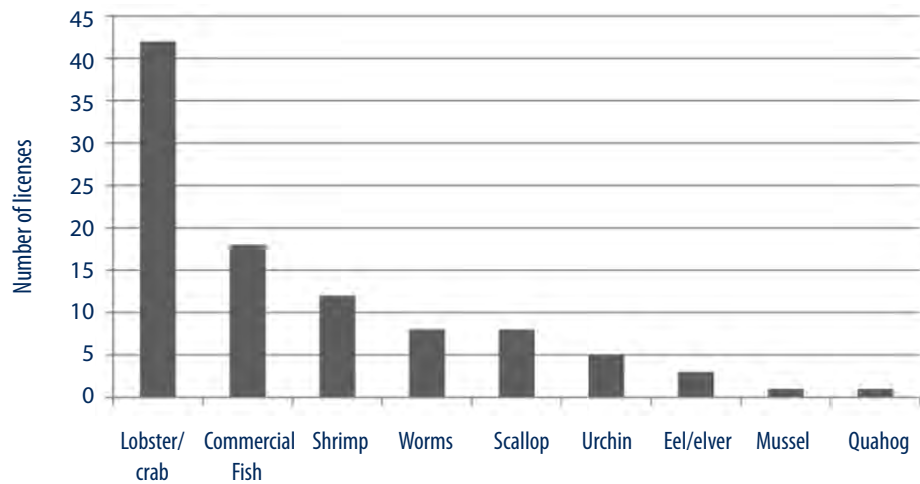


Figure 42. State licenses listing Winter Harbor addresses. Source: Maine DMR 2011.

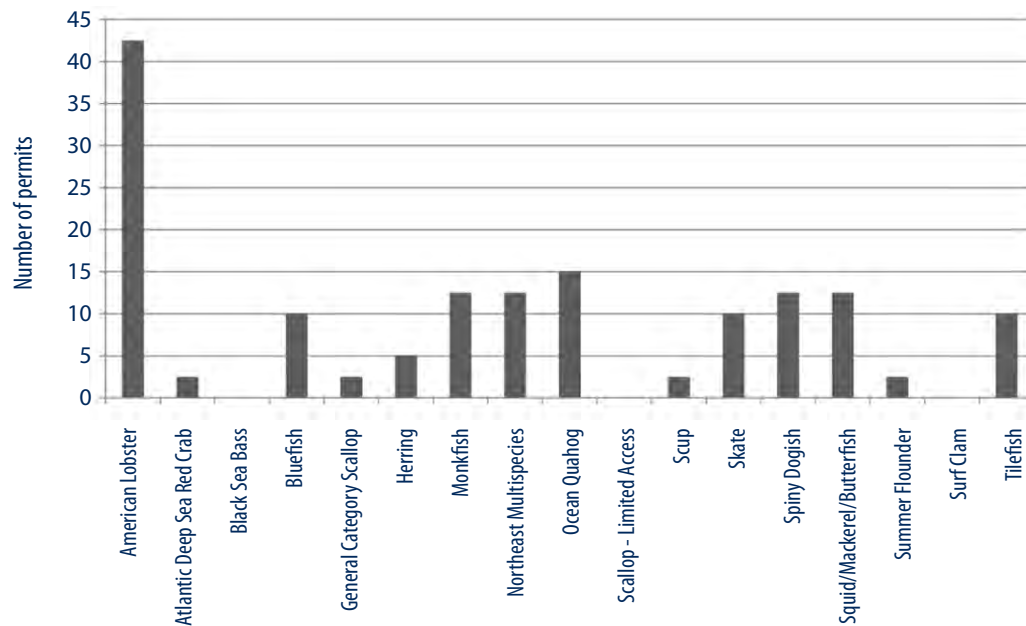


Figure 43. Number of federal permits listing Winter Harbor addresses in 2011. Source: Northeast Region Permit Database 2011.



Town pier (left) and Winter Harbor marina (right).

shore, Frazer Point in Acadia National Park is the only location in town that sees much activity (pers. com. key informant). According to NOAA, information on subsistence fishing in Winter Harbor is either unavailable through secondary data collection or the practice does not exist (NOAA 2009g).

Marine infrastructure

Winter Harbor has a town pier at the end of Harbor Road, near where boats moor in the inner harbor. The pier has ample parking, but there is no hoist, so gear must be carried down the gangway onto a single float to be loaded aboard fishing vessels. A sign warns against driving vehicles heavier than 12,000 lbs onto the pier until further notice. Only a few fishermen use the town pier as their loading/unloading facility. At times, during the busy tourist season, the space in and around the pier can get congested.

Winter Harbor also has a marina where recreational boats can rent moorings (\$25/night, \$150/week, \$400/month, \$800/season). The site is also home to boat storage, a launch ramp (\$10, pleasure boats; \$35, commercial; \$150, season pass), the Bar Harbor Ferry, and the Winter Harbor Water Taxi. A free Island Explorer shuttle bus departs the marina once an hour. The marina has fallen into neglect in recent years, though it has the potential to be useful as working waterfront and public/recreational access. The marine supply store and boat storage on site are no longer in use and are in a state of disrepair. There is a large hoist on the wharf, but it is no longer in operation. The fuel tanks are not in working condition, and this is not expected to change in the near future (pers. com. key informant).

In terms of commercial fisheries, there are two buyers in town. The Winter Harbor Coop is across the harbor from the town pier and has 31 members, about 90% from Winter Harbor. Members of the co-op who do not live in Winter Harbor either have family in town or have other ties to the town. The co-op has been in operation for 40 years and provides the fishermen with bait, fuel, and marine supplies (what they don't have on site they will order). There is no public place to fuel boats, so only a few independent fishermen and recreational boats use the co-op for fueling up. In terms of catch, the co-op facilities are primarily used to land lobster, but also shrimp and quahogs. In the past, some members of the co-op also participated in the groundfishery. The co-op buys lobsters and then sells them both wholesale and retail (on-site and online). The co-op does not have its own trucks—"that's next"—so customers use their own. Infrastructure on-site includes a float for loading/unloading, one hoist, a large shed for bait, a large cooler/shed that can hold several thousand pounds of bait and keep it at 45 degrees, an old office now used for storage, and a new office, the downstairs of which houses a tank room that can hold 18,000 lbs of lobster. Rather than having to sell wholesale at the end of every day, the tank room gives the co-op more selling options and flexibility (pers. com. co-op employee).

The second buyer in Winter Harbor does not have a waterfront site. D.C. Air is located a few miles from the harbor and has been in operation since 1999. The business has 15 vehicles, and trucks, garage, electrician, and mechanics. It buys seafood from other dealers (including the co-op in town) and has about 15 fishermen



Winter Harbor Lobster Coop (left) and D.C. Air (right).

who deliver catch to it. D.C. Air buys lobsters, quahogs, urchins, and crabs, and in the past bought groundfish occasionally. The company provides bait to fishermen who sell to it (pers. com. D.C. Air employees).

Fishing industry support and government institutions

The MLA and the DELA represent many of the lobstermen in the area. Winter Harbor has three selectmen and a town manager.

Cultural attributes related to fisheries and the sea

Winter Harbor hosts an annual lobster festival, which is sponsored by the Schoodic Area Chamber of Commerce. The festival consists of lobster boat races, a craft fair, lobster dinners, food vendors, and a parade. It celebrated its 48th year in 2012.²⁵

Issues Facing the Commercial Fishing Industry

One issue that some locals worry about is the amount of fishing pressure on commercial species. A substantial number of lobsters and other species such as urchins are landed in Winter Harbor, and overfishing is a constant concern. Another issue, since the recent cut in the herring quota, is the availability of bait. Fuel prices have also been increasing and putting pressure

on fishermen. Currently the Winter Harbor Coop is the only place in town to buy fuel.

Space in the inner harbor is also a problem for new fishermen. Minimal mooring space is available due to the number of boats in the harbor. Similarly, infrastructure for docking and unloading is currently limited to the co-op; the marina has the potential to be working waterfront, but it is currently not in use.

Lastly, a broader issue facing the community is that population has been sharply decreasing in recent years—a drop of 48% in the last 10 years, which in turn affects the economy of the town. The main reason for the huge drop in population was the closing of the Naval Group Support Activity in 2002, which had operated nearby since 1935. The facility was located on Schoodic Point, which is now the location of part of Acadia National Park, controlled by the National Park Service. The Schoodic Education Research Center (SERC) Institute was created in 2004 and is located where the Navy base was. SERC is co-managed by the National Park Service and SERC Institute. The mission is to guide present and future generations to greater understanding and respect for nature by providing research and learning opportunities through its outstanding Acadia National Park setting, unique coastal Maine facilities, and innovative partnership programs (pers. com. key informant).

²⁵ More information about the Annual Maine Lobster Festival can be found at <http://www.acadia-schoodic.org/lobsterfestival.html>.

GOULDSBORO COMMUNITY PROFILE

Geography and History

Gouldsboro includes the villages of South Gouldsboro, Birch Harbor, Prospect Harbor, and Corea, all of which are within three miles of one another in Hancock County. Corea and Prospect Harbor are located on the Schoodic Peninsula across Frenchman's Bay from Bar Harbor. Corea is bordered by Gouldsboro Bay to the east, West Bay to the north, and the Gulf of Maine to the south (Figure 44).

Gouldsboro was incorporated as a town on February 16, 1789. As the population increased, Gouldsboro became a busy village with a gristmill, wool mill, shipyard, post office, and school. The early settlers were generally farmers, fishermen, and later factory workers. Birch Harbor and Bunkers Harbor were settled by people who made their living from fishing and lobstering (NOAA 2009h). Originally called "Indian Harbor," Corea was almost exclusively a lobstering village (NOAA 2009h). Prospect Harbor was deep and clear of major navigational obstacles, so it became a popular berthing place for large schooners and home to many sea captains (NOAA 2009h). Prospect Harbor remains the town center, and herring and lobster have been a way of life in Gouldsboro for generations (NOAA 2009h).

Demographics and Economy

The population of Gouldsboro has been declining for the past few decades. According to the U.S. Census Bureau (2010), the population of Gouldsboro was 1,737 in 2010 (down 10.5% from 1,941 in 2000). The population is relatively homogenous; in 2010, 97.8% identified itself as white (U.S. Census Bureau 2010). More than 63% of residents were born in Maine, 34.8% were born in a different state, and 1.3% were born outside the U.S. (U.S. Census Bureau 2010). As for educational attainment, 39.9% of Gouldsboro's population had only a high school degree, while 20.4% had a bachelor's degree or higher, which is lower than the state and national percentages of people with bachelor's degrees.

The town's age structure is similar to many Maine towns in that it is older than the nation as a whole (Figure 45). The median age was 50.3 years in 2010, higher than both the Maine and the national median

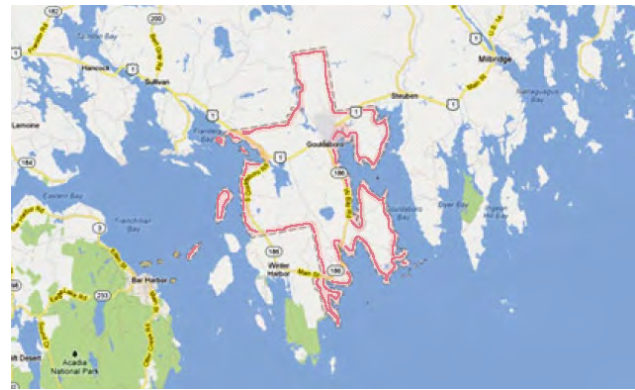


Figure 44. Map of Gouldsboro. Town borders outlined in pink.

ages (U.S. Census Bureau 2010). In 2010, 23.1% of the population was 65 years of age or older in 2010 (U.S. Census Bureau 2010).

In 2012, median household income in Gouldsboro was \$50,256 and median per capita income was \$26,615, both higher than the state median incomes (Table 33). Gouldsboro features more households with incomes from Social Security, but fewer households with incomes from retirement compared to Maine and the nation (Table 34). Gouldsboro had lower poverty levels than many of the other major fishing communities in Maine. In 2012, only 6.1% of families fell below the poverty threshold (lower than the state poverty rate) and 14.7% of individuals fell below the poverty threshold (higher than the state poverty rate). Elderly poverty rates are also low in Gouldsboro, with only 5.8% of all persons over 65 falling below the poverty line. Also, fewer households in town depended on food stamps in 2010 (Table 34).

In 2012, 57.7% of the total population 16 years of age and over was in the labor force. Of the civilian labor force, 7.4% was unemployed, higher than the state unemployment rate (Table 33). Top occupations were natural resources, construction, and maintenance occupations (27.7%), management, business, science, and arts occupations (25.9%), and service occupations (18.0%). Self-employed workers, another category in which fishermen are found, accounted for 18.1% of all workers (Table 33). As an employment sector, agriculture, forestry, fishing, hunting, and mining occupations accounted for 16.9% of all jobs, significantly more than the state as a whole (Table 35).

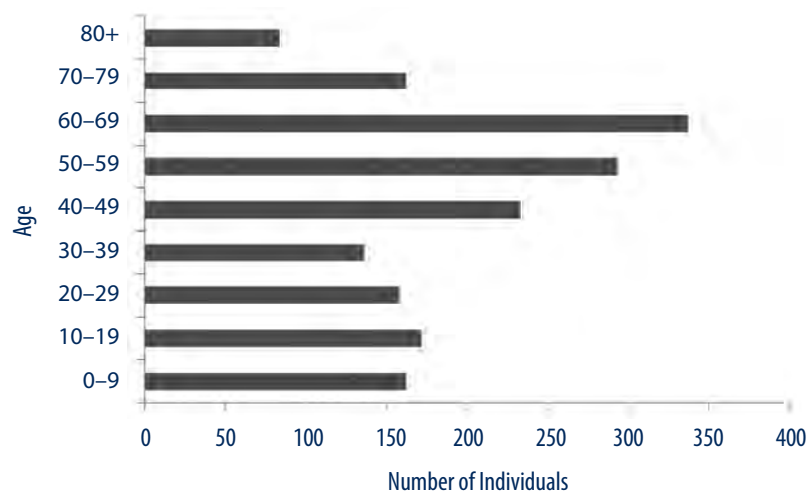


Figure 45. Age structure of the population in Gouldsboro, 2010. Source: U.S. Census 2010.

Table 33. Median and per capita income and percentages unemployed and self-employed, Gouldsboro, 2012.

	Median Capita Income	Per Capita Income	Unemployment	Self-employment
	----- \$ -----		----- % -----	
United States	\$53,046	\$28,051	6.0	6.3
Maine	\$48,219	\$26,464	4.8	9.1
Gouldsboro	\$50,256	\$26,615	7.4	18.1

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 34. Household income from earning, Social Security, retirement and SNAP, Gouldsboro, 2012.

	Households with income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- % -----			
United States	78.7	28.3	17.6	11.4
Maine	75.7	32.9	18.9	15.8
Gouldsboro	73.7	42.6	15.6	12.3

Source: 2008–2012 American Community Survey 5-Year Estimates.

Fisheries Profile

Commercial

Gouldsboro has long been a fishing community and despite changes over the years, locals interviewed continue to see it that way. The town is comprised of numerous smaller harbors, which have their own fleet of fishing vessels. There are six lobster buyers spread across the peninsula. Herring and lobster were historically important fisheries in Gouldsboro, but today herring

is infrequently landed in town, except occasionally as bait. Lobster is by far the largest and most important fishery in the towns of Gouldsboro and Winter Harbor. Other commercially harvested species include shrimp, crab, mussels, and clams (pers. com. key informant).

Until April 2010, Stinson Foods, located in Prospect Harbor, was the sole cannery remaining in Maine and the United States. Stinson Foods once bought herring from 12 to 15 separate carriers in the course of a year (NOAA 2009h). In 2012, Maine Fair Trade Lobster, a joint venture between Garbo Lobster and East Coast Seafood, began processing lobsters in the old Stinson Cannery building, employing around 160 people (Trotter 2013).

Groundfishing: Acheson et al. (1980) report that “except for a few tubtrawls for halibut set by lobster fishermen as an incidental activity, Prospect Harbor has no groundfishing. Stinson began buying groundfish in late 1977. Acheson et al. (1980) also state groundfishing in Corea didn’t start until 1978, when two lobstermen did some otter trawling. They also note an “incidental, almost recreational fishery” that involved lobstermen setting tubtrawls for halibut. Acheson et al. (1980) reported that in the spring of 1979, seven lobstermen rigged for otter trawling in Winter Harbor and then converted back to lobstering for the summer.

State and federal permit data

In 2011, there were a total of 178 individuals with state licenses in Gouldsboro. These individuals held 286 licenses, most of which were for lobsters and crabs (Figure 46). In 2011, 55 vessels with federal permits listing Gouldsboro residences held a total of 82 permits. All but one permit included a federal lobster permit and four permits included multispecies groundfish permits (two with HB; two A [limited access]; one K)

Table 35. Percentage of jobs in select occupation categories, Gouldsboro, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	%			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Gouldsboro	16.9	8.7	4.6	22.6

Source: 2008–2012 American Community Survey 5-Year Estimates.

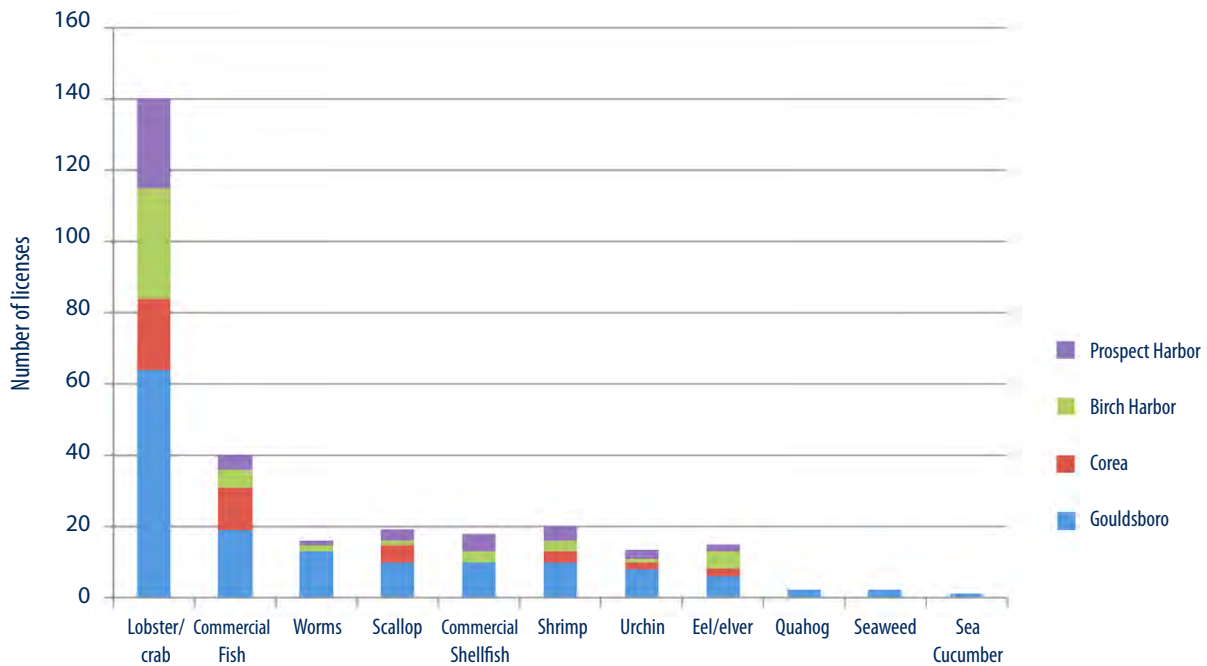


Figure 46. State licenses listing Gouldsboro addresses. Source: Maine DMR 2011.

(Figure 47). The average vessel length of permit holders in Gouldsboro, Corea, Birch Harbor, and Prospect Harbor was 38.2 ft. In 2012, there were three federal dealers listed in Gouldsboro; all three deal lobster, and one also deals herring.

Recreational and subsistence

According to NOAA (2009h), the Gouldsboro area, especially Prospect Harbor and Corea, was an important part of Maine's recreational fishing industry. Significant saltwater sport fishing in Maine occurred in these waters and out of this area. Today, however, there is little recreational fishing because there are few fish to catch. As one local stated, "They go out hoping they'll catch a cod, but mackerel and pollock is all they ever catch."

According to NOAA, information on subsistence fishing in Gouldsboro is either unavailable through secondary data collection or the practice does not exist (NOAA 2009h).

Marine Infrastructure

The town of Gouldsboro has one public wharf, located in Prospect Harbor, which appears to be in good condition with new wooden planking. The wharf has one hoist and a small float, which can hold a small number of skiffs and has space for a larger vessel to dock while loading or unloading. The town also has three public launches: one in Birch Harbor on Town Landing Road adjacent to the D.B. Rice commercial dock, one in South Gouldsboro on Shore Road adjacent to the Gouldsboro Enterprises dock, and one on Gouldsboro Point (pers. com. key informant).

