

Sub-region Profile

Counties: Lincoln, Sagadahoc and Cumberland

5.9 Lower Midcoast Maine

Midcoast is defined in the local Chamber of Commerce's literature as the "reach of two mighty rivers—the Kennebec and Androscoggin—and their joining at the luminous expanse of Merrymeeting Bay."¹ The region's Chamber of Commerce notes that Bath, Brunswick and Topsham are the region's core commercial communities, with Arrowsic/Georgetown, Bowdoinham, Harpswell, Phippsburg, West Bath, Westport/Woolwich and Wiscasset also considered significant.

None of the profiles drawn by various "Midcoast Maine" publications includes Portland even though the city is in Cumberland County, not far from Harpswell that *is* considered part of the midcoast region. The communities explicitly included in the midcoast descriptions are said to be primarily "small with annual town meetings, a sense of community, 'Yankee independence,' and rural lifestyles." Nevertheless, for this fisheries-related sketch, Portland is included. As explained in the introductory section, this project is loosely linked to an economics project developing IMPLAN for fisheries specific data. In an effort to make the results of this project parallel those of the economics project, counties are specified for each of the sub-regions. Cumberland, Sagadahoc and Lincoln are the three counties considered "lower mid-coast." The profiles of individual communities portray very different economic and social features within the counties and sub-region and thus illustrate the constraints imposed by such arbitrary boundaries as "county" or sub-region.

Historical sketch

Samuel de Champlain is believed to have mapped the lower portion of the Kennebec River in 1605, but a stone with runic markings of the date 1018 suggest his explorations may have been preceded by Norse Vikings. Native Americans of the Abnaki tribe, including the Pejepscots, the Sagadahocs and the Sheepscots, were the earliest known settlers of the region.

Predating Plymouth by 13 years, Popham Colony was settled in 1607 by a branch of the Virginia Company, which had also founded Jamestown. "Led by George Popham, an aging but well-connected nobleman, and Raleigh Gilbert, a rake of 25, the Popham colonists chose to found their colony, Fort St. George, at a wind-whipped spot on Atkins Bay that was described, with typical 17th-century incoherence, as 'almost an island of good bigness.'"² After reports of "wanton cruelty by the settlers and counterattacks by the Indians," a bitterly cold and snowy winter, and the death of George Popham, the colonists built the *Virginia* and in September of 1608 sailed back to England. There they reported that America was "over cold, and in respect of that not habitable by our nation."

Later English settlers associated with the Plymouth and Pejepscot Proprietorships attempted to compete with the French by establishing a fur trade with the Native Americans. By 1640 the fur trade languished and the English turned to farming and logging. The competition with the French, however, was not resolved and a series of "French and Indian" wars began in 1675. For over 50 years, the settlements constantly suffered burning over the course of six wars. Skirmishes with the Indians continued until the middle of the 18th century.

While Brunswick endorsed the Declaration of Independence in May of 1776, it wasn't until 1820 that Maine joined the union as a state separate from Massachusetts. During the revolutionary war, the British held the coast of Maine. The War of 1812 was also difficult for Maine since some of territory was occupied and the British again patrolled the coast.

¹ Description found at the Chamber of Commerce web site URL:
<http://www.midcoastmaine.com/cbbr/midcoast/region.html>

² http://www.weeklywire.com/ww/10-27-97/boston_feature_4.htm

During the harsh economic periods, Maine's commerce relied on the bartering of lumber, logs, and ship masts.

Modern Economy

The lower midcoast region is a study in contrasts. Some of the largest employers in the state are located here offering industrial, military and service employment. However, because of the rural and coastal nature of the region, this fails to project the whole economic picture. Four major peninsulas jut into the ocean, yielding many miles of seacoast. Summer visitors flock into the region, renting cottages, hiring boats and taking day trips. The town of Phippsburg noted in its 1990 annual report that more than 50% of its property taxes are paid by non-residents, reflecting the annual economic impact that tourism and summer visitors have on the area.³

Furthermore, many of the permanent residents along the seacoast make their living from fishing and marine activities. They also depend on a "cottage" economy, running small family businesses such as tree farms, or selling handmade goods and produce on a seasonal basis.

Fishing Dependency

According to the analysis of the first set of indices that are based on employment ratios, Lower midcoast Maine ranks fourth in its level of fishing dependency following Cape Cod (3), Upper midcoast Maine (2) and Downeast Maine (1). This ranking reflects the fact that this sub-region is more economically diverse than those higher on the dependency scale. It also, however, depicts a sub-region still highly dependent on its natural resources.

In considering fisheries infrastructure, Portland clearly must be categorized as a "primary" port and an "essential provider." It ties with New Bedford, Massachusetts as the most highly differentiated fishing port in the New England Natural Resource Region. Virtually every aspect of the fishing industry has a presence in Portland. In addition, the availability of support services attracts the business of others in the fishing industry from smaller or less differentiated ports both in the sub-region and elsewhere. Because the statistics upon which the dependency index is based reflect the harvesting sector more consistently than other fishing-related employment (e.g., marketing or processing), Portland's dependency may actually be higher than indicated. Research in the city identified a considerable processing sector, including the largest shrimp processor in the state of Maine. Portland is also the site of the first display auction in New England, a very significant institution in the marketing of fish.

Gentrification is virtually inevitable in a modern urban setting and Portland is no exception. Nevertheless, Portland has zoning safeguards that protect water-dependent use. The city has demonstrated the value it attaches to the fishing industry by supporting such facilities as the fish pier and the auction and by hiring a fisheries program manager.

If Harpswell were located farther away from Portland, it would probably have remained unquestionably fisheries-dependent. The area still values its fishing industry, particularly lobstering, and a variety of services are still locally available. But the list of contacts spreads out towards Brunswick and Portland, showing a total capital flow that surges well beyond the boundaries of the peninsula. Perhaps the most telling observations are these: One of the last groundfish fishermen in the area is selling his boat because he is no longer able to attract acceptable crew. He plans to go lobstering since he can do so on his own or with a sternman. Fishing families report that their children are not attracted to the industry not only because of the inherent hardships and regulatory headaches, but also because of the greater appeal of high tech jobs.

Respondents for Boothbay, Boothbay Harbor and Southport indicated that gentrification is well underway in their community. Though the peninsula as whole still derives a healthy

³ <http://www.cityofbath.com/>

income from reliance on natural resources, especially lobsters, the waterfront has largely shifted to non-water-dependent uses in the community centers.

Lower Mid-Coast Maine
County Statistics

5.9.1. Lincoln County⁴

Incorporated in 1760, Lincoln County is one of the oldest counties in Maine. It was named for Thomas Pownal, an early governor of Massachusetts whose home was Lincoln, England. The county has 457 square miles and had a population of 30,357 in 1990 (1998 estimate was 31,815) living in 11,889 households.⁵ The gender division was 14,751 males to 15,606 females.

British Isles (English, Irish, Scotch and Welsh) ancestry is claimed by 46% of the residents. Scandinavian and Hispanic ancestry is attributed to over 1000 individuals each. Eight hundred and twenty individuals were born outside of the US. Only 236 nonwhites were resident in the county in 1990.

Elementary and high school enrollment in the county was 4992 in 1990. Also at that time, among persons 25 and older, 16,834 (67%) individuals had a high school diploma or higher. Bachelors, graduate or professional degrees were identified for 4593 individuals (18%).

“Agriculture, forestry and fisheries” category of occupation was claimed by 741 employed individuals over 16 years old. The median household income in 1989 was \$28,373 with a per capita income of 13,479. Social security was received by 3769 households, retirement income by 2301.

Of the county’s 11,968 occupied housing units, 9955 were owner occupied, 2013 were rented. The median age the housing unit was built was 1959 and the median value of owner-occupied housing was \$102,000.

Towns include: Alna, Boothbay, Boothbay Harbor, Bremen, Bristol, Damariscotta, Dresden, Edgecomb, Jefferson, Newcastle, Nobleboro, Somerville, South Bristol, Southport, Waldoboro, Westport, Whitefield, and Wiscasset. Plantations: Monhegan.

Wiscasset, on the Sheepscot River, is the county seat for Lincoln County. Eighteenth and 19th century buildings from its maritime past now house restaurants, inns, shops and offices. One of the offices housed is that of Coastal Enterprises, Inc. (CEI), a non-profit corporation that provides financial and technical assistance for the development of small businesses, social services and affordable housing. CEI has a fisheries program that targets fishing industry participants for a variety of services. Wiscasset is connected by bridge to Westport Island.

The Boothbay Harbor region is a popular summer resort. Lobster fishing retains a strong role in the county. After acrimonious debate with fishermen from Friendship, Maine, Monhegan fishermen were allowed to retain exclusive rights set lobster pots in Monhegan’s fishing grounds.

Southeast of Damariscotta, located in the small town of Walpole, the Darling Marine Center is the site of world-renowned marine research bordering the Damariscotta River estuary. DMC faculty belongs to the University of Maine’s School of Marine Sciences. The DMC fosters national and international collaboration among marine scientists and invites visiting investigators to use the state-of-the-art equipment in their biogeochemistry, microbiology, histology, electron microscopy, and flowing seawater laboratories.⁶

⁴ <http://www.supt.sad37.k12.me.us/Maine/Counties/Lincoln.htm>

⁵ 1990 US Census Data. Database:C90STF3A. Found at <http://venus.census.gov/cdrom/lookup/953847061>

⁶ <http://server.dmc.maine.edu/>

The Darling Center is also noteworthy for its seminal role in Maine's aquaculture industry. In 1972 the "first aquaculture hatchery was built at the Darling Center as the foundation for a Sea Grant funded project, the Culture of Resources in a Cold Water Marine Environment. This was the first facility to raise soft-shell clams on a large scale and to produce triploid shellfish of four species—Eastern oysters, soft-shell clams, bay scallops and hard-shell clams."⁷

Vessels providing Lincoln County addresses for their vessels include Boothbay (19 boats), Boothbay Harbor (25 boats), Bremen (13 boats), Bristol (19 boats), Damariscotta (3 boats), Edgecomb (4 boats), Jefferson (1 boat) Newcastle and Nobleboro (3 each), South Bristol (8 boats), Southport (6 boats), Waldoboro (5 boats), Westport (2 boats) and Wiscasset (2 boats). In addition, 14 boats gave a Monhegan address.

A key respondent reported that the significant fishing towns, including those whose fishermen rely primarily on state permits, are Boothbay Harbor, Bremen, Bristol, Monhegan, South Bristol, Southport, and Westport. Waldoboro is also considered significant in the clamming sector of the industry.

⁷ <http://www.maineaquaculture.org/history/milestone.htm>

Community Profile
Lincoln County
Lower Mid-Coast Maine

5.9.1.1. South Bristol

Background

South Bristol has an active, well-maintained commercial fishing waterfront. Few recreational vessels are in evidence. There is a large warehouse on the shore and a couple of wharves. Two restaurants double as convenience stores.

Since 1994, collaboration between the Maine Maritime Museum and the South Bristol Elementary School brings the eighth grade to the Museum in Bath once a week. Over the course of the year, depending on the size of the class, students build one or two traditional skiffs. The students thus learn teamwork, how to follow directions, proper tool handling techniques, and woodworking skills that involve hands-on math applications.⁸

Demography

Population

According to the 1990 census, 825 persons live in South Bristol year round, 402 are male and 423 female.⁹ The summer population is about 2000.¹⁰

Age Structure

In 1989, there were 147 children (3-19 years).¹¹

Education

For persons 20 and over, 214 were high school graduates, 149 had some college and 191 had a Bachelor's or better.

In 1989, there were 118 students enrolled in school. South Bristol Elementary School had 70 students in grades K-8 in 1999.

Housing

Median housing value in 1989 was \$108,871. Of the 790 housing units, 299 were owner occupied, 55 rented. The remaining 436 were vacant, presumably some of these are vacation or recreational units.

Racial and Ethnic Composition

In 1989, all but 3 residents were white.

Economic Context

Income

Median household income in 1989 was \$27,188 and per capita income was \$18,772.

Employment

In 1989, the employment level was 358, by May of 2000 it was 600.¹²

Transportation and Access

South Bristol is at the end of a peninsula, accessible by Maine Route 129 off U.S. Route 1.

⁸ http://LCNews.Maine.Com/2000-04-06/maine_maritime_museum.html

⁹ <http://govinfo.kerr.orst.edu/sddb-stateis.html>

¹⁰ South Bristol Volunteer Fire Department's web page at <http://lincoln.midcoast.com/~sbvfd/index.html>

¹¹ <http://govinfo.kerr.orst.edu/sddb-stateis.html>

¹² <http://www.economagic.com/em-cqi/data.exe/blsla/laume23030305>

Wiscasset, the county seat, is about 20 miles away (estimated 45-minute drive).

Fisheries Profile

Community

South Bristol fulfills the definition of a fishing community on the basis of central place theory. Fish are legally sold ex-vessel to a dealer, processor or the public; fishing support services are provided; there are public facilities providing dockage; fishing people satisfy their daily and weekly social and/or economic needs here, and some fishermen and their representatives participate in fisheries resource management.

Among the features present in South Bristol are: air fill station for divers, available bait, boat builders, boat yards, yacht dealer, docking facilities, a lobster coop, a shrimp, tuna and crab processor, fish retailers, harbormaster, ice house, marine contractors, marine railways, marine supplies, marine museum, one aquaculture facility, oceanographers, cold storage warehouse, trucking and oil/diesel fuel. The fishermen usually do welding themselves. Oceanographers are at the Darling Center.

Commercial fishing and fisheries-related employment

Harvesting structure

There are up to 68 boats in South Bristol (an estimated 20 wooden, 8 steel and 40 fiberglass) ranging in age from one to fifty, and in size from skiffs to 90 foot vessels. About a dozen stern trawlers, a couple of eastern-rigged boats, a few urchin boats, and about 50 lobster boats.

The majority lobster in summer, shrimp in winter, groundfish in summer, and one vessel fishes year-round for red crab.

Processing structure

One processor handles shrimp, crab and groundfish.

Support Services

There are three boat builders and four boat yards; diesel fuel is locally available; there are one or 2 docking facilities, a lobster coop, a bait house, one processor, a couple of fish & seafood retailers, a harbormaster, grocers, ice house, a marine contractor, marine railway, some marine supplies are available, two trucking companies, marine museum, marinas, and motel.

