

<i>Species</i>	<i>Monkfish</i>	<i>Herring</i>	<i>Spiny Dogfish</i>	<i>Skates</i>	<i>Scallops</i>	<i>Loligo squid</i>	<i>Large-mesh groundfish</i>
<i>April-June 99</i>	6.5%	48.5%		8.2%	1.5%		19.3%
<i>July-Sept. 99</i>		68.4%		9.5%	0.7%		7.6%
<i>Oct.-Dec. 99</i>		53.9%		9.3%	1.7%	5.5%	11.2%

Vessels home-ported at Boston landed the majority of their catch from all fisheries (32.7% of total kept pounds) at Rockland ME, followed by Pt. Judith RI (15.3%), Portland ME (12.3%), and Gloucester MA (10.5%), with 3.2% of the total catch landed at Boston, and 31.5% landed at Massachusetts ports. These vessels landed most of their scallops (in terms of kept pounds) at New Bedford MA (77.2%), “other” Nantucket MA (10.2%), and Fairhaven MA (8.5%), with 98.6% of scallops landed in Massachusetts.

### 3.5.8 Geographic Area: Wellfleet town, Barnstable County, Massachusetts

#### 3.5.8.1 General Demographic Profile

From the 1990 Census, the population of Wellfleet MA was 2,493, of which 100% was rural. 48.5% of the population was male and 51.5% was female. Approximately 59.5 % of the town was between 18 and 65 years of age; 20.5 % of the population was 18 years and under, and 20 % was 65 years or older. 86.9% of the population graduated from high school, while 21.2% had a bachelor’s degree. 98.8% of the population was white, 0.4% was black, 0.4% was American Indian or Aleut, and the remaining 0.4% was split between Asian or Pacific Islander and “other.” 0.7% of the population reported being Hispanic. Of the ethnic categories reported in the census, which account for at least 5% of the population, English dominated (23.2%), followed by Irish (14.0%), Portuguese (8.5%), German (7.8%), French (6.1%), Italian (5.9%) and Scottish (5.4%). 65.6% of the population was born in Massachusetts, while 3.8% of the population was born outside of the U.S.; 4.9% of those older than five speak a language other than English. There were 1,129 households, of which 49.6% were married-couple families, 1.9% were male-householder families, 9.9% were female-householder families, and 38.5% were non-family households. The average number of people per household was 2.21.

#### 3.5.8.2 Economic Characteristics

60.8% of the population in general, aged 16 years and older, was in the labor force, of which 8.7% was unemployed and none was in the armed forces. By gender, however, 66.9% of male residents were in the labor force, of which 10.3% were unemployed. For women, 55.3% were in the labor force, of which 7% were unemployed. The median household income was \$24,149, with a per capita income of \$14,581. 13.0% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 63 shows the relative proportions of industry for Wellfleet, MA.

**Table 63.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	70	6.2 %
Mining	0	0.0 %
Construction	248	22.1 %
Manufacturing, non-durable goods	6	0.5 %
Manufacturing, durable goods	12	1.1 %
Transportation	72	6.4 %
Communications and other public utilities	7	0.6 %

Sector	Number Employed	Percent Employed
Wholesale trade	24	2.1 %
Retail trade	199	17.7 %
Finance, insurance, and real estate	40	3.6 %
Business and repair services	43	3.8 %
Personal services	107	9.5 %
Entertainment and recreation services	38	3.4 %
Health services	23	2.1 %
Educational services	31	2.8 %
Other professional and related services	131	11.7 %
Public administration	71	6.3 %
Total	1,122	100%

### 3.5.8.3 Wellfleet as Port of Landing

Wellfleet is a significant place for scallopers as a port of landing, as shown in Table 40. That listing is based upon dealer weighout data, which recorded 2,909 landed pounds of scallops compared to the logbook data that recorded 2,698 kept pounds of scallops during the same period. Weighout data is based on the activity of seven vessels landing in Wellfleet—including three limited access vessels and 3 general category vessels. Logbook records cover the activity of five vessels that visited Wellfleet at least once during partial fishing year 1999. 65.8% of kept pounds landed (from all fisheries) came from boats listing Wellfleet as their homeport; 67.2% came from boats listing Massachusetts as homeport state. In terms of scallops, 62.8% of kept pounds of scallops came from boats listing Wellfleet as homeport and Massachusetts as home port state.

All scallop kept pounds were landed with scallop dredge. Logbook records show 79.6% of scallop kept pounds landed by general category boats. In terms of kept pounds, 76.0% of the total catch came sea scallops, with scup accounting for 16.0%. Scallops accounted for 33.9% of landed value in fishing year 1999 (Table 40). Scallops landed at Wellfleet, as recorded in logbook records, came entirely from New England waters near Massachusetts, as shown below.

**Table 64.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
514	2698	100%	76.0%	30	34.6	18.0	1.1	1.4

\*Only trips landing less than or equal to 400 pounds scallops.

Logbook records show scallops landing at Wellfleet only during April-June 1999, all from statistical area 514. The following table shows the distribution of the overall composition of fisheries landed at Wellfleet, by quarter.

**Table 65.** Percent of total kept lbs., by quarter (species with 5% or more of total catch, per quarter).

<i>Species</i>	<i>Sea Scallops</i>	<i>Bluefish</i>	<i>Scup</i>	<i>Black sea bass</i>	<i>Striped bass</i>	<i>Bay scallops</i>
<b>March 1999</b>	N/A	N/A	N/A	N/A	N/A	N/A
<b>Apr.-June 99</b>	99.0%					
<b>Jul.-Sep. 99</b>		6.2%	67.5%	5.0%	17.9%	
<b>Oct.-Dec. 99</b>						100%

Griffith and Dyer (1996) provide descriptions of Provincetown (pp. 106-110) and Chatham (pp.69-75), both outer cape communities like Wellfleet and facing some though not all of the same issues (see <http://www.nefsc.nmfs.gov/clay/Glouc3dn.htm>).

### **3.5.9 Geographic Area: New Bedford, Massachusetts**

#### *3.5.9.1 General Demographic Profile*

From the 1990 Census, the population of New Bedford MA was 139,082, of which 100% was urban. 47% of the population was male and 53% was female. Approximately 58.7 % of the town was between 18 and 65 years of age; 23.7 % of the population was 18 years and under, and 17.6 % was 65 years or older. 54.1% of the population graduated from high school, while 11.4% had a bachelor's degree. 90.3% of the population was white, 5.8% was "other," 3.1% was black, 0.5% was Asian or Pacific Islander, and 0.3% was American Indian or Aleut. 5.1% of the population reported being Hispanic. Of the ethnic categories reported in the census, which account for at least 5% of the population, Portuguese dominated (37.1%), followed by French (10.8%), English (10.4%), Irish (8.4%), French Canadian (5.8%), and Sub-Saharan African (5.0%). 86.6% of the population was born in Massachusetts, while 17.6% of the population was born outside of the U.S.; 33.8% of those older than five speak a language other than English. There were 53,089 households, of which 51.3% were married-couple families, 3.2% were male-householder families, 15.2% were female-householder families, and 30.3% were non-family households. The average number of people per household was 2.53.

#### *3.5.9.2 Economic Characteristics*

60.2% of the population in general, aged 16 years and older, was in the labor force, of which 10.7% was unemployed and 0.4% was in the armed forces. By gender, however, 69.5% of male residents were in the labor force, of which 10.8% were unemployed and 0.7% were in the armed forces. For women, 52.4% were in the labor force, of which 10.5% were unemployed and less than 0.1% were in the armed forces. The median household income was \$25,155, with a per capita income of \$11,728. 13.9% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 66 shows the relative proportions of industry for New Bedford, MA.

**Table 66.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	1,708	2.9 %
Mining	31	0.1 %
Construction	3,568	6.1 %
Manufacturing, non-durable goods	7,982	13.6 %
Manufacturing, durable goods	6,724	11.4 %
Transportation	1,913	3.3 %
Communications and other public utilities	1,305	2.2 %
Wholesale trade	2,585	4.4 %
Retail trade	10,809	18.4 %
Finance, insurance, and real estate	2,376	4.0 %
Business and repair services	1,902	3.2 %
Personal services	1,542	2.6 %
Entertainment and recreation services	459	0.8 %
Health services	5,225	8.9 %

Sector	Number Employed	Percent Employed
Educational services	4,656	7.9 %
Other professional and related services	3,183	5.4 %
Public administration	2,821	4.8 %
Total	58,789	100%

### 3.5.9.3 New Bedford as Homeport

New Bedford can be considered a port significant for scalloping during the 1999 fishing year both as a port of landing (Table 40) and as a designated homeport (Table 41). There were 71 limited access vessels and 82 general category vessels that designated New Bedford their homeport in fishing year 1999. Logbook data show that dredge gear accounted for most of the scallops (by kept pounds) caught by boats home-ported at New Bedford: 93.4 % of scallops were landed by scallop dredge, followed by other dredge (3.5%), scallop bottom trawl (1.5%), other gear (1.5%), and other bottom trawl (0.2%). All of the scallops landed by general category boats, however, were caught by "other bottom trawl."

The 68 actively scalloping limited access boats that listed New Bedford as home-port accounted for virtually all (99.9%) of kept pounds of scallops, but there are also 21 New Bedford general category boats that caught scallops to the degree they could. Of fisheries that account for at least 5% of the total catch (by kept pounds) of the limited access fleet, scallops accounted for 24.3%, with herring accounting for 68.6%. The general category boats practiced a fishing strategy that was not as dominated by any one particular species; the fisheries that account for more than 5% of their total catch (in kept lbs) were large-mesh groundfish (56.3%), skates (19.0%), and monkfish (10.0%), with sea scallops accounting for less than 0.02% of their catch by kept pounds. These analyses using logbook data represent only the partial fishing year 1999, since logbook data for January and February 2000 is currently unavailable

**Table 67.** Vessel and scallop trip characteristics, 1999 permit data and 1999 logbook data.

Permit Status	Average vessel length, in feet	Average vessel gross tons	Average crew size, per trip landing scallops*	Average days absent, per trip landing scallops*
Limited Access	86.9	175.2	6.4	10.0
General Category	65.7	101.1	3.8	6.9

\*For limited access boats, only trips which landed greater than 400 pounds scallops are considered; for general category boats, only trips that landed less than or equal to 400 pounds scallops are considered.

A number of statistical areas, concentrated off New England and the upper Mid-Atlantic, were important fishing grounds for the New Bedford fleet, as shown in Table 68. There was a seasonality to this use of the different fishing grounds, however, as shown in Table 69, as well as a seasonality to proportion of common species caught, though little apparent seasonality to the species themselves (it should be noted again that this is by kept pounds, not dockside value received, which gives an undue weight to species like herring which are relatively low value).

**Table 68.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
521	673012	11.3%	11.3%	65	85.9	168.0	6.7	10.8
522	328892	5.5%	6.9%	29	87.7	183.9	6.4	12.0
525	621699	10.4%	29.7%	54	87.7	179.6	6.5	11.8

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
526	500841	8.4%	22.2%	42	92.1	181.5	6.6	11.6
561	462573	7.7%	42.6%	44	86.1	180.8	6.8	10.4
562	1822464	30.5%	53.8%	185	86.3	177.1	6.2	7.0
615	436259	7.3%	86.8%	40	86.5	175.2	6.4	12.5

\* Only trips landing greater than 400 pounds.

**Table 69.** Percent of areal contribution to scallop catch, by quarter (areas having 5% or greater of scallop catch).

Statistical Area	521	522	525	526	561	562	613	615	616	622
March 1999	11.8			10.5	10.5		12.5	26.7	6.8	6.5
April–June 1999	11.3	8.9	14.4	7.9	9.1	9.2	6.8	12.1	8.5	
July–Sept. 1999	10.7		6.1	10.6		56.2				
Oct.–Dec. 1999	12.1		10.7	5.5	12.1	43.0				

**Table 70.** Percent of total kept lbs. (species with 5% or more of total catch per quarter), by quarter, 1999 logbook data.

Species	Monkfish	Herring	Skates	Scallops	Large-mesh Groundfish
March 1999	11.4%	27.9%	6.4%	10.2%	34.7%
April – June 1999	10.5%	24.6%	6.7%	21.7%	29.6%
July – September 1999		40.4%	10.9%	14.6%	22.3%
October – December 1999		54.5%	7.4%	8.5%	20.6%

Vessels home-ported at New Bedford also landed the majority of their catch from all fisheries (52.5% of total kept pounds) at New Bedford, with Portland ME second-most important (21.7%; only herring is landed), and Gloucester MA being third-most important (16.5%). Similarly, these vessels landed most of their scallops (in terms of kept pounds) at New Bedford (96.7%) and then Cape May (1.5%), with only 2.9% of scallops landed outside of Massachusetts.

#### 3.5.9.4 New Bedford as Port of Landing

New Bedford is also a significant place for scallopers as a port of landing, as shown in Table 40. That listing is based upon dealer weighout data, which recorded 11,491,480 landed pounds of scallops compared to the logbook data that recorded 10,669,409 kept pounds of scallops during the same period. Logbook records show there were 179 limited access vessels, 178 general category vessels, and 9 other vessels that visited New Bedford at least once during partial fishing year 1999. 49.3% of kept pounds landed (from all fisheries) came from boats listing New Bedford as their homeport; 73.5% came from boats listing Massachusetts as homeport state. In terms of scallops, 55.2% of kept pounds of scallops came from boats listing New Bedford as homeport, followed by Fairhaven boats (8.1%); 74.2% of scallops kept pounds came from boats listing Massachusetts as homeport state.

93.9% of scallop kept pounds were landed with scallop dredge, followed by other dredge (4.1%), scallop bottom trawl (0.8%), other bottom trawl (0.1%), and other gear (0.1%). Logbook records show 99.8% of scallop kept pounds landed by limited access boats, with general category boats landing 0.2% of scallop kept pounds. In terms of kept pounds, 36.5% of the total catch came from large-mesh groundfish, followed by scallops (23.2%), monkfish (10.6%), skates (8.2%), and herring (7.1%). Scallops accounted for 53.7% of landed value in fishing year 1999, as shown in Table 40. Scallops landed at New Bedford came from both New England and Mid-Atlantic waters, as shown below.

**Table 71.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch), 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
521	1041308	9.9%	11.8%	96	86.3	172.9	6.6	11.3
522	677570	6.5%	9.2%	58	88.8	177.1	6.3	11.7
525	849161	8.1%	27.2%	76	86.9	176.1	6.4	11.8
526	896666	8.5%	24.6%	72	89.5	175.5	6.7	11.4
561	588060	5.6%	29.1%	54	87.3	180.9	6.7	10.7
562	4127743	39.3%	51.6%	424	84.1	169.3	6.4	7.2
615	620366	5.9%	88.2%	52	87.8	175.2	6.5	13.3

\* Only trips landing greater than 400 pounds.

The following two tables show the distribution of both the statistical areas from which scallops predominantly were caught, and the overall composition of fisheries landed at New Bedford, by quarter.

**Table 72.** Percent of areal contribution to scallop catch , by quarter (areas with 5% or greater of catch per quarter).

Statistical Area	521	522	525	526	561	562	613	615	616
March 1999	18.1%			11.6%	6.7%		11.1%	27.0%	5.5%
April-June 1999	11.3%	9.8%	13.4%	9.0%	8.0%	13.9%	6.0%	11.2%	6.0%
July-Sept. 1999	6.3%			7.6%			62.3%		
Oct.-Dec. 1999	10.7%	5.2%	7.1%	8.1%	7.0%	47.9%			

**Table 73.** Percent of total kept lbs., (species with 5% or more of total catch per quarter) by quarter, 1999 logbook data.

Species	Monkfish	Herring	Scallops	Skates	Large-mesh Groundfish	Illex Squids
March 1999	11.9%	30.4%	8.9%		30.4%	
Apr.-June 99	12.9%	6.0%	22.9%	6.4%	37.2%	
Jul.-Sep. 99	7.3%		31.0%	9.9%	33.9%	5.7%
Oct.-Dec. 99	10.4%		23.1%	10.9%	41.2%	

### 3.5.9.5 New Bedford and Fairhaven, Ethnographic Community Profiles

Globalization in New Bedford has paved the way for the loss of blue-collar jobs to cheaper overseas production sites, for the growing reliance on imported seafood, and for the increasing presence of foreign labor in the processing plants.