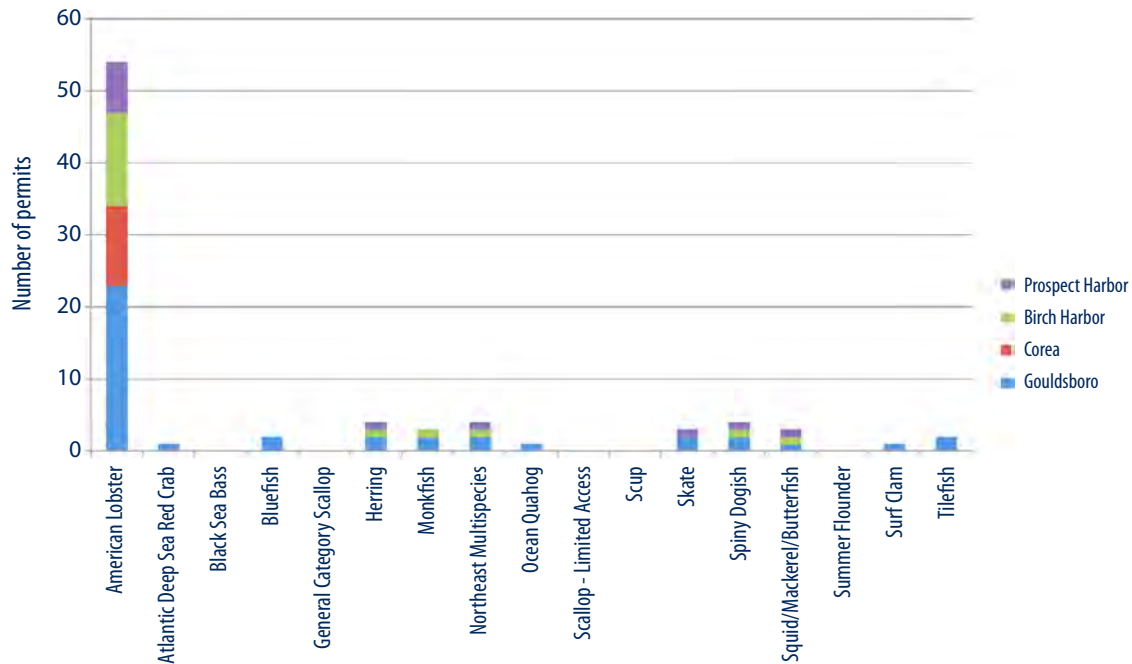


Figure 47. Number of federal permits. Source: Northeast Region Permit Database.

There is a boatbuilder in Corea, Light's Fiberglass, established in 1995. There used to be other boat builders, but they are no longer in business. Repairs are done unofficially by a number of talented locals or by fishermen themselves. Space is rented onshore if the boat must be hauled out. For recreational boats, Snyder Boat Repair is a new business that hopes to service yachts and classic boats. Billing's Diesel Marine in Stonington is the nearest/most convenient boat repair yard if repair requires a larger facility (pers. com. key informant). The only marine boating supplier in town is Anderson's Marine on Route 1. If other equipment is needed, gear from Hamilton Marine in Southwest Harbor can be dropped off in town.

There are five lobster buyers/dealers in Gouldsboro, and a co-op in nearby Winter Harbor. Unlike many other fishing communities, these are not clustered around one main harbor, rather they are divided between multiple harbors spread across a large peninsula.

Corea

The village of Corea is home to one commercial buyer, the Corea Co-op. To be a member of the co-op, fishermen must fish out of Corea Harbor. The co-op serves 45 lobster vessels and has been in operation since 1970. It provides bait, fuel, and marine supplies/parts for its members. The dock used to serve commercial

fishermen, but no longer does so. There have been many recent improvements to the site: the wharf and buildings were completely rebuilt and the driveway to the dock was paved. The co-op has no processing facilities, and customers bring their own trucks to ship catch elsewhere. The co-op sells 99% of its lobsters wholesale, with a small on-site retail operation for lobster and crab.

Prospect Harbor

The D.B. Rice Company owns two buying stations in Gouldsboro. The wharf in Prospect Harbor is leased to another buyer who manages the site. Recently under new ownership, the site was previously called Prospect Harbor Trading Co. (the old sign is still up). The dock itself has been in operation for approximately 70 years, and under its latest owner, for just over a year. It buys from seven fishermen in the summer and fewer in the winter. The wharf provides its fishermen with salted bait and fuel. The site has limited parking space, but has seen recent improvements such as a new office and roof and new pilings beneath the wharf. The wharf has one hoist. The company does only wholesale, selling catch to Garbo Lobster, which brings trucks to the site (pers. com. key informant).

Adjacent to D.B. Rice and the town wharf is Inland Lobster, a division of Inland Seafood. The site has ample parking, and the wharf is larger than most and in good



Corea Co-op building (left) and view of Corea harbor (right).

condition. The site is leased from both the town (on the left) and a private waterfront owner (on the right). In a good summer, Inland Lobster buys from 17 vessels, seven in the fall and all winter. Most boats are from the immediate area, though two are from the village of Corea. The company provides salted bait and fuel, has a large, new float for unloading and weighing lobsters, and has two hoists. It has no processing facilities on site, but its parent company in Georgia does, and Inland Lobster trucks the catch to nearby Milbridge, Maine, where it is either processed or packaged for shipping to Georgia.

Maine Fair Trade Lobster, a joint venture between Garbo Lobster and East Coast Seafood, has brought the former Stinson Seafood sardine cannery back to life as a lobstering processing plant (Trotter 2013). The plant is expected to hire around 160 employees (Trotter 2013).

The plant expects to begin processing 60,000 lbs per day then up to 100,000 lbs daily in the months ahead (Weaver 2013). Garbo is the largest buyer of lobsters in the state (Trotter 2013).

Bunkers Harbor (in the village of Birch Harbor)

This small harbor is home to one commercial buyer though it is lined by many private wharves and sees substantial lobster fishery activity. The second of the D.B. Rice wharves, it has been in operation for at least 125 years, 20 years under current management. The company buys only from local lobstermen and provides fuel and bait to its 21 boats. The wharf is on a small site and therefore crowded, but in good condition—the only needed repair listed was constant maintenance. In terms of catch, a small amount is sold retail, and the



D.B. Rice building (left) and Inland Lobster wharf, a division of Inland Seafood (right).



D.B. Rice in Bunkers Harbor (left) and Gouldsboro Enterprises (right).

bulk is sold wholesale. The company uses a mix of its own and customers' trucks.

South Gouldsboro

This area is home to two buying stations—one for lobster and one for worms—that are run jointly on the same site adjacent to the public boat ramp. Gouldsboro Enterprises is located at the end of Shore Road and has been in operation for 42 years. The lobster facility provides its 23 boats with fuel and bait and provides fuel to a handful of recreational boats also. The company has a small wharf, floats for lobster buying, and a smaller pier adjacent to the lobster wharf with a building that houses tables for counting worms. Independent diggers bring worms to the facility to count and sell (pers. com. Gouldsboro Enterprises co-owner).

Fishing Industry Support and Government Institutions

The Corea Lobster Cooperative buys lobster from local fishermen and also provides fuel and supplies to fishermen (NOAA 2009i). The Winter Harbor Lobster Co-op has about 30 members/owners, and in addition to purchasing and shipping lobsters from the local lobstermen, the co-op provides bait, gear, and parts (NOAA 2009h).

The MLA and DELA represent many of the lobstermen in the area.

The town of Gouldsboro is governed by a five-member board of selectmen. The town manager is appointed by the selectmen and is responsible for the day-to-day operations of the town. Gouldsboro

also has a harbormaster, deputy harbormaster, and a harbor committee. The board of selectmen appoints the five-person harbor committee, which is made up of interested commercial fishermen, representatives of marine-related businesses, and private citizens.²⁶

Cultural attributes related to fisheries and the sea

Although not in the town of Gouldsboro, nearby Winter Harbor hosts an annual lobster festival, which is sponsored by the Schoodic Area Chamber of Commerce. The festival consists of lobster boat races, a craft fair, lobster dinners, food vendors and a parade. It celebrated its 48th year in 2012.²⁷

A 1947 documentary entitled *Lobstertown* focused on life in Corea. The film depicts the traditional ways of life for Corea lobster fishermen, their families, and their community directly after World War II. The documentary also discusses the changes in Corea due to fluctuation of fishery stocks, increased tourism, government regulation, and the surge of people moving into the community from other states.²⁸

Issues facing the fishing community

One threat to the Gouldsboro fishing community is that lobster is the only active and lucrative fishery left. The loss of overall fisheries activity and diversity

26 Official website of the Town of Gouldsboro, Maine. 2011. <http://www.gouldsborotown.com/>

27 More information about the annual Maine Lobster Festival can be found at <http://www.acadia-schoodic.org/lobsterfestival.html>.

28 <http://docs.lib.purdue.edu/dissertations/AAI3037604/>

threatens the community's ability to maintain both its fishing character and its infrastructure. If the lobster industry were to decline, there would be no fishing activity left to sustain the community.

Another threat that worries many locals is over-regulation of the fisheries. With so many regulations and limits on how many can participate in the fishery, some worry that fishermen or their descendents will eventually be pushed out all together. One local stated, "The resources could take care of themselves if we could fish like we used to, they were always able to rebound."

Yet another issue, one that has been described in many other fishing communities, is the danger of gentrification, in terms of both character and waterfront access. Waterfront and nearby property is so valuable that many locals (including fishermen) sell their property to summer residents "from away." Higher property prices make it hard for local families or younger generations to later re-purchase property in the area. This dynamic has changed the demographics and character of the community (pers. com. key informant). This trend also affects waterfront access. In the village of Corea, a resident explained that despite every private wharf being covered in lobster traps, leading one to think that fishermen owned waterfront property, most of the waterfront is owned by non-fishermen from away. Many of these property owners have agreements with fishermen to allow the use of the wharves for fishing, but only for those specific fishermen's lifetimes; access for future generations will disappear. Other fishermen have sold most of their property, retaining only a small triangle along the waterfront to ensure access to the wharf and harbor. "And this problem," noted the same local, "is happening everywhere on the peninsula, all throughout Gouldsboro" (pers. com. Corea Co-op employee).

STEUBEN COMMUNITY PROFILE

Geography and History

The town of Steuben is located in Washington County. The town has a total area of 74.8 square miles, of which 31.8 square miles (42.5%) are water. It is bounded on the north by Cherryfield, on the east by Millbridge, on the west by Gouldsboro in Hancock County, and on the south by the Atlantic Ocean. To the east is the Narraguagus River and Bay, and to the west are Gouldsboro Bay and Steuben Harbor (Figure 48).

Steuben was incorporated in 1795 and was named after the inspector general of the U.S. Army during the Revolutionary War. Historically, Steuben has been dominated by the fishing industry, but it has also been home to terrestrial-based industries such as lumber, manufacturing, and mining. In 1886, there were two mining companies in Steuben, the Petit Manan Silver Co. and Steuben Silver Mining Co.

Demographics and Economy

According to U.S. Census Bureau (2010), the population of Steuben was 1,131, which is a 0.4% increase from its population in 2000. The population is relatively homogenous; in 2010, 98.6% identified itself as white (U.S. Census Bureau 2010). Of Steuben residents, 70.6% were born in Maine, 27.2% were born in a different state, and 2.2% were born outside the United States (U.S. Census Bureau 2010). In 2010, 44% of Steuben’s population reported having only a high school degree, while 19.2% had a bachelor’s degree or higher.

The town’s age structure is similar to many Maine towns in that it is older than the national average (Figure 49). Consistent with many other small fishing communities, there is a sharp decline in the population as young individuals leave town for college and in search of employment. The median age in 2010 was 42.4 years, lower than Maine’s median age, but higher than the U.S. median age. In 2010, 15.2% of the population was over 65, which is also lower than the state percentage but higher than the national percentage.

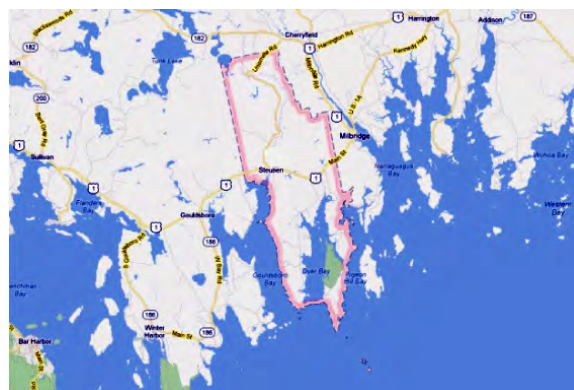


Figure 48. Map of Steuben with Gouldsboro to the west and Millbridge to the east.

In 2012, median household income in Steuben was \$40,625, and median per capita income was \$20,079, both lower than the state median incomes (Table 36). Steuben features more households with incomes from Social Security, and fewer with incomes from earnings compared to Maine and the nation (Table 37). In 2012, 18.6% of families and 27.0% of individuals fell below the poverty threshold, both rates higher than the state poverty rates. Elderly poverty rates are also high in Steuben, with 16.3% of all persons over 65 falling below the poverty line. Also, more Steuben households depend on food stamps than do households in the state or nation (Table 36).

In 2012, 61.3% of the total population 16 years of age and over was in the labor force. Of the civilian labor force, 7.4% was unemployed, higher than the

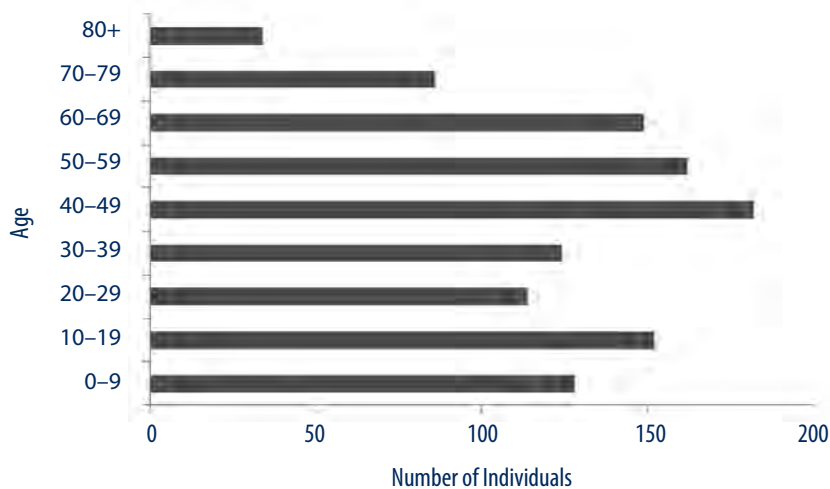


Figure 49. Age structure of the Steuben population, 2010. Source: U.S. Census 2010.

Table 36. Median and per capita income and percentages unemployed and self-employed, Steuben, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
	----- \$ -----		----- % -----	
United States	53,046	48,219	6.0	6.3
Maine	48,219	26,464	4.8	9.1
Steuben	40,625	20,079	7.4	26.0

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 37. Household income from earning, social security, retirement, and SNAP, Steuben, 2012.

	Households with income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- \$ -----			
United States	78.7	28.3	17.6	11.4
Maine	75.7	32.9	18.9	15.8
Steuben	69.5	43.1	17.6	25.3

Source: 2008–2012 American Community Survey 5-Year Estimates.

state unemployment rate (Table 36). Top occupations were natural resources, construction, and maintenance (28.9%); management, business, science, and arts (22.6%); and service (22.9%). Self-employed workers, another category in which fishermen are found, accounted for 26.0% of all workers (Table 36). As an employment sector, agriculture, forestry, fishing, hunting, and mining occupations accounted for 16.6% of all jobs, significantly higher than in the state as a whole (Table 38).

Fisheries Profile

Commercial

Fishing is an important part of the Steuben community; most of the community has been, and continues

to be, involved in the fishing industry in one way or another.

In the 1960s and 1970s, Steuben boasted a thriving herring weir fishery. About two decades ago the fishery virtually disappeared from the area. Recently two brothers, Joshua and Adam Stanwood, have been building a weir in Dyer Bay. The brothers hope to fill a need for lobster bait in the area (pers. com. key informant). Additionally some lobstermen set halibut trawls during halibut season, fish for tuna when in good tuna-fishing areas, and dig clams for extra income in the off season (pers. com. key informant).

Groundfishing: In the 1970s, there were five boats in the Milbridge-Steuben area that trawled for groundfish (Acheson et al. 1980). Four of these boats fished with an otter trawl

while one fished with gillnets. At that time, dragging for groundfish was a spring activity, and the fishermen involved would fish for lobster throughout the remainder of the year. Today, there are no groundfish permits in Steuben, and the fishing industry primarily revolves around lobster.

State license and federal permit data

In 2011, there were 145 individuals who held a total of 229 state licenses in Steuben. Most licenses were for lobster/crab and commercial shellfish, which is primarily a clam license (Figure 50). In 2011, 17 vessels with federal permits listing Steuben residences held a total of 24 licenses. The average vessel length of federal permit holders in Steuben was 39.6 ft. All

Table 38. Percentage of jobs in select occupation categories, Steuben, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	----- % -----			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Steuben	16.6	6.1	3.4	29.4

Source: 2008–2012 American Community Survey 5-Year Estimates.

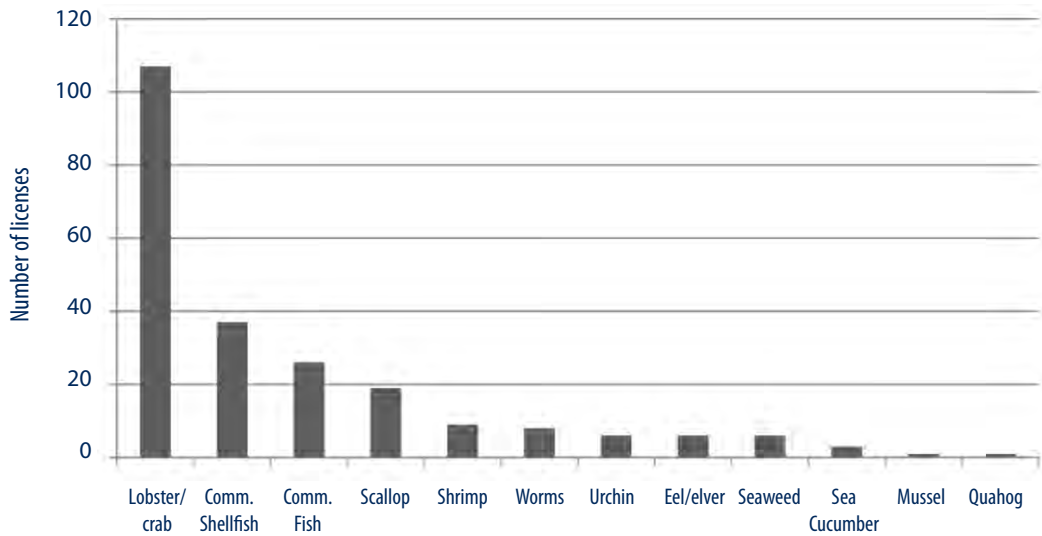


Figure 50. Number of state licenses listing Steuben addresses. Source: Maine DMR 2011.

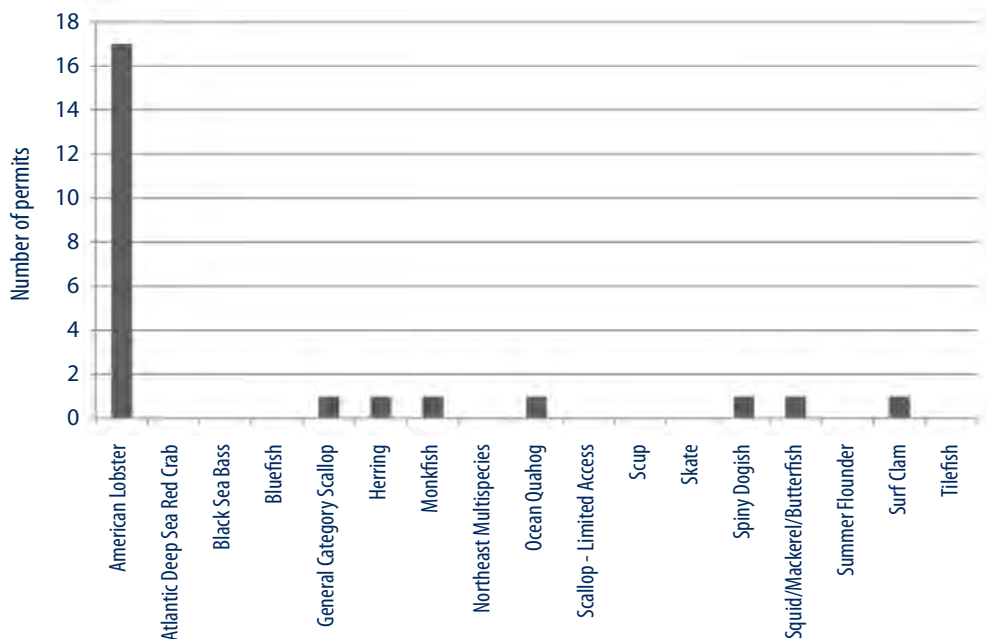


Figure 51. Number of federal permits listing Steuben addresses, 2011. Source: Northeast Region Permit Database.

permits held a federal lobster license, and no permits held a multispecies groundfish fish permit of any kind (Figure 51). In 2012, there was one federal dealer listed in Steuben, a lobster dealer.

Recreational and subsistence

The town experiences a fair amount of summer tourism, and recreational fishing is a common activity among visitors and some locals. Recreational species include clam, halibut, cod, pollock, striped bass, and

mackerel. Because there is no public pier, people generally fish from their own boats. There are three boat launches in town. Information on subsistence fishing in Steuben is either unavailable through secondary data collection or the practice does not exist.

Marine infrastructure

The town has one boat ramp in each of the bays: Pinkham/Dyer Bay, Joy Bay/Gouldsboro, and Pigeon Hill Bay. There are parking areas in each location. There



BBS Lobster Trap (left) and Bushey Enterprises (right).

are also seven commercial lobster buyers in town: BBS Lobster Trap, Bushey Enterprises, Kelly's Lobster Pound, Lyon's Seafood, Caler Cove Lobster, A.S. Francis Lobster, and Leach's Wharf.