Employment (year-around and seasonal)

About 100 fishermen live in the area, 40 to 50 in South Bristol and Walpole. At least 175 households are directly dependent on the fishing industry, another 100 indirectly.

Quite a few people go clamming, people run the wharves, work in the boatyards, work with the trap business and work at the Darling Center. In addition, there's carpentry, lawn care (including for the golf course), and tree care. There's always some slack time, so you work on what you can find.

Wharf work is year round between the landings and the maintenance.

Sales/revenue

The price of lobster slipped from \$2.50/lb to \$1.75/lb. as landings and sizes of individual lobsters increased.

Species, Seasonality

The number of months one can lobster varies year to year, depending on the weather. When not lobstering, many switch to shrimping (winter). April and May some go for elvers (eels). Hagfishing (slime eels) used to be year round. Striped bass are plentiful (not caught commercially). One red crab fishermen docks in South Bristol, fishes far offshore.

Landed species include:

Groundfish: cod, flounder, haddock, pollock, hake, halibut

Pelagics: herring, mackerel, pogies (in the past)

Crustaceans: lobster, crab

Shellfish: scallops, soft-shell clams, sea urchins

HMS: tuna

Other: dogfish, monkfish, hagfish, elvers (eels)

However, landings of groundfish have precipitously declined since the 1980s. South Bristol did have a concentration of groundfish and shrimp boats, but has had to diversify. Fears about the loss of access to groundfish, even after the stocks have recovered, have been raised.

Form of ownership (e.g., owner/operator; corporation)

Lobster boats are usually owner-operated, as are remaining groundfish vessels.

Recreational fishing and employment

There's just a little recreational fishing and no charter boats in South Bristol. Sometimes people come in to catch mackerel, and then they go to Wiscasset to catch striped bass.

Aquaculture

In 1975 the state's first aquaculture lease was granted to Abandoned Farms, Clarks Cove, South Bristol.

Cultural role of fishing

Museums and history

Across the bay from South Bristol, Pemaquid Point was the scene of many shipwrecks through the centuries, including the 1635 wreck of the British ship Angel Gabriel in which five people died and all 100 on board lost their belongings. With marine trade, fishing and the shipping of lumber increasing in midcoast Maine, Congress appropriated \$4,000 for the building of a lighthouse at Pemaquid Point in 1826 to mark the entrance to Muscongus Bay and John Bay.¹³

In 1934, Pemaquid Point Light was the first to be automated. The surrounding property became Lighthouse Park and the keeper's house eventually was converted into the Fishermen's Museum. The museum opened in 1972 and has been operated since by volunteers from the town of Bristol. The museum houses exhibits on the history of the local fishing and lobstering industries as well as pictures of all the lighthouses on the Maine coast and a Fresnel lens from Baker Island.

The Pemaquid Group of Artists added an art gallery to Lighthouse Park in 1960. Pemaquid Point Light continues to serve as an active aid to navigation; the grounds are leased to the town of Bristol. In May 2000 the lighthouse was leased by the Coast Guard to the America Lighthouse Foundation.

Ethnicity in the fisheries

South Bristol's population is all white, "Maine Yankee."

Kinship & family

The majority of local fishermen were born in the town or nearby.

Fishing related organizations

Commercial fishing associations

Maine Lobstermen's Association

Fishing related programs

¹³ <http://www.lighthouse.cc/pemaquid/history.html>

Science institutions

The Darling Marine Center

The marine laboratory of the University of Maine functions year round as a research and educational facility serving the marine interests of faculty, staff, students and visiting investigators from around the world.

Perceptions of the Fishing Community¹⁴

Importance of fishing to the community

Fishing is considered “very important” to South Bristol. If it weren’t for commercial fishing, the town would not be active year round; “they could put a gate up at the end of the year and shut it down.”

Boundaries

Capital contacts can be divided up into those encompassing social capital (e.g., visit friends, go for recreation, go for vacation, visit relatives, socialize, go to church); economic (e.g., sell fish, offload fish, buy fishing gear, haul out for boat repairs, go to the bank, go shopping), and human (e.g., go to school, go for childcare, go for health care, go for retraining).

Damariscotta is the community people of South Bristol have the most contact with. The majority of the lobster fishing-related economic capital contacts of South Bristol are in South Bristol, with the exception of hauling out for boat repairs which is more likely to be done in Portland or East Boothbay. The exception for finfishermen is Portland to sell fish and buy gear. Bookkeeping, shopping, banking are usually conducted in Damariscotta. Some of the human capital contacts, such as health care and childcare, are also in Damariscotta. Retraining is available in Portland and Augusta.

Contacts between buyers and sellers of lobsters are usually reciprocal. Harvesters generally buy bait and sometimes fuel and other supplies from the company that buys their lobsters.

Technology is affecting the patterns of contact. With computers and the Internet, as well as cell phones, fishing industry participants are less isolated, even while working.

Communication Issues

Communication between fishermen and local, state and federal representatives/managers was described as “poor.” However, one respondent made the point that “most of the time you hear about this stuff but whether it registers or not is a different story.”

Those in the lobster industry who are on the Zone Councils seem to consider communication better than those who are not. The local Zone Council has a representative who is on the Fishery Advisory Council for the state, so that helps communication.

Fishermen don’t share information, “lie like hell,” except to friends, with whom they may share. Those who “run at the mouth” risk attracting all the fishermen to their fertile location.

Assessments

Fishermen and federal scientists “disagree” on assessments. “Bob Steneck from the Darling Center started working with fishermen 10 or 15 years ago. He’s starting to prove much of what the fishermen have been saying for years.”

Local management practices

The Zone Councils have institutionalized local practices. In 2000 the local zone limited the numbers of traps to 600. “This has caused great strife.”

¹⁴ Based on key informant interviews

Economic Change

Ten years ago, the economic condition of the finfishing industry was said to be “good.” South Bristol had “a lot of big pogie (menhaden) boats.” Five years ago, the economic condition was described as fair because the pogies “were just drying up.”¹⁵ Today, because of the days at sea regulations, the economic condition remains “fair.” Five years from now, assuming regulations remain in place, the condition will also be “fair.”

Ten years ago, the economic condition of the lobster industry was “average.” But, ten years ago your dollar was worth more. Five years ago was “good.” Today, it is “fair.” Five years from now, it depends on regulations. “If they go with some of the things they’re looking at, we could all be out of business.” Also, if too many groundfishermen switch to lobstering, they many hurt the fishery.

The standard of living has not changed in the last five years, except there were more people working in the processing plant 5 years ago because sea urchin industry was pretty strong. The standard of living has changed over time, though. “It’s definitely more expensive...I mean you look back thirty years ago, my grandparents bought a house down on the water for \$4000 and that house is evaluated at \$180-190,000 today.” “There’s so much money being made out of state and brought in that it has a “real big influence in the area.”

Changes in fishing effort

There is less effort on groundfish because of the regulations; increased effort on lobsters due to competition and shrimping effort has remained about the same. The greatest change in fisheries has been the change in technology. This includes changing from wood to wire traps and the great increase in engine horsepower.

Fishermen have been switching from dragging to lobstering. The lobstermen have been asking for license controls for years, not to create a monopoly, but to slow entry. The state was reluctant to do so. When they started putting in trap limits, trap numbers increased by as much as 25 percent in a lot of areas. “It’s the hog mentality, you know, if 10 traps are good, 30 would be better.” The local Zone Council’s trap limit is the most restrictive in the state with a limit of 600 traps (2000).

Effects of recent management

Days at sea regulations and closures for multispecies have had the most impact of any regulations on finfishing. One effect is an increase in danger, since smaller vessels must go out farther off shore. The restricted season for shrimp probably have had the most significance for the lobster/shrimp fishermen. Trap limits also have had an effect on lobster fishing.

Increasing the measure on lobsters has had some negative consequences. When there were fewer pounds available, fishermen were paid \$.75 more per pound. The restaurants don’t want to pay for a pound-and-a-half lobster for their lobster dinner specials, so the price is reduced. “We’re better off staying with a smaller lobster and protecting the brood stock (via v-notching).”

As the groundfish stocks recuperate, lobster fishermen anticipate that the lobster stocks will suffer from the increased predation. However, then lobstermen may be able to diversify, doing some groundfishing as well.

¹⁵ Pogies were a unique niche fishery upon which a few people where able to build successful companies.

Characteristics of local fishermen

Most fishermen are satisfied with their jobs, though regulations make it difficult, especially because of the associated uncertainty. But “these guys don’t know anything else.”

“With the regulations that come down, they don’t know whether they’re gonna be able to go or not from one day to the next. In the next year you don’t know if you’re gonna be put out of business, whether you’re gonna be so regulated that you’re not gonna be able to make a living or what.”

A “good fisherman” must be a good businessman and a hard worker. “You work out on deck for years, then you get into the wheelhouse.” “A good fisherman has to be dedicated and pretty much brought up in it.”

Fishing families

Some women work with their husbands on their vessels, some work at the processing plant and some don’t work. Many wives do the boat’s bookkeeping, others have found clerical jobs or jobs in stores in Damariscotta.

Opinions varied about whether or not informant’s children should enter the industry. Some said “no,” others qualified a “yes” by saying that they should “get their education first.”

Community Profiles
 Lincoln County
 Lower Mid-Coast Maine

5.9.1.2. Boothbay, Boothbay Harbor and Southport

Background

The Wawenocks, an Abenaki tribe, were the first known inhabitants of Boothbay. Fishermen and traders from Europe appeared here in the early 1600's, with families following, but by 1689, the white settlers were driven out.¹⁶ The region was resettled under the name Townsend in 1729 by a group of Scotch-Irish. The French-Indian wars, however, devastated the community and everyone left for a period of years. The returning settlers were farmers, but the rocky soil made agriculture a struggle. Woodcutting for the Boston market offered cash and eventually a strong fishing tradition developed. Everything from clam digging to whaling was tried, but it was the Banks fishermen who were most successful.

Saw and gristmills, brickmaking, and shipbuilding were being undertaken by the 1760's. Caleb Hodgdon's tidemill and shipbuilding drew some commerce to East Boothbay Village while the McCobb-Auld business in Boothbay Harbor attracted Banks fishermen. Boothbay incorporated as a town in 1764, dropping the name of Townsend.

Boothbay's economy focused on fishing in the 18th and 19th centuries. Shipyards built fishing vessels; at least half the men fished, large stores supplied the vessels and fish drying racks covered much of the shoreline. In 1826, 2125 vessels spent time in Boothbay Harbor. Later 400 fishing vessels at a time were anchored there. Pogie factories, marine railways, the ice industry and sardine canneries contributed to the economy.

Southport left Boothbay in 1842. Boothbay Harbor, with a year around population of 1500, incorporated in 1889. By that time, the region had already begun to attract summer visitors who arrived by steamer and several grand hotels were being built. Though the traditional fishing-related businesses continued, "they were outdistanced by the growth of the Harbor as a summer resort." Art schools and retired fishing skippers offering boating excursions were a couple of unusual attractions for the summer visitors. To date, tourism and summer residencies have continued to grow.

Two-masted fore and aft rigged schooners were commonly built in East Boothbay and Boothbay Harbor for coastal fishing and cargo shipment. The hundred-year period between 1820 and 1920 was the most active shipbuilding time, with yacht building beginning to supercede construction of commercial vessels by the 1890's. Five hundred vessels had been built by 1900.

Despite development pressures associated with its growth as a summer resort, Boothbay Harbor has maintained its commitment to the fishing industry, keeping its fish pier active. Lobster fishermen are the primary harvesters in the area and some of the old shipbuilding sites continue as repair facilities.

Demography

Population

In 1989, the population of Boothbay and Boothbay Harbor was 5,013, 2402 male and 2611 female.¹⁷ Boothbay Harbor alone had a year round population of 1,267; 581 male, 686 female.

¹⁶ Boothbay Harbor Region Chamber of Commerce web site:
<http://www.boothbayharbor.com/New%20Pages/arts.html>

¹⁷ <http://govinfo.library.orst.edu/cqi-bin/sddb-state?Maine>

Age Structure

According to the 1990 Census there were 166 persons under 12 years (13%) and 130 teenagers (10%), 706 are 21 to 65 years (56%) and 265 (21%) are 65 or older. In Boothbay and Boothbay Harbor combined there were 1,007 children.

Education

Of the residents in Boothbay and Boothbay Harbor who were 20 years or older, 1,267 had a high school diploma or better. Some college courses had been taken by 977 individuals and 829 had attained a college degree.

Housing

There were 817 housing units in Boothbay Harbor, 354 are owner-occupied, and 230 are rented in 1989. The median value of owner-occupied housing was \$99,800.

In Boothbay and Boothbay Harbor there were 3,605 housing units, 2077 occupied, 1609 by owners and 468 by renters. The median value of housing was \$116,356.¹⁸

Racial and Ethnic Composition

The vast majority of Boothbay Harbor is white (1254 persons) with 9 American Indians and 4 Asians counted in the 1990 Census. When considering Boothbay and Boothbay Harbor together, the 4,912 individuals are white and 101 are non-white.

Economic Context

Income

Median household income for Boothbay and Boothbay Harbor was \$27,787. Per capita income in 1989 was \$14,248.

Employment

Apart from fishing, there's boatbuilding and boat yard work, including scraping and painting. Restaurant work and carpentry is available. Tourism-related jobs are also available. "There's plenty of work in the area."

Transportation and Access

Balmy Day Cruises runs ferries to Monhegan Island and Squirrel Island.

Fisheries Profile

Community

Boothbay, Boothbay Harbor and Southport together fulfill the definition of a fishing community on the basis of central place theory. Fish are legally sold ex-vessel to a dealer, processor or the public; fishing support services are provided; there are public facilities providing dockage; fishing people satisfy their daily and weekly social and/or economic needs here, and some fishermen and their representatives participate in fisheries resource management.

Fishing is considered "slightly important" to the community. The peninsula has an urchin processor and one who handles shrimp, there are docking facilities (2 commercial, one owned by the town), a fishing association, an air fill station, bait houses, five boat builders and six boat yards. There is a fishing monument, three harbor masters, an icehouse, marine railway and marine contractors, marine supplies, fish and lobster buyers and retailers, grocers, insurance companies, a trucking firm, cold warehouse, welders, and oil/diesel fuel. In addition, there are seafood restaurants, bars, recreational dock, hotels/inns, and five boat excursions.