Ironically, many New Bedford fishers have been involved in global politics for generations. Two transnational communities make up a sizeable portion of the fishing fleets that fish out of New Bedford: Norwegians and Portuguese. Another, smaller group of fishermen come from Nova Scotia.

Most important in the groundfishing industry are the Portuguese, who come from mainland and island territories of Portugal, including Cape Verde and the Azores. They arrived in several waves through the 19th and 20th centuries and have established an ethnic enclave in which knowledge of English is no more a necessary prerequisite to survival than it is among Cubans in Miami or Puerto Ricans in Spanish Harlem (Baganha 1991).

Strong ties to Portuguese villages still exist, making the community transnational in the textbook sense of the word, comprised of "processes by which immigrants forge and sustain multi-stranded social

relations that link together their societies of origin and settlement" (Basch, Glick-Schiller, and Szanton Blanc 1995: 7). Among the New Bedford Portuguese, these social relations are based first in family and second in village or region of origin, keeping the community in New Bedford alive with the images and cultural paraphernalia of Portugal. Even second generation Portuguese, born in the United States, express allegiance to Portugal rather than the United States. A boat-owner who was closely knit into the Portuguese community of New Bedford, in response to a question about her nationality, said, *"Well, I consider myself Portuguese. My mother was born American, first generation; I'm second generation. I'm first generation through my father. I'm Portuguese; I'm not American, I'm Portuguese."*

The strength of the Portuguese community, similar to the Italian community in Gloucester and the Norwegians in New Bedford/Fairhaven, was noted by Doeringer, Moss, and Terkla in their mid-1980s study of New England's fishing economy (1986), serving as an important predictive variable for many of the same behaviors we witness in the fishery today. How Portuguese fishers adapt to the current crisis and future regulations derives in part from the collective funds we refer to as social capital, which Doeringer, et al. called "family capital," and in part from their membership in a community that spans two and sometimes more than two nations.

The blue collar character of the city is reflected in the area's labor force statistics, with persons employed as "operators, fabricators, and laborers" rivaling those who have streamed into the "technical, sales, and administrative support" category.

These figures, based on the US census, underestimate the numbers of the New Bedford/Fairhaven fishers by about 50 percent, presumably because they include information only from fishers who live within New Bedford city limits and leaving out those who live in surrounding communities yet fish out of New Bedford. Nearby Taunton, for example, has its own sizeable Portuguese community, and a sizeable portion of the fleet is based across the harbor from New Bedford, in Fairhaven. More accurate counts of fishers and vessels come from local observers (Griffith and Dyer 1996: 75-78).

New Bedford and Fairhaven] vessels employ around 2,000 fishers; the dragging fleet, by itself, employs somewhere between 600 and 1,200 fishers, as groundfishing vessel crews range in size from three to six individuals. Crew size on both scallop and groundfishing vessels has shrunk in the past few years, in part because of the crisis and in part due to regulations designed to curb fishing effort. Some captains and boat owners have adopted crew rotation schedules--a variant of job-sharing--instead of laying off crew.

While many vessels are owner operated, there still remains a contingent of non-operator vessel owners within the New Bedford fishery that marshal fleets, hiring captains and crew. These individuals set some of the rules that govern labor relations throughout New Bedford, negotiating vessel shares and hiring practices, but union representatives we spoke with in New Bedford reported that payment systems and crew-captain relations vary widely from vessel to vessel. In the late 1980s, boat owners who fell into this category numbered 32; typically, these owners owned anywhere from one or two to six or seven vessels. As a sign that vessel owners' powers are increasing, during the strike of 1986 the union argued for a 42-58 percent split in profits, with 42 percent going to the owners, and owners desired a 49-51 percent split. A decade after the strike, the split on union vessels is 46-54 percent, with the owners receiving 46 percent.

In addition to boat owners, captains, and crew, the full New Bedford/ Fairhaven fleet generates business for around 75 seafood processors and wholesale fish dealers and 200 other shore side industries. Together, these businesses provide employment for around 6,000 to 8,000 additional workers.

The above figures, of course, include only those individuals employed directly in fishing and fishing-related industries; missing from these numbers are the health providers, real estate companies, banks, insurance agencies, and small business people who rely on the families of fishing industry employees for a percentage of their business. Even without considering these individuals, between five and eight percent of the people in the New Bedford SMSA (Standard Metropolitan Statistical Area) --far higher when we include members of their families--receive their livelihood primarily from fishing. Even a conservative estimate, assuming two other individuals supported by each fisher and fishing-related worker employed, places the proportion of the population dependent on fishing at between 11 percent and 18 percent.

The support industries that fishers we interviewed mentioned most often as directly dependent on the industry were fuel, ice, and food/supplies. During a major fishers' strike of 1985-86, newspaper coverage focused on the plight of fishery-related businesses within the first two weeks of the strike, suggesting the effects of reduced fishing are felt immediately and deeply along the waterfront. A single vessel's trip supplies were listed as including, "40 dozen eggs, 20 steaks, 20 pounds of bacon, 10 gallons of orange juice, 18 gallons of milk, and 37 loaves of bread" (Sunday-Times, January 5, 1986: A1). A company supplying 45 vessels lost a quarter of a million dollars before the strike was 10 days old, and laid off 22 employees. Besides food suppliers, other businesses affected immediately were welders, restaurants, ice companies, fish wholesalers and processors, and dockworkers. Fishers we interviewed for this study commented that the current downturn in fisheries had had ripple effects through the support sector as well. According to one:

*"Well, what has happened is I have a welder that does most of my work, and he's an individual--once in a while he'll have a helper, but most of the time this guy works for himself by himself. When money gets tight with me, I can weld myself and I can work on the boat. So that saves me a couple of hundred dollars, but it also takes a couple hundred out of his pocket. So a lot of things that you used to pay someone to do, we do ourselves. It's a ripple effect; as soon as you don't have the money to pay for your services, you stop getting them. And with the more time that the boat now has to stay ashore, if I'm going to be home for a week, I can spend one day or two working on the boat."*

Another put it more succinctly, saying, "Fishermen invest in a lot of money in the community, so there's a whole industry prepared for them, like ice, fuel, food, clothing, the restaurants. They like to go out and drink and eat and socialize" (translated and paraphrased by research assistant).

These observations reflect the official positions of the city fathers. In 1986, the head of the Greater New Bedford Chamber of Commerce claimed that the strike was costing the metropolis over \$1,000,000 per day and that, "For every dollar paid to a fisherman, \$4 to \$4.50 circulates through the local economy." In 1992, before the current fishing crisis, the average annual income for a fisher in New Bedford was \$36,534. Unfortunately, New Bedford/ Fairhaven catch revenues declined from \$151,300,000 to \$107,500,000 between 1992 and 1993.

The close ties between the city and the fleet are visible and invisible, material and symbolic. When vessels come ashore, captains and crew join service personnel to repair the routine wear and damage of sailing. Seafood wholesale and processing companies come alive with the catch. Trucks wait in the parking lots. Beside them, at nine, noon, and three, carts sell sandwiches and sodas to the cutters and lumpers. During the 1985-86 strike, 115 members of the Fish Lumpers Union sat idle while vessels remained ashore or began fishing out of Provincetown.

New Bedford now has a fish auction modeled after the Portland Display Auction, but many vessels remain obligated to seafood dealers and processors by virtue of credit relations or access to docking space. The New Bedford Seafood Coalition cited the auction as one of the "positive notes" in

recent times, saying, "The privately operated Display Auction has attracted a wider range of fish buyers which are seeking a wider range of fish other than the traditional species of fin fish and flounders. Among those species are hake, cat fish, cusk, mud skate wings, halibut, fluke, mackerel, red fish, and blue fish" (New Bedford Seafood Coalition, 1996).

Relations among boat owners, captains, and seafood merchants are highly varied and often fraught with suspicion and hostility. Most fishers reported that the 1980s strike signaled the end of a long era of cooperative relations. Within the fleet, divisions exist between vessels, between scallopers and draggers, between fleets based on docking locations, and between different ethnic groups. The Portuguese tend to concentrate on draggers, although this was more the case in the past than today, and some Portuguese have switched from dragging to scalloping. Switching of this nature is possible, but costly. According to one fisher who had made this switch:

*"My first three boats were draggers, and the boat that I now have is a combination dragger/scalloper. We're scalloping right now; we've been scalloping since 1987. I was dragging from '74 to '87. In that period of time, I went scalloping on occasion; I went for a few months on two separate occasions. In '87 I changed to go scalloping. Draggers weren't making any money... I figured I would go back and I've been at it ever since. Now it's like flipping a coin to see who has the best deal, you know, because the draggers and scallopers are both struggling.... I could go dragging, but it's cost-prohibitive to change back and forth. You're talking \$30,000 or \$35,000 every time you change, so you can't do that if they give you 50 days to drag. It isn't worthwhile."*

These comments and the lack of switching among different fisheries in New Bedford reflect the degree to which the fleets have become specialized, a common characteristic of large-vessel fleets. This specialization is not confined to fishing alone but spills over into the support sectors and labor relations on vessels as well, making adjustments to changes in the industry more difficult than in other ports, such as Point Judith and Chatham, where fishers engage in more generalized fishing strategies. The history of the union presence in New Bedford has regimented labor-management relations in ways that govern crew recruitment and policies aboard vessels, although it was widely reported that the late 1980s strike, chronicled briefly below, shifted power away from the union and thereby deregulated, to some degree, labor relations in the community and aboard vessels (Griffith and Dyer 1996: 78-80; see <http://www.nefsc.nmfs.gov/clay/Glouc3dn.htm> for further details ).

### **3.5.10 Geographic Area: Fairhaven town, Bristol County, MA**

#### *3.5.10.1 General Demographic Profile*

From the 1990 Census, the population of Fairhaven MA was 16,132, of which 85.5% was urban and 14.5% was rural. 47.4% of the population was male and 52.6% was female. Approximately 59.1% of the town was between 18 and 65 years of age; 21.9% of the population was 18 years and under, and 19.0% was 65 years or older. 68.2% of the population graduated from high school, while 13.5% had a bachelor's degree. 97.6% of the population was white, 1.2% was "other," 0.5% was black, 0.5% was Asian or Pacific Islander, and 0.2% was American Indian or Aleut. 0.8% of the population reported being Hispanic. Of the ethnic categories reported in the census, which account for at least 5% of the population, Portuguese dominated (26.8%), followed by English (16.6%), French (13.8%), Irish (11.8%), and French Canadian (7.3%). 88.3% of the population was born in Massachusetts, while 5.4% of the population was born outside of the U.S.; 11.9% of those older than five speak a language other than English. There were 6,359 households, of which 56% were married-couple families, 3% were male-householder families,

10.1% were female-householder families, and 30.9% were non-family households. The average number of people per household was 2.49.

### 3.5.10.2 Economic Characteristics

Sixty-three percent of the population in general, aged 16 years and older, was in the labor force, of which 7.6% was unemployed and 0.3% was in the armed forces. By gender, however, 72.7% of male residents were in the labor force, of which 8.6% were unemployed and 0.5% were in the armed forces. For women, 54.5% were in the labor force, of which 6.4% were unemployed and 0.2% were in the armed forces. The median household income was \$30,097, with a per capita income of \$13,114. 6.5% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 74 shows the relative proportions of industry for Fairhaven, MA.

**Table 74.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	219	2.9 %
Mining	8	0.1 %
Construction	417	5.5 %
Manufacturing, non-durable goods	687	9.1 %
Manufacturing, durable goods	800	10.6 %
Transportation	237	3.1 %
Communications and other public utilities	236	3.1 %
Wholesale trade	377	5.0 %
Retail trade	1,705	22.6 %
Finance, insurance, and real estate	373	4.9 %
Business and repair services	286	3.8 %
Personal services	198	2.6 %
Entertainment and recreation services	64	0.8 %
Health services	682	9.0 %
Educational services	582	7.7 %
Other professional and related services	351	4.7 %
Public administration	318	4.2 %
Total	7,540	100%

### 3.5.10.3 Fairhaven as Homeport

Fairhaven can be considered a port significant for scalloping during the 1999 fishing year as a designated homeport (Table 41). There were 10 limited access boats and 16 general category boats that listed Fairhaven as their homeport in the permit database. All limited access boats showed at least some scallop landings, and together they account for most of Fairhaven's scallop catch; only one general category boat showed landings of scallops in the logbook records, but a total of ten general category boats were actively fishing other species, so their overall activities will be described below. Logbook data show that scallop dredge accounted for most of the scallops (by kept pounds) caught by boats homeported at Fairhaven: 97.3 % of scallops were landed by scallop dredge, followed by other dredge (2.7%), and other bottom trawl (less than 0.01%). Of fisheries that account for at least 5% of the total catch (by kept pounds) for limited access vessels, scallops accounted for 77.2%, followed by monkfish (15.9%) and large-mesh groundfish (6.4%). Of fisheries that account for at least 5% of the total catch (by kept pounds) for general category vessels, skates accounted for 33.8%, followed by lobster (18.8%), dogfish-nk (12.4%), rock crab (9.9%), summer flounder (7.4%), and large-mesh groundfish (6.8%).

**Table 75.** Vessel and scallop trip characteristics, 1999 permit data and 1999 logbook data.

Permit Status	Average vessel length, in feet (all permitted vessels)	Average vessel gross tons (all permitted vessels)	Average crew size, per trip landing scallops*	Average days absent, per trip landing scallops*
Limited Access	88.7	167.1	5.8	10.3
General Category	38.7	19.9	1.1	1.0

\*For limited access boats, only trips which landed greater than 400 pounds scallops are considered; for general category boats, only trips that landed less than or equal to 400 pounds scallops are considered.

A number of statistical areas, concentrated mostly on New England and also upper Mid-Atlantic waters, were important fishing grounds for the Fairhaven fleet, as shown in Table 76.

**Table 76.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
521	166756	19.4%	80.3%	13	91.2	187.0	6.0	12.8
522	117075	13.6%	74.4%	8	91.0	183.8	6.4	12.9
526	71496	8.3%	37.6%	6	94.5	175.3	6.3	10.7
562	274831	31.9%	82.3%	27	92.2	180.9	6.0	7.6
615	73193	8.5%	89.2%	5	95.2	188.6	6.6	14.3

\* Only trips landing greater than 400 pounds.

There was a seasonality to this use of the different fishing grounds, however, as shown in Table 77, as well as a seasonality to common fisheries composition.

**Table 77.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

Statistical Area	520	521	522	526	552	561	562	613	615	616	621
March 1999	9.9%							36.9%	25.2%	9.4%	17.6%
April-June 1999		30.3%	16.4%	8.4%			9.4%		16.2%		
July-Sept. 1999		7.0%	16.8%	9.6%	5.1%		49.2%				
Oct.-Dec. 1999		19.2%	8.9%	8.4%		6.6%	54.0%				

**Table 78.** Percent of total kept lbs. (species with 5% or more of quarterly catch), by quarter, 1999 logbook data.

Species	Monk-fish	Sea Scallops	Squid (nk)	Large-mesh groundfish	Skates	Rock Crab	Lobster	Summer Flounder	Dogfish (nk)
March 1999	11.3%	55.5%	5.5%	21.4%					
Apr.-Jun. 99	6.0%	50.8%		5.1%	16.2%	5.0%	5.9%		
July-Sept 99	5.5%	31.9%			24.3%		12.5%	6.4%	15.2%
Oct-Dec 99	17.9%	47.3%		14.1%		9.6%	7.5%		

Vessels home-ported at Fairhaven landed the majority of their catch from all fisheries (56.5% of total kept pounds) at New Bedford MA, followed by Newport RI (21.4%), and Fairhaven (13.0%); 76.3% of the total catch is landed at Massachusetts ports. Similarly, these vessels landed their scallops (in terms of kept pounds) at New Bedford (97.5%) and Fairhaven (1.1%), with all scallops landed in Massachusetts.