BBS Lobster Trap is a large operation located on Pigeon Hill Road. BBS Lobster Trap has been doing minor construction, and it plans to build and operate a tank room (pers. com. key informant). The business also owns Kelly's Lobster Pound, which does not currently function as a buying station. Kelly's leases a portion of the Lyon's Seafood wharf where lobsters are landed and then trucked to BBS. There is a second BBS site in Machiasport, and the company is headquartered in Cape Cod, Massachusetts. The Steuben location has been in operation for approximately 30 years. The facility has traditionally only bought lobster though many of their fishermen hold other species licenses or permits and fish for herring, crab, halibut, and dogfish, which are landed elsewhere. BBS Lobster Trap also bought elvers during the 2012 elver season. At the height of season, the BBS Lobster Trap dock serves about 20 boats, whereas the Machiasport location may serve more than 50. All of the boats are kept at moorings, which are privately owned and maintained by the fishermen. The site has two large lobster pounds, which are fenced and have scattered aerators. The property is large with ample parking. There is an office building adjacent to the bait shed. Bait comes in regularly and is salted—employees take temperature and timing into careful consideration to ensure a fresh, longer-lasting product. The bait shed is filled with totes and buckets

organized by specific customer orders so that they are ready when the fishermen arrive. Steps lead to a small fueling and loading station where fishermen can pull up and be served. The facility also has a tank room with two large saltwater holding tanks. The lobster totes are arranged into labeled aisles and put on a pulley system for easy loading. The lobsters and totes are weighed, tagged, and prepared for shipping.

Bushey Enterprises is located on Route 1 in Steuben. It is not on the water and does not provide bait or fuel for fishermen. The business has been in operation for 44 years and was recently rebuilt a fire. The company does both wholesale and retail, though most of the business is wholesale. Bushey has trucks, and many customers use their own trucks to pick up the product. The company buys from 20 to 25 fishermen, who come from Sullivan, Eastport, and "everywhere in between." The company plays a significant role in the elver fishery, which has had significant impact on the area's economy (pers. com. key informant). The company also has processing facilities.

Caler Cove Lobster opened in 2000 and used to be a private wharf. The business is a family operation and currently buys from 20 boats and provides its fishermen with bait and fuel. Lobsters are bought and then sold to another local lobster pound. The wharf has two hoists and ample shore space, though it is not paved. It has also started to conduct a small amount of retail sales (pers. com. key informant).

The dock at Lyon's Seafood has been in operation for about 35 years. Lyon's Seafood currently buys lobster



Caler Cove Lobster (left) and Lyon's Seafood (right).

and crabs from approximately 10 boats. No one fishes exclusively for crab, but it is often a by-catch. Bait and fuel are provided at the wharf. Customers use their own trucks to pick up lobsters, and some come from as far as New York City. While the business is mostly involved in wholesale, it also does a small amount of retail. Lyon's Seafood uses two pounds to harden lobsters as a value-added process for the fall and winter markets.

A.S. Francis Lobster has been in operation for about 60 years. It currently serves five lobster boats, all of which are local Steuben fishermen. The dock provides bait, and fuel is delivered by truck. The wharf is well maintained and has two hoists and a pound. Lobsters are kept in the pounds, fed, and given time for their shells to harden before they are shipped. The business mainly does wholesale. Trucks deliver lobsters to retailers, and a fair number of the lobsters are sold overseas to Spain and France.

There are four boat builders and repair shops in Steuben: H & H Marine, T. Jason Boats, West Marine Boats, and Petit Manan Boat. Welding and supplies are available at both Kennedy Marine Fabrication and Petit Manan Boat. Fishermen typically travel to Stonington for electronic and navigational equipment repairs, and boating supplies can be found at Noel Marine or Rumery's Marine, both in the nearby town of Milbridge. Hamilton Marine also takes orders and delivers marine supplies on a route that appears to encompass much of the coast, stopping in many other Downeast fishing communities. Kennedy Marine Engineering, part of

Kennedy Marine Fabrication, deals in marine diesel engine sales and service.

Fishing industry support and government institutions

Local fishermen are members of both the MLA and the DELA. The town of Steuben has board of selectmen comprised of three individuals. Steuben has two harbor masters; one covers Dyer Bay and Gouldsboro/Joy Bay, and one covers Pigeon Hill Bay (pers. com. key informant).

Cultural attributes related to fishing and the sea

There are no fishing-related festivals held in the town of Steuben, but local fishermen may participate in activities held in nearby towns.

Issues Facing Commercial Fishing Industry

A major issue for the community of Steuben has been gentrification. As more and more property is sold to summer residents, the community struggles with the resultant tax increases, which compounds the problem of few businesses or jobs in town. In addition, the town has lost much of its waterfront access to seasonal residents; there are now only three public landings in town because a formerly public landing has recently been converted to private property. While there are half a dozen commercial wharves in town, there is no public dock, and with three bays in town, it would be



Steuben public town landing in Dyer Bay.

difficult to say where a public dock would be developed
if the option existed.

MILBRIDGE COMMUNITY PROFILE

Geography and History

Milbridge, located in Washington County, lies at the mouth of the Narraguagus River at the head of Narraguagus Bay (Figure 52). Milbridge contains 75 miles of coastline and has a total area of 57.4 square miles, 24.1 square miles of which are land (about 42% of the total area). Nearby fishing communities include Steuben, Harrington, Addison, and Cherryfield. Several islands offshore from Milbridge belong to either the Maine Coast Heritage Trust or are a part of the Petit Manan National Wildlife Refuge.

Milbridge was settled in 1765 and incorporated on July 14, 1848, from a portion of Harrington. It annexed land from Steuben in 1876 and 1907 (NOAA 2009j). At that time, Milbridge was recognized as a major shipbuilding center. From the mid-1880s to the beginning of World War I, the town had many large shipyards.

Demographics and Economy

Milbridge reached its peak population in 1890 with 1,963 residents. This peak in population corresponds with Milbridge's shipbuilding history. Unlike many other small fishing communities in eastern Maine, in recent years Milbridge has seen a slight population increase. According to the U.S. Census Bureau (2010), the population was 1,353 in 2010, which was up 5.8% from 1,279 in 2000. The population is relatively homogenous; in 2010, 95.1% of residents identified themselves as white (U.S. Census 2010). As of 2010, 68.2% of Milbridge residents were born in Maine, 22.6% were born in a different state, and 9.3% were born outside the United States (U.S. Census Bureau 2010). In terms of education, 34% of Milbridge's population had a high school degree and 18.3% had a bachelor's degree or higher, which is lower than the state and national levels of bachelor's degree attainment.

The town's age structure is similar to many Maine towns in that it is older than the nation as a whole (Figure 53). The median age in 2010 was 47.3 years, which is higher than both the state's and nation's median ages. The percentage of the population over the age of 65 was 23.8%, which is also higher than the state and national figures.

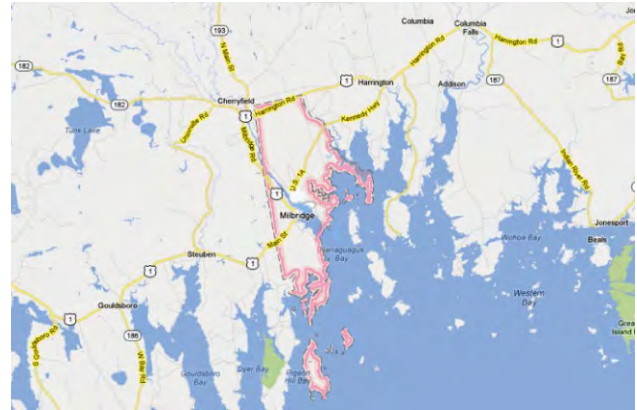


Figure 52. Map of Milbridge (outlined in pink) at the head of Narraguagus Bay.

Median household income in Milbridge in 2012 was \$34,545, and median per capita income was \$20,346, both lower than the state and national median incomes (Table 39). Milbridge has more households with incomes from Social Security and fewer with incomes from earnings compared to Maine and the nation (Table 40). In 2012, 11.0% of families and 20.9% of individuals fell below the poverty threshold, both rates higher than those for the state as a whole. Elderly poverty rates are also high in Milbridge, with 16.3% of all persons over the age of 65 falling below the poverty line. Also, a higher percentage of Milbridge households depend on food stamps than do households in the state or nation (Table 40).

In 2012, 52.5% of Milbridge's population 16 years of age and over was in the labor force. Of the civilian labor force, 9.9% was unemployed, a much higher rate than the state unemployment rate (Table 39). Top employment sectors were management, business, science, and arts occupations (27.5%), sales and office occupations (23.8%), and natural resources, construction, and maintenance occupations (21.8%). Self-employed workers, another category in which fishermen are found, accounted for 19.6% of all workers (Table 39). As an employment sector, agriculture, forestry, fishing, hunting, and mining occupations accounted for 17.2% of all jobs, performing significantly higher than this sector does in the state as a whole (Table 41).

Blueberries are especially important to Milbridge's economy. Wyman Company and Cherryfield Foods (the latter owned by Canada's Oxford Frozen Foods) are the two largest growers. Milbridge is home to the largest

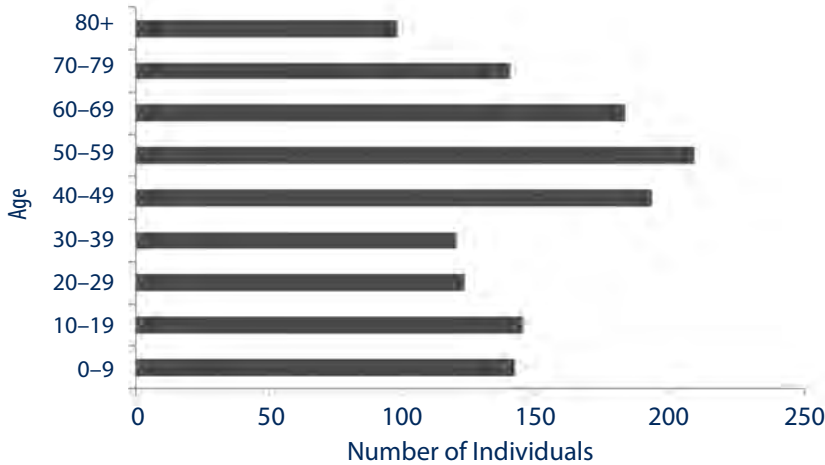


Figure 53. Age structure of the Milbridge population. Source: U.S. Census 2010.

Table 39. Median and per capita income and percentages unemployed and self-employed, Milbridge, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
	----- \$ -----		----- % -----	
United States	53,046	28,051	6.0	6.3
Maine	48,219	26,464	4.8	9.1
Milbridge	34,545	20,346	9.9	19.6

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 40. Household income from earning, Social Security, retirement, and SNAP, Milbridge, 2012.

	Households with Income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- % -----			
United States	78.7	28.3	17.6	11.4
Maine	75.5	32.9	18.9	15.8
Milbridge	70.5	38.9	21.5	20.8

Source: 2008–2012 American Community Survey 5-Year Estimates.

concentration of lowbush wild blueberries in the world and Cherryfield Foods claims to operate the largest fruit farm in North America.²⁹ Many of the blueberry barrens are located in neighboring Cherryfield and Columbia (pers. com. area fisherman). The two largest employers are Kelco Industries (wreaths and wreath-making

supplies) and Narraguagus Bay Health Care Facility (assisted living facility) (NOAA 2009j).

Fisheries Profile

Commercial

Milbridge today is still predominately a fishing community, and tourism-related businesses in town consists only of a few restaurants and cafes. For many, fishing is crucial to their livelihoods, and it is an important part of the town’s economy. “If there wasn’t fishing here, there wouldn’t be much here...when we [fishermen] don’t make money, stores uptown will tell you that they don’t either,” said one local.

The level of homeport fishing varied a great deal between 1997 and 2006, which contributed to the number of boats registered to Milbridge being much lower than the level of landings in Milbridge. This includes a value of zero boats in 2003, indicating that most of the fishermen landing their catch in Milbridge listed another port as their homeport. The number of vessels homeported in Milbridge increased from a low of nine in 1998 to 24 in 2011, and it may be as high as 56 now (pers. com. area fisherman). The number of boats registered to owners living in Milbridge was similar in most years, indicating that most vessels homeported are also owned by residents (NOAA 2009h).

Groundfishing: Acheson et al. (1980) reported five boats in the Milbridge-Steuben area that trawled for groundfish in the 1970s. Four used an otter trawl while one fished with gillnets. Dragging for groundfish was a spring activity, and the fishermen involved would fish for lobster throughout the remainder of the year. Today, there are three groundfish permits in Milbridge; however, none of them are currently in use (pers. com. area fisherman).

29 Oxford Frozen Foods. 2010. Cherryfield Foods Inc. http://oxfordfrozenfoods.com/cherryfield_foods

Table 41. Percentage of jobs in select occupation categories, Milbridge, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	----- % -----			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Milbridge	17.2	20.4	4.0	19.0

Source: 2008–2012 American Community Survey 5-Year Estimates.

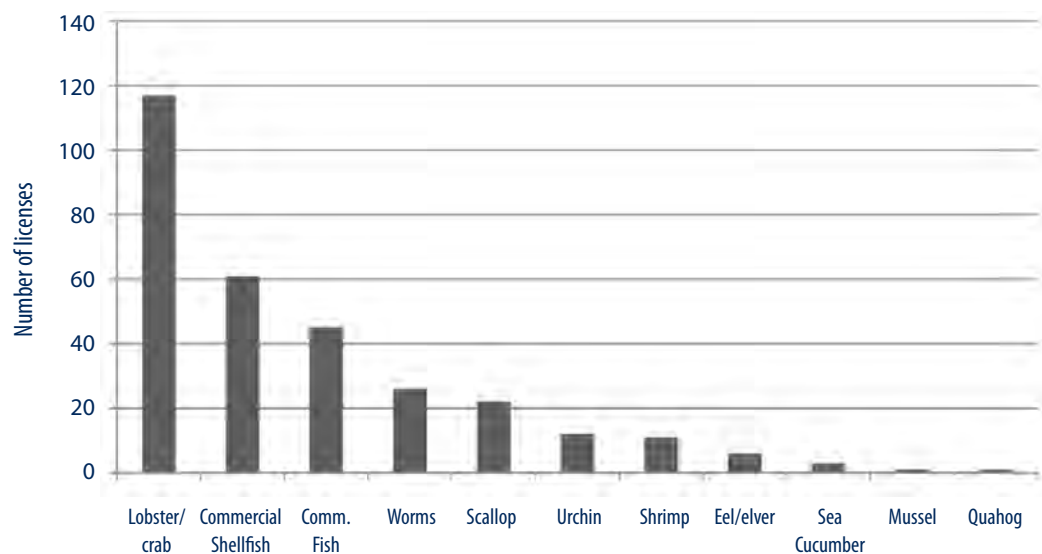


Figure 54. State licenses listing Milbridge addresses. Source: Maine DMR 2011.

State license and federal permit data

In 2011, 176 individuals held a total of 305 state licenses in Milbridge. Most licenses were for lobster/crab, but there were also many for commercial shellfish (Figure 54). Other permits included licenses for scallop, sea urchin, and shrimp. In 2011, 24 vessels with federal permits listing Milbridge residences held a total of 45 permits. The average vessel length of permit holders in Milbridge was 37.2 ft. All permit holders held a federal lobster permit, and three held a multispecies groundfish fish permit (two HB/K; one A) (Figure 55). In 2011, there were nine federal dealers listed in Milbridge; eight were lobster dealers, and one was a herring dealer.

Recreational and subsistence

Milbridge offers a variety of recreational fishing opportunities. The Narraguagus River is famous for its Atlantic salmon and striped bass. For saltwater fishing, the Milbridge Marina is located off Route 1A, and the Jordan Town Pier is located on Wyman Rd. Charter trips are also available. Recreational fishers generally fish for

mackerel, pollock, and bluefish, but as in many nearby communities, saltwater recreational fishing has sharply decreased in recent years (pers. com. key informant). Information on subsistence fishing in Milbridge is either unavailable through secondary data collection or the practice does not exist (NOAA 2009j).

Marine infrastructure

In 2001, Milbridge received \$250,000 from the state to build a new town dock (NOAA 2009k), which is called by locals the uptown pier or “the marina.” The site, located on Route 1, is also home to the town’s public boat ramp, which is paved and accessible at all tides although very shallow at low tide (pers. com. area fisherman). The pier has one hoist.

The town has another public pier located on Wyman Road, which is used more by fishing vessels than recreational boats. The Jordan pier is in good repair, is large enough to drive trucks onto, and has multiple floats for docking. It also has a hoist for loading and unloading gear and catch.

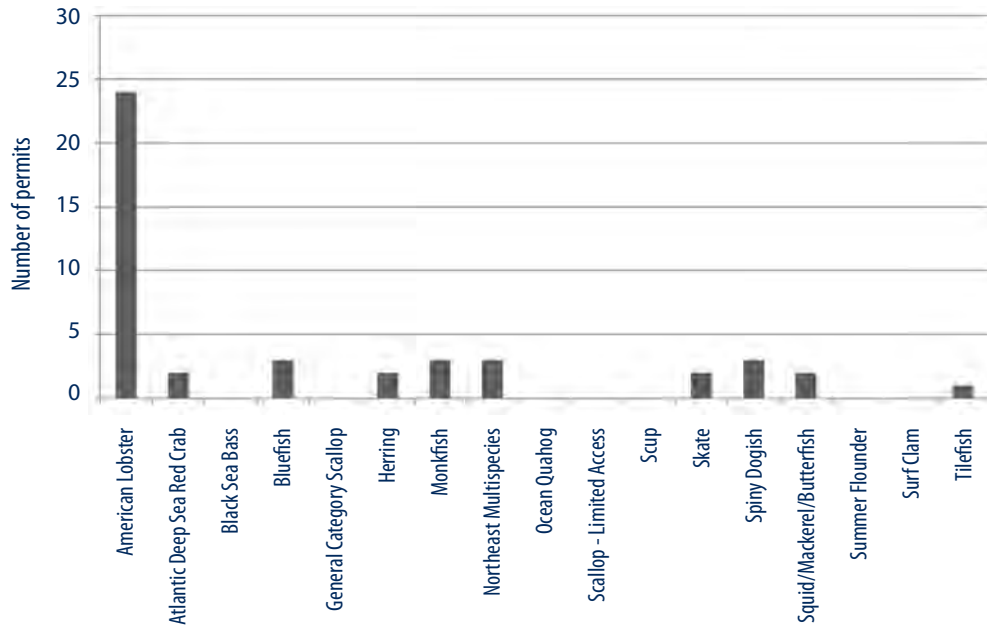


Figure 55. Number of federal permits listing Milbridge addresses in 2011. Source: Northeast Region Permit Database.

There are five lobster-buying stations in Milbridge: two Inland Lobster sites, Chipman's Wharf, Dorr Lobster, and Dorr Lobster Co. (the latter two are separate businesses). Inland Lobster is a division of Inland Seafood of Atlanta, Georgia, and operates the largest lobster-buying business in the area. Its two sites in Milbridge, in operation for about 15 years, are large and in good repair and purchase lobster from 65 to 70 boats. Additionally, since Chipman's Wharf and Dorr Lobster Co. sell the bulk of their lobsters to Inland Lobster, the company essentially has four buying stations. One Inland Lobster site is on Factory Road, just a few minutes up the coast from the Jordan Wharf. This site has a brand new wharf with a hoist and provides bait for fishermen. It served commercial groundfish fishermen "a long, long time ago" (pers. com. Inland Lobster manager). The other Inland Lobster site is on Smith Cove Road and provides both bait and fuel for its fishermen. This site is also home to the company's lobster pound.

Chipman's Wharf has been in operation for seven years; the wharf purchases lobsters from seven boats, then sells 90% of the catch to Inland Lobster. The other 10% is sold retail on site. Chipman's Wharf provides bait and fuel to its boats, all of which are local. The wharf has one hoist, and there is also a tank house on site. It has one pickup truck for transporting catch to Inland Lobster (pers. com. Chipman's Wharf owners).

Dorr Lobster is a small business that operates from the Jordan town pier and from a small float moored between the Jordan pier and the Inland Lobster pier. The business has been in operation for 10 years. It provides bait for lobstermen who sell to it, and fuel is trucked in to the Jordan pier to fill the lobster boats. Catch is sold to Inland Lobster and brought by either boat or pickup truck to Inland Lobster's lobster pound (pers. com. Dorr Lobster owner).

Dorr Lobster Co. has been in operation since 1977. The facilities include two sites approximately half a mile apart: at one site there is a pound, cold-water tank house, and processing facilities for picking lobster and crab meat; at the other, a small buying wharf where bait and fuel are sold to the approximately eight boats that sell to the company. Dorr Lobster Co. also sells ice. In the winter, the company will also sometimes purchase scallops. (This company is located on Bar Island, technically part of Milbridge, but only accessible by going through the town of Steuben.)

In addition to the five lobster buyers, there is also a company in town that purchases "pickles." Cherry Point Products is a locally owned business that has been in operation since 1996 and processes sea cucumbers for export overseas. In the past it has also sold slime eels, sea urchins, and scallops. Boats that sell to the company include local Milbridge vessels, boats from nearby Steuben, and some draggers from Canada. The



Chipman's Wharf (left) and Dorr Lobster Co. (right).

company provides boat storage, gear storage, fuel, and ice. Cherry Point Products has a large ice capacity. Many fishermen get ice from Cherry Point Products for using when they set halibut trawls (pers. com. area fisherman). Catch is processed in town and then shipped to the Asian market; customers have cargo containers shipped to town to pick up the processed product. The company does not have its own wharf, but uses a mix of private and public facilities in Milbridge, Jonesport, Southwest Harbor, and other towns along the coast.