Commercial fishing and fisheries-related employment

Harvesting structure

Boats that can be used for lobstering and shrimping predominate. There are about 50 lobster boats in Boothbay Harbor, through probably about 200 total on the peninsula and approximately 20 urchin dive boats. Boats' ages range from a year old to 40 years old and in size from 20 to 54 feet. Most are fiberglass, but there are 12 or so wooden boats in Boothbay Harbor.

One groundfish boat remains, the others are said to have gone to Portland because of the auction. This is a sharp decline from 20 years ago when Acheson et al. (1980) noted 10 groundfish boats. Teresa Johnson (2000) reports in the early 1980's there were 7-1- draggers and 3-6 gillnetting boats, plus 6-8 combination boats. In the mid-1980's, she said, there were 8-10 gillnetters, 7 draggers and 10 combination boats. The numbers declined in the '90's. Johnson, however, reports the numbers today as "4 draggers, 1-2 gillnetters, and 5 combination boats," significantly more than reported by our key informants.

Processing structure

One processor handles urchins and another shrimp.

Support Services

The boat builders and boat yards work on both commercial and recreational boats. Fuel is available from four dealers, bookkeepers, fishermen's supplies, an icehouse, and various marine contractors.

Employment (year-around and seasonal)

Estimates suggested about 100 fishermen work out of Boothbay. Another 100 households are probably indirectly dependent on the fishing industry. It was believed there are as many as 400 fishermen (total) on the peninsula.

Species, Seasonality

Typically, "you go lobstering through the spring and into the fall and then you go urchining or shrimping in the winter." Some lobstermen work their traps for six months and do odd jobs for the rest of the year. "Urchining is pretty big."

1997 Federal landings data confirms informants' observations of shrimp landings December-April. Urchins were landed January, February and November. Groundfish landings were noteworthy May through December. Landings in July through September showed Bluefin tuna.

Finfishermen fish year-around. Besides urchining as a "niche" fishery, elvers are sought, in season.

Landed species include:

Groundfish: cod, flounder, haddock, pollock, hake

Crustaceans: lobster, crab

Small mesh: shrimp

Pelagics: herring

Shellfish: sea urchins, periwinkles, mussels, soft-shell clams, scallops, conch

HMS: tuna, swordfish

Other: dogfish, skates, monkfish, bluefish (recreational), stripped bass (recreational), hagfish (soft market)

Recreational fishing and employment

Seasonally, "head boats" take from six to 26 people to go tuna fishing or jigging for codfish. More than 15 excursion boats leave Boothbay Harbor daily.

Cultural role of fishing

Museums and history

Maine Department of Marine Resources built the shell of an aquarium in 1993, then completed the interior by 1995 in West Boothbay Harbor. "The main gallery resembles the rocky coast of Maine. A collection of regional fish and invertebrates can be seen hidden within the granite-like cliffs. Interactive displays, including the numerous touch tanks, allows for discovery learning to take place."¹⁹

Kinship & family

The potential for children to go into fishing remains. Informants here seemed more optimistic about fishing as a career than in some other ports.

Fishing related organizations

Commercial fishing associations

Lobster cooperative

Fishermen's Wives associations

The local fishermen's wives organization disbanded

Fishing-related programs and services

Bigelow Laboratory has a community of scientists whose principal concern is the biology of the oceans. Many studies involve marine phytoplankton and zooplankton: microscopic plants and animals that are at the lowest levels of the ocean's food web and which sustain all life in the sea. In fact, the research lab maintains the largest collection of marine phytoplankton in the world.²⁰

The Division of Marine Resources' new fisheries research station was built in 1993 on McKown Point in West Boothbay Harbor. This houses the Bureau of Resource Management, all the science capabilities of the department, and some of the Marine Patrol.

U.S. Coast Guard maintains a station in Boothbay Harbor as part of the Coast Guard Group, Portland Maine.²¹

Perceptions of the Fishing Community²²

Importance of fishing to the community

Opinions ranged from "slightly important" to Boothbay to "very important" to the peninsula as a whole. Informants noted that fishermen no longer live on the waterfront. Most sold any waterfront property as soon as the real estate values escalated. Hotels, condos, private estates and summer estates now predominate. "Pretty much every hotel in Boothbay Harbor that's on the water used to be a fish dock at one time."

Boundaries

Capital contacts can be divided up into those encompassing social capital (e.g., visit friends, go for recreation, go for vacation, visit relatives, socialize, go to church); economic (e.g., sell fish, offload fish, buy fishing gear, haul out for boat repairs, go to the bank, go shopping), and human (e.g., go to school, go for childcare, go for health care, go for retraining).

¹⁹ <http://janus.state.me.us/dmr/rm/Aquarium/aquarium.html>

²⁰ http://www.bigelow.org/sci_overview.html

²¹ <http://www.uscg.mil/d1/newengland/d1units.html>

²² Based on interviews with key informants conducted by Keith Bisson.

Boothbay, East Boothbay and Southport are all on the same peninsula. Most people's contacts are confined to the local area with the exception of a few fishermen's economic contacts. For example, fish (not including lobsters) are commonly offloaded and sold in Portland. Shrimp is sold locally, but shipped to Portland. While most shopping is done on the peninsula, it was pointed out that "when you do go out of town, you pick up stuff because you can save money." Most social capital is linked to the local area, though for a night out, one might go to Portland or Cook's Corner in Brunswick.

There's a fishermen's coop in Boothbay where members can buy fishing gear.

Technology is affecting the patterns of contact. With computers and the Internet, as well as cell phones, fishing industry participants are less isolated, even while working.

Communication Issues

Communication with local managers and representatives is considered fair to good, but communication with state and federal managers and representatives is non-existent (zero). One informant noted, "all these guys are independent and they're not going to be led by anyone so therefore they're not going to ask any one any advice." Another informant commented, "Well, we all have good relationships, it's just we don't agree on how the government's doing it. You know, I'd say, they're listening, but they just don't pay any attention to us."

Vis a vis communication with other fishermen, informants commented that fishermen did not often share information with each other, but you learn a lot by watching what is landed and noticing where individuals fish. Cell phones allow fishermen to contact dealers privately to indicate arrival time and offer catch information.

Assessments

Again opinions varied though active fishermen-informants said that fishermen "strongly disagree."

Local management practices

"We've notched lobsters ever since I was lobstering. Always notched the females. And we always used our own spacers. And we built our own wooden traps. Years ago, before they ever even had this stuff."

Fishermen initiated putting conservation zones, smaller trawls, into place on Sheepscot River.

Economic Change

The economic condition of the fishing industry ten years ago was "good" to "excellent" because the groundfish was not depleted. Five years ago, the conditions were "fair" to "average" for groundfishing (starting in 1994 when Amendment 5 was implemented). Today, it's "fair" to "poor" for groundfish, excellent for lobstering. Some informants blame the condition of the stocks that was attributed to a lack of regulation. "But when those groundfish went to hell, the lobster industry picked up because the predators were taken out of the loop." When the groundfish were plentiful, the lobsters were depleted because of the predation of monkfish and sculpins. Other informants suggested that the catch rate in groundfishing is the same as it was 10 years ago, so question whether such severe regulations are needed. The value of regulations on lobstering was acknowledged, for example, the vents and V-notching are "letting the small ones go and keeping the breeding stock."

Five years from now, it is anticipated that the economic condition will be back to "good," as long as the regulations are maintained, but one informant noted that "they could pass one regulation tomorrow that could put us all out of business." The general consensus was that groundfishing will get better and lobstering will continue.

Standards of living have gone up because of tourism, but life is also worse than it was five years ago...due to tourists, one informant laughed. For the fishermen, life is about the same as it was five years ago, with the possible exception of some improvement for lobster fishermen. Finfishermen, however, face "excessive regulation."

Changes in fishing effort

Fishermen of Boothbay are not going for alternative species, at least in part because of a lack of access to markets. Those fishermen who pursue alternative species (e.g., hagfish and dogfish) tend to fish out of Portland.

Because of the lack of groundfish, more fishermen are lobstering. Lobstermen are always trying to get more traps, more gear.

The most significant changes in the industry have been the development of hydraulic haulers and wire traps. Another factor noted in groundfishing is the need to travel farther offshore for a catch (increasing costs).

Effects of recent management

"Cod are coming back, getting pretty steady again." Amendments 5 and 7 affected groundfishing. Days-at-sea regulations had the greatest impact on the groundfishing industry and shrimp industry. Trap limits and vent size impact lobstering.

In addition to limited markets for alternative species, another factor that now limits fishermen's flexibility is attributed to the regulatory system. "Commercial fishing up and down the coast of Maine has always been a cyclical industry. It comes and goes, comes and goes. And whether it's groundfish stocks or pogies or herring or whatever it is, you'll have a few good years and then you'll have a few bad years. That's just the way it's always been for the last hundred years. And, years ago, guys could always shift from one fishery to another. But now, with the new regulations, you can't switch from one fishery to another unless you've got the permits and the licenses."

Characteristics of local fishermen

A good fisherman is one with a work ethic, who pays attention and listens. Drive, determination and a wish to be independent were also mentioned as important.

Fishing is safer now with regulations requiring more safety equipment and improvements in weather reporting. "Everyone has VHF, lifejackets...before, you know, when we started, you didn't have to have a thing. You know, you jumped aboard and went."

Fishing families

Women have always worked, it's not just the spouses of fishermen, "it's just today, you gotta have both of you working." Lobstermen's wives help with fishing-related tasks... they may do the bookkeeping, paint the pot buoys, go as "sternman" until having children.

When old enough, children may also go as "sternman." Some children are going to college now, but work in the industry in the summer.

Additional issues

Informants commented that the Clean Waters Act was not being enforced as it should be. The paper mills and tanneries pump chemicals down the rivers that can't possibly be meeting water standards. Maine Yankee's been releasing two and three hundred gallons of water from the holding tank for nuclear rods every day. "You don't see the growth around the shore that you used to. You used to see sea anemones come up and grow on the piling and stuff. You just don't seem 'em anymore, not like you did when I was a kid."

“...You go to the grocery store and look down and you’ll see an entire aisle dedicated to nothing but chemicals...millions of households use all this stuff. Something like 50 percent of the population of the United States lives within 75 miles of the shoreline. Let’s face it, all that stuff is gonna end up in the ocean and I think it’s just getting to the saturation. Every year we keep chasing fish further offshore. They don’t come inshore anymore.”

Lower Mid-Coast Maine
County Statistics

5.9.2. Sagadahoc County

Bath, the County Seat, has a centuries-old shipbuilding tradition. Nearly half the ships constructed in America between 1862 and 1902 were constructed in Bath. Continuing the tradition by building ships for the U.S. Navy, Bath Iron Works, with 8,500 employees is Maine's largest employer, and draws almost 50% of its work force from the Mid Coast region. Numerous sea captains' homes attest to the town's maritime history. Retail centers and a service sector are currently important components of the town's economic vitality. In addition, a cultural resource and tourist destination, the Maine Maritime Museum, preserves and interprets materials associated with Maine's maritime history.²³

Bath Iron Works

Shipbuilding has been a way of life along the Kennebec River in Bath, Maine, since 1762 when the Earl of Bute was launched on the site of present day Bath. In the 19th century, Bath became one of the leading ports in the United States competing with New York, Boston, Philadelphia and Baltimore in the tonnage of vessels registered here.²⁴

By the 1840's the people of Bath felt a change in the administration of the growing town was necessary, and Bath Iron Works began producing the finest steel hulled ships in the world. The year 1890 saw BIW winning contracts for two steel-hulled gunboats, initiating a fruitful relationship between BIW and the U.S. Navy, which continues to this day. Over the last century, BIW has provided battleships, frigates, cruisers, and destroyers for the Navy while also building yachts, fishing trawlers and a host of commercial vessels.

Since the 1950's, BIW has served as lead shipyard for 10 surface ship classes produced by the U.S. Navy, more than any other U.S. shipyard. In 1995, BIW was purchased by General Dynamics, further enhancing the company's technological expertise and capabilities through key investments and access to the complementary capabilities of other General Dynamics companies.²⁵ Today, BIW, the largest private employer in the State of Maine, builds AEGIS Destroyers - the most advanced and capable warships in the world.

As the 21st century begins, BIW is solidifying its industry leadership position by teaming with the City of Bath and the State of Maine in a long-term capital investment plan. When the modernization is complete in 2001, BIW will be building ships in a state-of-the-art facility. These improvements will enable the company to remain the "best value" shipyard in America, offering unprecedented productivity, quality and affordability to our customers.²⁶

Stinson Seafoods

Also significant is Stinson Seafoods, the largest canner of sardines in the US, now owned by Connors Brothers, that has a major processing operation in Bath, Maine. Stinson is Bath's second largest employer after the Bath Iron Works Shipyard.

Stinson President, Dick Klingaman, anticipates adding about 125 jobs in Bath. Stinson also operates plants in Prospect Harbor and Belfast, Maine and a clam products cannery in Millville, NJ.

Demography

At 250 square miles, Sagadahoc County is Maine's smallest county. Incorporated in 1854, Sagadahoc County had a population of 33,535 in 1990, it's estimated to have grown to 35,779 by 1998. Merrymeeting Bay is one of the most popular duck hunting areas in the

²³ Maine Maritime Museum Homepage:

<http://www.bathmaine.com>

²⁴

²⁵ <http://www.biw.com/menu/menu.htm>

²⁶ http://www.biw.com/company_overview/history/default.htm

northeast.

“Sagadahoc County is a popular area for tourists, offering phenomenal coastline, a rich maritime heritage, quaint towns, antique shops, and much, much more . . . The name Sagadahoc is said to have come from the Sasanoa Indian Tribe and roughly translated means "mouth of big river," referring to the Kennebec River. Sagadahoc County was most likely named for the Sagadahoc expedition of the early 1600s, which included the Popham Colony at the point of what is now Phippsburg.

The towns of Bath, West Bath, Phippsburg, Arrowsic, and Woolwich were originally part of Georgetown,”²⁷

In 1990 there were 16,552 males, 16,983 females and 32,766 (98%) whites. There were 305 Blacks, 279 Asians (47% Filipino), 107 American Indians, and 78 “other.” About 46% of the population (12,904) claimed British Isles ancestry; 16% French or French Canadian, 11% German and 4% Hispanic.