### 3.5.11 Geographic Area: Providence County, Rhode Island

Other Providence represented a somewhat temporary blip in the radar of fishing activity, a temporary site of landing south of the city of Providence for a number of boats active in scalloping and herring [personal communication, port agents]. As seen below, all landings occurred during one month of 1999. Its exposition below can be taken as a demonstration of the mobile and transitory nature of some industrial fishing operations.

#### 3.5.11.1 General Demographic Profile

From the 1990 Census, the population of Providence County was 16,132, of which 91.5% was urban and 8.5% was rural. 47.5% of the population was male and 52.5% was female. Approximately 61.9% of the town was between 18 and 65 years of age; 22.4 % of the population was 18 years and under, and 15.7 % was 65 years or older. 67.0% of the population graduated from high school, while 18.3% had a bachelor's degree. 87.7% of the population was white, 5.6% was black, 4% was "other," 2.4% was Asian or Pacific Islander, and 0.4% was American Indian or Aleut. 6.8% of the population reported being Hispanic. Of the ethnic categories reported in the census which account for at least 5% of the population, Italian dominated (17.3%), followed by Irish (15.1%), French (11.1%), English (10.1%), Portuguese (7.3%), and French Canadian (7.1%). 75.0% of the population was born in Rhode Island, while 12.5% of the population was born outside of the U.S.; 22.5% of those older than 5 speak a language other than English. There were 226,362 households, of which 50.3% were married-couple families, 3.5% were male-householder families, 13.2% were female-householder families, and 33% were non-family households. The average number of people per household was 2.53.

#### 3.5.11.2 Economic Characteristics

64.5% of the population in general, aged 16 years and older, was in the labor force, of which 7.2% was unemployed and 0.2% was in the armed forces. By gender, however, 73% of male residents were in the labor force, of which 8% were unemployed and 0.4% were in the armed forces. For women, 57.2% were in the labor force, of which 6.3% were unemployed and less than 0.1% were in the armed forces. The median household income was \$29,580, with a per capita income of \$13,871. 11.9% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 79 shows the relative proportions of industry for Providence County.

**Table 79.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	2,300	0.8 %
Mining	154	0.1 %
Construction	15,136	5.3 %
Manufacturing, non-durable goods	20,916	7.3 %
Manufacturing, durable goods	50,752	17.8 %
Transportation	9,178	3.2 %
Communications and other public utilities	5,427	1.9 %
Wholesale trade	11,656	4.1 %
Retail trade	47,471	16.7 %
Finance, insurance, and real estate	18,961	6.7 %
Business and repair services	11,589	4.1 %
Personal services	6,035	2.1 %
Entertainment and recreation services	3,350	1.2 %
Health services	28,761	10.1 %

Sector	Number Employed	Percent Employed
Educational services	24,639	8.7 %
Other professional and related services	16,169	5.7 %
Public administration	12,168	4.3 %
Total	284,662	100%

### 3.5.11.3 Other Providence, RI as Port of Landing

Ports in “other Providence county”, RI were significant landing places for scallopers during fishing year 1999, as shown in Table 40. That listing is based upon dealer weighout data, which recorded 20,049 landed pounds of scallops compared to the logbook data that recorded 20,849 kept pounds of scallops during the same period. Logbook records show there were four vessels that visited “other Providence” at least once during partial fishing year 1999. 75.1% of kept pounds landed (from all fisheries) came from boats listing Gloucester MA as their homeport; 3.8% came from boats listing Rhode Island as homeport state. In terms of scallops, 100% of kept pounds of scallops came from boats listing Davisville as homeport and Rhode Island as homeport state.

Logbook records show that limited access vessels using scallop dredge accounted for all scallop kept pounds. In terms of kept pounds, 96.2% of the total catch came from herring, with scallops accounting for 3.1%. Scallops accounted for 27.8% of landed value in fishing year 1999 (Table 40). Scallops landed at other Providence county ports came entirely from Mid-Atlantic waters, as shown below. Logbook data show all catches of fish occurring during quarter one, March 1999.

**Table 80.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
613	11849	56.8%	2.3%	1	**	**	6.0	17.9
615	9000	43.2%	88.2%	1	**	**	6.0	14.8

\* Only trips landing greater than 400 pounds.

\*\* Not reported to preserve confidentiality.

## 3.5.12 Geographic Area: Washington County, Rhode Island (for Davisville, RI)

### 3.5.12.1 General Demographic Profile

From the 1990 Census, the population of Washington County was 110,006, of which 46.1% was urban and 53.9% was rural. 48.8% of the population was male and 51.2% was female. Approximately 64.6% of the town was between 18 and 65 years of age; 23.1 % of the population was 18 years and under, and 12.3 % was 65 years or older. 82.8% of the population graduated from high school, while 29.1% had a bachelor's degree. 96.6% of the population was white, 1.3% was Asian or Pacific Islander, 1.0% was black, 0.9% was American Indian or Aleut, and 0.2% was “other.” 1.0% of the population reported being Hispanic. Of the ethnic categories reported in the census which account for at least 5% of the population, English dominated (18.6%), followed by Irish (18.4%), Italian (14.6%), German (9.1%), and French (8.4%). 63.1% of the population was born in Rhode Island, while 4.0% of the population was born

outside of the U.S.; 4.7% of those older than 5 speak a language other than English. There were 39,311 households, of which 59.4% were married-couple families, 2.9% were male-householder families, 9.0% were female-householder families, and 28.7% were non-family households. The average number of people per household was 2.64.

### 3.5.12.2 Economic Characteristics

68.1% of the population in general, aged 16 years and older, was in the labor force, of which 5.6% was unemployed and 0.9% was in the armed forces. By gender, however, 76.8% of male residents were in the labor force, of which 5.6% were unemployed and 1.7% were in the armed forces. For women, 60% were in the labor force, of which 5.6% were unemployed and less than 0.1% were in the armed forces. The median household income was \$36,948, with a per capita income of \$16,182. 6.8% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 81 shows the relative proportions of industry for Washington County.

**Table 81.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	1,514	2.7 %
Mining	42	0.1 %
Construction	3,668	6.6 %
Manufacturing, non-durable goods	2,955	5.3 %
Manufacturing, durable goods	6,993	12.6 %
Transportation	1,617	2.9 %
Communications and other public utilities	877	1.6 %
Wholesale trade	1,630	2.9 %
Retail trade	10,722	19.3 %
Finance, insurance, and real estate	3,124	5.6 %
Business and repair services	2,058	3.7 %
Personal services	1,505	2.7 %
Entertainment and recreation services	772	1.4 %
Health services	4,733	8.5 %
Educational services	6,832	12.3 %
Other professional and related services	3,772	6.8 %
Public administration	2,671	4.8 %
Total	55,485	100%

### 3.5.12.3 Davisville as Homeport

Davisville can be considered a port significant for scalloping during the 1999 fishing year as a designated homeport (Table 41). There were four limited access boats and two general category boats that listed Davisville as their homeport. Due to the small number of general category vessels, their fishing profiles will not be discussed in detail. The limited access boats accounted for all kept pounds of scallops. Logbook data show that scallop dredge gear accounted for 100% of scallops (by kept pounds) caught by boats home-ported at Davisville. Of fisheries that account for at least 5% of the total catch (by kept pounds) for limited access vessels, scallops accounted for 1.6%, with herring accounting for 97.8%. The reader should be reminded that a comparison by landed pounds rather than landed value can distort a sense of an entity's financial dependence on scallops, since herring is relatively low value compared to a species like scallops.

**Table 82.** Vessel and scallop trip characteristics, 1999 permit data and 1999 logbook data

Permit Status	Average vessel length, in feet (all permitted vessels)	Average vessel gross tons (all permitted vessels)	Average crew size, per trip landing scallops*	Average days absent, per trip landing scallops*
Limited Access	103.8	208.3	6.1	11.1
General Category	92.5	182.5	N/A	N/A

\*For limited access boats, only trips which landed greater than 400 pounds scallops are considered; for general category boats, only trips that landed less than or equal to 400 pounds scallops are considered.

A number of statistical areas, concentrated on lower New England and the upper Mid-Atlantic, were important fishing grounds for the Davisville fleet, as shown in Table 83.

**Table 83.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
522	106925	32.5%	9.3%	8	97.3	200.9	6.0	11.7
525	22504	6.8%	20.1%	2	**	**	6.0	14.3
562	106497	32.4%	22.8%	10	97.6	245.5	6.0	6.1
613	52208	15.9%	12.6%	4	97.3	200.0	6.3	16.1
615	41024	12.5%	90.3%	3	97.3	211.3	6.7	15.6

\* Only trips landing greater than 400 pounds.

\*\* Not reported to preserve confidentiality.

There was a seasonality to this use of the different fishing grounds, however, as shown in Table 84, though little seasonality to common fisheries composition.

**Table 84.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

<i>Statistical Area</i>	<i>522</i>	<i>525</i>	<i>562</i>	<i>613</i>	<i>615</i>
<i>March 1999</i>				56.8%	43.2%
<i>April-June 1999</i>	15.8%		35.4%	22.0%	26.8%
<i>July-Sept. 1999</i>	37.5%	10.1%	26.3%	11.4%	
<i>Oct.-Dec. 1999</i>	49.9%	12.0%	38.0%		

**Table 85.** Percent of total kept lbs., by quarter (fisheries other than herring are shown if relatively significant), 1999 logbook.

<i>Species</i>	<i>Herring</i>	<i>Butterfish</i>	<i>Scallops</i>	<i>Loligo squid</i>
<i>March 1999</i>	95.5%	1.8%	0.9%	1.7%
<i>April-June 99</i>	94.2%		1.9%	2.8%
<i>July-Sept. 99</i>	92.4%		2.2%	4.8%
<i>Oct.-Dec. 99</i>	90.9%		1.0%	6.9%

Vessels home-ported at Davisville landed the majority of their catch from all fisheries (42.7% of total kept pounds) at Gloucester MA, followed by Portland ME (33.6%; all herring), North Kingstown RI (14.7%), and Rockland ME, (6.9%; all herring); only 14.8% of the total catch was landed at Rhode Island ports. Similarly, these vessels landed most of their scallops (in terms of kept pounds) at New Bedford MA (94%) and "other" Providence RI (6%), with only 6% of scallops landed in Rhode Island.

### 3.5.13 Geographic Area: Stonington town, New London County, Connecticut

#### 3.5.13.1 General Demographic Profile

From the 1990 Census, the population of Stonington was 16,919, of which 50% was urban and 50% was rural. 48.9% of the population was male and 51.1% was female. Approximately 63.4% of the town was between 18 and 65 years of age; 20.3 % of the population was 18 years and under, and 16.3 % was 65 years or older. 80.3% of the population graduated from high school, while 26.6% had a bachelor's degree. 98.5% of the population was white, 0.6% was black 0.5% was Asian or Pacific Islander, 0.3% was American Indian or Aleut, and 0.1% was "other." 1.3% of the population reported being Hispanic. Of the ethnic categories reported in the census, which account for at least 5% of the population, English dominated (19.8%), followed by Irish (16.1%), Italian (12.2%), German (11.1%), French (7.2%), and Portuguese (5.7%). 39.6% of the population was born in Connecticut, while 5.8% of the population was born outside of the U.S.; 8.2% of those older than 5 speak a language other than English. There were 7,017 households, of which 57.1% were married-couple families, 2.8% were male-householder families, 7.9% were female-householder families, and 32.2% were non-family households. The average number of people per household was 2.4.

#### 3.5.13.2 Economic Characteristics

68.1% of the population in general, aged 16 years and older, was in the labor force, of which 5% was unemployed and 1.3% was in the armed forces. By gender, however, 77.3% of male residents were in the labor force, of which 6.0% were unemployed and 2.2% were in the armed forces. For women, 59.6% were in the labor force, of which 3.8% were unemployed and 0.1% were in the armed forces. The median household income was \$39,651, with a per capita income of \$20,808. 4.5% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 86 shows the relative proportions of industry for Stonington.

**Table 86.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	114	1.3 %
Mining	7	0.1 %
Construction	601	6.8 %
Manufacturing, non-durable goods	682	7.7 %
Manufacturing, durable goods	1,794	20.2 %
Transportation	234	2.6 %
Communications and other public utilities	231	2.6 %
Wholesale trade	155	1.7 %
Retail trade	1,574	17.8 %
Finance, insurance, and real estate	400	4.5 %
Business and repair services	328	3.7 %
Personal services	303	3.4 %
Entertainment and recreation services	112	1.3 %
Health services	591	6.7 %
Educational services	771	8.7 %
Other professional and related services	589	6.6 %
Public administration	379	4.3 %
Total	8,865	100%

### 3.5.13.3 Stonington as Port of Landing

Stonington is a significant place for scallopers as a port of landing, as shown in Table 40. That listing is based upon dealer weigh out data, which recorded 554,114 landed pounds of scallops compared to the logbook data that recorded 512,164 kept pounds of scallops during the same period. However, none of the landed pounds from the dealer weigh-out data were associated with permitted vessels, making comparison between the two sources of data difficult. Logbook records show there were 9 limited access vessels, 23 general category vessels, and 3 other vessels that visited Stonington at least once during partial fishing year 1999. 24.3% of kept pounds landed (from all fisheries) came from boats listing Stonington as their homeport; 30.5% came from boats listing Connecticut as homeport state. In terms of scallops, 65.7% of kept pounds of scallops came from boats listing New York as homeport, followed by Stonington boats (17.6%); 18.9% of scallops kept pounds came from boats listing Connecticut as homeport state.

97.3% of scallop kept pounds were landed with scallop dredge, followed by scallop bottom trawl (2.3%), other bottom trawl (0.4%), and other gear (<0.002%). Logbook records show 99.6% of scallop kept pounds landed by limited access boats, with general category boats landing 0.2% and other boats also landing 0.2% of scallop kept pounds. In terms of kept pounds, 39.7% of the total catch came from small-mesh multispecies, followed by skates (15.2%), loligo squid (10.4%), scallops (9.4%), and large-mesh groundfish (7.3%). Scallops accounted for 38.1% of landed value in fishing year 1999 (Table 40). Scallops landed at Stonington came predominantly from Mid-Atlantic waters, as shown below.

**Table 87.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
522	49607	9.7%	6.3%	3	82.7	182.3	6.7	13.1
525	47560	9.3%	3.4%	3	84.3	182.7	6.7	13.6
562	170433	33.3%	88.3%	18	79.8	162.4	6.6	6.6
612	32470	6.3%	39.1%	7	79.7	154.3	5.9	7.4
613	138216	27.0%	27.6%	20	75.0	143.1	6.4	7.9
615	42647	8.3%	87.2%	4	82.0	176.0	7.0	11.4

\* Only trips landing greater than 400 pounds.

The following two tables show the distribution of both the statistical areas from which scallops predominantly were caught, and the overall composition of fisheries landed at Stonington, by quarter.

**Table 88.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

Statistical Area	522	525	539	562	612	613	615
<b>March 1999</b>					19.7%	48.1%	31.3%
<b>April-June 1999</b>	17.7%	17.0%		22.0%	5.2%	23.4%	8.0%
<b>July-Sept. 1999</b>			10.3%	59.3%	5.3%	25.1%	
<b>Oct.-Dec. 1999</b>				73.4%		24.5%	

**Table 89.** Percent of total kept lbs., by quarter (species with 5% or more of quarterly catch), 1999 logbook data.

Species	Sea Scallops	Loligo Squid	Small-mesh multispecies	Skates	Large-mesh Groundfish	Monkfish	Squids (ns)
<b>March 1999</b>	8.1%	5.4%	73.0%				
<b>Apr.-June 99</b>	16.7%		39.6%	12.6%	17.2%		

<i>Species</i>	<i>Sea Scallops</i>	<i>Loligo Squid</i>	<i>Small-mesh multispecies</i>	<i>Skates</i>	<i>Large-mesh Groundfish</i>	<i>Monkfish</i>	<i>Squids (ns)</i>
<i>Jul.–Sep. 99</i>	4.5%	16.6%	38.3%	22.0%			
<i>Oct.–Dec. 99</i>	8.5%	16.4%	10.6%	14.8%	9.0%	10.7%	9.0%

### 3.5.14 Geographic Area: Point Pleasant borough, Ocean County, New Jersey

#### 3.5.14.1 General Demographic Profile

From the 1990 Census, the population of Point Pleasant was 18,177, of which 100% was urban. 47.4% of the population was male and 52.6% was female. Approximately 61% of the town was between 18 and 65 years of age; 21.9 % of the population was 18 years and under, and 17.1 % was 65 years or older. 81.1% of the population graduated from high school, while 20.2% had a bachelor's degree. 98.9% of the population was white, 0.4% was black, 0.3% was Asian or Pacific Islander, 0.3% was "other," and 0.1% was American Indian or Aleut. 1.5% of the population reported being Hispanic. Of the ethnic categories reported in the census, which account for at least 5% of the population, Irish dominated (22.6%), followed by German (20.4%), Italian (16.1%), and English (11.8%). 81.2% of the population was born in New Jersey, while 3% of the population was born outside of the U.S.; 5.4% of those older than 5 speak a language other than English. There were 7,008 households, of which 57.6% were married-couple families, 2.9% were male-householder families, 11% were female-householder families, and 28.5% were non-family households. The average number of people per household was 2.56.