Beal's Boat Shop is the only boat building and repair option in town. Sargent's Custom Boats, which had offered similar services, recently closed. Rumery's Marine is both a marine supply store and a boatyard. Marine/fishing gear can be obtained from either Rumery's Marine or Noel Marine.

Fishing industry support and government institutions

The MLA and the DELA represent many of the lobstermen in the area (NOAA 2009j). The Sunrise County Economic Council (SCEC) is located in the nearby town of Machias. The SCEC operates the Down East Commercial Fisheries Fund (DECFF), a revolving loan program. It is part of SCEC's Sunrise Loan Fund (SLF) programs, and DECFF invests in Washington County-based commercial fishermen and marine-related industries. The goal is to increase economic activity and capital formation leading to growth, profitability, and sustainability of marine-related industries in Washington County. Increased access to capital with technical assistance and support also assists in job

creation and retainment in one of Downeast Maine's core economic sectors.³⁰

Milbridge is governed by a town manager, selectmen, and through town meetings. Milbridge has a harbor master (NOAA 2009j), as well as an assistant for marina activities (pers. com. area fisherman).

Cultural attributes related to fisheries and the sea

Milbridge's annual Milbridge Days festival takes place in July. The highlight of the festival is the greased cod contest.

Issues Facing the Fishing Community

The major threat cited by our key informants in Milbridge was "whale rope and all that foolishness," a sentiment similar to one we encountered in other Downeast fishing communities. As do fishermen elsewhere, Milbridge lobstermen see the amount of regulation as an impediment to their ability to work.

The town's only gas station was destroyed in a fire, and residents had a difficult time accessing fuel. A new convenience store, Milbridge Gulf, opened in May 2012. The new store offers fuel, helping ease the burden (pers. com. area fisherman).

Though gentrification has been a core issue in many nearby communities, our key informant did not think that it is yet a problem in Milbridge. "Maybe for a clam digger getting to a mudflat," he said, but otherwise there are no problems with waterfront access.

³⁰ Sunrise County Economics Council. 2011. Downeast Commercial Fisheries Fund. <http://www.sunrisecounty.org/decff/overview.html/>

JONESPORT COMMUNITY PROFILE

Geography and History

The town of Jonesport, in Washington County, extends six miles out into the ocean and has a total area of 100 square miles (Figure 56). A highway bridge was built to link Jonesport and Beals Island in 1957. The ties between Jonesport and Beals are strong due to their proximity and because lobster boats from both towns fish in the same waters. In many aspects, the two towns function as one larger fishing community.

Judah Chandler first settled the area around 1763. The land was part of more than 48,000 acres given to John C. Jones by the state of Massachusetts in 1789. Jonesport, named for its leading proprietor, was not incorporated as a town until 1809, at which time it was called Jonesborough. A portion of Jonesport was set off and incorporated as the town of Beals in 1925. Marine occupations have always been a major part of the town's history and economy. Tourism, however, is not a large part of Jonesport's economy.³¹

Demographics and Economy

In 2010, Jonesport had a total population of 1,370, down 2.7% from 2000 (U.S. Census 2010). The population is relatively homogenous; in 2010, 98.1% of residents identified themselves as white (U.S. Census 2010). As of the 2010 Census, 75.5% of Jonesport's population was born in Maine, 22.6% were born in a different state, and 1.9% were born outside of the United States (U.S. Census Bureau 2010). In terms of education, 41.6% of Jonesport's population had a high school degree and 17.7% had a bachelor's degree or higher, which is lower than the state and national levels of educational attainment for bachelor's degrees.

As in most Maine fishing communities, Jonesport's population is aging and older than the state as a whole (Figure 57). The median age in 2010 was 49 years, which is older than the Maine and U.S. median ages. In 2010, 24.4% of the population was 65 years of age or older, again higher than in the state as a whole.

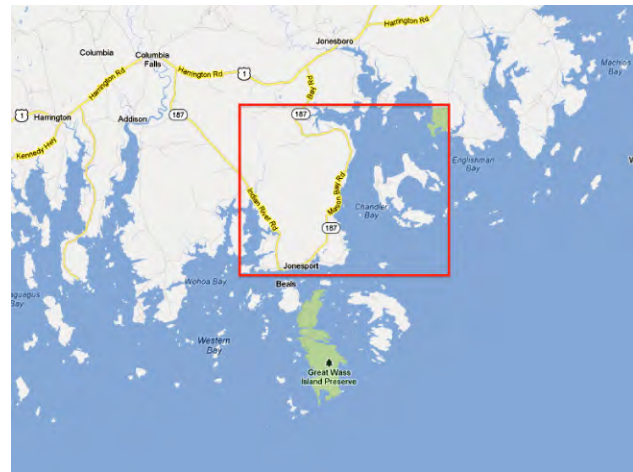


Figure 56. Map of Jonesport with Beals Island to the south.

In 2012, median household income in Jonesport was \$39,500, and median per capita income was \$19,742, both less than the respective state median incomes (Table 42). Compared to Maine as a whole and the nation, Jonesport features more households with incomes from Social Security and retirement (Table 43). In 2012, 21.0% of families and 23.9% of individuals in Jonesport fell below the poverty threshold. These levels are also both higher than levels in the state as a whole. Elderly poverty rates are also high in Jonesport, with 12.9% of all persons over 65 falling below the poverty line. Given these statistics, it is not surprising that more households in Jonesport depend on food stamps compared to the households in the state as a whole (Table 43).

In 2012, 54.5% of the total population 16 years of age and over was in the labor force. Of the civilian labor force, 4.5% was unemployed (Table 42). Top employment sectors were natural resources, construction, and maintenance occupations (30.0%), sales and office occupations (27.1%), and management, business, science, and arts occupations (19.9%). Self-employed workers, another category in which fishermen are found, accounted for 30.9% of all workers, which is significantly higher than the state level (Table 42). As an employment sector, agriculture, forestry, fishing, hunting, and mining occupations accounted for 30.6% of all jobs, which is significantly higher than the state average for this sector (Table 44).

31 Information on the history of Jonesport is from Washington County, Maine Government. 2011. Town of Jonesport. <http://www.washingtoncountymaine.com/towns/bjonesport.html>

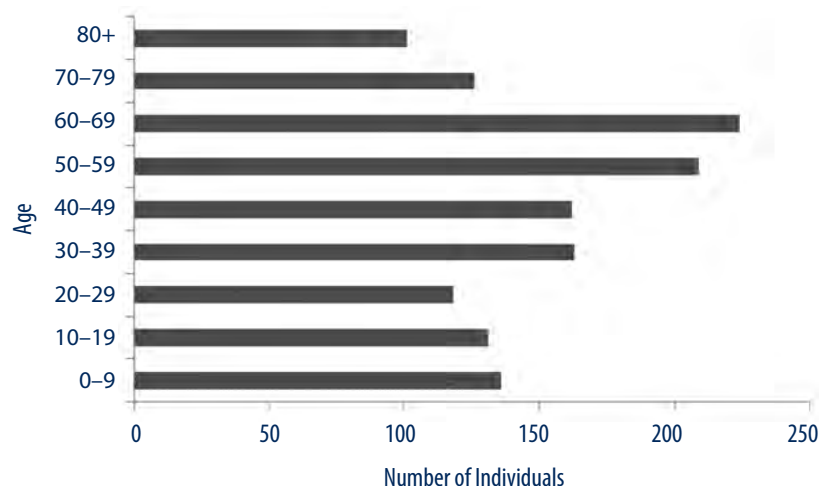


Figure 57. Age structure of the population of Jonesport, 2010. Source: U.S. Census 2010.

Table 42. Median and per capita income and percentages unemployed and self-employed, Jonesport, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
	----- \$ -----		----- % -----	
United States	53,046	28,051	6.0	6.3
Maine	48,219	26,464	4.8	9.1
Jonesport	39,500	19,742	4.5	30.9

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 43. Household income from earning, Social Security, retirement, and SNAP, Jonesport, 2012.

	Households with Income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- % -----			
United States	78.7	28.3	17.6	11.4
Maine	75.7	32.9	18.9	15.8
Jonesport	73.2	40.0	19.5	28.4

Source: 2008–2012 American Community Survey 5-Year Estimates.

Fisheries Profile

Commercial

In the past, fishing was the largest source of employment in Jonesport. While the town was one of the largest lobster fishing harbors in the mid-20th century, many locals also fished for herring, groundfish, and

clams. Today, locals still consider Jonesport a major fishing community with lobster, surf clam/ocean quahog, mussels, scallops, halibut, and occasionally sea urchins being among the most important fisheries. Lobster fishing remains the largest fishery. Historically, there were three sardine canneries in Jonesport. Groundfish and shrimp are examples of other fisheries that were historically, but are no longer, important in Jonesport (pers. com. key informant).

Groundfishing: From the 1960s to the early 1990s, Beals, Jonesport, and other Downeast harbors relied on groundfishing. In 2004, only one Jonesport resident had a groundfish permit (NOAA 2009k). Today, there are four groundfish permits in Jonesport. Many residents lost access to the groundfishery when regulations required a history of groundfishing in order to obtain a permit (NOAA 2009k).

State license and federal permit data

In 2011, there were 231 individuals with state licenses in Jonesport. These individuals held 401 licenses, most of which were for lobsters and crabs (Figure 58). In 2011, 40 vessels with federal permits listing Jonesport residences held a total of 77 licenses. All but three permits included a federal lobster license, and four permits included multispecies groundfish permits (one HB and K; two HB; one A) (Figure 59). The average vessel length of permit holders in Jonesport was 37.4 ft. In 2012, there were 11 federal dealers listed in Jonesport that, collectively, dealt herring, lobster, sea scallop, and squid.

Table 44. Percentage of jobs in select occupation categories, Jonesport, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	----- % -----			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Jonesport	30.6	19.2	5.2	16.0

Source: 2008–2012 American Community Survey 5-Year Estimates.

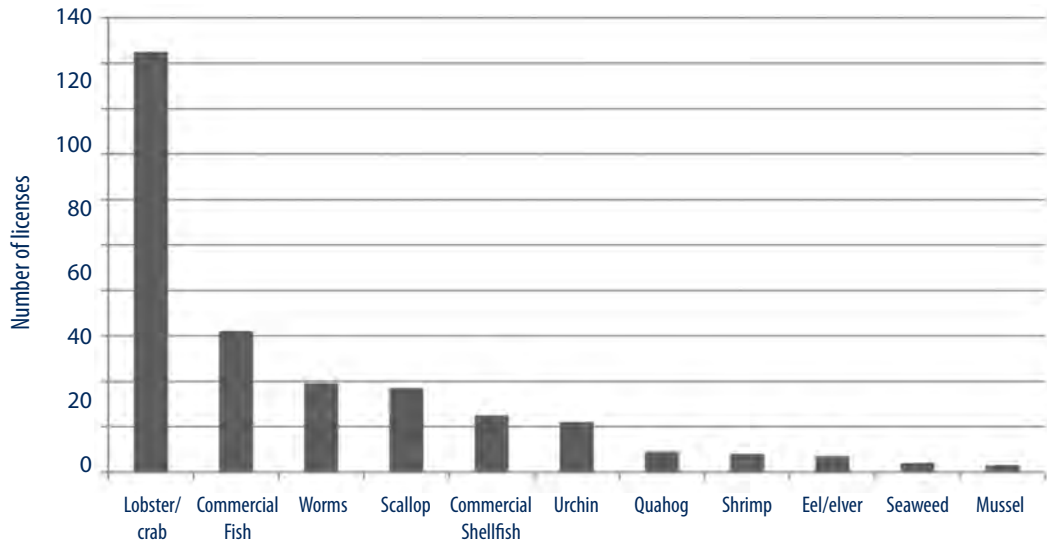


Figure 58. State licenses listing Jonesport addresses. Source: Maine DMR 2011.

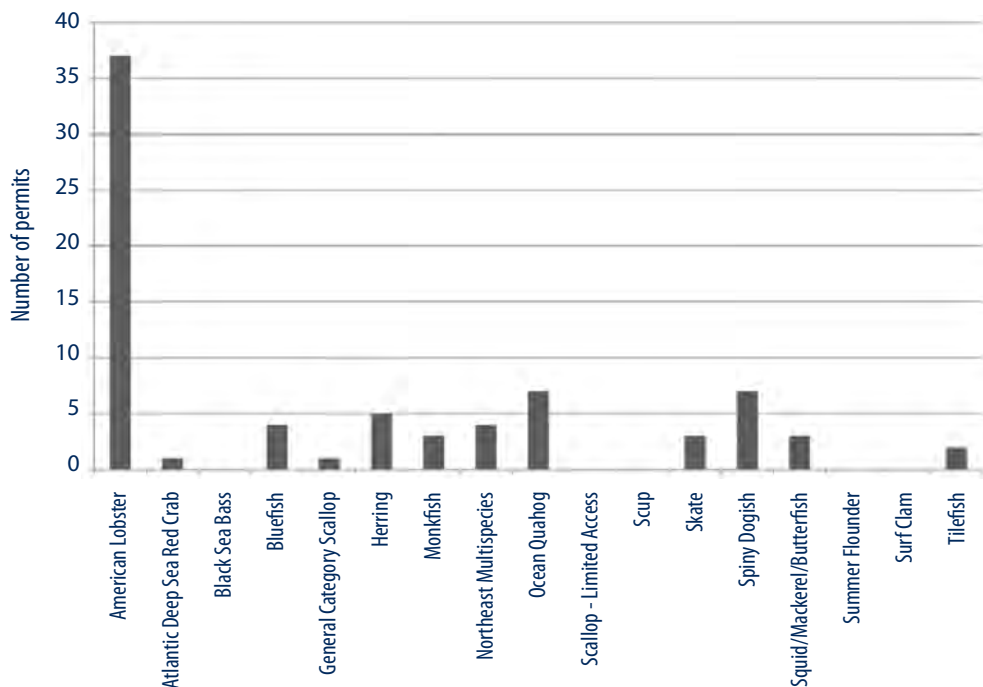


Figure 59. Number of federal permits in Jonesport. Source: Northeast Region Permit Database.



Jonesport Shipyard (left) and Moosabec Marine (right).

Recreational and subsistence

Recreational fishing is minimal, except by locals during the annual mackerel run. Recreational boating also is minimal as a local said, “because it’s so cold and foggy here!” In Jonesport, mackerel, flounder, pollock, codfish are caught recreationally by local residents, but it is expensive to start a recreational fishing business. Hall-Arber et al. (2001) reported two small charter boat operations in Jonesport, one of which is for wildlife viewing. Information on subsistence fishing in Jonesport is either unavailable through secondary data collection or the practice does not exist (NOAA 2009k).

Marine infrastructure

Jonesport has a harbor in Sawyer Cove behind a 1,200-ft steel and a stone breakwater that extends across the mouth from the east—most fishing vessels are moored in the lee of this protective wall. The town of Jonesport has one public landing called “the marina” by locals though it is a free and public facility. The marina has a paved boat ramp, or catwalk, lined by long floats used by both recreational and fishing vessels. The westernmost floats are for commercial vessels only. The easternmost floats are for the limited docking of recreational boats. Each float has only about 3 ft of depth at low tide. There is an additional long, wooden pier with a large float for docking/loading/unloading.

Haul-out, storage, and repair facilities can be found at the Jonesport Shipyard, located east of the town on floats near the head of the harbor. The shipyard has been in operation for 23 years and services fishing vessels as well as yachts and government boats. The shipyard

serves between 300 and 400 boats annually. Boats up to 17 tons or 45 ft can be hauled and repaired on site, and the shipyard also offers hauling, launching, storage, rentals, yacht joinery, and showers and laundry for visiting boaters. They employ several mechanics and subcontract a welder when needed. The shipyard also sells Maine peapod boats.

Wayne Beal Boat Shop, Moosabec Marine, and Runtz Welding also repair boats. Marine and fishing supplies can be purchased at the T.A. King (the local hardware store), Hamilton Marine, or Moosabec Marine. As recently as 2010, Jonesport was home to a net-making business, Stearling Net and Twine, but the business is now closed (pers. com. key informant).

The town of Jonesport has six lobster buying sites: Look Lobster, O.W. Look and Son, the Beals-Jonesport Co-op, Hopkins Point Lobster Co., Beals Lobster Co., and Smith’s Lobster. In addition, there is a wharf used for landing algae, and Moosabec Mussel purchases mussels and occasionally lobsters in town.

Look Lobster’s floats and buildings are across from the west end of the breakwater. The business has been in operation since 1910. The buying station is large and in good repair, with two large mechanized hoists, two wooden gallows-style pulleys, and two long wharves connected by the wall of a lobster pound that sits between them. Gas is available at the floats, and diesel is available halfway up the dock. Lobster and herring boats use the facility, and groundfish vessels did in the past. Today Look Lobster buys lobster from about 30 boats, selling the bulk wholesale and shipping with a mix of its trucks and customers’ vehicles. Only one



Dock at Look Lobster (left) and buckets of bait at Beals-Jonesport Co-op (right).

wharf is used as a lobster-buying station. The other is currently used for landing algae—the algae is raked from the shore into small, aluminum boats and is processed for the carrageenan it contains (pers. com. Looks Lobster owner).

O.W. Look and Son is located to the west, down the shore from Look Lobster. This lobster-buying station is situated in an old sardine cannery, which is still called “the middle factory” by locals and whose smokestack is tall enough to be included on navigational charts. The entire site was redone in 2011, with new roof, planking, and floats, though the facility is not maintained or used for processing. As a lobster business, the wharf has been in business for 40 years and buys from 55 to 60 boats from Jonesport, Beals, and Bucks Harbor. Catch is sold primarily wholesale, often to A.C. Carver on Beals Island.

The Beals-Jonesport Co-op is located adjacent to the bridge that spans the reach to Beals Island and has been in operation since 1970. The facility buys from about 70 boats from Jonesport, Beals, and Addison, and provides bait, fuel, and marine supplies such as gloves, rope, and oil. Located in Jonesport, it handles 500,000 to 800,000 lbs of lobster and 200,000 to 400,000 lbs of live crabs a year (NOAA 2009k). The co-op buys only lobster and crab though years ago groundfish were landed on the wharf (but not purchased by the co-op). During the winter months, scallops are sold, allowing sea urchin fishermen to use the facility. Boats from Jonesboro, Bucks Harbor, and Cutler also sometimes land their catch at the co-op. Nearly all the catch is sold wholesale and is picked up by trucks owned by customers.

Hopkin’s Point Lobster Co. is located approximately a mile west of the co-op. The business is eight years old, and the site is on the tip of Hopkins point, accessible only by rough dirt roads. The wharf and facilities are small, but still new and in good repair, and the business also has a lobster pound on site. Hopkin’s Point buys from about 20 boats and in turn provides bait and fuel to its lobstermen. Lobsters are kept in the pound before being sold wholesale and picked up by customers’ trucks.

Mussels are landed and processed at Moosabec Mussels, Inc., located between Look Lobster and the middle factory. Moosabec is the only family-owned and -operated buyer, all the others are private or co-op managed. The family’s son-in-law operates a dive service to clean wheels off the pier. The company has a commission agreement with DC Air out of Winter Harbor to use the pier to buy mussels (from two draggers), some periwinkles or quahogs, and limited amount of lobster. The wharf and buildings appear new and in good condition. Its processing facilities clean, de-clump, remove byssal threads, and size mussels before they are packaged for shipping. Most of the product is sold wholesale to Whole Foods. The business does not need to provide bait to its fishermen, nor does it provide fuel. It does, however, have a large ice-making machine.

Ems Rock Light is located on the eastern part of Mossabec Reach between Jonesport and Beals Island. It is 28 ft tall and has an automated beacon using solar power. There is also another lighthouse five miles south of Jonesport—Moose Peak Light, which was built in 1827 on Mistake Island’s point.



Harbor panorama.

Fishing industry support and government institutions

Fishing industry organizations include the DELA and MLA (NOAA 2009k). There is also a co-op serving both Jonesport and Beals fishermen. Jonesport is governed by a board of selectmen, which consists of three individuals.

Cultural attributes related to fishing and the sea

Boat building is a family tradition in the Jonesport/Beals Island area. The area is famous for its style of wooden lobster boat. As late as 1980, there were approximately a dozen boatbuilding shops on the island specializing in lobster boats, most of which have since closed. Boat builders have switched to fiberglass, but they continue to build or finish boats in the winter. Lobster boat races originated in Jonesport/Beals as a way of demonstrating and advertising the latest designs. The races are still held every summer in different locations around Maine. Each year on the Fourth of July, the Moosabec World's Fastest Lobster Boat Races are held in Moosabec Reach. Preceding this race is the World's Fastest Model RC Lobster Boat Races, where residents race model lobster boats by remote control (NOAA 2009k). The Moosabec Community Center, located at the Beals Historical Society, sponsors an annual Model Boat Show.

Another tradition for the Jonesport and Beals fishing community is an annual Christmas parade of lobster boats—each decked out in Christmas lights and decorations—down the Moosabec Reach. Santa Claus overlooks the event from the bridge to Beals and

a designated local sings Christmas carols over the VHF (pers. com. key informant). There is also a small museum in town devoted to once-booming sardine industry.