Sixty-one percent of the population (20,287) was born in Maine, 4% was born outside the U.S. (including 359 born of American parents).

Eighty-one percent of the population (17,497) of persons 25 or older achieved a high school diploma or better. Twenty-one percent (4,649) received a Bachelor’s and/or graduate degree.

Of employed persons over 16 years, 313 worked in “agriculture, forestry or fisheries.” Median household income in 1989 was \$31,948 and per capita income was \$13,668. Social Security income went to 2,838 households, and retirement income to 2,048.

“In 1997, Sagadahoc had a per capita personal income (PCPI) of \$21,595. This PCPI ranked 7th in the State, and was 98 percent of the State average, \$21,937, and 85 percent of the national average, \$25,288. In 1987, the PCPI of Sagadahoc was \$14,692 and ranked 4th in the State. The average annual growth rate of PCPI over the past 10 years was 3.9 percent. The average annual growth rate for the State was 4.3 percent and for the nation was 4.7 percent . . .

The largest industries in 1997 were durable goods manufacturing; services, 14.7 percent; and state and local government, 7.2 percent. In 1987, the largest industries were durable goods manufacturing, 58.2 percent of earnings; services, 11.5 percent; and construction, 7.4 percent.”²⁸

Of the 14,633 housing units, 8,909 were owner occupied and 3,672 were renter occupied. The median value of owner-occupied housing was 95,600 and the median year housing units were build was 1961.

Towns (as differentiated from cities) include: Arrowsic, Bowdoin, Bowdoinham, Georgetown, Phippsburg, Richmond, Topsham, West Bath, and Woolwich.

West Bath, on the New Meadows River and Casco Bay, retains its coastal ambiance with its coves and salt marshes. Located between Bath and Brunswick, its residents may commute to either commercial center for work.

Bowdoinham was the center of Maine’s icecutting industry and its workers also built wooden sailing ships. Truck farms, recreational boating and general aviation are now the norm.

Topsham, a coastal town on Merrymeeting Bay, has become a suburban residential

²⁷ <http://www.geocities.com/Heartland/Plains/1208/towns.htm>

²⁸ REIS Bearfacts for Sagadahoc County http://govinfo.kerr.orst.edu/cqi-bin/bfact?8_01-023.mec

community with active businesses not necessarily dependent on maritime pursuits. Construction companies, automobile dealerships, health-care agencies, engineering and legal firms and a retail mall top the list of economic activities in the town.

Across the Kennebec from Bath, Woolwich has retained both farming and shipbuilding traditions. Just east of Woolwich is the island of Westport.

Fishing Industry

The fishing industry, especially lobstering, is important to both Georgetown and Phippsburg. Clamming is important in the town of West Bath. As noted above, sardine processing is also important to the county and the city of Bath. Stinson Seafoods announced in September (2000) that it will berth both the 112' fishing vessel *Providian* and the 366' freezer vessel *Atlantic Frost* at its Kennebec River plant in Bath. Mackerel and herring caught by the *Providian* in the Gulf of Maine will be transferred to the *Atlantic Frost* for processing. The *Atlantic Frost* will be in Bath for about six months of the year, according to the company. The company also anticipates adding about 125 jobs.²⁹

²⁹ <http://www.fishfacts.com/sfdpriv/news1/20000911SSWB.html>

Community Profiles
Sagadahoc County
Lower Mid-Coast Maine

5.9.2.1. Georgetown

Background

Arrowsic/Georgetown are islands bounded by the Kennebec and the Sasanoa, a setting that enabled shipbuilding and shipping industries to develop. Today, the Josephine Newman Wildlife Sanctuary and Reid State Park boast beaches, woods and salt marshes. The two islands are said to be sustained by lobstering, boatbuilding, fishing, and native crafts.

Georgetown is located in Lower Midcoast Maine near Bath. It was incorporated in 1716, and was the 10th corporate town in Maine. The population was 914 according to the 1990 census. With an area of 18.5 square miles, Georgetown has 82.77 miles of shoreline.³⁰

“Georgetown, a.k.a. Parker's Island, along with Arrowsic Island and Phippsburg across the river, boasts a great deal of English colonial history dating back to 1607 when the Plymouth Company in England chose the Sagadahoc, the mouth of the Kennebec River in Maine, to begin colonizing America.³¹ The colony located on Atkin's Bay, survived for only a year before abandoning the fort and returning to England. Their only success was a demonstration project, constructing and launching a small ocean-going vessel, the pinnacle *Virginia*, which went into service for the southern colony at Jamestown when the northern colony was abandoned.

One of the English crewmen who participated in constructing the northern colony's fort was first mate John Parker of Devon, christened in Shobrook on the 25 of September in 1568. John Parker eventually decided to spend the balance of his life in Georgetown, building a home on a small islet at the head of Sagadahoc Bay. Four generations of Parkers lived there, between Indian wars, and many of their descendants still live close by, over 350 years later. Georgetown was known as Parker's Island until 1714 when it became part of the town of 'Georgetown on Arrowsic' along with the present Woolwich (1714), Phippsburg (1721) and Bath (1721).

This first John Parker (there were 8 of them over the next 7 generations) is believed to have managed a chain of fishing stations along the Maine coast for Sir Ferdinando Gorges, the earliest at Monhegan (c.1618),³² Damariscotta (c.1622) and Parker's Neck at Winter Harbor (c.1630). It is not known when Parker established the station at Georgetown but it was probably many years before he acquired a deed to it from the Indian Sagamore, Robin Hood, in 1648.

Today, Georgetown's Reid State Park is one of Maine's most popular saltwater parks. Its “766 acres include nearly a mile and a half of sand beaches, dunes, marshes, ledges, and ocean, plus a warm saltwater pond for swimming.”³³

³⁰ <http://www.georgetown.u47.k12.me.us/history.html>

³¹ <http://maineusa.com/georgetown/>

³² Samoset was the first Indian to make contact with the Pilgrims. He was a member of an Algonquin tribe that resided at the time in southeast Maine. He was a Sagamore of his tribe, and was visiting chief Massasoit. He spoke in broken English that he had learned from the English fishermen that came to fish off Monhegan Island, from off the coast of southeast Maine. Samoset was described the Pilgrims in this way: "He was a man free in speech, so far as he could express his mind, and of a seemly carriage ... He was a tall straight man, the hair of his head black, long behind, only short before, none on his face at all." http://pilgrims.net/native_americans/samoset.html

³³ <http://www.state.me.us/doc/prkslns/reid.htm>

*Demography*³⁴

Population

According to the 1990 Census, Georgetown had a population of 913, 451 male and 462 female.

Age Structure

There were 65 children under 5, 136 school age (5 to 18 years), 581 between 18 and 64, and 131 were 65 or older.

Education

Of those 25 years and older, 136 had no high school diploma, 158 had graduated from high school, 160 had some college, 135 had a Bachelor's and 62, a graduate or professional degree.

Housing

There were 401 households in Georgetown in 1989, 305 of which lived in owner-occupied units. Fewer than half the 803 housing units were occupied (393). The median year the housing units were built was 1965 and their median value was \$111,000.

Racial and Ethnic Composition

In 1989, the vast majority was white with only 2 Blacks and 1 American Indian.

Economic Context

Income

The median household income in 1989 was \$28,967.

Employment

The Census counted 27 in the *industry* category of "agriculture, forestry and fisheries." Twenty-nine were counted in the *occupation* category of "farming, forestry, and fishing." Despite the small difference in these numbers, the discrepancy suggests some confusion among those sampled for the Census, or as noted earlier in this report, reflects the imprecision of Census numbers.

The largest industry category in 1989 was "manufacturing, durable goods" with 123 employees. However, it should be noted that Georgetown is right across the bridge from Maine's largest manufacturing employer, Bath Iron Works. Professional (including educational and health) services had 95 employees. Retail trade with 74 employees was third and construction with 38 was fourth. Fishing, etc. was 27 and the other categories were all under 20 employees.

³⁴ <http://venus.census.gov/cdrom/lookup/978562855>

Community Profiles
Sagadahoc County
Lower Mid-Coast Maine

5.9.2.2. Phippsburg

Background

“Phippsburg is the location of the first colony in America, established in 1607, 13 years before the Pilgrims landed at Plymouth. For most [visitors], though, Popham means three miles of beautiful sandy beach for great swimming; natural rock outcroppings and tidal pools for interesting explorations; and an historic fort on the banks of the Kennebec River.”

In the late 1700's, Benedict Arnold landed here with eleven hundred and fifty men from Cambridge, Mass to attack the British in Quebec, Canada.”³⁵

“Fort Popham, built during the Civil War in 1860 and never finished, is located two miles further down Route 209. The fort sits on the banks of the Kennebec River where it broadens into Atkins Bay, and offers views of Georgetown across the river. A second fort, Fort Baldwin, built during World War I as an observatory used to spot periscopes of enemy submarines, sits atop nearby Sabino Hill.”

Phippsburg noted in its 1990 annual report that more than 50% of its property taxes are paid by non-residents, reflecting the annual economic impact that tourism and summer visitors have on the area.³⁶

Demography

Population

According to the 1990 Census Phippsburg had a total population of 1815, 918 males and 897 females.

Age Structure

In 1989, 102 children were under the age of 5, 329 persons were school age (5 to 17 years), 1153 were adults 18 to 64 years old and 231 were 65 and older.

Education

Of those over 25 years, 326 were not high school graduates, 440 had a high school diploma, 241 had some college, 165 had a Bachelor's degree and 77 had a graduate or professional degree.

Housing

Of the 706 households, 582 lived in owner-occupied units. The median value of housing in 1989 was \$100,700.

Phippsburg has 1224 housing units of which 461 are for seasonal, recreational or occasional use.

Racial and Ethnic Composition

The majority in Phippsburg was white with 1806 persons in 1989. There was also one Black, two American Indians, and six Asians.

Economic Context

Income

The median household income in 1989 was \$30,822 and the per capita income was \$13,818.

³⁵ <http://www.maineusa.com/hippsburg/about.htm>

³⁶ <http://www.cityofbath.com/>

Employment

The 1990 Census counted 67 in the *industry* category of “agriculture, forestry, and fisheries.” However, there were 76 counted in the *occupation* of “farming, forestry, and fishing.” The discrepancy suggests some confusion among those sampled for the Census, or as noted earlier in this report, reflects the imprecision of Census numbers.

Manufacturing, durable goods had the largest number of employees in 1989 with 249. Professional and related services employed 166, retail trade employed 154, construction 77 and fisheries, etc. was 67. The other categories all had fewer than 36 employees.

Lower Mid-Coast Maine
County Statistics

5.9.3. Cumberland County

Cumberland County, incorporated in 1760, has many famous historical landmarks and some of the state's leading educational institutions: Bowdoin College, Brunswick and the University of Southern Maine, the University of Maine system's second largest campus. Cumberland County was named for a county in England.³⁷

With a population of 243,135 in 1990 and an estimated 1998 population of 253,582, Cumberland is the most populous of Maine's sixteen counties with almost a quarter of the state's population. It covers 853 square miles and its county seat is Portland, which is also Maine's largest city. Portland, South Portland and Westbrook are the county's three cities.

Cumberland's population consists of 116,765 males, 126,370 females.³⁸ Ninety-eight percent of the population is white, 44% of who claimed British Isles ancestry. About 15% of the population claimed French and French Canadian ancestry, 7% German, 5% Italian and 3% Scandinavian.

Sixty-five percent (157,458) of the population was born in Maine, only 4% (9,965) were born outside the U.S. (including those born abroad of American parents).

Elementary and high school enrollments in 1990 noted 36,676 pupils. Of persons 25 years and older, 85% (135,932) had at least a high school diploma, 27% (44,064) had a Bachelor's degree or higher.

"Agriculture, forestry, and fisheries" industry had 2201 workers cited. Median household income in 1989 was \$32,286 and per capita income was \$15,816. Of the 94,607 households counted, 26% received social security income and 16% received retirement income.

Of the 109,890 housing units, 60,812 were owner-occupied and 33,700 were renter occupied. The median year housing units were built was 1958 and their median value was \$117,800.

Towns include: Baldwin, Bridgton, Brunswick, Cape Elizabeth, Casco, Cumberland, Falmouth, Freeport, Gorham, Gray, Harpswell, Harrison, Naples, New Gloucester, North Yarmouth, Pownal, Raymond, Scarborough, Sebago, Standish, Windham, and Yarmouth

Brunswick, settled in 1628 along the Androscoggin River, was the former home of wealthy sea captains. Brunswick has been home to Bowdoin College since 1794, though its first class began studying in 1804. A third of Brunswick's men served in the Civil War, Harriet Beecher Stow wrote Uncle Tom's Cabin there and resident Joshua L. Chamberlain received the surrender of Confederate troops at Appomattox. Furthermore, the Kennebec River was an important escape route of the Underground Railroad. Today, the college has about 635 employees and over 1000 students

Brunswick Naval Air Station, employing 719 civilians in 1996 with 3,500 military personnel, 3,300 dependents and 2,250 retirees, is important to the town. Light industry, originally powered by the waterfalls along the Androscoggin River, included textiles, grist and saw mills in the early days. Irish and French Canadian immigrants, who arrived in separate waves, ran the mills. Today, Brunswick industry includes manufacturing of boots for L.L.Bean (2,056 employees in Brunswick and Freeport, up to 4,300 in the pre-Christmas season), fiberglass construction materials and electronic switching devices. In addition,

³⁷ <http://www.supt.sad37.k12.me.us/Maine/Counties/Cumberland.htm>

³⁸ Census data from which these summaries were derived can be found at <http://venus.census.gov/cdrom/lookup/953845849>

retail and the service sector complete the town's economy.

Peninsulas, islands and high headlands characterize Harpswell. Harpswell Neck, a thin peninsula, has working farms and scores of lobstermen. The other half of Harpswell is a string of three islands—Great, Orr's, and Bailey—linked by bridges. Mackerel Cove and Cundy's Harbor are two of the islands' important deep-water harbors. While the residential and summer cottage populations are expanding, fishing and lobstering remain critically important to Harpswell.