#### 3.5.14.2 Economic Characteristics

65% of the population in general, aged 16 years and older, was in the labor force, of which 4.5% was unemployed and 0.1% was in the armed forces. By gender, however, 75.4% of male residents were in the labor force, of which 3.8% were unemployed and 0.2% were in the armed forces. For women, 55.8% were in the labor force, of which 5.3% were unemployed and none were in the armed forces. The median household income was \$40,798, with a per capita income of \$18,770. 3.1% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 90 shows the relative proportions of industry for Point Pleasant.

**Table 90.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	132	1.5 %
Mining	14	0.2 %
Construction	1,020	11.2%
Manufacturing, non-durable goods	414	4.6 %
Manufacturing, durable goods	472	5.2 %
Transportation	383	4.2 %
Communications and other public utilities	360	4.0 %
Wholesale trade	258	2.8 %
Retail trade	1,825	20.1 %
Finance, insurance, and real estate	686	7.6 %
Business and repair services	368	4.1 %
Personal services	224	2.5 %
Entertainment and recreation services	87	1.0 %

Sector	Number Employed	Percent Employed
Health services	1,040	11.4%
Educational services	736	8.1 %
Other professional and related services	575	6.3 %
Public administration	490	5.4 %
Total	9,084	100%

### 3.5.14.3 Point Pleasant as Port of Landing

Point Pleasant is a significant place for scallopers as a port of landing, as shown in Table 40. That listing is based upon dealer weighout data, which recorded 239,037 landed pounds of scallops compared to the logbook data that recorded 349,621 kept pounds of scallops during the same period. Logbook records show there were 26 limited access vessels, 42 general category vessels, and 30 other vessels that visited Point Pleasant at least once during partial fishing year 1999. 18.8% of kept pounds landed (from all fisheries) came from boats listing Point Pleasant as their homeport; 84.3% came from boats listing New Jersey as homeport state. In terms of scallops, 51.3% of kept pounds of scallops came from boats listing New York as homeport, followed by Point Pleasant boats (26.5%); 40.6% of scallops kept pounds came from boats listing New Jersey as homeport state.

98.9% of scallop kept pounds were landed with scallop dredge, followed by other dredge (1.1%), and other bottom trawl (<0.03%). Logbook records show 99.8% of scallop kept pounds landed by limited access boats, with general category boats landing 0.2%. In terms of kept pounds, 61.0% of the total catch came from menhaden, followed by monkfish (7.8%), and loligo squid (6.0%), with scallops accounting for 2.8%. Scallops accounted for 11.0% of landed value in fishing year 1999 (Table 40). Scallops landed at Point Pleasant came predominantly from Mid-Atlantic waters, as shown below.

**Table 91.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal & of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
562	91456	27.0%	88.2%	9	82.7	126.8	6.4	7.8
612	96167	28.4%	1.1%	9	84.7	139.0	5.4	5.3
615	68147	20.1%	7.9%	14	82.4	144.6	6.1	5.8
622	22339	6.6%	28.3%	3	82.0	126.0	7.0	9.5

\* Only trips landing greater than 400 pounds.

The following two tables show the distribution of both the statistical areas from which scallops predominantly were caught, and the overall composition of fisheries landed at Point Pleasant, by quarter.

**Table 92.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

Statistical Area	525	562	610	612	613	615	616	621	622
March 1999				17.3%		20.2%			56.2%
April-June 1999		20.8%	6.6%	20.2%	6.3%	31.5%	7.3%		
July-Sept. 1999	7.7%	38.5%		37.4%				5.9%	
Oct.-Dec. 1999		30.3%		35.1%		23.0%	11.0%		

**Table 93.** Percent of total kept lbs., by quarter (species with 5% of quarterly catch), 1999 logbook data.

<i>Species</i>	<i>Monk-fish</i>	<i>Atl. Mackerel</i>	<i>Dog-fish (nk)</i>	<i>Spiny Dogfish</i>	<i>Sea Scallops</i>	<i>Loligo Squid</i>	<i>Large-mesh Ground-fish</i>	<i>Men-haden</i>	<i>Small-mesh multi-species</i>	<i>Blue-fish</i>	<i>Summer Flounder</i>
<i>March 1999</i>	16.4%	8.1%	9.9%	18.4%	8.7%	14.8%	14.0%				
<i>Apr-June 99</i>					3.3%			67.9%	7.5%		
<i>Jul-Sep 99</i>					2.3%			82.1%			
<i>Oct-Dec 99</i>	30.7%			12.5%	1.5%	13.6%			8.5%	6.8%	11.9%

#### 3.5.14.4 Point Pleasant, Ethnographic Community Profiles

New Jersey is the most densely populated and one of the most industrialized and urbanized states in the nation. Although small in area, it also has a long coastline, about 100 miles, as well as two major tidal rivers, the Hudson and Delaware, and numerous estuaries inside its barrier islands and embayments. Much like New York, its fisheries are found in both urban and rural settings [...] Today, the major commercial fishing ports, in terms of ex-vessel value of landings in 1998, are Cape May, Atlantic City, Point Pleasant, Barnegat Light, Wildwood, and Belford, in that order, but as elsewhere in the Mid-Atlantic, the "other" fisheries are also significant. These are generally dispersed bayman or waterman fisheries for estuarine and inshore species, such as clams, crabs, and other shellfish as well as many fishes (McCay and Cieri. 2000: 43).

Point Pleasant is a highly developed coastal region. Currently there is only one wholesale finfish packing dock at Point Pleasant, a fishermen's cooperative. Another dock is used for offloading surf clams and ocean quahogs. The fisheries are very diverse, the classic situation in the Mid-Atlantic. Two stand out in terms of volume and value: otter trawls and gillnetting, the latter particularly important for spiny dogfish as well as bluefish, weakfish, and other species (Table 94). But sea scallop dredging is very important, as are surf clamming/ocean quahogging and offshore lobstering (ibid: 52).

The town of Point Pleasant (pop. 18,177, 1990) is located at the mouth of the Manasquan Inlet at the northern border of Ocean County. The town's economy is geared toward the summer tourist and recreational business. However, it is more than a "beach" town, and has a large resident population. It is close to a larger township, called Brick or Bricktown (pop. 66,473, 1990), and across the Manasquan River from Manasquan (5,369, 1990) and Brielle (4,406). The fisheries are concentrated in an area known as Point Pleasant Beach, along a sandy strip which includes restaurants, a fisherman's supply store, small marinas, charter and party boat docks, and two commercial fishing docks.

One of the Cape May seafood businesses has two fishing properties in Point Pleasant, one of which is now used for offloading and trucking surf clams and ocean quahogs. (Each of these docks had been used for finfish until about 10 years ago). From 6 to 10 boats land clams here, according to company personnel interviewed in Cape May. There are 15 crew at the docks and about 50 on the boats. There is also talk of a clam shucking factory in Point Pleasant (one existed here two decades ago, part of the original "Snow's" business, which was later absorbed by other companies).

A fishermen's cooperative owns two other properties, one for storing and working on gear and some dockage, the other including the coop's offices, gear storage, ice-making, packing house, and a retail store. The cooperative mostly depends on its fourteen or so members, who have older,

wooden-hulled vessels, 45-65' in length. They are geared for bottom otter trawling in a mixed-species, diversified fishery. The vessels usually have a two or three man crew, including the captain, who is paid shares of the profits. They are all hired locally. Although there are families with several generations in the fisheries, in recent years crewmembers are not often related to the captain or owner. Some members of this cooperative and some crewmembers have been ethnic minorities (Spanish, Portuguese, Chinese, and others). A few women have crewed on these boats. The boats are all owner-operated. They tend to fish in areas of Hudson Canyon called "the Mudhole" or "the Gully." The Mudhole is closer and has a dredged channel, but poor landings, especially of silver hake ("whiting") have forced most to move north into the Gully, where silver hake seem to be more plentiful. The average trip to the Mudhole is one to three days, but for the Gully can last a week.

Most of the draggersmen at the cooperative consider themselves loligo squid and whiting specialists, but different species are targeted at different times, depending on the conditions of the ocean, the market, and the preferences of the captain. Squid landings began to overtake silver hake landings in this fleet in 1992 and now account for over 50% of the landed value of Point Pleasant trawlers. At first, it was a by-catch while silver hake fishing in the Gully. Now it is targeted by some of the captains. As one captain stated, "You can't help but target squid sometimes, there is so much out there." Squid is sold to local processors. The cooperative is at a disadvantage in marketing squid because members lack freezer boats or refrigerated sea water (RSW) boats, and thus do not receive the same price that boats so equipped receive, particularly in Cape May.

Summer flounder has long been a mainstay of this fishery, especially in the Mudhole in September and October, as well as other times in New Jersey and New York waters. Because of sharp quota restrictions, it is now a derby-like fishery. It is marketed in the fresh fish markets of New York and Philadelphia, in local restaurants and fish stores, and in the Coop's own retail store.

At one time, a few trawlers targeted scup (also called porgies), partially because doing so took pressure off a supply-burdened whiting market. (There was also a significant offshore summer flounder fishery in the winter months, for a few boats). Today no vessels target scup but may encounter large schools in the winter. Marketing is similar. Spiny dogfish have emerged as a very important fishery for the draggers and even more so for a gill-net fleet, both local and visiting, which has grown in recent years. Gill-netters have used "runaround" nets for species such as bluefish, Spanish mackerel, little tuna, scup, and weakfish, although this gear did not appear in the 1998 NMFS data. They use drift and sink nets for dogfish, angler, bluefish, weakfish, and other species. Angler, or monkfish, is particularly important. In 1998, local fishermen using sink gill nets caught almost 17 million pounds of monkfish as well as over 8 million pounds of spiny dogfish.

Declining catches and restricted fisheries have hurt this fishing community severely. Many boats have left the fishery and boats are for sale. Existing operations have difficulty investing in major improvements, either to the waterfront properties or to the vessels (ibid: 54-56).

### **3.5.15 Geographic Area: Barnegat Light borough, Ocean County, NJ**

#### *3.5.15.1 General Demographic Profile*

From the 1990 Census, the population of Barnegat Light was 675, of which 100% was rural. 51.1% of the population was male and 48.9% was female. Approximately 56.1% of the town was between 18 and 65 years of age; 13.2 % of the population was 18 years and under, and 30.7 % was 65 years or older. 84.9% of the population graduated from high school, while 29.9% had a bachelor's

degree. 99.6% of the population was white, 0.3% was “other,” 0.1% was Asian or Pacific Islander, and there were no black, American Indian or Aleut. 0.7% of the population reported being Hispanic. Of the ethnic categories reported in the census, which account for at least 5% of the population, German dominated (26%), followed by Irish (18.5%), English (14.9%), and Italian (6.7%). 50.9% of the population was born in New Jersey, while 1.6% of the population was born outside of the U.S.; 2.7% of those older than five speak a language other than English. There were 330 households, of which 52.4% were married-couple families, 1.8% were male-householder families, 5.8% were female-householder families, and 40% were non-family households. The average number of people per household was 1.99.

### 3.5.15.2 *Economic Characteristics*

53.1% of the population in general, aged 16 years and older, was in the labor force, of which 0.9% was unemployed and 3.4% was in the armed forces. By gender, however, 60.5% of male residents were in the labor force, of which 0.5% were unemployed and 3.2% were in the armed forces. For women, 45.5% were in the labor force, of which 1.5% were unemployed and 3.7% were in the armed forces. The median household income was \$37,955, with a per capita income of \$25,973. 7.2% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 94 shows the relative proportions of industry for Barnegat Light.

**Table 94.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	39	12.6 %
Mining	0	0.0 %
Construction	39	12.6%
Manufacturing, non-durable goods	10	3.2 %
Manufacturing, durable goods	13	4.2 %
Transportation	7	2.3 %
Communications and other public utilities	6	1.9 %
Wholesale trade	4	1.3 %
Retail trade	65	21.0 %
Finance, insurance, and real estate	33	10.7 %
Business and repair services	16	5.2 %
Personal services	2	0.6 %
Entertainment and recreation services	9	2.9 %
Health services	12	3.9%
Educational services	11	3.6 %
Other professional and related services	33	10.7 %
Public administration	10	3.2 %
Total	309	100%

### 3.5.15.3 *Barnegat Light as Homeport*

Barnegat Light can be considered a port significant for scalloping during the 1999 fishing year as a designated homeport (Table 41). There were 6 limited access boats and 26 general category boats that listed Barnegat Light as their homeport. All six limited access boats showed at least some scallop landings, as did several general category boats, though the limited access boats accounted for virtually all kept pounds of scallops. Since 21 of the general category boats are actively fishing other species if not scallops, their activities are described below. Logbook data show that scallop dredge gear accounted for most of scallops (by kept pounds) caught by boats home-ported at Barnegat Light; 97.2% of scallops were caught with scallop dredge, followed by other dredge (2.8%) and “other” gear (less than 0.01%). Of

fisheries that account for at least 5% of the total catch (by kept pounds) for limited access vessels, scallops accounted for 88.0%, with monkfish accounting for 9.8%. For general category boats, monkfish accounted for 54.9% of the total catch by kept pounds, followed by spiny dogfish (19.5%), and bluefish (6.9%), with scallops registering less than 0.01%

**Table 95.** Vessel and scallop trip characteristics, 1999 permit data and 1999 logbook data.

Permit Status	Average vessel length, in feet (all permitted vessels)	Average vessel gross tons (all permitted vessels)	Average crew size, per trip landing scallops*	Average days absent, per trip landing scallops*
Limited Access	69	110	5.9	7.7
General Category	52.3	53.4	2.7	1.0

\*For limited access boats, only trips which landed greater than 400 pounds scallops are considered; for general category boats, only trips that landed less than or equal to 400 pounds scallops are considered.

A number of statistical areas, concentrated on lower New England and the upper Mid-Atlantic, were important fishing grounds for the Barnegat Light fleet, as shown in Table 96.

**Table 96.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
562	196183	36.8%	90.4%	19	68.6	108.5	6.9	7.5
613	68172	12.8%	81.0%	12	72.2	107.8	6.1	9.0
615	203267	38.1%	14.3%	31	76.4	124.6	5.1	6.7

\* Only trips landing greater than 400 pounds.

There was a seasonality to this use of the different fishing grounds, however, as shown in Table 97, as well as a seasonality to common fisheries composition.

**Table 97.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

Statistical Area	522	562	610	613	615	616	626
<b>March 1999</b>				29.4%	50.3%		20.3%
<b>April-June 1999</b>		19.6%	7.9%	11.0%	56.2%	5.3%	
<b>July-Sept. 1999</b>	5.6%	75.5%			13.9%		
<b>Oct.-Dec. 1999</b>		24.1%		35.1%	33.5%	6.7%	

**Table 98.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

Species	Monkfish	Spiny Dogfish	Scallops	Large-mesh Groundfish	Bluefish	Atlantic Croacker	Smooth Dogfish
<b>March 1999</b>	18.2%	9.5%	56.1%	14.6%			
<b>April-June 99</b>	33.5%	21.3%	23.0%				
<b>July-Sept. 99</b>	19.5%	19.4%	30.6%		5.2%	5.4%	8.0%
<b>Oct.-Dec. 99</b>	67.4%	10.8%	5.2%		8.0%		

Vessels home-ported at Barnegat Light landed the majority of their catch from all fisheries (79.2% of total kept pounds) at Long Beach, NJ. The rest of the catch was landed at many different ports, none of which accounted for more than 5% of the total catch: for example, Point Pleasant (4.6%), Gloucester MA (3.8%), and Pt. Judith RI (3.4%); however, 83.9% of the total catch was landed at New Jersey ports. Similarly, these vessels landed most of their scallops (in terms of kept pounds) at Long Beach NJ

(82.5%), followed by New Bedford MA (11.3%) and Point Pleasant NJ (6.0%), with only 88.7% of scallops landed in New Jersey.