Issues Facing Fishing Community

Beals Island and Jonesport are facing rapidly escalating property values due to gentrification. When asked if there was any infrastructure lacking that was needed, one local exclaimed, "Need! We need more property for the fishermen to use, but it's already all bought up and they can't have it anyway" (pers. com key informant).

As property has been purchased by non-fishing families, taxes have increased, making it increasingly difficult for young fishermen and their families to afford to live in Jonesport. Additionally residents have experienced a steep decrease in access to other fisheries, besides lobster, which drastically reduces opportunities for work. This coupled with the lack of additional infrastructure to support the working class, has forced many families to leave the area. With a decline in numbers of young families the number of students in the high school has decreased dramatically. In years past, the high school enrolled 125 students from both Jonesport and Beals; numbers have decreased to 56 students in most recent years (pers. com key informant).

BEALS ISLAND COMMUNITY PROFILE

Geography and History

The town of Beals is located on Beals Island in Washington County (Figure 60). Jonesport sits to the north of Beals Island, across Moosabec Reach. A highway bridge was built to link Jonesport and Beals Island in 1957, and a small bridge now connects Beals to Great Wass Island (Hall-Arber et al. 2001). Great Wass Island, a much larger island directly southeast of Beals Island, is encompassed within the town of Beals. Great Wass Island is home to about 205 people, almost half of the total population of Beals. About one-third of Great Wass Island is listed as a nature preserve (Figure 61). The towns of Beals and Jonesport have strong ties to one another, especially with respect to fishing; Jonesport and Beals fishermen fish in the same waters, and fishermen from both towns are members of the Beals-Jonesport Co-op.

Beals was first settled in 1770 and named after Manwaring Beal, an early settler. Beals was incorporated in 1925 from Jonesport. Marine occupations have always been important in Beals, as many of the residents can trace their lineage back through generations of fishermen and shipbuilders. Beals is famous for its shipbuilding. The Beals/Jonesport lobster boat model was a major player in the growth of the Maine lobster fishing industry.

Demographics and Economics

In 2010, according to the U.S. Census Bureau, the population of Beals was 508, down 17.8% from 618 in 2000 and down a total of 23.7% since 1990. The population in 2010 was relatively homogenous with 97.8% of residents self-identifying as white (U.S. Census 2010). In 2010, 83.9% of the Beals population was born in Maine, 15.8% was born in a different state, and 0.3% was born outside of the United States (U.S. Census Bureau 2010). Also in 2010, 41.6% of Beals' population had a high school degree, and 17.2% had a bachelor's degree or higher, which is lower than the state and national percentages of the population with bachelor's degrees.

Beals' population is aging and older than the state as a whole (Figure 62). The median age in Beals was 48.1 years, higher than both the Maine and national median ages. The percentage of the Beals population



Figure 60. Map of Beals with Jonesport to the north. Town of Beals outlined in red.



Figure 61. Welcome sign at Great Wass Island Preserve.

over 65 was 22.2%, also higher than state and national percentages (U.S. Census Bureau 2010).

Median household income in Beals was \$26,667 and median per capita income was \$22,935 in 2012, both lower than the state median incomes (Table 45). Beals features a greater portion of households with incomes from Social Security compared to the rest of Maine (Table 46). In 2012, 13.0% of families and 19.9% of individuals fell below the poverty threshold, rates that are higher than the overall state poverty rates. Elderly poverty rates are also higher in Beals, with 11.9% of all persons over 65 falling below the poverty line. Also, the percentage of households in Beals that depend on food stamps (26.5%) was much higher compared to the state (Table 46).

In 2012, 58.2% of the total population 16 years of age and over was in the labor force. Of the civilian labor force, 5.2% was unemployed (Table 45). Top employment sectors were natural resources, construction,

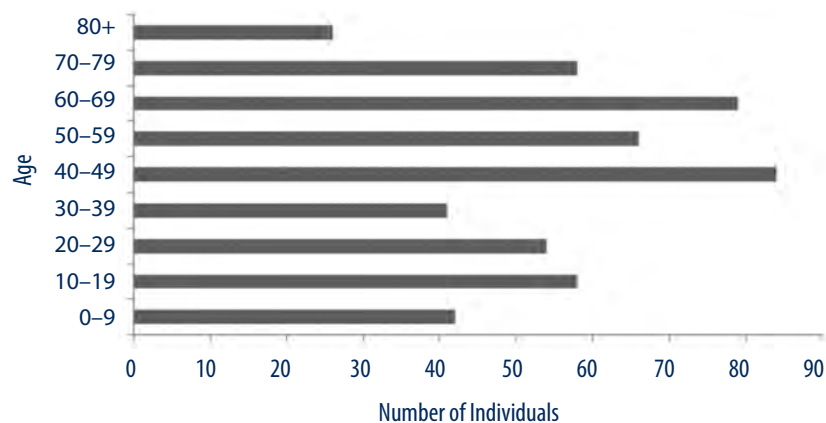


Figure 62. Age structure of the population, Beals Island, 2010. Source: U.S. Census 2010.

Table 45. Median and per capita income and percentages unemployed and self-employed, Beals, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
	----- \$ -----		----- % -----	
United States	53,046	48,219	6.0	6.3
Maine	48,219	26,464	4.8	9.1
Beals	26,667	22,935	5.2	30.0

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 46. Household income from earnings, Social Security, retirement, and SNAP, Beals, 2012.

	Households with Income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- % -----			
United States	79.7	27.5	17.5	9.3
Maine	76.5	31.6	18.8	13.6
Beals	75.2	46.2	16.1	26.5

Source: 2008–2012 American Community Survey 5-Year Estimates.

and maintenance occupations (43.7%), sales and office occupations (23.0%), and management, business, science, and arts occupations (20.7%). Self-employed workers, another category in which fishermen are found, accounted for 30.0% of all workers (Table 45). As an employment sector, agriculture, forestry, fishing, hunting, and mining occupations accounted for 48.4% of all jobs, which is significantly higher than the percentage of jobs in this sector in the state and the nation (Table 47).

Fisheries Profile

Commercial

Important fisheries in Beals include lobster, crab, surf clam/ocean quahog, and mussels. There are boats that actively participate in the scallop fishery in the winter, some of which also harvest urchins during the same period. Occasionally fishermen will fish for herring. Lobster fishing is the largest fishery, and one local informant estimated that there are currently over 200 fishing vessels in Beals.

Groundfishing: From the 1960s to the early 1990s, Beals, Jonesport and, other Downeast harbors relied on groundfish fishing. As of 2011, 11 residents had groundfish permits; many residents lost access to the fishery when regulations required a history of groundfishing in order to retain a permit.

State license and federal permit data

In 2011, there were 203 individuals with state licenses in Beals. These individuals held 349 licenses, most of which were for lobsters and crabs (Figure 63). In 2011, 76 vessels with federal permits listing Beals residences held a total of 174 licenses. Almost all permits included a federal lobster license and 11 permits included multispecies groundfish permits (11 HB; seven K) (Figure 64). The average vessel length of permit holders in

Beals was 36.2 ft. In 2011, there were seven federally registered dealers in Beals that dealt with herring, lobster, and sea scallop.

Recreational

Recreational fishing is not very popular in Beals, but with the dramatic increase in tourism, the practice has become more popular. Recreational species include pollock and mackerel, and fishing typically occurs off of the town landing. More serious fishing requires going

Table 47. Percentage of jobs in select occupation categories, Beals, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	----- % -----			
United States	1.9	11.5	8.9	22.1
Maine	2.5	13.9	8.1	26.1
Beals	48.4	6.6	4.7	17.8

Source: 2008–2012 American Community Survey 5-Year Estimates.

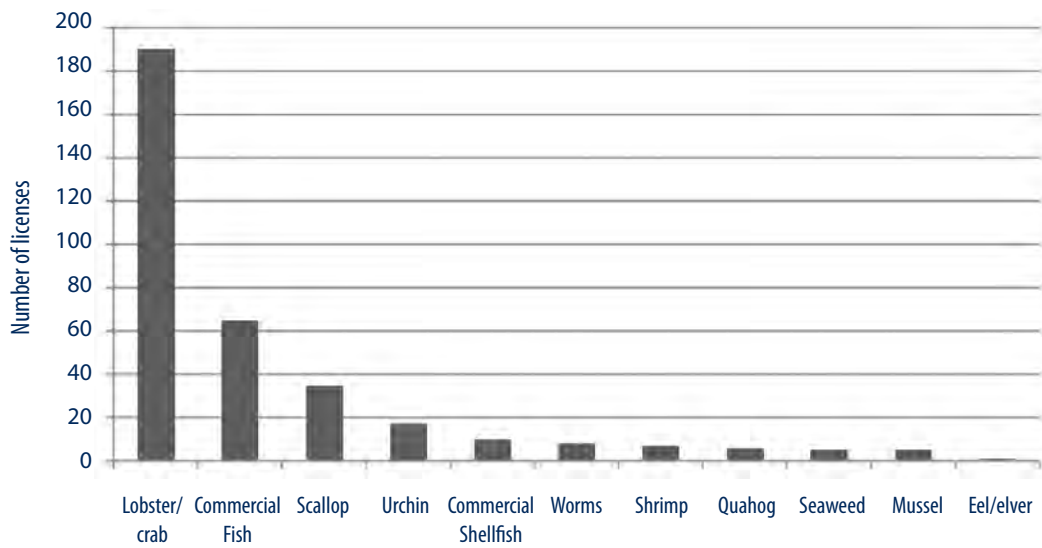


Figure 63. Number of state licenses listing Beals addresses. Source: Maine DMR 2011.

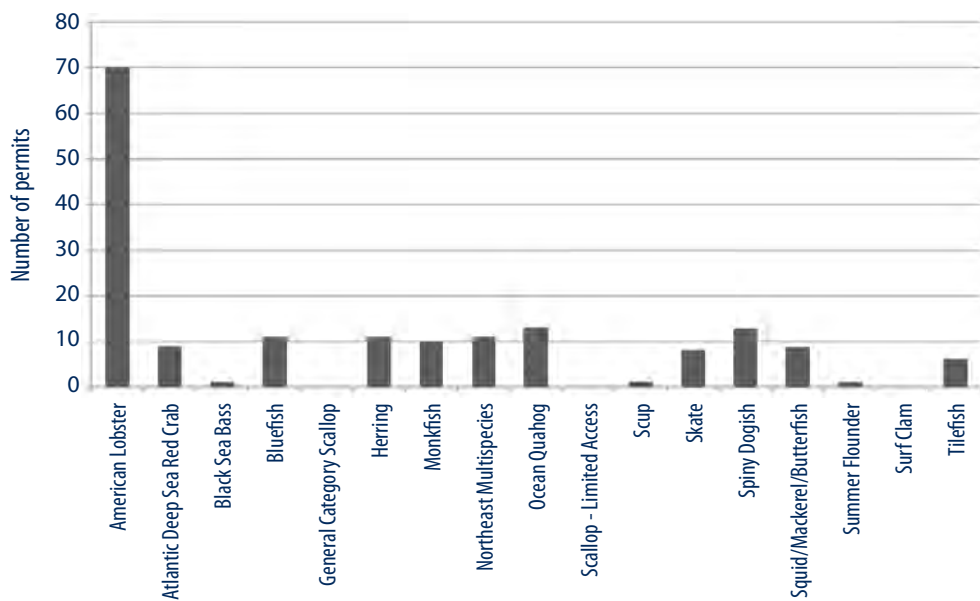


Figure 64. Number of federal permits listing Beals addresses in 2011. Source: Northeast Region Permit Database.



Boats along the town landing near Great Wass Seafood (left) and the dock at Barney Cove Lobster Co. (right).

out on a boat. While there is no place to buy recreational bait or supplies in town, these can be found in nearby towns (pers. com. key informant).

According to NOAA, information on subsistence fishing in Beals is either unavailable through secondary data collection or the practice does not exist (NOAA 2009l).

Marine infrastructure

The town landing was improved in 2004 and is the pride and joy of the community. The landing has float space for 20 or more skiffs to tie-up, and there are more than a half dozen additional floats for temporary gear storage. There is also a large lot with ample parking. The public boat ramp (to the left of the dock) is wide and paved, and a smooth, pebbled beach gives easy access for launching kayaks or canoes.

Boat building is a family tradition in the Jonesport-Beals Island area. The area is famous for its style of wooden lobster boat. As late as 1980, there were approximately a dozen boatbuilding shops on the island specializing in lobster boats, most of which have since closed (NOAA 2009l). Currently there are only three boat builders in Beals: Libby's Boat Shop and Calvin Beal Jr., which both build fiberglass boats; and Douglas Dodge Sr., which continues to build wooden boats (pers. com. key informant). Lobster boat races originated in Jonesport-Beals to demonstrate and advertise the latest designs. The races are still held every summer in Jonesport-Beals as part of what has become a statewide circuit with races in 12 harbors throughout the summer.

Today, Beals' Island has four commercial buyers: the Beals-Jonesport Co-op, Barney Cove Lobster Co., Great Wass Seafood, and A.C. Lobster, Inc. The Beals-Jonesport Co-op is a lobsterman's cooperative with approximately 75 active members, made up of residents of Beals Island, Jonesport, and Addison. The co-op sells both retail and wholesale. Located in Jonesport, it handles 500,000 to 800,000 lbs of lobster and 200,000 to 400,000 lbs of live crabs a year. During the winter months, scallops and sea urchin fishermen also use the facility. Boats from Jonesboro, Bucks Harbor, Addison, and Cutler also sometimes land their catch at the co-op (NOAA 2009l). The co-op sells bait, marine supplies, fuel and gas, lobster, and wholesale picked crabmeat (NOAA 2009l).

The dock at Barney Cove Lobster Co. has been in operation for 70 to 80 years and has been under the same ownership for the past 30 years. The company currently buys from 25 or more lobster boats, and most of the lobsters are then sold to A.C., Inc. The Barney Cove wharf was recently rebuilt but "still needs a little work." The dock has three manual hoists, and there are three small floats that wrap around the wharf and are used for dinghy storage. A fourth float is connected by a small wooden walkway and used for unloading and weighing catch. The wharf supplies lobstermen with bait and fuel (pers. com. business owner).

Great Wass Seafood is located next to the town landing and has been in operation since 2003, though the dock has been around since 1990. The 33-ft wooden wharf is in the midst of being renovated, and the owner



Boat repair shops in Beals.

is hoping to extend the wharf to 100 ft (has permits to eventually extend to 140 ft). The owner has applied for a working waterfront grant that he hopes will support the construction of a new lobster pound and a new storage building. The wharf currently has two hoists and three floats. Great Wass Seafood buys lobster from, and supplies bait and fuel for, approximately 60 boats from Beals and Jonesport and sells the catch wholesale to A.C. Lobster, Inc.

A.C. Lobster, Inc., is a family business that has been running for 75 years. At the buying station near the bridge to Jonesport, A.C. Lobster, Inc., currently buy lobsters from about 20 boats, and the majority of the fishermen are local. Most of its business is wholesale, but it also does a bit of retail (pers. com. A.C. Inc. employee). The large wharf has six manual hoists and a set of steps that lead down to the water where metal floats are arranged into a large square providing plenty of workspace. Crates full of lobster are stored and floated in the water in the center (this is called a *lobster car*). There is also a weighing station and bait shed on the floats.

The 1.8-acre property associated with Perio Point Shellfish includes two tidal lobster pounds and serves 75 to 100 boats that land lobsters, crabs, scallops, worms, urchins, cucumbers, and quahogs harvested in the region. The property also includes wharves, service buildings, and related working space and facilities. Carver Enterprises was granted an allocation of \$261,250 from the Land for Maine's Future Board to purchase a covenant on the property. The covenant

assures that this property will continue to be operated for the many fishermen in the Beals-Jonesport area.

In terms of maintenance and repair of boats, fishermen tend to do the work themselves. However, there are a few local businesses that do boat repairs: Libby's Boat Shop, Dennis Welding & Marine, and Osmond's Boat Shop. There are also a few individuals in town who build boats and do freelance repair work (pers. com. key informant). There are no marine boating suppliers or facilities for electronic and navigational repairs in town, but both of these are available just over the Reach in Jonesport.

Ems Rock Light is located on the eastern part of Moosabec Reach between Jonesport and Beals Island. It is 28 ft tall and has an automated beacon using solar power. There is also another lighthouse south of Jonesport at Moose Peak Light, built in 1827 on Mistake Island's point.

Fishing industry support and government institutions

Fishing industry organizations include the DELA and MLA (NOAA 2009). The Working Waterfront Access Pilot Program (WWAPP), administered by the Maine DMR, provides money to applicants such as municipalities, fishing co-ops, private commercial fisheries businesses, and more, ranging in amounts from \$7,000 to \$475,000. The intention of the program is to preserve commercial fisheries working waterfronts and to help secure property for these businesses. The WWAPP gave



Boats in Beals on foggy morning.

Carver Industries in Beals a grant to secure waterfront access for residents of both Jonesport and Beals.³²

Downeast Institute (DEI), now on Great Wass Island, began in 1987 on the clam flats of six Washington County communities. Clammers and town officials, concerned about declines in soft-shell clam harvests, teamed up with Brian Beal, a professor of marine ecology at the University of Maine in Machias. They created the Beals Island Regional Shellfish Hatchery (BIRSH)—a facility where wild clams were spawned, clam larvae and juveniles were reared on diets of cultured algae, and seed clams were produced for planting on the depleted municipal flats. Recently, DEI began rearing lobster larvae for use in biological studies. DEI's mission is "to improve the quality of life for the people of downeast and coastal Maine through applied marine research, technology transfer, and public marine resource education."³³

There are no fishery-assistance centers in Beals, but Coastal Enterprises, Inc., (CEI) supports fishing communities throughout the state. One of the ways they do this is through the Working Waterfront Access Protection Program. CEI gives loans and business assistance to commercial fisherman and other marine-related businesses. CEI assists fishermen in getting loans, legal advice, and money for research projects and provide counseling on business questions.³⁴ The Sunrise County

Economic Council also provides assistance for Beals, Jonesport, and other Downeast communities. This includes the Down East Commercial Fisheries Fund, which invests in Washington County-based commercial fishermen and marine related industries. The goal is to increase economic activity and capital formation leading to growth, profitability, and sustainability of marine-related industries located in Washington County.³⁵

Beals is governed is by a three-person board of selectmen. Additionally, the town has a harbormaster and assistant harbormaster. Beals also has a harbor committee and a shellfish committee.

Cultural attributes related to fishing and the sea

Each year on the Fourth of July, the Moosabec World's Fastest Lobster Boat Races are held in Moosabec Reach. Preceding this race is the World's Fastest Model RC Lobster Boat Races, where residents race model lobster boats by remote control (NOAA 2009l).

Each year around Christmas, fishermen from Jonesport and Beals decorate their boats with holiday lights and parade down the Moosabec Reach in the evening. Fishermen sing carols over VHF, Santa Claus watches from the bridge, and the community gathers to watch and enjoy the festivities (pers. com. key informant).

The Moosabec Community Center, located at the Beals Historical Society, sponsors an annual Model Boat Show (NOAA 2009l).

32 Maine's Working Waterfront Access Pilot Program: <http://www.wwapp.org>

33 Downeast Institute. Current Research. <http://www.downeastinstitute.org/research.html>

34 Coastal Enterprises Inc. 2011. A Development Approach to Fisheries and Maine's Working Waterfront. <http://www.ceimaine.org/Fisheries>

35 Sunrise County Economic Council. Down East Commercial Fisheries Fund. <http://sunrisecounty.org/business/loan-programs/down-east-commercial-fisheries-fund/>

Issues Facing Commercial Fishing Industry

Beals Island and Jonesport face rapidly escalating property values due to gentrification. It used to be that that nearly everyone in the town of Beals was from a family that had lived there for several generations. However, within the past decade, the community has seen an influx of “people from away” buying up much of the local property. Additionally, these newcomers tend to become seasonal residents and/or they are retirees who do not come to the area to raise a family. As a result taxes have increased and school subsidies have decreased. This trend is also contributes to waterfront access, both in terms of commercial and public access, is becoming increasingly limited (pers. com. key informant).

Fishermen also find the issue of regulations to be difficult. One cause for the collapse of the local sardine industry was regulatory changes regarding the dumping of waste and scraps into the ocean. Not even the scales of fishes could be dumped into the bay, which was difficult for these operations to avoid. Today, lobstermen are struggling to reach a compromise between the needs and requirements of their businesses and their impacts on the efforts to conserve and protect whale populations. Because of the high incidence of entanglement in fishing gear, including trap lines, the modification of such gear has been an important goal for conservationists. Meanwhile, each time regulations regarding fishing gear change, fishermen must update their traps and gear, which is extremely costly. Additionally, there may be a period of adjustment as fishermen learn and adapt to fishing under these new regulations (pers. com. key informant).

There is one school on the island, and it serves pre-kindergarten through middle school. Pre-K is open to children of Beals, Jonesport, and nearby Addison. Students then attend high school in Jonesport, and local reports suggest that students are still entering into the lobster fishery at a consistent rate (per. com. key informant). There doesn't seem to be concern about students returning to the island or participating in fishing; however, there are concerns about the limited-access lobster licensing program restricting some older fishermen from entering into the fishery or re-entering after a sabbatical (pers. com. key informant).

BUCKS HARBOR-MACHIASPORT COMMUNITY PROFILE

Geography and History

The village of Bucks Harbor is located within the town of Machiasport, in Washington County (Figure 65). The town of Machiasport has an area of 22.2 square miles. There is a small airport in Machias (Machias Valley Airport), and the Eastport Municipal Airport is about 40 miles away. The town is close to Route 1, which travels the length of the Maine coast. A bus line runs once daily between neighboring Machias and Bangor. The name Machias comes from the Native American word “mechises,” which means “little run of bad water” or “bad little falls,” after the Machias River which runs through town (NOAA 2009m).