Federal permit holders list Harpswell as their address for 15 vessels. In addition, they list Harpswell's villages, South Harpswell for 16 vessels, Bailey Island for 16 vessels, and Orr's Island for 26 vessels. Other federal permit holders in the county list Bridgton (1 vessel), Brunswick (39 vessels), Cape Elizabeth (27 vessels), Casco (1 vessel), Cumberland (2 vessels), Falmouth (10 vessels), Freeport (12 vessels), Gorham (6 vessels), New Gloucester (1 vessel), Pownal (1 vessel), Scarborough (28 vessels), Standish (4 vessels), Windham (7 vessels) and Yarmouth (5 vessels).

It is important to note that lobstering dominates Maine's fishing industry. Since lobster fishing relies on state issued permits and tags, the federal permits do not necessarily accurately reflect the numbers of vessels in these communities.

Cumberland County, ME
Lower Mid-Coast Sub-region

5.9.3.1. Portland

Background

In 1632 English settlers living on the Portland Peninsula initially changed its name from the Indian name, Machigonne, to Casco, then later to Falmouth. In 1652, the Casco Bay area became part of the Massachusetts Bay Colony but in 1675, was destroyed during King Philip's War. Once peace was restored in the first half of the 18th century, a commercial port was established. The Tate House, an estate built in 1755, attests to the elegant life of the British Royal Navy captain who served as Maine Mast Agent. Shipping grew rapidly after the Revolutionary War and ten years later, the town became known as Portland (1786).³⁹ Portland Head Light, built in 1791, is now Maine's oldest lighthouse.

In 1820, Maine became a state with Portland as its capitol. Shipping continued to grow and steamship service began, linking Portland with Boston. After the Great Fire of 1866 burnt most of the public buildings, half the churches and hundreds of homes, the city was rebuilt with brick, Victorian style.

Portland's historic connection to the sea is readily apparent along Commercial Street that runs along the city's working waterfront. The United States Custom House, the Maine State Pier, a Whaling Wall mural, an island ferry terminal, the Portland Fish Pier, a cruise ship terminal and DiMillo's Marina are all landmarks associated with maritime activities.⁴⁰ The Sea Dogs, Portland's baseball team also pays tribute to this heritage with their name. Waterfront zoning established in 1987 has helped the city retain the working port. Currently, the city is planning to improve its container cargo facility with emphasis on intermodal capabilities.

Portland acknowledges the importance of the fishing industry to the city. The Department of Transportation's recently hired Fisheries Manager is committed to maintaining diversity along the waterfront. "What's going to keep the port active? All businesses are cyclical. Need variety to maintain a working waterfront." She also provides a liaison service among harvesters, processors, transporters, aquaculturists, etc.

Governance

Portland has a City Council with 9 Councilors who appoint one of their members to serve as mayor. A city manager oversees the department heads and runs the day-to-day operation of the city.

Demography

Population

Portland had a population of 64,358 in 1989,⁴¹ approximately 30,000 males and 34,000 females.

Age Structure

The largest age group falls in the 25 to 49 years old category with 26,585 individuals. Another 7,000 people are 50 to 65 years old; almost 10,000 are over 65 and a similar number under 11 years old. Just over 3,000 are teenagers in the 12 to 18 year category and nearly 7,500 are 19 to 24 years old.

Education

According to the 1990 census, about 8000 Portland residents speak a language other than

³⁹ Greater Portland Visitor's Guide 1999-2000. Portland: The Convention and Visitor's Bureau, 1999.

⁴⁰ This is Portland. Portland: Worcester Publishing Ltd. 1999.

⁴¹ US Census Data found at URL <http://venus.census.gov/cdrom/lookup/953843648>

English at home, but only 900 of these were identified as linguistically isolated.

According to the 1990 census, 83% of the population over 18 years old graduated from high school. Almost 30% of the population over 18 has a Bachelor's degree or higher. The total number of elementary and high school students enrolled according to the 1990 Census was 7600.

Housing

Of the 31,293 housing units, 38% (11,895) are owner occupied and 52% (16,340) are renter occupied.

The median value of owner-occupied housing was \$112,300 and the median year housing units were built was 1939.

Racial and Ethnic Composition

In 1989, the vast majority of Portland's population was white (62,161) with about 1000 Asians, 700 Blacks, and 250 American Indians. Among the Asians, Cambodians predominated with over 300, Filipino, Japanese, Asian Indian and Vietnamese were almost equally represented with about 125 individuals in each group.

English and Irish ancestry dominated with French and French Canadian close in number. Italian and German ancestry was claimed by 5500 and 4000 respectively. Scottish, Hispanic and Polish descendents each numbered in the 2000 range, the other noted groups all had fewer than 1000 descendents.

Forty-one thousand residents (64%) were born in Maine. Almost 19,000 were born elsewhere in the U.S. Only about 7% were born outside the U.S. (including those born to American parents).

According to recent reports, these figures have radically changed since the 1990 census. Catholic Charities Maine has resettled 4,000 to 5,000 refugees in Portland in the last 20 years. However, seventy percent of the immigrant population in Portland is comprised of secondary immigrants, people who initially settled elsewhere in the U.S., but moved to Portland when they learned it is a safe city with a strong economy. Twenty-four languages are spoken at the city's most diverse elementary school including Serbo-Croatian, Khmer, Vietnamese, Somali, Spanish, Arabic, Russian and the African language Acholi.⁴²

Economic Context

Income

The median household income in 1989 was \$26,576 and per capita income was \$14,914. Of the persons for whom poverty status was determined, 8,783 had incomes below the poverty level.

Of the 28,235 households, 21,885 (78%) showed earned income in 1989. Twenty-seven percent (7,656) of households received social security income and 3,961 (14%) showed retirement income.

Employment

The census found 33,273 employed persons over 16 years old. Four hundred forty-nine individuals identified themselves as working in the "Agriculture, forestry, and fisheries" category.

Transportation and Access

Portland is benefiting from Maine's efforts to upgrade air, rail and sea transportation infrastructure. Considerable investment has recently been made in improving intermodal freight handling capabilities, including purchase of a state-of-the-art crane for containers

⁴² "A city's changing face," The Boston Sunday Globe, July 30, 2000

and the development of separate freight and passenger terminals.

In addition, Maine's roads and bridges were ranked seventh best in the country in 1996. Seven thousand licensed truckers transport freight overland. The waterfront is easily accessible via Route 295 off Interstate 95.

Casco Bay Lines operates four ferry lines from downtown Portland to the nearby islands on a year-around basis. Greater Portland has its own bus system, The Metro. An international ferry terminal services ferries that travel to Nova Scotia. Portland is also a port of call for cruise ships, 50 are expected to stop in 2000.

Hospitals, schools, libraries

Portland has two major hospitals. According to one respondent, the Maine Medical Center is considered the top heart center in New England. Mercy Hospital is also well respected. The Portland Public Library, Maine College of Art and the Museum of Fine Art are located in the Arts District of Portland. The news media is actively involved in community affairs, with personnel often chairing charity events, etc. While Maine is not considered a wealthy state, its people are generous and philanthropic. Successful charity drives usually have many small or medium donations rather than a few large donations.

Fisheries Profile

Community

Portland clearly fulfills the definition of a fishing community on the basis of central place theory. Fish are legally sold ex-vessel to a dealer, processor or the public; fishing support services are provided; there are public facilities providing dockage; fishing people satisfy their daily and weekly social and/or economic needs here, and many fishermen and their representatives participate in fisheries resource management.

Though Portland is a diverse city with a variety of commercial enterprises including a growing service industry catering to tourists, fishing and fishing-related businesses retain a strong presence. The city affirmed its support of the fishing sector in 1986 when it joined fishing vessel owners and fish and seafood processors in a coalition to establish the Portland Fish Exchange,⁴³ in 1987 when waterfront zoning was established and in 1999 when a Fisheries Manager was hired.

Fish Pier

When discussions first began between city officials and fishermen concerned about waterfront development, only a city-owned fish pier was envisioned. Once a display auction was agreed upon, and with help from legislators, Economic Development Administration (EDA) funds were secured, Vessel Services, a fishermen-owned ice and fuel service, decided to move to the pier, as did the developers of the Marine Trade Center.

Display auction

Portland was the first city on the East Coast to develop a display auction for the sale of fresh fish. Though Europeans have sold their fish for years at display auctions, the East Coast fishing industry had long relied on a dealer-driven, sight unseen, daily auction of fish. For many years, the Boston auction set the prices for the whole region. The system favored the dealers and led to considerable abuse of fair trading practices.

By 1988, Portland's new auction faced potential bankruptcy, partially attributable to an awkward management system. However, with help from fishing industry participants, Portland City Manager Robert Ganley and a restructuring of oversight as well as the hiring of general manager, Dennis Frappier, the auction began to thrive. Just a few years after its founding, the Portland Fish Exchange attracted landings from fishermen out of ports as distant as Gloucester, New Bedford, and Rhode Island. More importantly, the system became accepted as an industry standard for which to strive. In December 1997,

⁴³ <http://www.portlandfishexchange.com/>

Gloucester opened a display auction modeled on the Portland Fish Exchange. However, the Gloucester Auction was sold in 2000 and may not retain all the laudable features of the Portland Fish Exchange. New Bedford also has a variation on the display auction, though as private enterprise, it has not quite matched the favorable reputation of the Portland auction and Gloucester auction's first two years of operation.

Future plans

More berthing for fishing vessels is needed along the waterfront. The city is considering establishing a revolving loan fund that would enable the revamping of the older piers and other infrastructure improvements.

Commercial fishing and fisheries-related employment

Harvesting structure

Trawlers, long-liners and gillnetters have traditionally worked out of Portland. In the early '90's there were 80-90 bottom trawls, 20-25 gillnetters, 4-6 longliners. There was also a seasonal midwater trawl fishery for herring. According to the 1992 NMFS permit files, 68 vessels listed Portland addresses, while in 1997, 51 did so. Only 24 vessels list Portland in both years, but 5 that listed Portland in 1997 noted other Maine ports in 1992.

For a short time, it seemed that Portland would lose its presence in the offshore groundfishery when there were only about 10 vessels remaining in the 80 foot and up category. When groundfish fishermen first faced major cutbacks in days-at-sea and other regulations, a number of vessels switched to herring, mackerel and squid. Other fishermen were able to successfully switch to lobstering using smaller boats. The federal boat buy-back program also temporarily reduced the numbers of groundfish vessels when, of the 51 vessels listing Portland as their address, seven participated in the buyback.

However, the always dynamic groundfish industry has begun to recuperate, some boats that diverted to pelagics were dissatisfied with the markets and price and returned to groundfishing, some vessel owners bought a second or third vessel, and some of those who sold their boats in the buy-back purchased other vessels. There are currently (in 2000) at least 18 large groundfish boats that regularly fish out of Portland. Furthermore, the fleet of small to mid-sized vessels has remained steady.

A constantly shifting population of boats complicates counting vessels in Portland. Vessels move to follow migrations of fish, avoid closed areas, access better markets, etc. Because of the auction, Portland commonly hosts transient boats that wish to benefit from the open system, particularly if they are fishing in the Gulf of Maine. Some Portland vessels move south in certain seasons and southern boats come north.

What has changed over time is the pattern of vessel ownership in the finfish fishery. Before limits were placed on groundfish days at sea, owner-operators of single boats were the rule. Now, the groundfish fleet is primarily comprised of owners of two and three vessels. Lobster boats, however, are still predominantly owner-operated.

Processing structure

According to *Fisheries of the United States, 1997*, Maine had 54 plants classified as processing plants with an annual average employment of 1,768.⁴⁴ Another 223 plants were classified as "Wholesale"⁴⁵ with an annual average employment of 1,516.

⁴⁴ Fisheries of the United States, 1997. Fisheries Statistics Division, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, U.S. Dept. of Commerce. Any summaries that rely on federal reporting risk misleading numbers since confidentiality rules require National Marine Fisheries Service not to report figures when there are three or fewer firms in a category. For example, only two firms handle herring, so herring statistics are not included by name in Maine's Department of Marine Resources summaries. It is likely, however, that herring composes the majority of the "other fish" category.

⁴⁵ Based on Standard Industrial Classification 5146, reported to the Bureau of Labor Statistics

Portland has 21 processors of fresh and frozen seafood. Fifteen of the processors report sales of \$114,380,000. Six processors did not report their sales, but a key informant noted that three of these are fairly large companies and estimated sales at \$10-12 million. Two processors reported a total of 351 employees (1 processor did not report).⁴⁶ One processor is considered the largest shrimp processor in the state.⁴⁷ Urchin processing is also done in Portland.

Labor shortage

Interestingly, it is not the lack of fish, but a shortage of labor that may be the limiting factor in the growth of processing in Maine. Wages are significantly higher in entry level and service jobs than they were in the past, but processing jobs have not kept pace. Families that served the processing industry for several generations lost their positions to cheaper immigrant labor, then the plants lost the immigrant labor pool to stricter immigration regulations and to more appealing work with equivalent pay outside the plants. Currently, some plants now rely on prisoners on work release.

Young people who in the past might have stayed in the fishing industry as part of a family tradition are continuing with school and are leaving the state seeking better opportunities. One key informant noted that high taxes, labor issues and Maine's harsh climate contribute to a lack of growth in middle-management level jobs.

Support Services

As noted above, the Portland Fish Exchange is central to the handling and marketing of fish landed in the city. In May of 1998, the Fish Exchange's board of directors hired Wendi White as the new general manager of the 30,000 square foot cooler building and offloading facility. Temporary help supplements the full-time staff of 30 employees during the busiest seasons.

Seller representatives attend the daily auction to oversee the sale of their fishermen clients' catches, to agree to or refuse the price offered and may collect the agreed upon payment.

Vessel Services provides ice, fuel, and bait to commercial fishing vessels. Fishermen from various coastal communities and the Maine Fishermen's Cooperative Association organized it in 1979.⁴⁸ Through their services, vessels are able to obtain supplies, including more than 3300 items, much more efficiently than before. The company employs 17 to 18 people.

Vessel management services may provide financial management, permit acquisition, hiring, maintenance planning, logbook reporting, and operations planning. Other companies and individuals offer similar services. New England Fisheries Management Council member and vessel owner, Barbara Stevenson, for example, serves as a sales rep and vessel manager in addition to maintaining a widely read web site.