#### *3.5.15.4 Barnegat Light, Ethnographic Community Profiles*

Barnegat Light is one of New Jersey's most important ports. Many members of the East Coast's longline fleet, scallop vessels, and a fleet of inshore gillnetters reside at this port. Recreational and charter boats also utilize and work from this port. The recreational and charter boat fishing industry's landings, percentages, and values were not available at the port or county level.

There are five marinas in Barnegat Light. The two largest docks have 36 full-time resident commercial boats, approximately 40 recreational and charter boats, and some transients. Commercial fishing boats work out of these docks year round. The three remaining docks can each accommodate approximately 30-35 boats, most of which are recreational boats and charter/ party boats, with a few headboats. Most recreational and sportfishing fishing boats that utilize this port are here for part of the year, usually from May or June through early October.

One dock is completely occupied by commercial boats, and the owners are also commercial fishermen. These boats include seven scallopers, ten longliners that fish for tuna, swordfish, and tilefish, and about nine inshore-fishing gill net boats. All the boats are privately owned. Three offloading stations are part of this dock. During the slow to steady seasons, five or six locally hired full-time employees, the boat captain and crew perform the offloading. Additionally, dockhands are hired locally for the busy season. The choice for marketing and sale of the fresh fish can be done either by the captain or by the owners of the dock. The owners of the dock sell some of the catch to fresh fish markets in Boston, Philadelphia, Maryland and New York with the remaining being sold to local restaurants, retailers, wholesalers or at their own fish market, which is open from April to October.

The second of the largest docks accommodates ten commercial boats, fifteen charter boats, and twenty-five recreational vessels. This dock is primarily an offloading facility and can accommodate up to five vessels for offloading. During offloading, there are two people working the docks to help the captain and crew. The marketing and sales of the fish is done by the boat captain, who sells the fresh fish to local fish markets.

Commercial and recreational fishing have a long tradition here. Fisheries development was limited until recently, because in order to reach the ocean, boats had to go through Barnegat Inlet, one of New Jersey's narrow and often dangerous inlets (the "inlet of breakers"). Consequently, most development has been based on beach-oriented tourism. For example, the former fishing community of Beach Haven, on Long Beach Island, now has only private boat marinas and residential condominiums on its waterfront. In 1995, the inlet's fierce currents were tamed by an Army Corps of Engineers project that constructed a south jetty along with a three-quarter- mile beach, a fishing pier, and bird watching opportunities.

The small businesses of Barnegat Light are very reliant on the summer tourist economy and the year round fishing industry. This is apparent with all of the summer and beach houses, the seashore shops and convenience stores along the main boulevard to and through Barnegat Light. The tourist surf shops, souvenir shops, small grocery and convenience stores, fish markets, and even the electronics and repair shops advertise goods and service catering to the needs of their consumers. According to a resident, the commercial fishing industry (including charter and party boats) becomes the stalwart economic sector for the town in the winter through employing as many as 150 local people to work at the marinas. According to the 1990 census, 12.6% of those employed at Barnegat Light were in fisheries.

Throughout the interviews and meetings, several citizens and business owners from the Barnegat Light community emphasized the role the fishing industry has in sustaining and preserving their community. The marinas are the major source of taxes for the community, according to representatives of the community's taxpayers association. Two of the five marinas are primarily dependent on the commercial fisheries. An owner of one of the marinas told us that 80% of their overall income comes from the commercial fishing industry, for fuel and other services. Although there is a lot of recreational fishing, the amount of fuel and other services sold to recreational fishermen is tiny compared with what is sold to commercial fishers. One marina owner said that for fuel, the ratio is about 40 or 50 commercial to one recreational. In addition, small businesses are able to stay open all year because of the fishing industry, and this has stabilized the community so that it has the lowest crime rate on the island.

The Barnegat Light port is known for its offshore longliner fishery. Today it focuses on the tunas (yellowfin, bigeye) for most of the year and swordfish part of the year. A few continue bottom longlining, for tilefish, caught in deep waters of the outer continental shelf and canyons. The longlining tradition derives from a winter handline and longline fishery for cod, which lasted through the first part of this century and was prosecuted by Scandinavian immigrants among others.

Tilefish were well known by the old-timers of Barnegat Light but markets were poor. In 1969 a captain began tilefishing again. In the early 1970s he and others cooperated in successfully creating a domestic market for tilefish, and this soon emerged as a major focus of the longliners of Barnegat Light, as well as Montauk, New York and, more recently, Point Judith, Rhode Island. The fleets developed rapidly, attracting even some of the charter boat fishermen. They diversified into pelagic longlining, for swordfish and tunas, as tilefish catch rates diminished. Others moved into sea scalloping.

Although Barnegat Light is mainly a longliner fishing community, there is also a small group of coastal gill-netters plus seven large sea scallopers. And like all ports in the region, it has a significant recreational fishery, with an equally long tradition. The longliner fleet is side by side with the party boats at one of the docks. Indeed, one of the families is involved in both commercial and party boat fishing, including offshore "canyon" fishing for highly migratory species (HMS). The HMS longliner fishery and the scallop fishery are the most important in economic and social terms. Declines in allowable catches, seasons, trip limits, and, for the scallopers, days-at-sea are threatening the fishing community. There are few viable options. According to the mayor, a commercial fishermen himself, "September 30th, it's doomed." That was when the 1998 actions required by the new overfishing requirements came into place for HMS and scallopers.

The regulatory system intensifies economic marketing problems. The manager of a major local fish dock said that the management process creates derby fishing, through the opening and closing of seasons. This means that small businesses such as his have trouble keeping their markets. A good example is the shark management plan, which has two periods, one beginning January 1<sup>st</sup>, when boats in this area have no access, and the other beginning July 1st, when the rush for sharks results in a glut on the market. This is also true for weakfish and fluke management. Millions of dollars are lost, he said, because of derby fishing.

In terms of loss of revenue due to regulations, one resident commercial fisherman commented extensively on his personal losses due to the 1994 limit of 4,000 pounds per trip for harvesting mako shark. His comments on the economic impact of the shark quota being cut in half were that he lost out on \$25,000 in revenue each season. He had other concerns and points to make, and then noted that in his lifetime, he saw the striper taken from the commercial fishermen; decline in the marlin, the sturgeon, and now serious cutbacks in swordfish, tuna, sharks, bluefish; and every year more regulations on just about anything the commercial fishermen make a living on. Another resident added that charter/ party boats also suffer when they can not go out to fish. The entire fishing community is impacted. The sentiment of

the fishermen seem to be that the federal government needs to let the “hardworking fishermen” make a living or “pay” the fishermen every time they are not allowed to fish for one of their target species.

Instances were shared of occasions when policy implementation practices damaged the economy of local businesses because the federal plan came out after or during the fishing fleet and local businesses made adjustments to gear, trip plans, and orders for costly supplies and equipment. Fishermen attempt to adjust and cooperate with the management plans for the betterment of the fish resource, but the fishermen expressed their frustration that soon after either they make adjustments, the regulations change or new regulations come into affect that further impact the commercial fisheries target species and reduce alternatives. The adjustments made by commercial fishermen are often the only alternatives to sustaining their interests and livelihood in the commercial fishing industry. Fishermen and their community have strong concerns that the commercial fisheries future is in jeopardy due to the management agency’s policy practices and implementation.

To the old-timers, the nature of the fishery has already changed profoundly in part because of the way regulations are applied, forcing people to specialize in different fisheries, rather than to be able to combine them or switch from one to the other. Now they are “boxed in,” which increases pressure on fish. For example, the swordfish fishermen have nothing else to turn to; tuna quotas are way down and the market is poor for some of the tunas; there is a moratorium on tilefishing, hurting the longliners that moved away from that fishery in recent years; and the fishery for monkfish is very poor, with tight restrictions coming on line. Two local boats converted from swordfishing to monkfishing, at great expense, but failed to come in under the deadline for limited entry in that fishery. One option some captains from this port have taken is to go to other countries to fish, but that is not proving sustainable because once they have taught people in those countries, they are typically replaced by lower-cost captains.

Another change in the fishery is that crews, at least for the pelagic longliners and the scallopers, are less likely than before to come from local communities. Local job opportunities in construction and the service industries for tourism compete with working as a deckhand on a fishing boat, particularly with so many restrictions, declining catches, and poor markets, and thus crew come from other regions, where there are fewer opportunities, such as Nova Scotia and some of the southern states.

One sign of change in this fishing community that has intensified in the past 3 to 5 years is the loss of welders, woodworkers, mechanics, and others needed to support the fisheries. There used to be a full-time welder and a couple of part-time welders in Barnegat Light. The full-time welder has been gone for over 4 years. Local carpenters have been gone for about 6 years. Whereas it once took a few minutes or maybe an hour or day to get help, now it can take a week. These services are no longer available in town or even within the region.

Some of the longliners of Barnegat Light have become distant-water operations, going to the Grand Banks of Newfoundland or even the waters off Greenland, as well as the Caribbean, Brazil, and other distant fishing grounds. The owner of one major fleet, of six longliners, left Barnegat Light recently. His vessels were among the dozen or so very large longliners that found a 31,600-trip limit too restrictive, and thus left the Atlantic Ocean for the Pacific Ocean.

Others strongly prefer to work closer to home, to take shorter trips. As one of the captains said, “I never wanted to be a gypsy, going to Puerto Rico, Hawaii, to fish.” His father, one of the pioneers, explained further, “I never wanted any of our boats to go anywhere but Barnegat Light... We have our own troubles, no need to go someplace else to find it,” referring to troubles with crew, engine break downs, buyers in distant ports. The options of those who resist going to other ports are far more restricted. The new regulation, closing all areas north of 39 degrees north, Toms Canyon to the Hague

Line, to pelagic longliner fishing to protect bluefin tuna, is thus very scary to them. Members of this community have been very active in the politics of HMS management, including ICCAT, and are now (1999-2000) trying to get support for a buy-back program for longliners unable to continue.

Taking their boats to distant waters, as has the one fleet owner mentioned earlier, remains an option, but it is very disruptive of family and community --the loss of that fleet has already had major impacts on local businesses. Recognition of the links between the pelagic longline fishery and the community itself is a reason why those who run the fishing docks, together with leaders of the community, are struggling to find ways to deal with problems in the fisheries.

Another concern of local residents is that decline or demise of the commercial fisheries is likely to transform the use of the waterfront, bringing in condominium development where marinas are now, an outcome which many long-term residents find undesirable. Even more, the fisheries are perceived as part of the identity of this community. Hence, that would be "the end of Barnegat Light as we know it." For fishing families, the changes are even more significant. As one said, "There's no future in it," and sons and daughters are being discouraged from going into the business. (McCay and Cieri 2000: 65-70; see also Ecopolicy Center 1998)

### **3.5.16 Geographic Area: Long Beach township, Ocean County, New Jersey**

#### *3.5.16.1 General Demographic Profile*

From the 1990 Census, the population of Long Beach was 3,407, of which 100% was rural. 47% of the population was male and 53% was female. Approximately 55.3% of the town was between 18 and 65 years of age; 11.5 % of the population was 18 years and under, and 33.2 % was 65 years or older. 87.8% of the population graduated from high school, while 32.6% had a bachelor's degree. 99.2% of the population was white, 0.4% was "other," 0.3% was Asian or Pacific Islander, 0.1% was black, and 0.1% was American Indian or Aleut. 1.2% of the population reported being Hispanic. Of the ethnic categories reported in the census, which account for at least 5% of the population, German dominated (23.1%), followed by Irish (19.3%), English (16.3%), Italian (7.9%), and Scottish (5.0%). 51.7% of the population was born in New Jersey, while 2.1% of the population was born outside of the U.S.; 6.1% of those older than five speak a language other than English. There were 1,661 households, of which 52.9% were married-couple families, 2.0% were male-householder families, 6.1% were female-householder families, and 39% were non-family households. The average number of people per household was 2.05.

#### *3.5.16.2 Economic Characteristics*

53% of the population in general, aged 16 years and older, was in the labor force, of which 4% was unemployed and 0.4% was in the armed forces. By gender, however, 60.9% of male residents were in the labor force, of which 1.2% were unemployed and 0.0% were in the armed forces. For women, 46.4% were in the labor force, of which 7.1% were unemployed and 0.8% were in the armed forces. The median household income was \$31,775, with a per capita income of \$21,545. 4.5% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 99 shows the relative proportions of industry for Long Beach.

**Table 99.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	38	2.4 %
Mining	0	0.0 %
Construction	149	9.4%
Manufacturing, non-durable goods	64	4.0 %
Manufacturing, durable goods	45	2.8 %
Transportation	62	3.9 %
Communications and other public utilities	30	1.9 %
Wholesale trade	81	5.1 %
Retail trade	264	16.6 %
Finance, insurance, and real estate	165	10.4 %
Business and repair services	96	6.0 %
Personal services	45	2.8 %
Entertainment and recreation services	22	1.4 %
Health services	154	9.7%
Educational services	168	10.6 %
Other professional and related services	97	6.1 %
Public administration	112	7.0 %
Total	1,592	100%

### 3.5.16.3 Long Beach as Port of Landing

Long Beach is a significant place for scallopers as a port of landing, as shown in Table 40. That listing is based upon dealer weighout data, which recorded 543,371 landed pounds of scallops compared to the logbook data that recorded 507,184 kept pounds of scallops during the same period. Logbook records show there were 9 limited access vessels, 22 general category vessels, and 26 other vessels that visited Long Beach at least once during partial fishing year 1999. 84% of kept pounds landed (from all fisheries) came from boats listing Barnegat Light NJ as their homeport; 87.4% came from boats listing New Jersey as homeport state. In terms of scallops, 86.7% of kept pounds of scallops came from boats listing Barnegat Light as homeport and New Jersey as homeport state.

98.7% of scallop kept pounds were landed with scallop dredge, followed by other dredge (1.3%), and other gear (<0.004%). Logbook records show virtually all scallop kept pounds landed by limited access boats. In terms of kept pounds, 40.9% of the total catch came from monkfish, followed by spiny dogfish (15.0%), scallops (13.7%), and bluefish (8.0%). Scallops accounted for 29.9% of landed value in fishing year 1999 (Table 40). Scallops landed at Long Beach came predominantly from lower New England and Mid-Atlantic waters, as shown below.

**Table 100.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
562	187128	36.9%	89.9%	18	69.8	111.0	6.7	7.8
613	38643	7.6%	81.3%	9	66.8	100.3	5.8	7.4
615	217272	42.8%	9.5%	33	75.0	121.4	5.1	7.2

\* Only trips landing greater than 400 pounds.

The following two tables show the distribution of both the statistical areas from which scallops predominantly were caught, and the overall composition of fisheries landed at Long Beach, by quarter.