This area was of strategic importance for lumber and trade during the early days of European exploration and settlement. Machias was at one time a popular hideout for pirates. The first naval battle of the American Revolution was held in Machiasport near what is now the site of Fort O’Brien State Park. Originally part of the town of Machias, Machiasport was incorporated separately in 1826. Machiasport was once the most important port in the area, known for its shipbuilding and sardine-canning industry (NOAA 2009m). Despite its rich history, Machiasport is not known as a tourist town.

Demographics and Economics

The demographic data provided is for Machiasport rather than Bucks Harbor, as information is not available at the village level. According to the U.S. Census Bureau (2010), the population of Machiasport was 1,119 in 2010 (down 3.5% from 1,160 in 2000). Machiasport’s population is relatively homogenous; in 2010, 97.1% of residents identified themselves as white (U.S. Census 2010). Additionally, 69.6% of Machiasport residents were born in Maine, 26.3% were born in a different state, and 4.1% were born outside of the United States (U.S. Census Bureau 2010). In terms of education, 35.2% of Machiasport’s population had a high school degree, and 18.1% had a bachelor’s degree or higher, which is lower than the state and national levels.

Machiasport’s age structure is similar to many Maine towns in that it is older than the nation as a

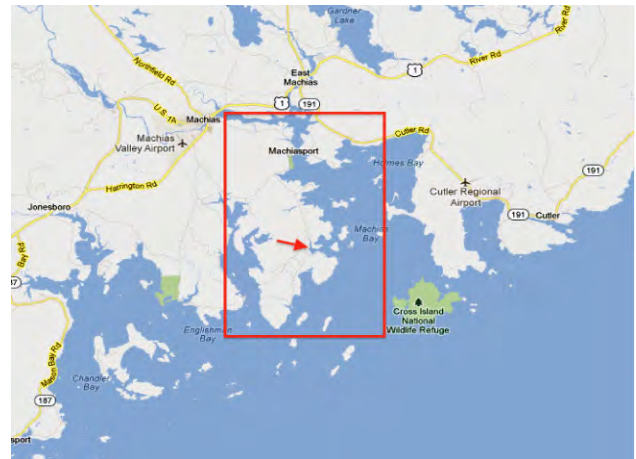


Figure 65. Map of Machiasport. Town is outlined in red. Bucks Harbor is designated with a red arrow.

whole (Figure 66). The median age was 43.3 in 2010, higher than both the state and U.S. median ages (U.S. Census Bureau 2010). In 2010, 18.1% of the population was 65 years of age or older, which is higher than for the state as a whole.

In 2012, median household income in Machiasport was \$42,778 and median per capita income was \$23,098, both lower than the state medians (Table 47). Machiasport features much fewer households with incomes from Social Security and retirement compared to Maine and the nation (Table 48). In 2012, the poverty levels in Machiasport were lower than the state levels, with 7.6% of families and 10.3% of individuals falling below the poverty threshold. Elderly poverty rates, however, are slightly high in Machiasport, with 10.4% of all persons over 65 falling below the poverty line, and more households depend on food stamps in Machiasport than in the state or the nation (Table 48).

In 2012, 47.3% of Machiasport’s population 16 years of age and over was in the labor force. Of the civilian labor force, 1.2% was unemployed, lower than the overall state unemployment rate (Table 47). Top employment sectors were management, business, science, and arts occupations (32.9%), natural resources, construction, and maintenance occupations (24.3%), and sales and office occupations (24.3%). Self-employed workers, another category in which fishermen are found, accounted for 24.9% of all workers (Table 47). As an employment sector, agriculture, forestry, fishing, hunting, and mining occupations accounted for 22.1% of all jobs, which is significantly higher than the state (Table 49).

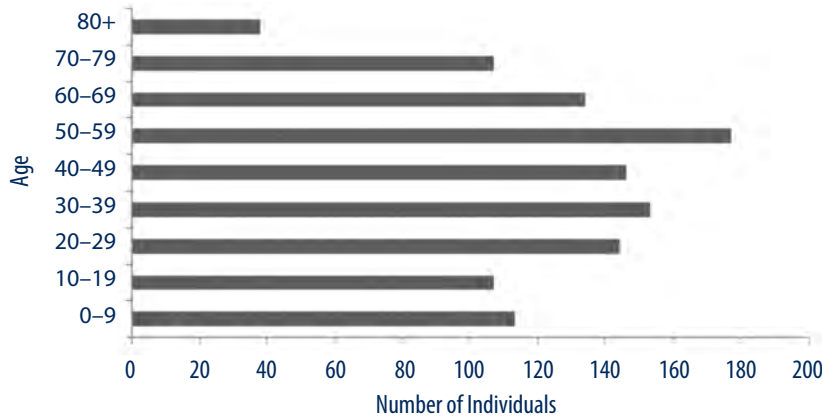


Figure 66. Age structure of the population, Machiasport, 2010. Source: U.S. Census 2010.

Table 47. Median and per capita income and percentages unemployed and self-employed, Machiasport, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
	----- \$ -----		----- % -----	
United States	53,046	28,051	6.0	6.3
Maine	48,219	26,464	4.8	9.1
Machiasport	47,778	23,098	1.2	24.9

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 48. Household income from earning, Social Security, retirement, and SNAP, Machiasport, 2012.

	Households with Income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- % -----			
United States	78.7	28.3	17.6	11.4
Maine	75.7	32.9	18.9	15.8
Machiasport	76.0	36.5	18.5	18.0

Source: 2008–2012 American Community Survey 5-Year Estimates.

Fisheries Profile

Commercial

Important fisheries in Bucks Harbor include lobster, surf clams, ocean quahogs, herring, scallops, shrimp, and other nonfederally managed species. Some of the vessels fishing for ocean quahogs from Buck’s Harbor will sometimes land their catch at a facility in Beals Island/Jonesport. Bucks Harbor is also home to the

salmon aquaculture and processing operation True North Maine, Inc., a division of Cooke Aquaculture, Inc.

Groundfishing: There is currently only one groundfishery permit in Machiasport. The permit is an HA, which allows for the possession of Atlantic halibut.

State license and federal permit data

In 2011, there were 157 individuals with state licenses in Machiasport. These individuals held 276 licenses, most of which were for lobsters/crabs and shellfish (Figure 67). In 2011, 15 vessels with federal permits listing Machiasport residences held a total of 16 licenses. All permits included a federal lobster license and one permit included multispecies groundfish (one with HA) (Figure 68). The average vessel length of permit holders in Machiasport was 38.6 ft. In 2012, there were four federally registered dealers listed in Machiasport that dealt with herring, lobster, and sea scallop.

Recreational and subsistence

In terms of recreational fishing, Mill Creek in Machiasport may be a good spot for fishing striped bass from shore. According to NOAA, information on subsistence fishing in Bucks Harbor was either unavailable through secondary data collection or the practice does not exist (NOAA 2009m).

Marine infrastructure

Machiasport has one boat ramp and one town-owned dock located in Bucks Harbor. The dock is in the middle of moored boats, with a commercial buyer on each side and the Cooke Aquaculture pier on the opposite shore. The site has ample parking, and the pier is paved and has a large mechanized hoist for loading and unloading catch and gear.

Table 49. Percentage of jobs in select occupation categories, Machiasport, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	%			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Machiasport	22.1	6.8	5.1	28.5

Source: 2008–2012 American Community Survey 5-Year Estimates.

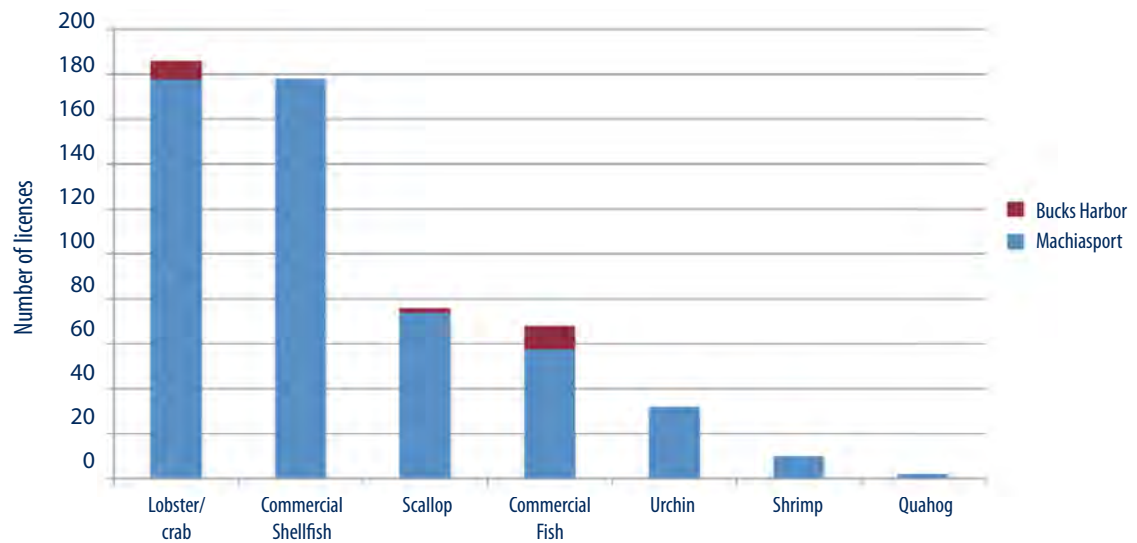


Figure 67. State licenses listing Machiasport and Bucks Harbor addresses. Source: Maine DMR 2011.

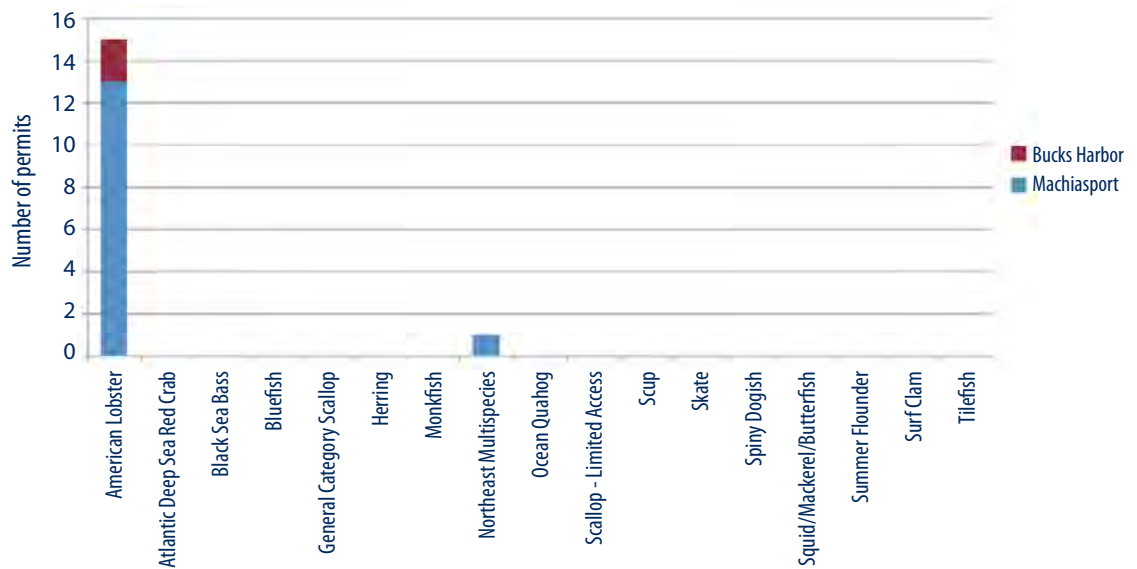


Figure 68. Number of federal permits listing Machiasport and Bucks Harbor addresses. Source: Northeast Region Permit Database.



BBS Lobster Trap wharf (left) and facility (right).

There are two lobster buyers in Bucks Harbor. BBS Lobster Trap, owned by the Lobster Trap of Cape Cod, Massachusetts, is located on Pettegrow Point Road. BBS Lobster Trap has been in operation since 2008, though the wharf has been in operation for far longer (at least 30 years). BBS is both a retailer and wholesaler of lobster and buys from approximately 35 local fishermen. Although BBS buys only lobster, one employee reported “anyone can come here to use the wharf.” BBS sells both bait and fuel, and it has an ice machine. For transporting catch, the company uses a mix of its own and its customers’ trucks. The facility is large, with more extensive buildings than most Downeast lobster-buying stations, but no processing happens on site. BBS does have an additional, non-waterfront site in town where it stores large amounts of bait and keeps its refrigerated trucks when they are not transporting catch.

The other commercial buyer is Beach Road Lobster Co., Inc., which operates from a float in Bucks Harbor and uses the public Pettegrow Beach on Fin Beach Road to load and offload catch, bait, and other supplies. The company buys from approximately 25 lobster boats, providing them with bait and fuel (fill up on the public beach from jugs). The young company sells catch wholesale to a buyer in Jonesport, transporting catch with its own refrigerated truck.

Cooke Aquaculture is another site with marine infrastructure in Bucks Harbor; the company has been in operation since 1987. Across from Pettegrow Beach, the facility has a private pier and extensive processing facilities. They also have multiple boats and many large refrigerated trucks for transporting product. The

company employs close to 200 people in the state of Maine, including at its other sites farther Downeast (pers. com. Cooke Aquaculture employees).

Fishing industry support and government institutions

Bucks Harbor fishermen are associated various fishing industry-support organizations including the DELA and the MLA (NOAA 2009m). Although there are no fishery-assistance centers in Bucks Harbor, Coastal Enterprises Inc. in Machias provides support to fishing communities, including Bucks Harbor, throughout Maine. CEI assists fishermen in obtaining loans, legal advice, money for research projects, and provides counseling on business questions.³⁶

The Downeast Salmon Federation, located in Columbia Falls, Maine, is working to protect and restore habitat of wild salmon in Maine, to preserve the species for sportfishing, and to protect other recreational and ecological resources in eastern Maine. The federation is one of many partners involved in the Machias River Project, which is trying to protect 60,000 acres of land along the river with conservation easements and purchases (NOAA 2009m).

Machiasport is governed by a three-person board of selectmen. The town also has a harbormaster.

³⁶ Coastal Enterprises Inc. 2011. A Development Approach to Fisheries and Maine’s Working Waterfront: <http://www.ceimaine.org/Fisheries>



Boats on the water in Bucks Harbor

Cultural attributes related to fisheries and the sea

There are no museums, festivals, or monuments in Bucks Harbor or Machiasport, but fishermen may participate in festivities in nearby towns such as Jonesport and Cutler (pers. com. key informant).

Issues Facing the Fishing Community

The biggest issue facing the fishing community in Machiasport is regulations. For example, urchin harvesters are only able to work on specific days that change from week to week. Once these days have been set, the harvesters can only work on those days—regardless of whether the weather is fair or dangerous. While the basis of limiting urchin harvesting to a certain number of days is accepted by most, urchin harvesters believe setting specific dates is not safe or efficient. If an urchin-fishing day ends up being stormy, harvesters must choose between their safety and their livelihood. Likewise, lobstermen have been frustrated by regulations regarding whale conservation. Gear modifications and especially the issue of “whale rope” have been an ongoing struggle for lobstermen, because they are costly, ever changing, and may be irrelevant in certain areas (pers. com. key informant).

An issue that affects clam diggers is the town of Machias’s failing sewer system. When there is heavy rain, the system dumps into the Machias River, which results in the closures of many acres of clam flats, which can have major economic impact (pers. com. key informant). Another concern is that, like so many

small fishing communities, the town of Machiasport would collapse were it not for the fishing industry. While Machiasport fishermen participate in a variety of commercial fisheries—lobsters, crabs, scallops, urchins, clams, and periwinkles—the industry is heavily dependent on lobster, and several of these other species have been on the decline. Additionally, there is little fisheries-related infrastructure available in the town of Machiasport, such as boat builders, repair yards, supply stores, or boat storage yards. Although many of these services can be found relatively nearby, having to travel for basic needs is yet another expense (pers. com. key informant).

LUBEC COMMUNITY PROFILE

Geography and History

Lubec is the easternmost town in the United States and is located at the end of a peninsula in Washington County at the opening of Cobscook Bay (Figure 69). It is a geographically large area, 78.9 square miles, divided into Lubec village to the east, North Lubec on a north-extending peninsula, South Lubec, and the more agricultural West Lubec. The Lubec Narrows separates it from Canada and the Franklin Delano Roosevelt Bridge connects Lubec to Canada's Campobello Island, home of the Roosevelt Campobello International Park and an active community. Lubec is about 4 miles from Eastport over water, but they are about 1 hour apart by car (50 miles).

Lubec was settled before the American Revolution. It was initially part of Eastport (incorporated in 1798) and was incorporated separately as "Lubeck" in 1811. The town's economy has long centered on fishing and fish processing. In 1797, Daniel Ramsdell cured the first herring by smoke, a process of preserving fish he had learned in Nova Scotia. Lubec would later become the national leader in smoked herring production.³⁷ In 1880, the first sardine- and herring-canning facility was built in Lubec, the Lubec Packing Company (Hall-Arber et al. 2001). The supply of herring for sardine canneries in Maine came from local weirs, a fixed gear that corrals and traps schooling herring.

The herring industry grew rapidly, and by 1850 there were 45 weirs, 75 smokehouses, and more than 500,000 boxes of herring produced annually. Herring and smokehouses were the major employers, and eventually Lubec had 23 sardine factories. Support businesses also grew—sawmills that provided the shooks for wooden cases that held the cans for shipment, transporters, boat builders, and suppliers of condiments—all of which offered employment opportunities. Byproducts of the industry, such as fertilizer, pearl essence (from herring scales), and fish oil, also contributed to the local economy. During this time the smoked herring business also prospered, with some sardine canneries even operating herring smokehouses. Fish processing declined with the Depression, revived briefly during WWII, as the industry supplied healthy protein to the

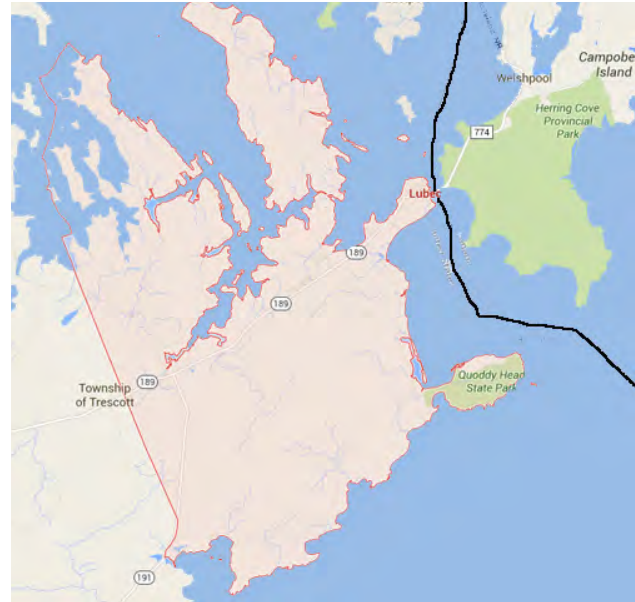


Figure 69. Map of Lubec, Maine, at the opening of Cobscook Bay.

oversea troops, and then declined precipitously in the early 1950s (Hall-Arber et al. 2001). By 1976, there were only two canneries left in Lubec, and the last of these, the Lubec Packing Company, closed in 2001. The last sardine smokehouse—the last of its kind in the United States—was the McCurdy Smokehouse, which closed in 1991.

Tourism is becoming an increasingly important part of Lubec, at least for the downtown portion of the community. The downtown strip includes the McCurdy museum, a number of restaurants, an ice cream parlor, and a few gift shops. The town also has two charter companies that offer sunset cruises, whale watching, and private charters. The wharf is not only a seafood-buying station, but also a restaurant, gift shop, and the departure site for whale-watching cruises.

Demographics and Economics

Lubec's population has mirrored the rise and fall of the herring fishery and associated fish-processing plants. The rise of herring smokehouses led to rapid population growth: by 1850 Lubec had 3,000 people. The strong fishery kept the human population stable through the early 20th century; the 1910 census reported 3,363 persons living in Lubec. The closing of the sardine factories was paralleled by a significant drop in population. By 2000, only 1,652 persons lived in Lubec (U.S. Census Bureau 2000). In 2010, Lubec had a

³⁷ Multhopp, J. 2011. Lubec: A border town shaped by the sea. <http://lubec.maine-memory.net/page/722/display.html>

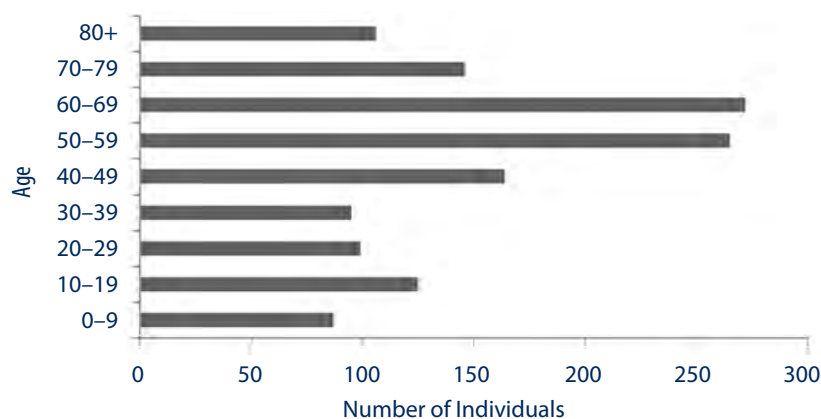


Figure 70. Age structure of the population, Lubec, 2010. Source: U.S. Census 2010.