From 1998 to 1999, the fishing industry was one of several Maine industries to experience dramatic growth in exporting. In 1998 Maine exported \$96,775,286 worth of fish products and in 1999, \$148,035,604, a 53 percent increase.⁴⁹ Part of this increase is attributable to port upgrades, tax incentives for business growth, and improved access to information about exporting through the establishment of the Maine International Trade Center (MITC). Beginning in 1995, Maine began to invest \$80 million in upgrading the ports of Portland, Eastport, Searsport and Winterport. In 1996, the MITC was established (see below).

⁴⁶ The Portland Area Nynex Yellow Pages, August 1996-July 1997, lists 29 processors and wholesale fish and seafood companies. Five additional firms are found in South Portland. Four companies are listed as Fish and Seafood Brokers.

⁴⁷ Resource Trading Company, according to journalist Art Mayers, May 18, 2000.

⁴⁸ <http://www.vesselservices.com/Master/history.htm>

⁴⁹ "Exporting from Maine" in Northeast Export May-June 2000.

Employment (year-around and seasonal)

Respondents estimated 300 to 400 households are directly dependent on commercial harvesting; around 1500 to 2000 others are thought to be indirectly dependent.

Sales/revenue

Ninety percent of the groundfish landed in Portland goes through the auction for sale, generating approximately \$25 million in sales annually. However, two species with significant landings in Portland, herring and lobsters, are not handled by the auction but probably sell for \$25-50 million. In addition, the \$124-126 million in sales of processed fish add significantly to the value of fisheries products to Portland.

Species, Seasonality

Whiting and redfish dominated Portland's fishing industry in the 1960s and '70s. At the same time, the foreign fleets were heavily exploiting cod and herring. By 1980's the Magnuson Act had been implemented and redfish stocks had begun to diminish, so Portland's fleet turned toward groundfish. Cod, pollock and hake were the most significant species, that is, they had the highest landings in the early 90's. Significant quantities of cod, pollock and hake are still landed but key respondents noted that monkfish, plaice (dab) and witch flounder (grey sole) are increasingly important.

While shrimp is said to be characterized by a six or seven year cycle (up to a peak and down), in 1997 landings of shrimp were third, following herring and lobster. When shrimp is available, it provides an important component of many fishermen's "year." Redfish diminished to virtually no landings, but is slowly recovering. Portland rivals Rockland (Maine) in annual herring landings. Lobster plays a critical role in Portland's fishing industry, as a commodity that is landed and/or shipped through the city and as a product that is processed and then shipped (value-added).

Summer was once the "big season for fish" but because of days-at-sea regulations, fishermen now "fish for dollars, not pounds" so they try to choose the season when they are most likely to obtain the best return per day. In 1997 October and September had the highest landings of the year, followed by August, June, April, May and November. February, December, March and January had lower quantities of landed pounds. Shrimp is landed December-May; lobster landings are almost year around, but are concentrated in July-December.

The top ten species landed in Portland in 1997 (in order of pounds landed): herring, lobster, shrimp, plaice (dab), cod, witch flounder (grey sole), pollock, monkfish, white hake and silver hake.

Landed species include:

Groundfish: cod, cusk, flounders (American plaice/dabs; witch/grey sole; fourspot; winter (a few); yellowtail (some)), haddock, hake, halibut (a few), pollock, pout,

Pelagics: herring, mackerel

Crustaceans: lobster, crab

Shellfish: conch/whelks, mahogany clam, mussels, periwinkles, scallops, sea urchins, and softshell clam

Small mesh: shrimp, squid (some illex), whiting

HMS: swordfish (occasionally), tuna

Other: bluefish (sometimes), dogfish, eels (slime and conger), redfish, sea cucumbers, shark, skates, striped bass and sturgeon (not commercially), tilefish (occasionally), wolffishes

Seaweed—dulse, rockweed

Form of ownership (e.g., owner/operator; corporation)

The majority of groundfish vessel owners have two boats or three vessels each. While several owned up to four vessels in the '90's, some sold their extra vessels as the stocks

diminished and regulations ballooned, making business planning more difficult. However, several of those who owned only one vessel in the early '90's have bought an additional vessel. Several who sold their vessels in the buy-out have replaced them and at least one latent permit has been activated.

Those who were content with one vessel before the imposition of limits on groundfish days-at-sea (DAS) have purchased a second vessel in order to be able to fish more of the year. This is particularly true among the small to mid-sized vessels that had to take the fleet option of DAS (currently, 88 allowable days).

Recreational fishing and employment

Respondents indicated that there was limited recreational fishing out of Portland and only two marinas were noted. However, there are five marinas in South Portland and others in the vicinity. Fishing charters are available out of South Portland and one company takes tourists lobstering.

Cultural role of fishing

Museums and history

Portland Harbor Museum (formerly known as Spring Point Museum) focuses on the history and development of Portland's port.

Gulf of Maine Aquarium Corporation is in the process of raising funds to develop an aquarium and marine research institute in Portland. The director has been actively engaged in helping the groundfish industry identify research needs for the Gulf of Maine. The site of the Naval Reserve Training Center is being eyed as a potential site for the aquarium though some in the city consider it an inappropriate use of scarce waterfront property. Traffic and parking issues also fuel concerns among opponents to the use of this site.

On Middle Street, one of Portland's main streets, a statue of a lobsterman measuring the carapace length of a lobster attests to both the importance of the fishing industry to the city and the lobster industry's adherence to measures that attempt to assure sustainability.

Cultural events

The Blessing of the Fleet was an important festival for the industry for many years, but was cancelled four years ago in protest against the carnival atmosphere that had developed around the waterfront during the Blessing. The Maine Fishermen's Wives, who had been the organizers, believe the blessing should be a solemn event. Portland's Fisheries Manager is trying to help resurrect the tradition during OpSail celebrations, honoring the solemnity by holding the blessing early in the morning.

OpSail will bring in the Tall ships for viewing and will attract a host of educational exhibits on the waterfront.

Yarmouth, a neighboring town, holds a clam festival in July.

Ethnicity in the fisheries

The fisheries reflect the general population of Portland, with most participants having English, Irish or French ancestors, and is generally considered typically Yankee American. In addition, there is a significant group of Italian-Americans who have been part of the groundfish industry in Portland for several generations. Cambodians and Afghanis have found work in the processing plants of Portland and South Portland. Catholic Charities often sponsored immigrants who found work in plants in both New Bedford (MA) and Portland.

Kinship & family

As noted above, fewer children are automatically choosing the fishing industry for their careers. In some cases, the industry has changed, eliminating some family "inherited" jobs.

For example, since most groundfish goes through the auction, which has employees who unload the fish, kin serving as lumpers is no longer common. The limitations on licenses/permits have also made fish harvesting more difficult to enter than it was in the past.

Where fishermen go for coffee

Open 362.5 days per year from 4 am to 9 p.m., Becky's, a diner next to the Portland Fish Exchange, attracts fishing industry participants for coffee and reasonable, tasty meals. One respondent, however, noted that it has become a "yuppie" spot and no longer attracts as many fishermen.

Where fishermen go for beer

Angie's and the Sail Loft are said to be two favored spots.

Fishing related organizations and their roles in the community and fishery

Commercial fishing associations

Associated Fisheries of Maine (AFM), particularly the Groundfish Group Has a representative attend Council meetings and other venues of interest to speak on behalf of its members and to keep members apprised of the changing regulatory environment.

Maine Urchin Harvesters Association

Maine Fishermen's Cooperative Association (actually in Cundy's Harbor) helped organize Vessel Services, Inc. (see above)

Fishermen's Wives associations

Maine Fishermen's Wives Association is active in helping promote fishing interests and provides support services when a need arises. Early in 2000 they helped organize successful fundraisers for families of those lost when the F/V *Two Sisters* sank.

Maine Fishermen's Forum

Though held in Rockland, Maine in March, the Maine Fishermen's Forum attracts participants from all over the state. Some Fishing industry participants from Portland are members of the board of the Forum and therefore play a role in setting its agenda each year.

Processing

United Processors of Maine

Associated Fisheries of Maine (AFM) (see above) is a multi-sector organization that started as a processor association.

International Trade

Maine International Trade Center is a nonprofit created in 1996 combining the activities of the Maine World Trade Association, Maine Education and Training Export Partnership, and the International Trade Division of the Maine Department of Economic and Community Development. Services include organizing trade missions, conferences, training programs, expositions, providing counseling, access to a library, and trade leads. Recently it has also created the Clipper Export Trading Program, intended to help producers market their "made in Maine" products internationally.

Fishing-related programs and services

Other NGOs

Coastal Enterprise, Inc. (CEI), a nonprofit community development corporation, contributed \$815,000 in 1998 to various fisheries-related enterprises that, among other things, permitted the Portland Fish Exchange to make upgrades to their refrigeration system and helped a start-up fresh fish market open in Portland's new Public Market. In addition, they maintain a Fisheries Revolving Loan Fund dedicated to maintaining and developing a sustainable fishery and industry infrastructure, and have a Shellfish Growers Revolving Fund

for shellfish aquaculture. CEI's "Fishtag" program encourages fishermen to supply biological data to fisheries managers in an effort to develop cooperative research and management.⁵⁰

Instrumental in starting the Maine Fishermen's Forum in 1975, the **University of Maine's Sea Grant Program** has continued to work closely with the fishing industry in the Gulf of Maine to identify issues and problems, and then to use university resources to find solutions. It also supports the Maine Lobster Institute.

Waterfront Alliance Boston Seamen's Friend

U.S. Coast Guard Group Portland, Maine has a station in South Portland, a Marine Safety Office in Portland and an Aids to Navigation Team in Portland.

Training institutes

Coast Guard offers safety at sea courses and/or workshops

Fishing Community Resource Center offers retraining to those who wish to leave the fishing industry. Navigation training is offered by a private company to those interested in passing Coast Guard exams for various licenses.

Perceptions of the Fishing Community⁵¹

Importance of fishing to the community

Fishing is considered important not only for its financial contribution to the city (considerably over a \$100 million dollar industry for Portland),⁵² but as "one of the oldest industries, it attracts tourists and it fits Maine's philosophy." While the city wouldn't disappear if the industry did, since it composes only about 10% of the city's gross product, it is considered culturally important to the city.

One respondent was adamant that the fishing industry has a greater economic impact than is generally acknowledged because of the confidentiality issues associated with statistics collected by National Marine Fisheries Service. Respondents estimated "300 to 400 individuals are directly dependent on fishing, the ripple effect could involve six indirectly dependent for each directly dependent."

Most of the fishermen in Portland are from Maine and are year-around harvesters.

Boundaries

Asked what city Portland has the most contact with, respondents indicated that as a city with a variety of fishing industry services, Portland is fairly self-sufficient. However, Gloucester was cited as the other community with which people of Portland had the most contact. For most of the contacts, respondents cited "Greater Portland." The exceptions included: "buying fish gear" for which they added Gloucester, New Bedford and Rhode Island and "hauling out for boat repair" for which Gloucester was added. For the bank, Production Credit (elsewhere in Maine) was listed. Vacations are said to be taken in Maine or "away."

Communication Issues

Generally, respondents indicated that local officials have not paid very much attention to the industry, communication was rated as "poor to fair," with the exception of some support

⁵⁰ <http://www.ceimaine.org/fisheries/>

⁵¹ Based on key informant interviews

⁵² According to Peter Anania, Portland Fish Exchange president, the exchange annually generates \$350 to \$400 million in direct and indirect income to Maine's economy. Quoted in the Port Report found at http://www.portlandfishexchange.com/port_report.htm

of the Fish Pier development in 1986. The current mayor, however, is starting to take more of an interest.⁵³ Respondents found the communication with federal managers and representatives “fair,” with the possible exception of good communication with one or two Council members.

According to one respondent, the “old Yankee” fishermen of Maine are less well organized than fishermen of other ports, they tend to be quieter and so are less likely to be “heard” in the management process. They are said to be “less politically savvy” in contrast to “Rhode Island that has a strong political lobby and Gloucester that is favored by the regs and caused some of the problems.” There is no existing database of all fishermen and no mechanism to reach fishermen quickly or on a regular basis.

Also, “what’s happening to S-K (Saltonstall-Kennedy) money?” one respondent asked.

Assessments

Respondents agreed that scientists and fishermen “strongly disagree” on stock assessments. One of the common complaints is that the landings naturally fell when the mesh size was increased, but the decreased landings were then used as an indicator of lower stock abundance. Also, before the Hague Line was drawn, 25% of landings came from what is now Canadian water.

However, most also agreed that there is a recognition in the industry that there is a problem with some of the stocks, though there is no agreement on what should be done. Regulatory discards are also an extremely sore issue with many harvesters.

Local management practices

Five to ten years ago, an industry group led by Roger Woodman, suggested closing inshore areas to small mesh dragging for 8 months of the year, however, neither the state nor the Council instituted such a rule. Maine also was early supporter of larger mesh sizes for conservation, but the Council did not institute these.

Economic changes over time

Ten years ago, the economic condition of the fishing industry was classified as “average” to “good.” The Portland Fish Exchange was making a difference in the marketing of fish so groundfish harvesters saw an increase in their earnings.

Five years ago, there were still reasonably high volumes of fish coming in, but reports of the downturn in the stocks and the increase in regulations, especially the implementation of Amendment 5 to the Multispecies Plan, caused a great deal of apprehension.

The fishery is said to be much less dynamic today (1999). The businesses that have not failed are beginning to stabilize. Vessel owners and captains are more analytical about their strategies, so they make more money with less volume than in the past. Dealers remain concerned about product, but the auction has attracted additional vessels. Also, processors are no longer wholly dependent on local product. This is a trend in the major processing centers of Boston, Gloucester and New Bedford as well. When economists predicted that prices would go up when supplies diminished with effort controls (associated with regulations), some fishermen warned that the global market would allow processors access to product and therefore prices would not compensate for lower catches. They also worried that once local harvesters/suppliers lost their markets (being unable to provide sufficient product) that they would never regain them.

Five years from now the economic condition may improve since it appears that the offshore stocks are rebuilding. Survivors in the industry will be accustomed to the regulations and perhaps there will be increased effort with less waste, unless fishermen are only a minor

⁵³ The city has recently created the post of Fisheries Manager in the Office of Transportation. Judy Harris was a consultant to the industry prior to accepting this position.

factor in the diminishment of the stocks. It is possible that coastal development and climate change could be negatively affecting stock abundance.