**Table 101.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

<i>Statistical Area</i>	<i>562</i>	<i>613</i>	<i>615</i>	<i>616</i>	<i>626</i>
<i>March 1999</i>		28.8%	52.9%		18.3%
<i>April–June 1999</i>	12.5%	8.5%	72.1%		
<i>July–Sept. 1999</i>	72.2%		12.0%		
<i>Oct.–Dec. 1999</i>	19.2%	8.8%	60.3%	10.1%	

**Table 102.** Percent of total kept lbs., by quarter (species with 5% or more of quarterly catch), 1999 logbook data.

<i>Species</i>	<i>Monkfish</i>	<i>Sea Scallops</i>	<i>Bluefish</i>	<i>Spiny Dogfish</i>	<i>Skates</i>	<i>Atlantic Croaker</i>	<i>Smooth Dogfish</i>	<i>Squeteague Weakfish</i>
<i>March 1999</i>	12.1%	84.1%						
<i>Apr.–June 99</i>	35.5%	13.3%	5.6%	19.7%	12.0%			
<i>Jul.–Sep. 99</i>	17.8%	35.3%	8.3%			13.3%	8.6%	
<i>Oct.–Dec. 99</i>	54.7%	2.9%	10.1%	17.2%				5.3%

#### 3.5.16.4 Long Beach, Ethnographic Community Profiles

The fishing port of Long Beach Island is mostly located in the small bayside municipality of Barnegat Light, on this long, densely-developed barrier island on the central New Jersey coast. The commercial fishery has been undergoing a transition from over 20 years of specializing in offshore, deep-water and distant-water longlining. That tradition remains in the importance of bottom and pelagic longline gear (18% of total landed value) and of species such as tilefish (5% of value), swordfish (6%), and tunas (totaling 13% of value in 1998, including big eye, yellowtail, blackfin, and skipjack) [...] (Handlines are also used for big eye tuna as well as for bluefish and other species; troll lines for yellowfin tuna). However, the physical perils of the inlet has kept this a relatively small-boat longliner fleet, and natural and regulatory changes in the species sought have forced people to look for alternatives. An alternative developed over the past decade is sea scalloping (25% of value using dredges) and the attendant by-catch of angler (30% of value in 1998). Another is for expansion of the species sought with bottom and pelagic longlines, including sharks and dogfish among others. In 1998, the pelagic longline gear of Long Beach Island caught fully 23 different species, and bottom gear caught 17 species.

Whether transitional adaptation or old stand-by, the gill-net fisheries of Long Beach Island are the most substantial, representing 76% of poundage and 45% of landed value in 1998. The number of species involved is equally impressive: 61 for the drift gillnets, including mackerel, dogfish, flounders, tunas, weakfish, shad, sharks; 23 for the sink gill-nets. In contrast, otter trawl dragging is minor and only 10 species were landed. Spiny Dogfish are a recent focus, representing over 37% of total landings in 1998 and about 6% of landed value (McCay and Cieri 2000: 62-63).

### 3.5.17 Geographic Area: Cape May city, Cape May County, New Jersey

#### 3.5.17.1 General Demographic Profile

From the 1990 Census, the population of Cape May was 4,668, of which 100% was urban. 52% of the population was male and 48% was female. Approximately 60.7% of the town was between 18 and 65 years of age; 16.3 % of the population was 18 years and under, and 25% was 65 years or older. 84.4%

of the population graduated from high school, while 25.2% had a bachelor's degree. 89.4% of the population was white, 8.0% was black, 1.3% was "other," 0.9% was Asian or Pacific Islander, and 0.4% was American Indian or Aleut. 2.2% of the population reported being Hispanic. Of the ethnic categories reported in the census, which account for at least 5% of the population, Irish dominated (32.8%), followed by German (21.4%), English (13.9%), and Italian (8.0%). 25% of the population was born in New Jersey, while 3.4% of the population was born outside of the U.S.; 4.7% of those older than five speak a language other than English. There were 1,868 households, of which 49% were married-couple families, 2.6% were male-householder families, 8.8% were female-householder families, and 39.7% were non-family households. The average number of people per household was 2.13.

### 3.5.17.2 *Economic Characteristics*

63.8% of the population in general, aged 16 years and older, was in the labor force, of which 4.3% was unemployed and 32.7% was in the armed forces. By gender, however, 76.6% of male residents were in the labor force, of which 2.6% were unemployed and 48.1% were in the armed forces. For women, 49.9% were in the labor force, of which 7.1% were unemployed and 7.1% were in the armed forces. The median household income was \$27,560, with a per capita income of \$15,884. 4.9% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 103 shows the relative proportions of industry for Cape May.

**Table 103.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	25	1.6 %
Mining	0	0.0 %
Construction	86	5.4%
Manufacturing, non-durable goods	50	3.1 %
Manufacturing, durable goods	37	2.3 %
Transportation	28	1.8 %
Communications and other public utilities	45	2.8 %
Wholesale trade	15	0.9 %
Retail trade	432	27.1 %
Finance, insurance, and real estate	82	5.1 %
Business and repair services	39	2.4 %
Personal services	133	8.3 %
Entertainment and recreation services	53	3.3 %
Health services	94	5.9%
Educational services	183	11.5 %
Other professional and related services	138	8.7 %
Public administration	153	9.6 %
Total	1,593	100%

### 3.5.17.3 *Cape May as Homeport*

Cape May can be considered a port significant for scalloping during the 1999 fishing year as both a designated homeport (Table 41) and a port of landing (Table 40). There were 29 limited access boats and 26 general category boats that listed Cape May as their homeport. Over 3/4<sup>th</sup> of the limited access boats showed at least some scallop landings, accounting for almost all kept pounds of scallops. Since 20 general category boats showed landings of other species, their overall activity will be discussed below. Logbook data show that scallop dredge gear accounted for 93.0% of scallops (by kept pounds) caught by boats home-ported at Cape May, followed by scallop bottom trawl (6.8%), "other" gear (0.2%) and other

bottom trawl (<0.02%). Of fisheries that account for at least 5% of the total catch (by kept pounds) for limited access vessels, scallops accounted for 10.2%, with menhaden accounting for 65.0%, followed by loligo squid (10.6%), and Atlantic mackerel (5.8%). For the general category boats, scallops accounted for less than 0.03% of their total catch, with Atlantic mackerel accounting for 34.6%, followed by menhaden (25.8%), illex squid (18.7%), and loligo squid (9.5%).

**Table 104.** Vessel and scallop trip characteristics, 1999 permit data and 1999 logbook data.

Permit Status	Average vessel length, in feet (all permitted vessels)	Average vessel gross tons (all permitted vessels)	Average crew size, per trip landing scallops*	Average days absent, per trip landing scallops*
Limited Access	79.7	146.0	6.7	8.4
General Category	62.7	99.8	N/A	N/A

\*For limited access boats, only trips which landed greater than 400 pounds scallops are considered; for general category boats, only trips that landed less than or equal to 400 pounds scallops are considered.

A number of statistical areas, concentrated on lower New England and the upper Mid-Atlantic, were important fishing grounds for the Cape May fleet, as shown in Table 105.

**Table 105.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
525	86747	5.0%	63.6%	7	85.7	176.6	6.9	12.4
562	724438	42.0%	88.2%	76	84.1	160.3	6.7	7.3
615	185476	10.7%	21.4%	29	83.8	160.0	6.5	8.0
620	92306	5.3%	93.8%	8	86.3	149.5	7.0	14.0
621	119317	6.9%	0.9%	18	75.3	130.1	6.9	7.8
622	249497	14.4%	3.5%	37	80.6	145.9	6.8	7.9

\* Only trips landing greater than 400 pounds.

There was a seasonality to this use of the different fishing grounds, however, as shown in Table 106, as well as seasonality to common fisheries composition.

**Table 106.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

Statistical Area	525	562	610	615	616	620	621	622	626
March 1999			10.0%	19.6%		14.0%		43.3%	9.3%
April-June 1999	9.3%	14.3%		18.0%	5.6%	9.4%	10.0%	16.7%	
July-Sept. 1999		64.4%					7.0%	10.9%	
Oct.-Dec. 1999		79.0%		5.4%				5.6%	

**Table 107.** Percent of total kept lbs., by quarter (species with 5% or more of quarterly catch), 1999 logbook data.

Species	Atlantic Mackerel	Sea Scallops	Loligo Squid	Menhaden	Illex Squid	Atlantic Croaker	Squeteague Weakfish
March 1999	72.1%	2.0%	15.4%				
April-June 99	38.0%	6.2%	5.6%	36.3%	7.4%		
July-Sept. 99		3.6%	5.6%	65.5%	20.7%		
Oct.-Dec. 99		7.4%	35.3%	24.3%		6.7%	8.0%

Vessels home-ported at Cape May landed the majority of their catch from all fisheries (78.8% of total kept pounds) at Cape May, followed by Point Pleasant NJ (15.2%), New Bedford (2.3%), and

Chincoteague VA (1.4%); 94.3% of the total catch was landed at New Jersey ports. Similarly, these vessels landed most of their scallops (in terms of kept pounds) at New Bedford MA (38.6%), Cape May (37.6%), and Newport News VA (16.4%), with 38.6% of scallops landed in New Jersey.

#### 3.5.17.4 Cape May as Port of Landing

Cape May is also an important port of landing in terms of landed value (Table 40). That listing is based upon dealer weighout data, which recorded 1,857,658 landed pounds of scallops compared to the logbook data that recorded 1,674,659 kept pounds of scallops during the same period. There were 68 limited access vessels, 31 general category boats, and 26 vessels with neither FMP that visited Cape May at least once during fishing year 1999. 87.3% of all kept pounds landed (from all fisheries) came from boats listing Cape May as their homeport; 89.7% came from boats listing New Jersey as homeport state. In terms of scallops, 38.8% of kept pounds of scallops came from boats listing Cape May as homeport, followed by Norfolk VA boats (24.1%), Philadelphia PA (10.7%), Newport News VA (7.9%), and New Bedford MA (5.3%). 41.1% of scallops kept pounds came from boats listed New Jersey as homeport state.

59.1% of scallop kept pounds were landed with scallop dredge, followed by scallop bottom trawl (32.1%), other bottom trawl (6.9%), “other” gear (1.3%), and other dredge (0.6%). 99.0% of scallop kept pounds were landed by limited access vessels, with general category boats landing 1.0% and other boats landing <0.004%. In terms of kept pounds, 35.2% of the total catch came from menhaden, followed by Atlantic mackerel (21.8%), illex squid (16.3%), loligo squid (12.0%), with scallops accounting for 4.4%. Scallops accounted for 44.4% of landed value in fishing year 1999 (Table 40). Scallops landed at Cape May came predominantly from Mid-Atlantic waters, as shown below.

**Table 108.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
615	310850	18.6%	28.8%	46	83.5	158.4	6.5	9.0
621	413326	24.7%	2.7%	59	76.4	127.2	6.7	7.6
622	646731	38.7%	7.0%	108	79.9	145.3	6.7	7.4

\* Only trips landing greater than 400 pounds.

The following two tables show the distribution of both the statistical areas from which scallops predominantly were caught, and the overall composition of fisheries landed at Cape May, by quarter.

**Table 109.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

Statistical Area	562	615	621	622	626	627
March 1999		23.6%	10.6%	54.5%	5.9%	
April-June 1999		24.7%	35.9%	27.6%		
July-Sept. 1999	14.6%	10.0%	11.6%	45.6%		6.8%
Oct.-Dec. 1999		10.0%	19.2%	55.7%		7.0%

**Table 110.** Percent of total kept lbs., by quarter (species with 5% or more of quarterly catch), 1999 logbook data.

Species	Atlantic Mackerel	Sea Scallops	Loligo Squid	Menhaden	Illex Squid	Butterfish	Atlantic Croaker	Squeteague Weakfish
March 1999	70.1%	2.5%	17.1%					
Apr.-June 99	45.0%	8.6%	8.9%	22.6%	9.0%			

<i>Jul.-Sep. 99</i>	2.7%	5.9%	55.0%	29.9%			
<i>Oct.-Dec. 99</i>	4.2%	33.9%	29.3%		5.5%	12.9%	8.2%

#### Cape May, Ethnographic Community Profiles

Situated at the southeastern tip of New Jersey, at the mouth of Delaware Bay, Cape May has long been a departure and arrival point for the well-traveled Cape May, NJ to Lewes, DE ferry, a transportation link between the cities of the north and the Delmarva Peninsula. Among nearby cities to the south is Ocean City, Maryland's premier tourist destination and a common destination for tourists from Washington, DC, and other nearby metropolitan areas. In both areas, tourism dominates the economic activity and the commercial fishing fleets are, on the one hand, appendages to the tourist sectors and, on the other, economic activities that have been marginalized by the tourist sector. Fishers in both locations have experienced the encroaching effects of coastal gentrification and real estate development, although portions of the fleet in Cape May have situated themselves within the tourist trade in a way similar to Chatham fishers, becoming tourist attractions themselves and providing fresh fish to local markets and restaurants. [...] Ocean City's fleet is primarily a small- to medium-sized vessel fleet, operating as day vessels and fishing often in Maryland state waters for blue crab, particularly behind the barrier islands. Cape May's fleet is larger and more diverse than Ocean City's, fishing with draggers, lobster pots, gillnets, and black sea bass pots. In 1993, McCay, et al. (1993: 76) reported that squid was becoming the most important species in Cape May, that there were 33 local draggers and 57 transient vessels. The fleet supplies fish to a bustling seafood processing sector at four primary locations around the city, creating shore-side employment for over 200 individuals, some of whom are contracted for work from as far away as Philadelphia.

Observing transient vessels is not less common in Ocean City. Perhaps the most significant attribute of the Cape May and Ocean City ports is their status as ports for transient boats from the north and south. During our visits, we saw shrimp vessels from North Carolina, Mississippi, and Norfolk in these ports, alongside local vessels. The central locations of Cape May and Ocean City in terms of northern and southern fisheries, combined with an increase in transience among fishers in general as crises develop in one fishery after another, is likely to increase the importance of these ports in the future. (Griffith and Dyer 1996: 118).

Cape May is New Jersey's largest commercial fishing port in terms of landings and value. When combined with neighboring Wildwood (the fishing port is often referred to as "Cape May/Wildwood"), its landings exceeded 93 million lbs., worth over \$29 million in 1998.

Draggers, or vessels using bottom otter trawls, account for 69% of Cape May's landings and 70% of its value [...] Most are used for a wide variety of finfish species [...] Some are also used for scallops; Cape May has a long history of combined or alternating fin-fishing and scalloping. Squid is very important: In 1998 17% of Cape May's landed value came from *Illex* squid and another 22% from *Loligo* squid [...] Much of the squid is processed locally as is Atlantic mackerel, caught with draggers and midwater pair trawls. Summer flounder has been a major species but regulations have severely reduced catches (4% landed value in 1998). Scup is another dragger-caught species of historic importance in Cape May; in 1998 it represented 6% of landed value. Cape May is also the home of some of the very few vessels allowed to use purse seines for bluefin tuna in U.S. waters, but there were few purse seines landings in Cape May in 1998, except for menhaden landed by vessels with menhaden purse seines. Fishing for large pelagics is also done with longlines and troll lines.

Although sea scallop management measures have reduced opportunities for many Cape May fishermen, scalloping remains important. In addition to scalloping with otter trawls, scallop dredges are used, accounting for 15% of the total value of Cape May's landings in 1998. Angler (monkfish) are caught with scallop dredges as well as gill-nets, otter trawls, and scallop otter trawls (1.8% of landed

value). Dogfish catches are now relatively small (0.3% of total landings in 1998) (McCay and Cieri 2000: 80-81).

Commercial and recreational fishing docks are scattered around Cape May or, more properly, Lower Township, but centered in an area known as Ocean Drive, for a road which leaves the main highway and crosses the marshes toward Wildwood, and Schellenger's Landing, just over a large bridge that connects the mainland with the center of Cape May and its beaches.

Our visit to Cape May reinforced what we later learned at other ports in the Mid-Atlantic region, that commercial fishing businesses and uses of the waterfront are lower priority than recreational and resort-oriented uses within the community. For example, the 1988 "harborfront enhancement" master plan and other documents emphasize "full-service" recreational marinas as "...the most economically viable marina option to both the investor and the community at large." The local Chamber of Commerce carries brochures for local charter and party boat and recreational marinas, as well as restaurants, hotels and bed-and-breakfast accommodations, etc. They could not come up with any information on commercial fishing in Cape May, despite the fact that this is the largest fishing port in New Jersey and one of the largest on the Atlantic seaboard. For this reason, we start with an examination of planning and zoning.

### *3.5.17.5 Planning and Zoning*

Although the fishing port is known as Cape May, in fact it is not located in the city of Cape May but rather in neighboring "Lower Township," part of Cape May County. The Lower Township planning director stated that the constant association of Cape May and the fishing industry is a sore spot for Lower Township because Lower Township would like to be identified with the fishing community. He said that people realize fishing is an economic boon to the area and that they feel pretty positive about it. He said there are only a few conflicts with people who live near the boats.