Table 50. Median and per capita income and percentages unemployed and self-employed, Lubec, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
	----- \$ -----		----- % -----	
United States	53,046	28,051	6.0	6.3
Maine	48,219	26,464	4.8	9.1
Lubec	36,146	24,553	4.5	22.3

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 51. Household income from earnings, Social Security, retirement, and SNAP, Lubec, 2012.

	Households with Income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- % -----			
United States	78.7	28.3	17.6	11.4
Maine	75.7	32.9	18.9	15.8
Lubec	57.2	54.1	27.2	23.8

Source: 2008–2012 American Community Survey 5-Year Estimates.

population of 1,359 people. The population is relatively homogenous; in 2010, 97.7% identified of residents themselves as white (U.S. Census Bureau 2010). In terms of education, 37.8% of Lubec’s population had a high school degree, and 19% had a bachelor’s degree or higher, which is lower than both the state and national percentages of the population with bachelor’s degrees.

The population of Lubec swells during the summer months, reflecting its status as a vacation destination. Summer visitors include those who maintain residences

in the area but spend winter months elsewhere along with those who come for one or two weeks. The popular music-education program SummerKeys draws European and Asian visitors, as well as many domestic tourists and has been recognized as an important contributor to the local economy. When SummerKeys is in town, many lodginghouses are full and restaurants have lines. While summer visitors also include visual artists, there is limited mixing of this group with the fishing population. The arts community in Lubec has seen considerable growth over the last decade or so, with a number of painters, sculptors, musicians, photographers, and writers who are full-time residents. Many of these individuals draw income from sources outside of Lubec.

As in much of rural Maine, the older population structure is due in large part to out-migration of young people after high school. While there are no statistics available on this process, it is common in rural Maine and evident in the overall age structure of the city. Lubec’s population is aging and older than the state as a whole. The median age in 2010 was 54 years, older than Maine and U.S. median ages. In 2010, 28.3% of the population was over 65, also higher than these percentages for the state and the nation (U.S. Census Bureau 2010) (Figure 70).

Median household income in Lubec was \$36,146 and median per capita income was \$23,553, both lower than the state medians (Table 50). In 2012, 14.2% of families and 18.3% of individuals fell below the poverty threshold, both higher than Maine poverty levels. Elderly poverty rates are also high in Lubec, with 14.9% of all persons over 65 falling below the poverty line, and 23.8% of all households in Lubec reported depending on food stamps (Table 51).

In 2012, 50.2% of the total population 16 years of age and over was in the labor force. Of the civilian

Table 52. Percentage of jobs in select occupation categories, Lubec, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	-----%-----			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Lubec	8.0	16.2	13.6	24.7

Source: 2008–2012 American Community Survey 5-Year Estimates.

workforce, 4.5% was unemployed, comparable to the state unemployment rate (Table 50). Top employment sectors were management, business, science, and arts occupations (29.9%), service occupations (26.7%), and natural resources, construction, and maintenance occupations (17.4%) (Table 52). As an employment sector, agriculture, forestry, fishing and hunting, and mining occupations accounted for 8% of all jobs, which is significantly higher than the state average for this sector. Self-employed workers, another category in which fishermen are found, accounted for 22.3% of all workers (Table 50).

Fisheries Profile

Commercial

Traditionally, fishermen of this area use a portfolio method of fishing, so heavy specialization in a single fishery is not common. Acheson et al. (1980) reported fishermen participating in the herring fishery, clam digging, tub trawling and handlining for groundfish, scallop dredging, and lobstering. With the exception of herring and groundfish, these species remain important to commercial fishermen today, along with crab, urchin, and periwinkle.

Currently, there are approximately 50 boats, including 25 lobster boats, home-ported in Lubec, all docked at moorings distributed from Johnson Bay to Bailey's Mistake. Lobster is economically the most important fishery. Lubec lobstermen typically do not harvest year round, and fishing is difficult due to the strong tides. To prevent tides from moving traps, lobstermen tie 100-lb weights to them. Fishermen can only pull traps during the approximately 45-minute period of slack water between tides. They typically use two or three traps per buoy.

Scallops are harvested by both divers and draggers from Cobscook Bay although dragging is significantly more common. Local fishermen and managers are

concerned about the scallop resource and have been successful in implementing scallop conservation measures in Cobscook Bay including a daily catch limit that is lower than the limit for the rest of the state. Because Cobscook Bay is home to a prolific scallop grounds, local fishermen are concerned about the effects of a highly mobile fleet on the local resource. In some years, more than 100 boats travel to the bay to fish for scallops. In the 2011–2012 fishing season, boats had a difficult time meeting the 135-lb daily catch limits, so the state implemented an immediate closure about two weeks into the season. The president of the Cobscook Bay Fishermen's Association, who lives in Eastport, expressed the industry's concerns about boats "from away" in an article in the *Bangor Daily News* (Walsh 2012):

This mobile fleet travels up and down the coast, and, when they find a bunch of scallops, they are on them like wolves. Three or four days later, there's nothing left. They rape this bay and then go home and finish up the season in their neighborhood, leaving us with nothing.

Scallop management has since changed with DMR establishing a 10-year plan using rotational closures to "make sure good scallop grounds are set aside for fishing" (French 2012).

The sea urchin fishery has gone through a boom-and-bust cycle. Sea urchins are harvested primarily in the winter for their roe, which is mostly sold to the Japanese market. Sea-urchin harvesting began in the 1980s, peaked in the 1990s, and is much lower today.

Lubec's only commercial wharf also has 300 or more people who pick periwinkles part time, and "the Wharf," as it is called by locals, sells about 10,000 lbs of periwinkles each week. There are also a few fishermen who drag for sea cucumbers, including at least one from Lubec.

Herring fishing traditionally occurred via stop seining, which was done from small boats with outboard

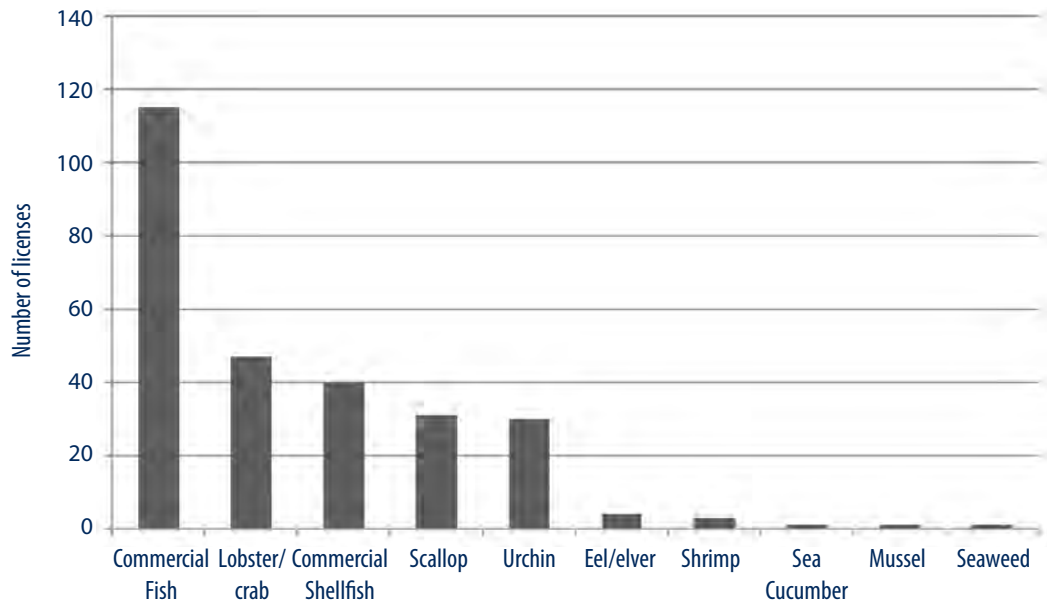


Figure 71. State licenses listing Lubec addresses. Source: Maine DMR 2011.

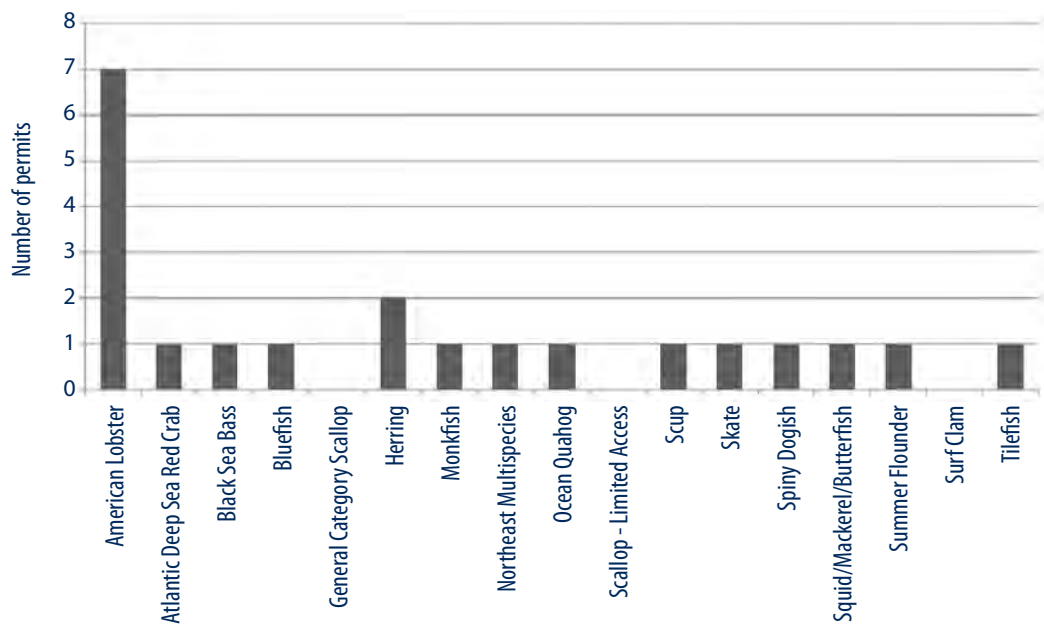


Figure 72. Number of federal permits listing Lubec addresses. Source: Northeast Region Permit Database.

motors. Herring weirs and stop seines found competition from purse seining and mid-water trawlers in the 1980s (Molyneaux 1999). There is minimal herring fishing done today.

State license and federal permit data

In 2011, there were 163 individuals with state licenses in Lubec. These individuals held 273 licenses, most of which were for commercial fish and shellfish (Figure 71). In 2011, eight vessels with federal permits

listing Lubec residences held a total of 21 permits. The average vessel length of permit holders in Lubec was 39.6 ft. All but one permit included a federal lobster license. There are a variety of permits that include herring, monkfish, flounder, clam, and spiny dogfish (Figure 72). In 2012, there were no federal dealers listed in Lubec.

Recreational and subsistence

There is little recreational fishing that takes place in Lubec. Occasionally tourists will drop a line from the town pier to catch a mackerel, pollock, or “whatever bites,” but it is not a common local pastime. There are no bait-and-tackle shops in town, so people who do fish recreationally typically use bare hooks, which attract mackerel. DMR records show that in Lobster Zone A, which includes Lubec, 221 noncommercial licenses were issued in 2009, along with 1,095 trap tags. Information on subsistence fishing in Lubec is either unavailable or the practice does not exist.

Aquaculture

Finfish aquaculture also occurs in Lubec. According to Hall-Arber (2001), the aquaculture operations were started by individuals who built pens by hand and undertook the experimental phase of establishing aquaculture as a commercially viable marine enterprise. They were helped initially by the high market prices for pen-raised Atlantic salmon. As aquacultured finfish flooded the market, however, the price dropped, which led to the buy-out of pens, aquaculture leases, and businesses by Canadian corporations that compensated for the small profit margin by handling large volumes (Hall-Arber et al. 2001).

In 2001, there were three aquaculture companies in the Lubec area: Maine Aquafoods (a division of International Aquafoods), Stoltz Seafarms, Atlantic Salmon of Maine and Heritage Salmon (formerly Connors). The three Canadian companies bought out

smaller operators. R.J. Peacock Co. started processing for the farms around 1995 and sold to Hannaford under the “Tru-Fresh” name. All of the active salmon farms in Maine are now owned by Cooke Aquaculture of Black’s Harbor, New Brunswick, which grows salmon in pens in Cobscook Bay, off Machias, and near Mount Desert Island in eastern Maine (*Bangor Daily News* 2011).

Marine infrastructure

Lubec’s municipal infrastructure includes a town pier, a large concrete boat ramp lined by a long row of narrow floats, a large parking lot between the pier and boat ramp, and a breakwater. The floats at the boat ramps have space for about 15 skiffs during low tide and appear to be mostly for recreational use. The pier has one hoist and one float. In addition to the boat ramp located at the pier, there are three others throughout town, but the downtown ramp is the only one that is paved and able to accommodate larger boats.

Although there are approximately 25 boats that are commonly used for lobstering in Lubec, there is only one commercial lobster buyer. The Wharf, with a large pier and one hoist, is based out of a former sardine cannery not far from the town pier. The Wharf provides bait and diesel fuel. The large facility currently buys lobster, crab, scallops, and periwinkles. It has a tank room for lobster and crab and a room for bait preparation. There is also a periwinkle-sorting station, for separating periwinkles into various size categories, and a walk-in refrigerator unit for storing periwinkles before they are shipped to New York. The Wharf currently buys from a



The concrete boat ramp: the only ramp in town capable of handling larger fishing vessels, shown here at low water.



Landing facilities at the Wharf on the left; the McCurdy Smokehouse on the right.

dozen lobstermen, 10 scallopers, and as many as 300 people pick periwinkles part time. The facility is in the midst of a large renovation project that includes a new office, processing facilities, and freezing capabilities for scallops. The business also hopes to get certified to buy clams. The Wharf also has deep-water access with at least 8 ft of water at low tide.

Fishing industry support and government institutions

The Cobscook Bay Fishermen's Association represents many of the fishermen in the Eastport and Lubec area, as does the Downeast Fixed Gear Association, MLA, and DELA.

The Cobscook Bay Resource Center, based in nearby Eastport, was founded in 1998 to encourage and strengthen community-based approaches to resource management. The center assists local resource users, scientists, government agencies, educators, and others to monitor and better understand the Cobscook Bay ecosystem, with an eye towards economic development based on the bay's renewable resources. The center plans to develop a new site near the waterfront, which will include a marketing co-op and community kitchen.

The University of Maine Sea Grant and Cooperative Extension has an office at the Boat School in Eastport. The local marine extension team member provides local support to fishermen and other community members and support to the Cobscook Bay Fishermen's Association.

Lubec has a five-person board of selectmen, a town administrator, a harbor committee, and a shellfish committee.

Cultural attributes related to fisheries and the sea

The McCurdy Smokehouse is now a museum, although it is partly closed due to lack of funding. It was the last herring smokehouse in the United States and was placed on the National Register of Historic Places in 1993.³⁸ Lubec Landmarks, Inc., is a nonprofit organization founded in 1995 to restore and maintain the McCurdy smokehouse complex and to preserve the region's maritime and fishing heritage.

The nonprofit Lost Fishermen's Memorial Association (LFMA) is in the process of creating a fishermen's memorial park adjacent to the public landing in downtown Lubec; it will honor all fishermen lost at sea in the area including those from nearby Canada. As of February 2010, more than 230 local fishermen have been identified as lost at sea including five who died in 2009. Sparked by the tragedies of 2009, the LFMA was created in 2010 and is conducting fund-raising activities for this effort.³⁹ The artist's rendering is not available; however, a feature of the memorial is an inscription from Virgil (c. 29 BC): "No day shall erase you from the memory of time."

³⁸ McCurdy Smokehouse and Mulholland Market Gallery & Gift Shop. 2011. <http://www.mccurdyssmokehouse.org/>

³⁹ Lost Fishermen's Memorial Association. http://www.lostfishermensmemorial.com/memorial_park.htm



Mullholland Point Light.

There are two lighthouses on nearby Campobello Island: the Mulholland Point Light at the mouth of the Lubec Narrows and East Quoddy Lightstation (also known as the Head Harbour Lightstation).⁴⁰ The nearby West Quoddy Head Lighthouse was built in 1809 and automated in 1988. It overlooks Sail Rock, the easternmost point of land in the continental United States and is situated in the 481-acre Quoddy Head State Park. The five-level Lubec Channel Light, also known as “the Sparkplug” was built in 1889 and automated in 1939. Discontinuation was planned in 1989, so Lubec residents mounted a “Save the Sparkplug” campaign and raised \$700,000 to save it. The lighthouse became privately owned in 2007.

Issues Facing the Fishing Community

A key issue facing the fishing community in Lubec is limited access—in terms of infrastructure, access to the water, and access to fishing rights. Though there are four public boat ramps in town, only one is suitable for launching fishing boats. While there is deep-water access in Lubec, dramatic tidal swings and vulnerability to storms have perhaps contributed to the lack of developed wharves and docking facilities. There are currently two working piers in town—the municipal pier and the one commercial buying station. Although the Wharf provides fishermen with bait and fuel and has well-maintained facilities, it and buyer’s trucks that visit the commercial dock, are the only local options for fishermen needing to sell their product.

There are currently no boat builders, repair yards, boating suppliers, or boat storage facilities in town. Many local fishermen store their boats on residential properties. There used to be a marina in town, but it was wiped out in a storm. Even though these items cannot be found within the town of Lubec, there are facilities in Columbia Falls and Eastport that fishermen use. Both of these towns are about an hour’s drive from Lubec, but Eastport is only a few miles away by boat. Moose Island Marine in Eastport is the nearest outlet for maritime hardware; the Lubec Hardware Store stocks a limited line of marine fittings and rope. The Hamilton Marine truck, on which many Downeast fishermen rely, does not make deliveries so far north. The nearest Hamilton Marine store is in Jonesport (pers. com. key informant).

Another issue that Lubec lobstermen are dealing with is the rising prices of necessities such as bait and fuel coupled with an unchanging or even decreasing price of lobster. This is a common problem facing fishing communities throughout the state and has been widely reported.

⁴⁰ Visit Lubec Maine. <http://www.visitlubecmaine.com>

EASTPORT COMMUNITY PROFILE

Geography and History

The easternmost city in the United States, Eastport is built on several islands in Washington County, the largest of which is Moose Island (Figure 73). Bays and inlets isolate it from other towns. A narrow tidal dam causeway connects Eastport to Carlow Island, which is connected to the Pleasant Point Passamaquoddy Reservation (Sipayik) on the mainland. Passamaquoddy Bay and Cobscook Bay surround the town and the narrow inlet to the Gulf of Maine creates strong tides, giving Eastport some of the widest tidal ranges (~25 ft) in the United States. The bathymetry of the bay and its mouth facilitates large-vessel shipping because there is a deep-water channel immediately offshore.

Eastport is situated about 2 miles north of Lubec as the crow flies, but the two towns are separated by water and are about 1 hour apart by car (50 miles). A seasonal ferry operated by Downeast Windjammer Cruises makes trips between Eastport and Lubec four times a day. A seasonal ferry also runs between Eastport and Canada's Deer Island, across what is known as the Western Passage. Between Eastport and Deer Island is the "Old Sow," the world's second largest whirlpool. Campobello Island (Canada) is also separated from Eastport by a narrow straight to the southeast of Eastport, but there is a connecting ferry from nearby Deer Island to Campobello.

Eastport was founded 1780, incorporated as a town 1789, and incorporated as a city 1893.⁴¹ In 1811, Lubec split off to become its own town. Eastport was captured by the British during the War of 1812, and then returned to the United States in 1818. The disputed boundary between the United States and Canada was not settled until 1842. Past industries included boat building, lumber, fishing, and shipping. Port activity peaked in the late 1880s, with roughly half of all vessels hailing from foreign ports. After WWII and the end of the Eastern Steamer line, port activity slackened and the economy declined (Hall-Arber et al. 2001).

In the 1930s, Dexter Cooper intended to build dams across two bays in the Eastport area to generate power as the tides receded. With approval from President Franklin Delano Roosevelt and \$36 million

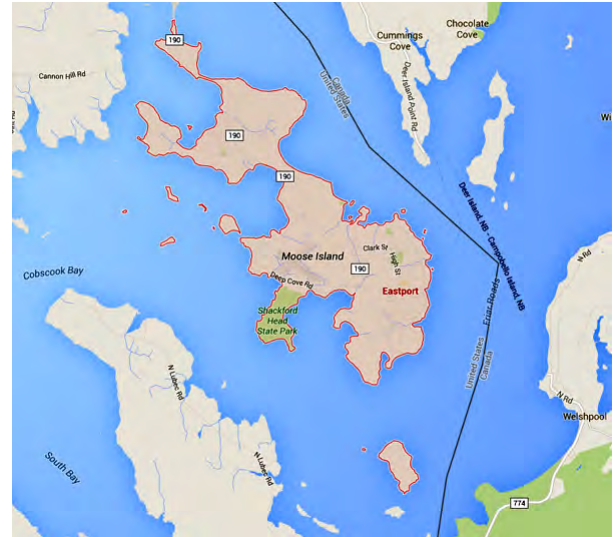


Figure 73. Map of Eastport with Lubec to the south. Town of Eastport outlined in red.

dollars in backing, the Quoddy Dam project started in 1935, only to lose government funding one year later when the economic feasibility of the project was questioned. There have been several other plans to create tidal energy plants in Eastport, but none has ever been constructed. Ocean Energy Renewable Company (ORPC) has deployed a commercial-scale turbine in Cobscook Bay that has been producing electricity that goes into the Emera (formerly Bangor Hydro) grid. Their in-stream technology does not require a dam.