Standards of living vary with individuals. Some respondents replied that their standard of living has gone down in the last five years, others said that it has kept pace with other industries. Most agreed that stress has increased.

Effects of recent management

Negative impacts of the regulatory changes are that many vessels have gone out of business, some individual's incomes have gone down, the dynamism of the harvesting side of the industry has diminished. According to some key informants the cumulative impact of Amendment 5 and Amendment 7 (to the NEFMC Multispecies FMP) is what has had the most impact in Portland. One respondent noted that "the Magnuson Act was the impetus for capitalization and for what has happened." Lobstering success, though, is often attributed to the downturn in codfish stocks.

Those who chose to switch to herring, mackerel and squid, in order to relieve some of the pressure on groundfish, according to one key respondent, have had a struggle to survive, mainly because prices have dropped (1999).

Satisfaction with their work has diminished among fishermen, according to key respondents. Even for those who have managed to continue making a living, morale has been negatively affected by regulatory change.

However, there are indications that capital is returning to the industry. While there are not additional boats, there are improvements being made to vessels, gear, and shoreside facilities. These are improvements for those who have survived. One major negative effect of current species-specific permit management is that there is that fishermen cannot switch fisheries even when stock conditions, or other factors, would recommend such a change.

Characteristics of local fishermen

Asked what makes a good fisherman, respondents mentioned professionalism, commitment and independence (or wants to work for themselves) and an appreciation of high adventure. Most fishermen network with selected others, sharing some information about fishing success. Cell phones have become popular, in part because of their relative privacy. In the past, when everyone monitored the radio, information given to friends would have to be in code if it were to remain secret.

Job satisfaction has taken a downturn with the changes in the fisheries. Morale is said to be low because most fishermen chose fishing in part because of the sense of "independence" and adventure the job offered. Respondents noted that independence is no longer possible, that the regulations dictate the choices. Many would leave fishing if they thought they could make the same amount of money within three or four years. Even among the lobster fishermen, the satisfaction is less than before because of crowding and trap buildup.

Fishing is safer now than it was in the past because the marginal people had to go [i.e., could not financially survive with the changes] and because of improvements in safety equipment. Nevertheless, the loss of a vessel in early 2000 was a painful reminder to the city and the industry of just how dangerous fishing remains.

Fishing families

Fewer spouses seem to be directly involved in the fishing industry than in the past, though more spouses are working outside their home both because of "the times" and the uncertainty in the industry. Though a few still "keep the books," most working spouses have jobs outside the industry. Nevertheless, the Maine Fishermen's Wives Association remains very active. Email and the Internet have helped make the distant ports less isolated and have allowed women who work outside of the industry to retain a voice.

Vessel owners generally own cell phones, a truck, and a house and they have health and life insurance policies. Crewmembers are less likely to own such property.

None of the respondents wanted their children to stay in the industry, primarily because it is no longer a growing industry and they believe the regulations constrain the ability to plan, "they change with the wind."

Advice

One respondent noted that they would like to see more understanding, basic research to support the industry, such as the development of reproductive models. *"I'm advocating mixing harvesters and researchers. Research could be less expensive if done in cooperation with fishermen to support or refute hypotheses. Such a symbiotic relationship could benefit everyone."*

Community Profiles
Cumberland County, ME
Lower Mid-Coast Sub-region

5.9.3.2. Harpswell

(With Cundy's Harbor and South Harpswell)

*Background*⁵⁴

Peninsulas, islands and high headlands characterize Harpswell. Harpswell Neck, a thin peninsula extending 10 miles into Casco Bay from Brunswick has working farms and scores of lobstermen. The other half of Harpswell is a string of three great islands—Great, Orr's, and Bailey—linked by bridges. Mackerel Cove and Cundy's Harbor are two of the islands' important deep-water harbors. While the residential and summer cottage populations are expanding, fishing and lobstering remain critically important to Harpswell.

"Harpswell was originally called 'Merriconeag' which is the Indian name for 'Quick Carrying Place.' Near the town line between Brunswick and Harpswell the peninsula is so narrow the spot was used by the Indians as a carrying place from one bay to the other in their canoe expeditions."⁵⁵

First settled in the mid 1600's, Harpswell 'neck' along with Sebascodegan Island was purchased from the Indians in 1659 by Colonel Shapleigh of Kittery. By 1714 there were only two settlers on the neck, the rest having been driven off by the Indians. By 1731 many settlers had returned and Harpswell was incorporated as a town in 1758—a distinction it has enjoyed to the present under the Massachusetts Bay Colony, the State of Massachusetts and the State of Maine.

Harpswell is a community full of history, legend, fishing tradition, old farmhouses and sea captain's homes. The tall ships, sloops and schooners built here during the 1800's were famous world wide. The names Stover, Skolfield, Curtis and Estes evoke bustling shipyards of the past. The area has long been a mecca for summer vacationers and its rock-ledged, wooded and marshy terrain make it an ideal nesting place and summer resort for many species of birds.

"Many well known American writers have called Harpswell home at some point in their lives. Harriet Beecher Stowe of *Uncle Tom's Cabin* fame also wrote *The Pearl of Orr's Island* when she spent the summer on that island. Ragged Island was the summer home of Maine poet, Edna St. Vincent Millay. Elijah Kellogg, the eloquent pastor of the present day Congregational church that bears his name, wrote 30 books for boys among them his Elm Island and Pleasant Cove series back in the 1840's. Robert P. Tristram Coffin who spent his childhood on Pond Island based his book *Lost Paradise* on his recollections of island life there. Harpswell continues to be home to many present day authors and artists.

Admiral Peary the Arctic explorer owned a home on Eagle Island. It is now run by the State of Maine and is accessible by boat to summer visitors who tour the house and picnic on the grounds. Admirals Peary and Macmillan both attended nearby Bowdoin College along with Nathaniel Hawthorne, Henry Wadsworth Longfellow and Franklin Pierce among other notables."⁵⁶

"Historical sites and places of interest abound in Harpswell but two of these deserve special mention here because of their unusual qualities. The Cribstone (or honeycomb) bridge ... 'the bridge that divided a town is unique in all the world but it caused one of the longest

⁵⁴ The majority of this section is adapted from the Harpswell Business Association web page:

<http://www.harpswellmaine.com/>

⁵⁵ <http://www.harpswellmaine.com/>

⁵⁶ Ibid.

and bitterest fights in New England' history.⁵⁷ Built in 1928 of huge granite blocks using no mortar or cement it connects Bailey and Orr's islands. The blocks are laid crib fashion - first lengthwise, then crosswise to accommodate swift tides and battering winter ice.

The old Meeting House in Harpswell Center is the oldest building still standing in the Brunswick area and perhaps the oldest meeting house in Maine. It stands exactly as it did in 1759 – older than the United States of America and built when Maine was just one part of the far-flung Massachusetts Bay Colony. The structure is so valued by the National Association of Architects that 12 blueprints are filed in the National Archives in Washington, DC so that the building may be recreated if the original were ever destroyed. It is a National Historic Landmark and several unusual architectural features, such as the 'shipknees,' the 10-foot high pulpit and sounding board and the pumpkin pine pews, make it invaluable.

The cemetery behind the meeting hall brings to mind the many legends passed down by tradition such as the 'witch of Harpswell' who was buried there, the reputation Pond Island has for being haunted and the spooky ghost ship last 'seen' in the 1880's. The ship was always sighted just before the death of a Harpswell resident and John Greenleaf. Whittier tells the tale in his poem, 'The Ghost Ship of Harpswell.'⁵⁸

Governance

Harpswell has three selectmen and a town clerk.

Demography

Population

According to the 1990 Census, Harpswell had a population of 5,012 living in 2,029 households. Of the 5,012 persons, 2,537 were male and 2,475 were female.⁵⁹ The village of Cundy's Harbor has a population of about 300 households in winter, 400 in the summer.⁶⁰

Age Structure

The median age was 37.9 years, with 1,048 persons under 18 (20.9 percent) and 783 (15.6 percent) 65 and over.

Education

Among persons 25 and over, 85.1 percent had graduated from high school or higher. Thirty-two percent had a bachelor's degree or higher.

Among the 4,840 persons 5 years and over, 221 spoke a language other than English and of these, only 69 did not speak English "very well."

Housing

There were 3,432 housing units in Harpswell. Of the 2,051 occupied units, 1,569 were owner occupied, 482 renter occupied. Of the 1,381 vacant units, 1,182 were considered seasonal, recreational or occasional use units. The median value of owner occupied housing units was \$152,100.

⁵⁷ For many years, the fishermen who lived on Bailey Island wanted a bridge to connect their island with Orr's Island. For many years, the town of Harpswell turned down the request. But things changed when the Legislature approved a law allowing the State and the counties to participate in bridge funding. And in 1926, a contract was signed for construction of a new bridge. The granite slabs were sufficiently heavy to withstand the buffeting of wind and wave and the open cribbing or cellular construction permitted the tide to ebb and flow freely without increasing the normal tidal current to any appreciable degree. A concrete roadway was placed on top of the granite cribs. On July 19, 1984 the Bailey Island Bridge was dedicated as a historic civil engineering landmark. (See http://www.state.me.us/mdot/maint_op/covered/bailevis.htm)

⁵⁸ <http://www.harpswellmaine.com/>

⁵⁹ 1990 U.S. Census data found at URL http://www.curtislibrary.com/census/harp_p3a.htm

⁶⁰ Based on key informant interviews.

Racial and Ethnic Composition

Of the 5,012 persons only 41 were not white.

Economic Context

Income

The median income for the 2,029 households in 1989 was \$33,298. Per capita income was \$16,952.

Employment

Of the 2,386 employed persons 16 and over, 269 noted an occupation of "farming, forestry, and fishing." Only 3.5 percent were unemployed.

Outside of the fishing industry, jobs include all shipbuilding skills at the Bath Iron Works (a subsidiary of General Dynamics Corporation), laying floors, carpentry and cabinet workers, electrician, well-drillers, excavation, and such service personnel as gas station attendants and restaurant workers. Women also work in retail sales, bookkeeping, baby-sitting, nursing, waitressing, as support staff at the bait company, Bath Iron Works and Brunswick Naval Air Station.⁶¹ In addition, there are faculty and staff positions at Bowdoin College, University of Southern Maine and the University of New England.

Transportation and Access

Bridges connect the three large islands that comprise Harpswell's eastern portion.

Hospitals, schools, libraries

Harpswell's World Wide Web site notes its proximity to Brunswick, home of Bowdoin College and numerous museums and galleries. In addition, Bath in the adjoining county of Sagadahoc County is home to the Maine Maritime Museum.

Harpswell has two elementary schools with middle school and High school attendance in Topsham. Middle and High school students living at the south ends of Harpswell Neck or Bailey Island ride 20 miles (one way) to school in the morning and afternoon.

Fisheries Profile

Community

Harpswell fulfills the definition of a fishing community on the basis of central place theory. Fish are legally sold ex-vessel to a dealer, processor or the public; fishing support services are provided; there are public facilities providing dockage; fishing people satisfy their daily and weekly social and/or economic needs here, and some fishermen and their representatives participate in fisheries resource management.

Nevertheless, Harpswell is geographically spread out and comprised of several villages. NMFS landings and permit files identify five distinct addresses: Cundy's Harbor, Harpswell, South Harpswell, Bailey Island and Orr's Island.

Harpswell was described as being like "three towns." There are the "commuters" who live in Harpswell, but work in Portland, Bath or Brunswick, usually in the new, highly skilled computer-based jobs. "Retirees" who have moved to Harpswell from away who bring their value system with them and impose it upon townfolk through their volunteer work for town government committees. "Working townfolk" include those who derive all or part of their income from the fishing industry, ironworkers, naval base and college support positions.

Commercial fishing and fisheries-related employment

Harvesting structure

Three steel stern trawlers, 1 wooden stern trawler, 2 fiberglass trawlers (1 being built as of

⁶¹ Ibid.

summer 2000) and 30 to 40 lobster boats fish out of Cundy's Harbor.⁶²

It is important to note that lobstering dominates Maine's fishing industry. Since lobster fishing relies on state issued permits and tags, the federal permits do not necessarily accurately reflect the numbers of vessels in these communities. In this case, thirteen vessels holding federal permits listed Cundy's Harbor as their address in 1997, 15 federal permit holders listed Harpswell as their address, South Harpswell had 16 vessels listed, as did Bailey Island, and Orr's Island had 26 vessels listed.

South Harpswell has 3 wooden vessels in the cove and about 50 fiberglass lobster boats. Two or three of the boats drag for mussels, 1 is crabbing and many switch to shrimp or scalloping in winter.

Mackerel Cove, Bailey Island had one forlorn groundfish vessel left in the early '90's that sank in September of 1997.⁶³ About 60 other boats ranging in size from 12 to 45 feet still fish out of Mackerel Cove. Fishermen trap lobsters, dive for sea scallops, drag for shrimp, and occasionally catch bluefin tuna or dive for sea urchins for the Japanese market.⁶⁴

Processing structure

There is little local processing. Some of the restaurants buy lobsters; Cook's handles shrimp in season.

*Support services*⁶⁵

Diesel fuel is locally available. There are about 80 moorings and though there are no wharf tie-ups, two berths are available for offloading. A boat finisher who works primarily on lobster boats is a resident, as are two welders. A company making and repairing propellers is also resident. There is a lobster retailer, though some lobsters are picked up directly by processors. The Coop wharf transships fish. For 10 cents/pound, they are weighed, put in containers and trucked. Usually only small lots are handled, vessels with large catches usually land in Portland. Tuna may be taken on consignment and shipped to Tokyo. Railways are available on the east side of the peninsula of Harpswell; other vessels go to Boothbay for repairs. Cooks Corner has an airfill station for divers. Watson's General Store offers some commercial fishing supplies.

The owners of Purse Line Bait, a primary bait supplier for midcoast Maine, live in Cundy's Harbor. This is considered an important feature of Harpswell and a "regional service company for Casco Bay's lobstering industry."⁶⁶ More than one supplier has a fleet of trucks that brings bait to the village.

Employment (year-around and seasonal)

About 50 fishermen live in the Cundy's Harbor area. Key informants estimated that half the population is indirectly dependent on the fishing industry (including trucking, etc.). Some fish part-time.