The planner said that most conflicts over land use by the fishing industry occur when new residential developments are sited next to fishing areas. The new residents complain about noise and claim that the piling up of gear is unsightly. He mentioned one example, new condos not far from Schellenger's Landing, where a combination fish market, dock, and restaurant and a number of large fishing boats are found.

Private recreational boating and fishing marinas are said to be a powerful political force in the township. In 1989 the planner interviewed said he conducted a study to site a public boat ramp. Planning board members reacted negatively to this proposal to provide free public access when some of the private marinas had launching ramps where people without slips could pay for boat launching. Although he worked with the Army Corps of Engineers and the state DEP to develop plans for five possible sites, and the state itself developed plans for another site, nothing has happened.

Regarding land use conflicts vis a vis wetlands, especially along Ocean Drive, the informant said there has not been a significant amount of conflict, even though there have been several expansions of existing facilities. For example, at one particular Marina, which already had 440 slips (according to manager of a bait and tackle shop at the marina) 380 more slips are being added, but no wetlands are being converted for this. All that was needed to add the slips was a waterfront development permit from the DEP, local permits, and a site plan. The parking lot was already filled in when the Wetlands Act went into effect in 1972. One large clamming business, (see below), expanded land-wise when processing was added six years ago, but once again, the land used was already filled in, according to our informant.

Schellenger's Landing, just over the bridge leading to the city of Cape May, is zoned "marine general business" with allowance for expansion of the marine industrial character. A large restaurant-fish market-packing dock complex has been expanding. It is a very popular place for tourists, who like to look at the fishing boats while they are eating lunch or dinner. Its large parking lot was once the site of another bar and restaurant. We were unable to talk with anyone at this complex. The planner estimated that 500 people work in the company's fishing, processing, fresh fish market and restaurant enterprises.

Next to that complex is a marine railway, which our informant said might have been converted to condos if it were not for the founder's grandson, who modernized in order to be able to work on steel boats. According to our informant, the founder's grandson was afraid that tourists would be annoyed by his business, but it turns out that they love to watch him power-washing the boats from the porch of the restaurant next door. Other marine-related businesses in and around the landing include two recreational marinas, two marine suppliers, two bait and tackle shops, a whale research center, and a "marlin and tuna club." Also there are a pizza shop, a motel, a bar, a wildlife art gallery, an antique store, two restaurants, and a gasoline station. Some cater to people in the fishing industry and some do not.

Further expansion of the fishing industry, commercial or recreational, is limited by the high cost of land near the waterfront. According to our informant, a 150' x 136' non-waterfront plot, seen on the planning map, that was being offered for \$350,000 five or six years ago, would go for \$400,000 now. As he put it, "That's awfully expensive to be used to store your fishing equipment." Another informant pointed to vacant buildings nearby, which had been intended for a deli and an antique store. Real estate costs proved too high for businesses like these. Even though there is considerable car and boat traffic at the landing, demand for homes is high. Many of the houses were built with use variances.

Lower Township has three "marine development" zones, located along Ocean Drive at Two Mile Landing and at Shaw Island and Cresse Island adjacent to Wildwood Crest. These areas are currently used by recreational boats. Across from Shaw I. is a new development, where 325 new slips are being put in. It is interesting to note that it was originally planned as a condominium development but now appears to be mainly a marina.

There is also a place off Richardson's Road, adjacent to Rte. 47, where four fishing boats are docked at a small service building. It does not appear as "marine development" on the zoning map, however, our informant knows of it. A woman who lives near where the boats are docked stated that the man who mostly uses them is an elderly fisherman. One of the boats that the elderly fisherman uses is clearly a lobster boat and one resembles a crabber, which is old army green. Two other boats are also docked here.

Cape May City does have several areas with zoning "uses by right" that include fishing-related uses such as piers, launching ramps, boat building and repair, retailing of goods and services oriented to marine or recreational activity, and so forth. None of these apparently hosts commercial fishing businesses, nor does an area zoned "mixed use." It appears that by fishing what is meant in zoning is recreational fishing. A woman in the zoning office said that they do not deal at all with commercial fishing, at least not in the 12 years she has worked there.

There has been a fair amount of friction between the recreational and commercial fishermen, including name-calling, some of which has even been printed in the newspaper. However, some commercial boats are found amongst the various marinas. For example, a lobster boat was docked next to a marina on Shore Drive. Like many vessels in this area, it was registered in Philadelphia. Offshore lobstering is an important fishery even this far south; the owner of this boat reportedly moved here recently and is doing very well. At another marina, a small commercial vessel pulled up to refuel; the

men on board had come down from Port Norris and were on their way out to fish with pots for conch. Their season was just beginning.

We visited a complex on a saltwater creek (Mill Creek) that includes a marina, bait and tackle, marine supply, charter boats. The marina itself is small, about 28 slips. Access to this particular area is now difficult for large vessels because of silting, due to the canal built between Cape May and the mainland. (Saltwater intrusion of the water supply is another problem linked to the canal). The marina is one of four owned by the owner of several party boats. Another of the marinas owned by this person has over 400 slips and is still building; it caters exclusively to recreational boats.

### *3.5.17.6 Fishing-Related Businesses*

Schellenger's Landing is the most visible center of fishing in the Cape May area. A large restaurant-fish market-packing dock complex is a very popular place for tourists, who like to look at the fishing boats while they are eating lunch or dinner. Its parking lot was once the site of another bar and restaurant. We were unable to talk with anyone at this complex. The planner estimated that 500 people work in the company's fishing, processing, fresh fish market and restaurant enterprises. At the time of our visit, there were 13 fin-fishing, lobstering, and other fishing vessels docked at various sites around the landing, several of which came from Hampton, Virginia and North Carolina ports. Cape May has long been used by fishermen from other states.

Ocean Drive is the location of several important commercial fishing businesses. The first is a company with a long history in the area, as a wholesale distributor, exporter, and processor. The company's "The focus for the past 18-20 years has been on high volume, low value species" such as mackerel, herring, squid and menhaden, according to the person we interviewed, who has been with the company for 25 years. They also deal with a little of everything else.

He said that over the last 15 years there has not been much change within the company except the growth of its processing capacity, mainly within the last five years. The company distributes and exports more than it processes. The processing that does occur involves turning squid into calamari. Otherwise, they check for species, size and quality, and freeze and pack for the market. Our informant said they do very little local business, and that which they do is only in wholesaling. Exports to foreign countries (all frozen) constitute 50% to 60% of their business. He said that the countries vary from year to year, depending on the market. The domestic market is 40% to 50% of the business. Of that, 15% to 20% is made up of fresh fish that goes to Philadelphia, New York, Boston and the Carolinas. The rest is frozen and sent to other processors and distributors throughout the country.

The company has expanded by taking over over the Two Mile Landing dock, which is across a 50-cent toll bridge on the way to Wildwood. It is being upgraded and will be used for large, long-range freezer trawlers and freighter vessels carrying mackerel and herring. The company owns only a half share in two boats. It works almost exclusively with independents, most of who have been dealing with the company "for generations." He mentioned one example, a local family of Swedish background. Most of the boats are local, though a few come from the South and from New England.

Fourteen boats work with this company full-time. They are all trawlers, though a couple of boats have the capacity to purse seine as well. All of the boats dock at this company, which provides them with fuel, ice and electricity. The boats are 85' to 145' in size and generally use 3- to 5-man crews except the freezer boats, which have 8 to 9 crew members. They fish as far east as offshore Massachusetts and as far

south as North Carolina. They go 40 to 100 miles offshore to as much as 300 fathoms. Our informant said that they are just beginning the Illex squid season, and are also bringing in menhaden.

The company has 75 to 80 employees who are not on the boats. He said they live in towns from Cape May to Bridgeton. The ethnic make-up is approximately 40% Hispanic, 40% white and 20% Asian, black, and other. Most of the Hispanics have been with the company a long time and live in Bridgeton, NJ. He also estimated that 65% to 70% of the workers are male.

This company has been on its property since 1954 and has had some problems with physical expansion due to laws governing conversion of the surrounding wetlands. Our informant said that New Jersey is very strict about this, much more so than most states. He said this was one reason they decided to acquire the dock at Two Mile Landing.

Two Mile Landing has a commercial dock, being upgraded. There is a pleasure boat marina next to this dock, as well as a para-sailing facility and a company that charters pleasure trips. There are also 2 restaurants at the landing, one quite large. An informant at the larger restaurant said that most of their fish and seafood that they serve is local and that the chef buys it from local wholesalers. The local types that they get are flounder, scallops, clams, swordfish, tuna, whole lobsters and mako shark. Also, some of the shrimp is local and some comes from farms. The crabs they get are from Maryland, the lobster tails are from New Zealand, and the salmon is from Norway. She also mentioned that local people sometimes try to sell to the restaurant directly, but that they "only buy from legitimate places."

We interviewed the owners of a neighboring and also large seafood company. It has a retail store and a processing factory. The permanent staff numbers about 20 people, mostly local, six to eight of whom work in the retail store/fish market. The rest work in the processing plant. At the time of our visit there were 35 or 40 contract laborers (mostly "Vietnamese") brought in from Philadelphia, as well as four or five African-Americans. The contract laborers had been working consistently for a month, packaging squid, the dominant species being processed here in recent times.

One of the owners said that handling squid as they were was not profitable, not even a "stopgap measure," but the regulations were forcing them to any markets they could. Their traditional dominant markets are squid, flounder, sea bass, porgies and clams/quahogs.

The owners said that they have lost two thirds of their gross volume in the last eight years due to regulations. They said that they can't compete with the prices of the imported, processed product. They believe that other countries are making big money at their expense. They were recently given an extra squid quota in exchange for their cooperation on a change in the season opening for squid. They accepted the quota but said that now their boats are having a problem bringing in the quota because of the poor timing. They complained about how limited their boats have become by the regulations that force them to fish only for certain species in very limited windows of opportunity.

Fifteen boats work for this company. Dealing with the declining volume problem by increasing the number of boats would mean having "...to steal them from other dealers or from other states who are themselves limited." They emphasized that no one is willing to risk building another boat with such a limited, unstable future for the industry looming overhead. The company had recently built a couple of large-capacity freezers and has expanded its dock over the years.

A third commercial fishing business in the Ocean Drive area owns 11 surf clam/ocean quahog vessels, nine of which are active. They also own a freezer trawler, seven wet boats and two refrigerated sea water vessels. Our first informant, who runs the dock, said that they go for both clams and finfish, however recently they have been bringing in mainly squid and mackerel. As noted in The New York

Times, August 10, 1997, the owner of this company "is the only one to work in 7 of the state's top 12 fisheries: clams, squid, scallops, flounder, menhaden, porgy and mackerel." The only things his boats do not engage in are long-lining for tuna and pot fishing.

The company also off-loads about 8 independent boats at Atlantic Cape Fisheries, and has another clam offloading dock in Point Pleasant. According to its owner, at this facility there are 15 shore employees, approximately 20 seasonal packers, and 45 crew on the boats. He tries to keep the crews of the boats small in size, for efficiency, but this increases the problem of finding appropriate, trained workers. The boats range in size from 75' to 125' and that they take crews of 4 to 7. Our first informant said that they have had to hire a number of transients from Virginia (for scalloping) and Massachusetts because it has been getting more difficult to find local workers for the jobs. He added that sometimes the boats cannot go out because they do not have enough properly trained crew members. Crews are paid by shares, which he said vary. Typical shares are 60/40 and 55/45, boat to crew.

This seafood businessman has been involved in several leadership positions and organizations. Together with representatives of other Cape May/Wildwood businesses, he started and supports the Cape May Seafood Association, which has a director and a budget of about \$100,000 a year. It has had problems, including competition with a group called Families and Friends of the Fishermen, which started up early in the 1990s in the wake of ITQs as well as conflicts over horseshoe crabs and menhaden fishing. He recently helped start a state-wide organization, the Garden State Seafood Association, which employs a professional lobbyist in the state capital.

According to the owner, this business has had little experience with land-use conflict because it is far removed from the main tourist areas of Cape May. It has been at this location since 1976 and owns 10 acres. However, there have been complaints about tractor trailers and equipment out in the yard creating an eyesore. "If Lower Township enforced the regulations, we would be in trouble for all the s\_\_\_ lying around." He said he thinks many people consider the fishing companies "scenic," but that they are "neither significantly supported by nor discouraged by local policies."

Regarding the study of fishing communities, the owner was very cynical, stating that it is conducted by the council just to placate communities. He says he wants to help management, but that management is working backwards. He thinks that the only things that constitute the public good vis a vis fishing are preserving biodiversity and keeping seafood affordable for people. He thinks the most important question for management is whether it should be done by input controls (e.g., time and gear management) or output controls (e.g., ITQs).

A large sea clam facility is located on Ocean Drive across from two of the finfish processing companies described above. It bought out another large company in 1992. We did not visit the facility. According to an informant, they have always caught clams out of there (and still do using the several boats that they own), but the current company expanded this Lower Township facility to do all of the processing of clams on site, rather than shipping the shucked clams elsewhere for cooking and canning or freezing (McCay and Cieri 2000: 83-90)

### *3.5.17.7 Fishing and the Larger Community*

A fisherman's memorial is at the end of Missouri Ave. (off of Pittsburgh Ave.). It portrays a woman and a child looking out to sea. A fishermen's wives organization, now defunct, played a major role in creating this memorial. The inscription says,

*“Dedicated to the fishermen lost at sea - 1988  
He hushed the storm to a gentle breeze,  
And the billows of the sea were stilled”*

There is also a bronze plaque for fishermen lost at sea on the Washington St. pedestrian mall. A Seafood Festival in Cape May had been moribund for a while until it was taken over by the Chamber of Commerce in the mid-1990s. When asked whether the commercial fishers in the area had been involved in organizing or supporting the seafood festival, a representative of the Chamber of Commerce said that there is a "non-existent relationship between us and them. We tried, they tried, but it never worked out." One of the seafood company owners interviewed expressed concern that such a festival was run to display commercial fishers as a "peep show" for the public, or for preserving some fabricated sense of community heritage, rather than to promote specific products. Besides, he said, fishers need to work for a living and cannot take time for these festivals.

We talked with quite a few people about how the fishing industry connects to the larger community. One, who works at a large seafood company, said that as far as a connection with the larger community is concerned, the fishing industry has “always been a very important and integral part of the community here. But it has also been very unrecognized, more often than not by choice. It’s not like New England – people do not think of this as a fishing community... fishing provides a lot of the jobs. If a guy or girl did not mind working hard, they could do super well. Some people used to make a lot of money, and then 80% of them blew it. Now it has changed a lot over the last 6 to 10 years. But still there are some people making money.” He thinks that the fishing is coming back in the area, though there are still a lot of problems, “some caused by ourselves, some that we have no control over.”

When asked about the fishing industry and tourism, our informant said that most of the industry has been “low key by choice.” He said that the one place where tourists have been cultivated is at a company that developed a seafood market and restaurant-bar at its dock. Other businesses “don’t encourage the tourist link because there is no real benefit to the company.” (A pamphlet *This Week in Cape May* lists a 45-minute “Fisherman’s Wharf Tour” that is scheduled to occur four times in May and June at the above-mentioned dock and fish packing plant. The tours are sponsored by the Mid-Atlantic Center for the Arts in Cape May City.) (McCay and Cieri 2000: 91-92).

### **3.5.18 Geographic Area: York County, Virginia (for Seaford, VA)**

#### *3.5.18.1 General Demographic Profile*

From the 1990 Census, the population of York County, in which Seaford VA is found, was 42,422, of which 73% was urban and 27% was rural. 49.8% of the population was male and 50.2% was female. Approximately 63.3% of the town was between 18 and 65 years of age; 29.2 % of the population was 18 years and under, and 7.5% was 65 years or older. 88.3% of the population graduated from high school, while 28.9% had a bachelor’s degree. 81.3% of the population was white, 15.6% was black, 2.3% was Asian or Pacific Islander, 0.5% was “other,” and 0.3% was American Indian or Aleut. 1.7% of the population reported being Hispanic. Of the ethnic categories reported in the census, which account for at least 5% of the population, English dominated (20%), followed by German (18.5%), Irish (11.5%), and “American” (6.9%). 42.1% of the population was born in Virginia, while 3.3% of the population was born outside of the U.S.; 5.2% of those older than 5 speak a language other than English. There were 14,474 households, of which 70.4% were married-couple families, 2.7% were male-householder families, 8.8% were female-householder families, and 18.1% were non-family households. The average number of people per household was 2.9.