The first sardine factory was built in Eastport around 1875, leading to significant growth in the city. Eighteen sardine factories operated day and night during the season and produced approximately 5,000 cases per week, employing about 800 men, women, and children. By the 1960s, however, there were only two canneries left, and by 1983, the last cannery in Eastport, Holmes Packing Corporation, closed.

Tourism is important to the local economy. There are two museums downtown, several restaurants, a few art galleries, and a motel (Hall-Arber et al. 2001). Such uses of the downtown appear to be increasing. A scale model of Roosevelt's Quoddy Dam project can still be seen on display in the city's visitor's center on Main Street.

Demographics and Economy

Population peaked at the same time as Eastport's high point as port city. In 1900 the city had 5,300 residents; by 2000 Eastport's population had dropped to

⁴¹ Border Historical Society. 2010. Eastport. <http://www.borderhistoricalsociety.com/abouteastport.html>

1,640 (NOAA 2009n). The population continued to decrease between 2000 and 2010, dropping by more than 300 residents (18.8%) to 1,331. Eastport’s population is relatively homogenous; in 2010, 97.3% of residents identified themselves as white (U.S. Census Bureau 2010). With regard to region of birth, 58.6% were born in Maine, 36.7% were born in a different state, and 2% were born outside of the United States (U.S. Census Bureau 2010). As for education, 33% of Eastport’s population had a high school degree, while 32% had a bachelor’s degree or higher, which is higher than the state and national percentages of individuals with bachelor’s degrees.

The city’s age structure is similar to many Maine communities in that it is older than the nation as a whole (Figure 74). The median age was 54.5 years in 2010, higher than both the Maine and U.S. median ages (U.S. Census Bureau 2010). In 2010, 26.7% of Eastport’s population was 65 years of age or older (U.S. Census Bureau 2010).

In 2012, median household income in Eastport was \$31,571, and median per capita income was \$21,424, both lower than the state median household and per capita incomes (Table 53). Eastport features more households with incomes from Social Security and retirement compared to Maine and the nation (Table 54). In 2010, 13.2% of families and 20.2% of individuals fell below the poverty threshold, both higher than the state’s poverty rates. Elderly poverty rates are also high in Eastport, with 16.2% of all persons over 65 falling below the poverty line. More households depend on food stamps compared to the state (Table 54).

According to the U.S. Census Bureau (2010), 48.8% of Eastport’s total population 16 years of age and over was in the labor force. Of the civilian labor force, 5.0% was unemployed, slightly higher than the state unemployment rate (Table 53). Top employment sectors

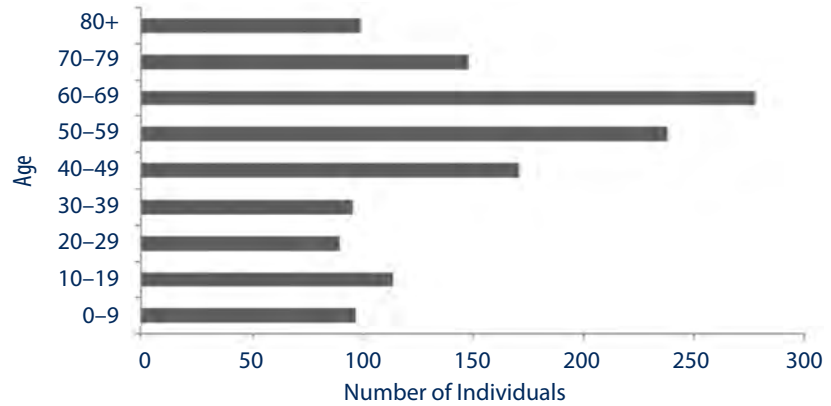


Figure 74. Age structure of the population, Eastport, 2010. Source: U.S. Census 2010.

Table 53. Median and per capita income and percentages unemployed and self-employed, Eastport, 2012.

	Median Household Income	Per Capita Income	Unemployment	Self-employment
	----- \$ -----		----- % -----	
United States	53,046	28,051	6.0	6.3
Maine	48,219	26,464	4.8	9.1
Eastport	31,571	20,424	5.0	13.0

Source: 2008–2012 American Community Survey 5-Year Estimates.

Table 54. Household income from earning, Social Security, retirement, and SNAP, Eastport, 2010.

	Households with Income from			
	Earnings	Social Security	Retirement	SNAP (food stamps)
	----- % -----			
United States	78.7	28.3	17.6	11.4
Maine	75.7	32.9	18.9	15.8
Eastport	62.6	51.1	26.8	16.6

Source: 2008–2012 American Community Survey 5-Year Estimates.

were management, business, science, and arts occupations (29.9%), sales and office occupations (24.5%), and service occupations (21.3%). Natural resources, construction, and maintenance occupations accounted for only 10.6% of all jobs; the lowest percentage of any category. Self-employed workers, another category in which fishermen are found, accounted for 13% of all workers (Table 53). As an employment sector, agriculture, forestry, fishing, hunting, and mining occupations accounted for 4.6% of all jobs (Table 55).

Table 55. Percentage of jobs in select occupation categories, Eastport, 2012.

	Agriculture, Forestry, Fishing, Hunting, and Mining	Retail Trade	Arts, Entertainment, Recreation, Accommodation and Food Services	Education, Health Care and Social Assistance
	----- % -----			
United States	1.9	11.6	9.2	22.9
Maine	2.4	13.7	8.4	26.8
Eastport	4.6	19.1	9.1	35.8

Source: 2008–2012 American Community Survey 5-Year Estimates.

Fisheries Profile

Commercial

Fishermen in Eastport typically engaged in diversified fishing operations. Key species harvested are lobster, scallops, sea urchins, clams, and periwinkles. A few herring weirs still operate in nearby Perry.

Though the numbers of lobsters and traps in Cobscook Bay have increased in recent years, lobsters are not as abundant in the bay as they are in other areas along the Maine coast because the strong tides create poor habitat (NOAA 2009n). As elsewhere, lobsters are an important resource due to relatively high prices compared to other fisheries. Hall-Arber et al. (2001) reported six boats fished for lobsters in Eastport, and only two of these fished more than 50 traps. This does not include those who fish out of Eastport, but live in nearby towns.

Eastport lost its municipal ordinance for shellfish management and no longer issues licenses. Additionally red tide closures are common in Eastport and can be devastating for shellfish harvesters.

Scallops continue to be a vital resource for fishermen in Cobscook Bay. Both divers and draggers harvest the resource. Local fishermen and managers are concerned about the status of the scallop resource and have been successful in implementing conservation measures for the resource in their area, including a daily catch limit. As one of the last viable scallop grounds in the state, local fishermen express concern about the effects of a highly mobile fleet on the local resource. In some years, more than 100 boats travel to the bay to fish for scallops. In the 2011–2012 fishing season, boats had a difficult time meeting the 135-lb daily catch limits, so the state implemented an immediate closure about two weeks into the season. The president of the Cobscook Bay Fishermen’s Association, who lives in Eastport, expressed the industry’s concerns about

boats “from away” in an article in the *Bangor Daily News* (Walsh 2012):

This mobile fleet travels up and down the coast, and, when they find a bunch of scallops, they are on them like wolves. Three or four days later, there’s nothing left. They rape this bay and then go home and finish up the season in their neighborhood, leaving us with nothing.

The 2012–2013 season has been more successful (Alden 2013). Scallop management has changed with Maine DMR establishing a 10-year plan using rotational closures to “make sure good scallop grounds are set aside for fishing” (French 2012).

The sea urchin fishery has gone through a boom-and-bust cycle. Sea urchins are harvested primarily in the winter for their roe, which is mostly sold to the Japanese market. Sea-urchin harvesting began in the 1980s, peaked in the 1990s, and is much lower today.

A small drag fishery for sea cucumbers takes place in the bay. The individuals involved in this fishery are mostly from neighboring towns (Dennysville, Gouldsboro, Little Deer Isle, Lubec, Milbridge, and Steuben). With only 10 permits for this fishery in the state in 2011 (Maine DMR 2011) and a moratorium on new entrants, this fishery does not provide a way for local fishermen to diversify.

Dragging for species such as urchins, scallops, and sea cucumbers is dangerous work in this area. The bottom of Cobscook Bay is rocky in places and tidal currents are swift. If a dragger accidentally hits a rocky patch, the gear can catch on the rocks and capsize the boat. This type of accident has claimed the lives of several fishermen in the past decade. Making matters worse, the bottom was poorly surveyed, so it is poorly marked on charts, which increases the hazard of hitting rocks. NOAA completed more detailed surveys of the bay bottom during the summer of 2011 to address this issue.



Commercial fishing vessels moored in Eastport.

Herring remain an important baitfish today. Formerly, weir fishermen could also sell herring to one of the many canneries. In the late 1990s, there were about 12 weirs in operation (Hall-Arber et al. 2001). Key informants report only a few herring weirs still in use in inlets around Eastport, notably in Perry. Some fishermen from the bay also rely on periwinkles as an important source of income.

In addition to the commercial and recreational fisheries, there are also extensive salmon aquaculture operations in Eastport. Cobscook Bay's powerful tides help flush away the waste products of the facilities. All of the active salmon farms in Maine are now owned by Cooke Aquaculture of Black's Harbor, New Brunswick, which grows salmon in pens in Cobscook Bay, off Machias, and near Mount Desert Island in eastern Maine (*Bangor Daily News* 2011).

Groundfishing: According to Acheson et al. (1980), as many as 20 fishermen were engaged in handlining in the 1970s. Landings were primarily pollock or cod. The marketing, processing, and record keeping of the fish were informal and casual. Now, fishing for groundfish such as cod and flounder no longer occurs due to the collapse of the groundfishery and subsequent regulations. An exception is small-scale halibut fishing that occurs, although landings are minimal due to state and federal restrictions. Today, only one federal groundfish permit exists in Eastport. It allows for the landing of

halibut and includes rod and reel, handline, or tub trawl gear only.

State and federal permit data

In 2011, there were 36 individuals with state licenses in Eastport. These individuals held 56 licenses, most of which were for commercial fish (Figure 75). In 2011, two vessels with federal permits listing Eastport residences held a total of 10 licenses for a variety of species (Figure 76). The average vessel length of permit holders in Eastport was 45.5 ft. In 2012, there were no federal dealers listed in Eastport.

Recreational and subsistence:

Saltwater recreational fishing is also an important activity for the community, and this includes clams, mackerel, and flounder. Most recreational fishing in town is done from the town pier, referred to by locals as "the Breakwater." The height of this type of recreational fishing is during the summer mackerel run (Athearn and Bartlett 2008). Many wildlife tours depend on mackerel and other feed fish to attract whales and marine mammals closer to shore. Deep-sea fishing is also advertised in Eastport, and Eastport Windjammers runs fishing charters. Saltwater-fishing opportunities are linked with tourism.

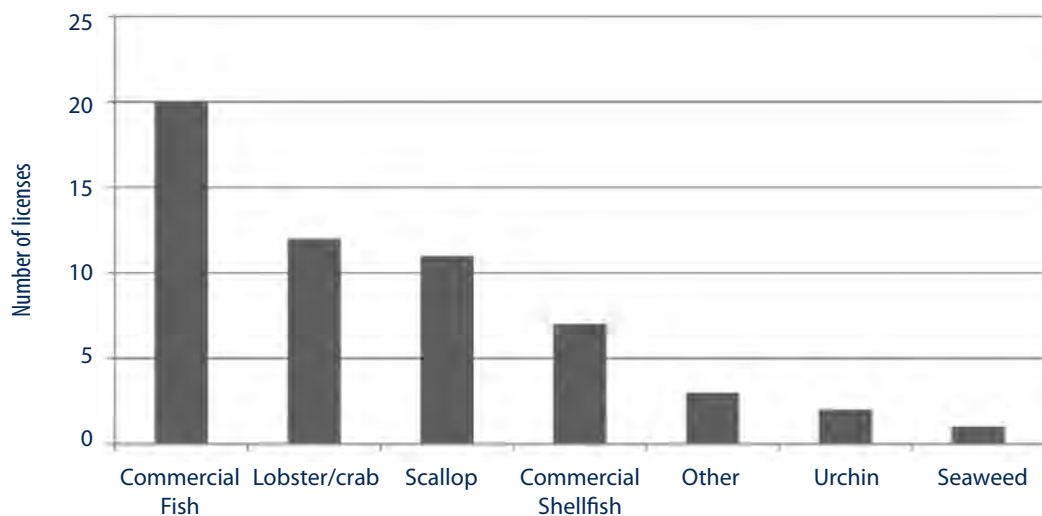


Figure 75. State licenses listing Eastport addresses. Other includes recreational saltwater fishing (2) and sea urchin/scallop tender (1). Source: Maine DMR 2011.

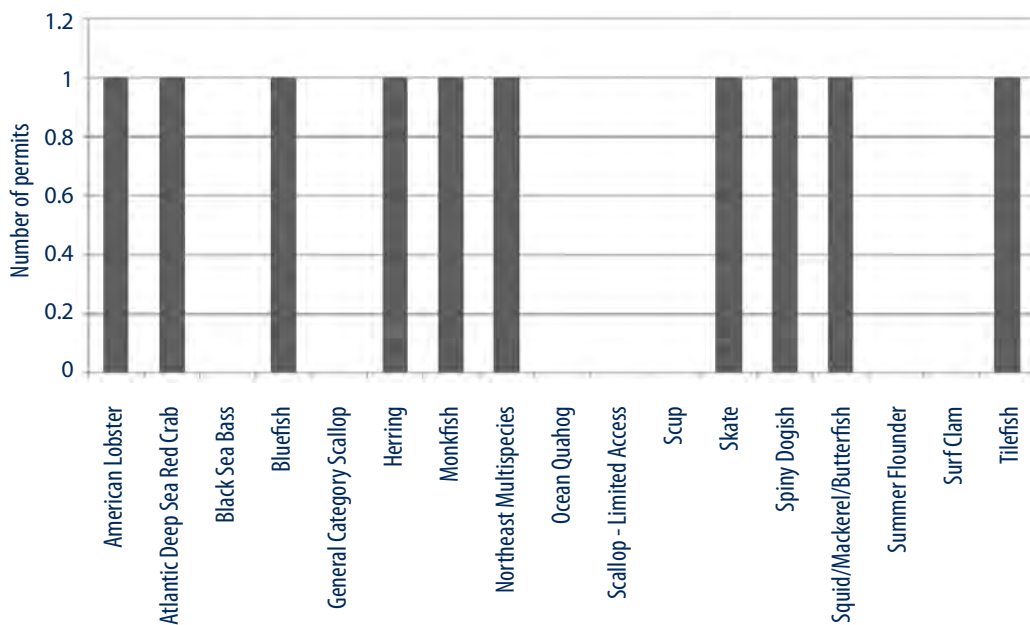


Figure 76. Number of federal permits, Eastport. Source: Northeast Region Permit Database.

Marine infrastructure

One unusual feature of the city is its deepwater port facilities. There are several warehouses near the port in the Marine Industrial Park. Eastport Port Authority, a downtown breakwater facility, leased 40 berths year round in 2011, 28 of which were used by commercial fishing vessels. The port also issued 21 mooring permits in 2011 (pers. com. member of the 2011 Eastport Port Harbor Committee). The downtown pier can also serve large ocean vessels. Although use of the deepwater facility declined after World War II, the federal and

state governments have invested millions of dollars to rebuild and refurbish the port to accommodate large vessels. The increasing use of this deepwater facility can be seen in the port’s gaining temporary USDA certification for livestock exportation, which the town hopes to make permanent (Mack 2010). There are two tugboats at the fish pier and shipping contracts have increased. A relatively new port facility on Estes Head is used by ocean-going freighters to transport paper products to foreign ports.



Quoddy Bay Lobster (left) and Eastport Lobster and Fuel (right).

Unlike in other Downeast fishing communities where catch is landed at any one of a number of commercial docks, in Eastport most seafood—lobsters, urchins, scallops, cucumbers, mussels, and quahogs—are landed primarily at the breakwater or private wharves. Clams, periwinkles, and alewives are landed at the road closest to where they were harvested (pers. com. Bartlett). There are also three commercial docks in town that purchase lobster: Lighthouse Lobster, Quoddy Bay Lobster, and Eastport Lobster and Fuel.

Quoddy Bay Lobster has been in operation since 2005, though the wharf was active working waterfront long before then. The company buys lobsters from and provides bait for the approximately eight boats that use the facility. Lobstermen who use the facility are from Eastport, Edmonds, Pembroke, East Machias, and Lubec. Most of the catch is sold wholesale, but the local Quoddy Bay Lobster restaurant and retail market on site holds a permit to pick lobster meat, so some processing also occurs on site. The site's infrastructure includes a mechanized hoist and a wooden wharf, which is currently being renovated. Improvements include new planking and in the future will entail new pilings and possibly an extension farther into the harbor. At present the wharf is difficult to use at low tide. Catch that is sold wholesale is picked up by trucks by customers.

Eastport Lobster and Fuel is Eastport's other lobster-buying station and also buys from and provides services for approximately eight fishermen. The site used to be a Stinson's sardine cannery, but has been under current ownership for the past several years. In the past the wharf also served as a site for landing

herring, cod, halibut, and scallops, but currently it buys only lobster. It is the only fuel depot in Eastport. The facilities also include a hoist for lowering bait onto lobster boats and a cold-water tank system for storing lobsters. This is also the site of the popular restaurant the Chowderhouse, which, of course, has lobster on the menu. What is not used in the restaurant is sold wholesale, and customers bring trucks to pick up catch.

Most other infrastructure needs—boat repair, welding, marine supplies, boat storage, haul-out facilities, recreational fishing supplies—are available at Moose Island Marine: "We have everything you need except groceries and gas!" The company has two sites in Eastport, the supply store and some boat storage/repair downtown, and haul-out facilities and extensive boat storage on the other side of town at Deep Cove.

Another aspect of Eastport's marine infrastructure is the strong aquaculture presence. Cooke Aquaculture has numerous finfish pens in waters surrounding Eastport and in terms of economy is as important as commercial fishing in the community.

Although Eastport's commercial shipping wharves are periodically renovated and much state and federal money is given to support this industry, waterfront access for fishermen is hindered by the physical deterioration of the fishing wharves and infrastructure that they use (Sheehan and Copperthwaite 2002).

Interest in harvesting energy from Cobscook Bay's powerful tides has reemerged in the region, which is expected to make use of the port's infrastructure and local labor skills and resources. Several proposals are in the planning stages and are expected to bring new



Fish pens at Cooke Aquaculture.

maritime-based jobs and other economic benefits to the community. Tidewalker Associates had proposed to build a 1200-ft dam and power facility at Half Moon Cove, and the Passamaquoddy Tribe studied two sites for tidal power. However the project has recently been dismissed. Several other tidal power projects have also been proposed.

There was also a proposal to build a liquefied natural gas terminal in Eastport. Fishermen, the Eastport city manager, and the city council objected to the proposal because they believed it would have a negative effect on boating and fishing.

Fishing industry support and government institutions

The Cobscook Bay Fishermen's Association represents many fishermen in the Eastport area, as does the Downeast Fixed Gear Association, the MLA, and the DELA.

The Cobscook Bay Resource Center was founded in 1998 to encourage and strengthen community-based approaches to resource management. The center assists local resource users, scientists, government agencies, educators, and others to monitor and better understand the Cobscook Bay ecosystem, with an eye towards economic development based on the bay's renewable resources. The center plans to develop a new site near the waterfront, which will include a marketing co-op and community kitchen.

The University of Maine Sea Grant and Cooperative Extension has an office in Eastport. It is located at the Boat School and offers support to local communities and their fishermen.

The city is run by a city manager elected by a five-person city council. Each member of the city council serves a three-year term. By charter, the Waterfront Management Council and the Boat School Waterfront Management Council must have a representative of the commercial fishing industry on each (NOAA 2009n). The Eastport Port Authority presides over the harbor operations at the Breakwater facility and fish pier located in the downtown area. The town of Eastport has a harbormaster and assistant harbormaster, who are employees of the Port Authority. The Port Authority is a separate entity from the city, but a city council member sits on the Port Authority Board.

Cultural attributes related to fisheries and the sea

The Eastport Salmon Festival, held annually in September, celebrates the history of the fishing and the salmon aquaculture industries. The Fourth of July celebration, lasting several days, has been an important tradition for Eastport for more than a century. Activities over this holiday, such as water sports and a codfish relay, commemorate Eastport's marine heritage. Eastport's Quoddy Maritime Museum has a collection on the fishing history of Eastport.

Issues Facing the Fishing Community

Some specific threats to the fishing community identified in the rapid assessment include loss of working waterfront access, the moratorium on the sale of commercial licenses, and an overall decrease in viable fish stocks.

Eastport's deepwater port is unique in the region; the recent expansion of the port facilities and the increased shipping income associated with the port has been an economic asset to the community. Eastport's tidal range is also quite large, which has encouraged the development of salmon aquaculture and tidal power (such as the ORPC project described earlier). These two industries using this special natural resource are providing significant economic opportunities for the community. Some extractive industries, such as scalloping, are recovering. Recent investments in lobster processing are also promising to help the fishing community.

Eastport is also increasingly seen as a destination for artists and tourists. Art galleries line Main Street, and the Eastport Arts Center, a nonprofit umbrella organization, was established in 1990. Government money has helped redevelop downtown buildings, which has helped bring in tourist dollars. The National Trust for Historic Preservation has recently named Eastport as one of its "Main Street Programs in Maine," which will funnel money to stimulate economic development.

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