Over 50 fishermen were thought to live in South Harpswell. The typical annual round is to lobster most of the year, switching to scallops or shrimp in the winter. Fishermen who are not boat owners may opt to crew on groundfish boats out of Portland or Portsmouth. As in Cundy's Harbor, those who are not harvesters often provide services to the industry and thus are dependent on the fishing industry.

⁶² Acheson et al. 1980 recorded seven draggers. Teresa Johnson (2000) reported that "in the 1980's there were 8-10 draggers, 1 gillnetter and 3 to 6 lobster/groundfish vessels fishing out of Cundy's Harbor. It was also estimated that in the early 1980's there were 20 groundfish vessels in the area around and including Cundy's Harbor...Currently, there are 6-7 draggers and 4-5 lobstermen who also groundfish."

⁶³ <http://www.LobsterVillage.com/index.shtml>

⁶⁴ <http://www.LobsterVillage.com/wharf.shtml>

⁶⁵ Key respondents listed these services.

⁶⁶ Key respondent.

About 100 fishermen are associated with Mackerel Cove, Bailey Island.⁶⁷

Species, Seasonality

The NMFS landings data for 1997 specified Bailey Island, Cundy's Harbor, East Harpswell and South Harpswell. Sometimes one boat would land in all four harbors over the course of a month. Of all four ports, Cundy's Harbor was consistently the most active, both in pounds landed and numbers of vessels landing. Cundy's Harbor is also the principal groundfish port in the town.

Shrimp dominated landings in January, February, March, April, May and December. Sea urchin landings were strong in January and September through December. Lobsters were landed all year. Bluefin tuna was landed in moderate amounts June through September with July having the highest landings. June was the only month with any significant groundfish landings. Hagfish was landed June, July, August and October.

Urchining was described as "wild" for a six or seven-year period, but was overfished and is only a moderate fishery now. Periwinkles and conch fishing provide occasional or small-scale opportunities for some fishermen.

Landed species include:⁶⁸

Groundfish: cod, dabs, grey sole, hake, halibut, pollock, winter flounder, yellowtail flounder
 Pelagics: herring, mackerel
 Crustaceans: lobster, crab
 Small mesh: whiting
 Shellfish: conch/whelk, mussels, periwinkles, quahogs, scallops, sea urchins, softshell clams
 HMS: tuna
 Other: bluefish (recreational), monkfish, menhaden, sea cucumbers, skate, slime eels, striped bass (recreational)
 Seaweeds: rockweed

Form of ownership (e.g., owner/operator; corporation)

Owner-operator is the dominant form of vessel ownership.

Recreational fishing and employment

Cundy's Harbor has one "lobster-style" boat that hosts up to six anglers for fishing. South Harpswell also has one or two charter fishing boats in the summer.

Cultural role of fishing

Religion and/or Values

Harpswell formed a school district (MSAD #75) with second and third tier, inland towns, building a school that draws students from Topsham, Bowdoin and Bowdoinham in addition to Harpswell. Some of the Bowdoin College faculty's children attend the local high school, as do children of Navy personnel. They tend to have different attitudes and a different value system from the town's children.

Monument

Bailey Island has a bronze statute dedicated to lobster fishermen, originally created for the 1939 World's Fair.

Kinship & family

More women are involved in fishing-related businesses. Children are more likely to finish school, some going on for higher education. Most of the key informants responded like one who said that they would not "try to talk them [their children] out of it [fishing], but it's not for everyone."

⁶⁷ <http://www.lobstervillage.com/>

⁶⁸ Ibid.

Fishing related organizations and their roles in the community and fishery*Commercial fishing associations*

Maine Fishermen's Cooperative Association

Maine Lobsterman's Association

Fishermen's Wives associations

Maine Fishermen's Wives Association

Perceptions of the Fishing Community⁶⁹**Importance of fishing to the community**

Harpwell boasts 216.8 miles of shoreline and a long tradition of fishing and other maritime occupations.⁷⁰ Fishing is considered very important to the villages. The majority of residents want the villages to retain their fishing identity, rather than become "suburbs of Portland."

Boundaries

Capital contacts can be divided up into those encompassing social capital (e.g., visit friends, go for recreation, go for vacation, visit relatives, socialize, go to church); economic (e.g., sell fish, offload fish, buy fishing gear, haul out for boat repairs, go to the bank, go shopping), and human (e.g., go to school, go for childcare, go for health care, go for retraining).

Contacts between buyers and sellers of lobsters are usually reciprocal. Harvesters generally buy bait and sometimes fuel and other supplies from the company that buys their lobsters.

The fisheries related services (i.e., economic capital contacts) used by Cundy's Harbor fishermen may be found on the island, elsewhere on the peninsula or in Portland.⁷¹ Diesel fuel is locally available, though groundfish boats usually fill up in Portland. Shrimpers and lobster boats buy fuel locally. There are about 80 moorings and though there are no wharf tie-ups, two berths are available for offloading. A boat finisher who works primarily on lobster boats is a resident, as are two welders. A company making and repairing propellers is also a resident. There is a lobster retailer, though some lobsters are picked up directly by processors. The Coop wharf transships fish. For 10 cents/pound, they are weighed, put in containers and trucked. Usually only small lots are handled, vessels with large catches usually land in Portland. Tuna may be taken on consignment and shipped to Tokyo. Railways are available on the east side of the peninsula of Harpswell; other vessels go to Boothbay for repairs. Cooks Corner has an airfill station for divers. Watson's General Store offers some commercial fishing supplies, other suppliers are in Brunswick, Portland and Portsmouth. The owners of Purse Line Bait, a primary bait supplier for midcoast Maine, live in Cundy's Harbor. Vessel Services in Portland is another bait dealer, but more than one supplier has a fleet of trucks that brings bait to the village. Portland is where the primary fish auction is and where consultants and fishermen's associations may be found.

Banking may be in Brunswick, shopping is in Brunswick. Health care is available at two hospitals in Brunswick. Childcare is mostly handled by local young women. Visiting relatives is most often in the village, though may be Brunswick or elsewhere for some. Recreation involves the "sport of the season." Visiting friends is usually on the islands or in Portland.

Contacts for South Harpswell are similar to those noted by Cundy's Harbor fishermen, though Brunswick figures more prominently. Fish (finfish) may be sold at one wharf in Harpswell,

⁶⁹ Based on key informant interviews

⁷⁰ According to an excursion vessel guide, this is the longest coastline of any community in the U.S. (L.Goudey, 2000, pers. comm.)

⁷¹ Much of what follows is a repetition of the section "support services" recorded earlier in this profile.

but often goes to the Exchange in Portland. Gear may be bought in either Brunswick or Portland; ice is bought in Portland. Dolphin Marina was specified for boat repairs as “finest kind.” Fuel and oil is available locally. Bookkeeping, bank, shopping, health care and some socializing are said to be conducted in Brunswick. The only recent change in contacts is that there is now a better general store in Harpswell, owned by a fishing family, so when possible, shopping is done there to save gas.

Technology is affecting the patterns of contact. With computers and the Internet, as well as cell phones, fishing industry participants are less isolated, even while working. Technology, however, is also attracting young people, enticing them away from employment in the fishing industry. This may prove to be a considerable problem for all, but particularly for the trip boats. Potential fishing crewmembers don’t want to be gone overnight.

Communication Issues

Many of the lobster fishermen are friendly with Lobster Zone Council members and communication is described as “good.” One informant pointed out that the communication couldn’t be classified as “very good” because there is “no right answer, all depends on who you talk to.” Communication with one state level official was classified as “very good” however, because he lives in Harpswell and alerts the local fishermen to issues. Communication with others at the state level is not good. Communication with federal level officials is described as “poor” and even “abusive.” The “arrogance of rule-making people and some of the scientists” leads to a lack of respect and interferes with communication.

There are no local managers of fin fisheries and local fishermen do not usually communicate with state and federal managers or representatives.

“The average fisherman has no voice. In general, they might as well live on the moon. The disenfranchisement is mostly by choice. They are not academic achievers, they were treated as fishermen in school.”

Assessments

Agreement or disagreement between fishermen and scientists is species dependent; however, fishermen’s local knowledge is usually ignored. Respondents said that most were comfortable with the shrimp assessments, attributing this partially to having a good relationship with Maine Department of Marine Resources scientist Dr. Dan Schick. The lobster assessments are viewed as farther from accurate, sea urchin fishermen and scientists are “openly antagonistic,” and the finfish assessments are way off.

One informant noted that the state and federal scientists often disagree with each other and offered an example of why there’s a “good degree of confusion.” In diving for scallops, the lack of visibility in Maine waters means that one fisherman may find nothing, but on a slightly different bottom there’s an abundance. The difference between a good fisherman and a bad fisherman may be a matter of 15 feet of depth, or a wrong turn. The problem with sampling is that it’s a “stab in the dark.”

Reportedly, there are some efforts to improve assessments. “DMR had observers go out, the length of the coast, sea sampling during different months, off a commercial vessel.” In addition, a couple of scientists have talked to and gone fishing with experienced fishermen. “When scientists were saying there were no large v-notched female lobsters offshore, fishermen were able to show them lots of them.”

Local management practices

The state of Maine has instituted local management in the lobster fishery with a moratorium on licenses and an apprenticeship program. In addition, such conservation measures as v-notching egg-bearing females and having maximum as well as minimum size were initiated by fishermen. In the past, territories were important but are no longer enforced by the fishermen. Harpswell, for example, has been “invaded by boats from Freeport.” Now, the

investment is so great, with new boats costing over \$100,000 and a 10-trap string costing \$600 to replace, fishermen don't dare scuttle boats or cut the buoys off the strings of traps.⁷²

Economic Change

Twenty years ago, the fishing economy was good to excellent. Ten years ago, the economy was good to excellent with decent fish stocks and fewer regulations than now. Five years ago, there were more regulations, fewer fish, though lobstering was still considered good to excellent. Today, fishing is "almost at a stand still." Five years from now, dabs may become overfished. Because of the collapse of the codfishery, dabs, grey sole and monkfish became the staple of the fin fish industry, but monk fishermen are facing extremely strict regulations. In fact, no fin fishermen are currently able to make a living by targeting a specific species in the multispecies (groundfish) fishery.

Costs of lobstering have radically increased and there is over-capitalization (trap build-up), but the product has remained at the same price. To stay competitive, fishermen have to keep upgrading. The cost of boats and gear has increased. Bait (herring and redfish, formerly pogies as well) has gone up 36 percent. Trap prices were \$30, now are \$42 for a 36-inch trap. Four-footers cost \$58 to \$60 each, before rope and buoys. The differences in the traps are subtle, "some fish great, some don't."

Five years from now lobstering may be better, especially "if we have a couple of terrible years to get rid of new entrants." The local zone would like to reduce the numbers of lobster fishermen by 40 percent.

Young people can no longer afford to buy shoreline property. "York Beach and Falmouth are brimful of yachts coming this way."

Changes in fishing effort

Effort on lobsters has increased with the buildup of traps. "Anybody who dreamed went from 100 pots to 800 when the limits on traps were imposed."

"There's less fish now and fish is further away; it's a young man's business." With the improvements in electronics, "there are no secrets any more. There's no mystery, no place for the fish to hide." Absentee ownership leads to the "Portland attitude of 'just catch the fish.' A hired captain's security is only as good as his productivity." Even some of the young people outside of Portland have adopted the Portland attitude and join in the fierce competition. In contrast, "Canada still has some sense of the 'connectedness,' the view that they are plying an honest trade, instead of just going after the buck." However, Canada also show greater evidence of a divide between the "have" and "have-nots." Most offshore fishing effort is based on company-owned vessels, a contrast to the inshore boats that are small and usually individually owned.

Labor woes are creating a serious constraint on traditional fin fishing. "We can't find anyone to go. The computer age has provided young people with more options. The only way you can find crew is to go down to Portland, prowl the bars and take aboard any drunk you can find who's willing to go out for a 3- 4- or 5-day trip." Between the technology that offers alternative job opportunities, the adverse publicity about fishing, and the management crunch, there are few individuals interested in going into fishing.

Effects of recent management

"Fishermen need versatility, but it's voted down every time. Part of the problem is that fishermen are widely dispersed in Maine, so they are no threat to elected officials." The system rewards hard drivers. When individuals heeded the advice of the Council and switched fisheries such as to whiting and shrimp, problems ensued with the market. Canada, for example, flooded the market with cheaper whiting. "Exit our whiting fishery," one key respondent wryly quipped.

⁷² See Acheson re lobster territories

There is a perception that bureaucrats have to generate new rules to justify their existence. However, there are too many boats, several of the key informants agreed. Confusion was often expressed about the whole regulatory picture.

“Historically fishermen have had to cope with weather, fish cycles, price cycles, but NMFS, how do you deal with that?”

One informant suggested that draggers might be more often targeting lobsters than in the past because of restrictions on groundfishing. They then have to land the lobsters in Portsmouth or use a holding tank (to obscure the origins, since dragging for lobsters is not permissible in Maine).

The unpredictability of management was criticized. “I need to buy another boat, but I don’t know what the rules will be. That has an effect on the local economy and I have no control over my livelihood.”

Nevertheless, many fishermen refuse to accept social aid packages. They would rather do without than accept aid with string attached.

Characteristics of local fishermen

Fishermen have to be willing to work hard and must be optimistic. They have to have a love of the water, be resourceful and not be going just for the money.

Generally, informants commented that fishermen do not share information, except “maybe, the time of day.” In fact, though, everyone mentioned that they had one friend or two, or possibly a close relative, they would share information with since they had worked together or were willing to reciprocate.

Safety

Improvements in equipment, training, rules and communication have made fishing safer.

Fishing families

Opportunities for women to work are greater now than in the past. There is also a greater desire for material things. With increased communication, there is also more awareness—both of “things” and jobs. Nevertheless, many wives still play an important role as ‘shore captains’ procuring food supplies and arranging for gear, etc.

More women may also work outside their homes now because the season is shorter and the cash flow more difficult. More women are directly involved in fisheries as boat owners and as helpers. Female sternmen were said to be more reliable than males because “they want to prove they can do it...Guys are usually younger, wild, unreliable.” One fisherman was said to have had 14 sternmen over the course of two months.

Children are not being encouraged to consider fishing as a career.