### 3.5.18.2 Economic Characteristics

71.9% of the population in general, aged 16 years and older, was in the labor force, of which 3.8% was unemployed and 12.4% was in the armed forces. By gender, however, 81.8% of male residents were in the labor force, of which 2.6% were unemployed and 20.5% were in the armed forces. For women, 62.4% were in the labor force, of which 5.4% were unemployed and 2.0% were in the armed forces. The median household income was \$40,363, with a per capita income of \$15,742. 4.8% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 111 shows the relative proportions of industry for York County.

**Table 111.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	235	1.2 %
Mining	14	0.1 %
Construction	1,202	6.3%
Manufacturing, non-durable goods	669	3.5 %
Manufacturing, durable goods	2,233	11.8 %
Transportation	528	2.8 %
Communications and other public utilities	360	1.9 %
Wholesale trade	407	2.1 %
Retail trade	2,995	15.8 %
Finance, insurance, and real estate	910	4.8 %
Business and repair services	683	3.6 %
Personal services	811	4.3 %
Entertainment and recreation services	472	2.5 %
Health services	1,593	8.4%
Educational services	1,840	9.7 %
Other professional and related services	1,623	8.6 %
Public administration	2,374	12.5 %
Total	18,949	100%

A county profiling [see <http://www.vapower.com/econdev/profiles/York/>] shows that one processing company, located in Seaford, is one of the three largest civilian employers in York county (all showing employees of 200), and is the largest employer in Seaford.

### 3.5.18.3 Seaford as Port of Landing

Seaford is a significant place for scallopers as a port of landing (Table 40). That listing is based upon dealer weighout data, which recorded 1,215,166 landed pounds of scallops compared to the logbook data that recorded 1,091,272 kept pounds of scallops during the same period. Logbook records show there were 17 limited access vessels that visited Seaford at least once during partial fishing year 1999. 100% of kept pounds landed (from all fisheries) came from boats listing Norfolk as their homeport and Virginia as homeport state.

90.2% of scallop kept pounds were landed with scallop dredge, followed by other dredge (9.8%). Logbook records show 100% of scallop kept pounds landed by limited access boats. In terms of kept pounds, 94.6% of the total catch came from scallops, followed by monkfish with 4.4%. Scallops accounted for 98.1% of landed value in fishing year 1999, (Table 40). Scallops landed at Seaford came predominantly from Mid-Atlantic waters, as shown below.

**Table 112.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
613	64486	6.0%	92.2%	10	81.4	128.4	6.6	11.2
615	221402	20.6%	94.5%	25	88.1	140.4	6.8	13.2
616	130092	12.1%	94.1%	11	87.6	139.6	6.9	18.3
621	129462	12.0%	92.4%	14	83.5	144.2	6.8	15.4
622	170799	15.9%	96.2%	21	80.3	134.7	6.7	11.4
626	277386	25.8%	95.3%	34	80.4	134.4	6.7	12.5

\* Only trips landing greater than 400 pounds.

The following two tables show the distribution of both the statistical areas from which scallops predominantly were caught, and the overall composition of fisheries landed at Seaford, by quarter.

**Table 113.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

Statistical Area	562	613	615	616	621	622	626
<b>March 1999</b>			16.6%		23.9%	7.4%	48.7%
<b>April-June 1999</b>		6.4%	25.9%	11.5%	14.7%	17.7%	20.5%
<b>July-Sept. 1999</b>		7.5%	18.3%	18.9%		16.6%	24.9%
<b>Oct.-Dec. 1999</b>	43.6%				10.1%	11.6%	23.1%

**Table 114.** Percent of total kept lbs., by quarter (species with 5% or more of quarterly catch), 1999 logbook data.

Species	Sea Scallops	Monkfish
<b>March 1999</b>	91.4%	6.2%
<b>Apr.-June 99</b>	94.3%	
<b>Jul.-Sep. 99</b>	96.7%	
<b>Oct.-Dec. 99</b>	93.5%	

### 3.5.19 Geographic Area: Hampton city, Hampton city, Virginia

#### 3.5.19.1 General Demographic Profile

From the 1990 Census, the population of Hampton city was 133,793, of which 100% was urban. 48.8% of the population was male and 51.2% was female. Approximately 65.4% of the town was between 18 and 65 years of age; 25 % of the population was 18 years and under, and 9.6% was 65 years or older. 79.7% of the population graduated from high school, while 19.1% had a bachelor's degree. 58.4% of the population was white, 38.9% was black, 1.7% was Asian or Pacific Islander, 0.7% was "other," and 0.3% was American Indian or Aleut. Two percent of the population reported being Hispanic. Of the ethnic categories reported in the census, which account for at least 5% of the population, German dominated (13.5%), followed by English (12%), Irish (10.4%), and "American" (6.7%). 48.8% of the population was born in Virginia, while 2.9% of the population was born outside of the U.S.; 5.2% of those older than 5 speak a language other than English. There were 49,673 households, of which 54.1% were married-couple families, 3.3% were male-householder families, 13.5% were female-householder families, and 29.2% were non-family households. The average number of people per household was 2.58.

#### 3.5.19.2 Economic Characteristics

68.9% of the population in general, aged 16 years and older, was in the labor force, of which 5.9% was unemployed and 12.2% was in the armed forces. By gender, however, 78.7% of male residents were in the labor force, of which 4.5% were unemployed and 18.8% were in the armed forces. For women, 59.8% were in the labor force, of which 7.5% were unemployed and 4% were in the armed forces. The median household income was \$30,144, with a per capita income of \$13,099. 10.8% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 115 shows the relative proportions of industry for Hampton city.

**Table 115.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	563	1.0 %
Mining	61	0.1 %
Construction	4,224	7.2%
Manufacturing, non-durable goods	1,534	2.6 %
Manufacturing, durable goods	9,445	16.1 %
Transportation	1,870	3.2 %
Communications and other public utilities	1,157	2.0 %
Wholesale trade	1,386	2.4 %
Retail trade	10,181	17.4 %
Finance, insurance, and real estate	2,662	4.5 %
Business and repair services	2,405	4.1 %
Personal services	1,890	3.2 %
Entertainment and recreation services	742	1.3 %
Health services	4,626	7.9%
Educational services	5,223	8.9 %
Other professional and related services	3,586	6.1 %
Public administration	7,006	12%
Total	58,561	100%

### 3.5.19.3 Hampton as Homeport

Hampton can be considered a port significant for scalloping during the 1999 fishing year as a designated homeport (Table 41) and as a port of landing (Table 40). There were seven limited access boats and one general category boat that listed Hampton as their homeport. Since there was only one general category boat, its fishing activities will not be discussed below. The limited access boats accounted for all kept pounds of scallops. Logbook data show that dredge gear accounted for most of the scallops (by kept pounds) caught by boats home-ported at Hampton: 61.2 % of scallops were landed by scallop dredge, followed by other bottom trawl (31.2%), and scallop bottom trawl (7.6%). Scallops accounted for 91.4% of the limited access fleet's total catch (by kept lbs), the only fishery to account for at least 5% of the catch.

**Table 116.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Permit Status	Average vessel length, in feet (all permitted vessels)	Average vessel gross tons (all permitted vessels)	Average crew size, per trip landing scallops*	Average days absent, per trip landing scallops*
Limited Access	76.1	152.4	6.9	9.8
General Category	62	61	N/A	N/A

\*For limited access boats, only trips which landed greater than 400 pounds scallops are considered; for general category boats, only trips that landed less than or equal to 400 pounds scallops are considered.

A number of statistical areas, concentrated on the Mid-Atlantic, were important fishing grounds for the Hampton fleet, as shown in Table 117.

**Table 117.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
562	179560	22.8%	91.5%	18	78.0	167.6	7.0	7.3
615	136044	17.3%	92.2%	11	77.8	167.4	7.0	13.4
616	52046	6.6%	94.2%	3	76.3	171.3	7.0	17.8
621	69333	8.8%	95.2%	9	72.6	129.1	6.2	8.0
626	295753	37.6%	97.7%	17	74.2	132.9	6.9	9.3

\* Only trips landing greater than 400 pounds.

There was a seasonality to this use of the different fishing grounds, however, as shown in Table 118. Hampton vessels showed a consistently strong dependence on scallops, though there were seasonally important showings of other fisheries as well.

**Table 118.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

<i>Statistical Area</i>	<i>562</i>	<i>615</i>	<i>616</i>	<i>621</i>	<i>622</i>	<i>626</i>
<i>March 1999</i>		62.2%		6.9%		30.9%
<i>April-June 1999</i>		35.0%		31.4%	12.9%	15.2%
<i>July-Sept. 1999</i>	40.6%	9.6%	19.8%			28.1%
<i>Oct.-Dec. 1999</i>	26.0%	5.2%				63.5%

**Table 119.** Percent of total kept lbs. (species with 5% or more of quarterly catch), by quarter, 1999 logbook data.

<i>Species</i>	<i>Monkfish</i>	<i>Black sea bass</i>	<i>Scallops</i>	<i>Loligo squid</i>	<i>Summer flounder</i>
<i>March 1999</i>	5.6%	9.2%	72.4%	8.6%	
<i>April-June 99</i>			85.7%		6.8%
<i>July-Sept. 99</i>	5.1%		94.8%		
<i>Oct.-Dec. 99</i>			96.3%		

Vessels home-ported at Hampton landed the majority of their catch from all fisheries (63.2% of total kept pounds) at Hampton, followed by New Bedford MA (24.9%), and Cape May NJ (6.4%); 68.3% of the total catch was landed at Virginia ports. Similarly, these vessels landed most of their scallops (in terms of kept pounds) at Hampton (64.7%), New Bedford (25.0%), and Cape May (6.8%), with 67.8 % of scallops landed in Virginia.

#### 3.5.19.4 Hampton as Port of Landing

Hampton is a significant place for scallopers as a port of landing (Table 40). That listing is based upon dealer weighout data, which recorded 996,278 landed pounds of scallops compared to the logbook data that recorded 1,113,714 kept pounds of scallops during the same period. Logbook records show there were 23 limited access vessels, 12 general category vessels, and three other vessels that visited Hampton at least once during partial fishing year 1999. 51.2% of kept pounds landed (from all fisheries) came from boats listing Wanchese NC as their homeport, followed by Norfolk VA (25.2%) and Hampton VA (15.6%); 43.5% came from boats listing Virginia as homeport state. In terms of scallops, 45.8% of

kept pounds of scallops came from boats listing Hampton as homeport, followed by Norfolk boats (39.7%); 93.5% of scallops kept pounds came from boats listing Virginia as homeport state.

48.4% of scallop kept pounds were landed with scallop dredge, followed by scallop bottom trawl (26.1%), other bottom trawl (24.7%), and other gear (0.8%). Logbook records show all scallop kept pounds landed by limited access boats. In terms of kept pounds, 31.8% of the total catch came from scallops, followed by Atlantic croaker (26.3%), illex squid (12.0%), and summer flounder (6.2%). Scallops accounted for 61.5% of landed value in fishing year 1999 (Table 40). Scallops landed at Hampton came predominantly from Mid-Atlantic waters, as shown below.

**Table 120.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
615	153047	13.7%	91.4%	12	79.2	166.1	6.9	14.3
616	56814	5.1%	94.7%	4	79.0	160.8	6.8	15.8
621	241077	21.6%	94.0%	32	71.9	119.9	6.8	8.6
622	55363	5.0%	81.0%	4	83.3	171.3	7.0	14.1
626	527293	47.3%	61.2%	46	75.2	133.8	6.8	8.8

\* Only trips landing greater than 400 pounds.

The following two tables show the distribution of both the statistical areas from which scallops predominantly were caught, and the overall composition of fisheries landed at Hampton, by quarter.

**Table 121.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

Statistical Area	562	615	616	621	622	626
March 1999		36.8%		20.4%		42.8%
April-June 1999		20.3%		22.8%	12.0%	33.2%
July-Sept. 1999	5.1%	8.6%	14.6%	19.5%		49.4%
Oct.-Dec. 1999		6.6%		23.3%		66.5%

**Table 122.** Percent of total kept lbs., by quarter (species with 5% or more of quarterly catch), 1999 logbook data.

Species	Atlantic Croaker	Herring	Atlantic Mackerel	Black Sea Bass	Sea Scallops	Loligo Squid	Summer Flounder	Illex Squid	Large-mesh groundfish
March 1999	33.9%	15.9%	18.0%	10.3%	6.9%	8.9%			
Apr.-June 99		5.4%		5.7%	64.8%		11.9%		
Jul.-Sep. 99					44.9%	6.0%		46.6%	
Oct.-Dec. 99	53.7%				22.3%		10.0%		6.4%

### 3.5.19.5 Hampton, Ethnographic Community Profiles

Hampton is the site of three major fish wholesalers, in the context of recreational fishing, resort homes, and other development. According to one informant in our previous study, five hundred new boat slips were built in the period 1988-1993. A salt pond was dredged for marinas and the sand used for beach nourishments. Developers have built condominiums as well as private homes and marinas. At one time, crab picking and oyster shucking were important, but there is only one crab house left.

We visited one dock/packing house. It has a long history, 82 years in Hampton. On one side of this packing house is a large recreational marina and restaurant. On the other side is "the only crab house left in this city." There are approximately 12 boats of less than 40-feet that pack at this dock. These boats gillnet for spot and other fish in the fall and change gear for conch and crab during the spring and summer.

The fish house does not have its own boats; at the time of the research visit, there were only a few scallop boats docked here and three small trawlers (of the five or six working out of these docks). The company's docks are wedged in between buildings forming part of a busy tourist area. An informant from the company said there has been constant pressure from developers for the use of the dock space. The business is entirely wholesale, and owns seven tractor-trailers that haul fresh fish twice a week from North Carolina to Peoria, IL. The company sends mostly croaker, gray trout, spots, bluefish and flounder. He said that winter used to be the busiest time, but that now there is no one busy time because of the quotas.

We were told that fluke is the single most important fishery there by another employee of the business. At the time of the interview, the fluke fishers were working a maximum of only 30 to 40 days a year, i.e., maybe 20% of what they would normally work, because of the restricted quota granted to the state. He believes that by not allowing bycatch, the regulators are putting people out of business. They are limited to specific species that they target and cannot build up a history with other species, making it impossible for them to get additional permits. Further, seasonal restrictions do not always correspond with when the fish are in nearby waters. The informant said there are more croaker and rockfish now than ever before. He said the rockfish are decimating the crab industry.

According to this informant, this packinghouse is pressured to go out of business soon, even though it has been in the same location for 82 years and made extensive additions and improvements in the early 1980s. The last two years have been the worst in the company's history. It made \$100,000 less than usual in the past 2 years, and management has had to lay off 50-75 people in that time. They have closed the packing plant. He added that this year the windy conditions actually were as damaging to the business as the regulations. They currently employ 75 people, but submitted 200 W-2 tax forms in 1998 (giving some indication of the turnover). They use many day workers. Workers have a number of other options in this area. There are many government positions (e.g., in the shipyards). Lucent Technologies, Gateway Computers, Canon, tourism, Langley, NASA and other high tech companies have attracted the highly skilled labor. "We've got the bottom of the barrel for day workers," he said.

Some of the crab houses brought in Mexican workers every year, but an activist then fought to enforce a law that required a guarantee of 35 hours per week for migrant labor. This caused many to stop bringing in migrant labor. Half of the packers are women. They are packing squid at present. "The men do the heavier work," he said. Most of the women packers are from Korea. The informant said that blacks, whites and Koreans work there, but no Mexicans.

The issue of regulations is foremost here, as well. "We always need regulations, but it's too much, too quick, and not accurate." This informant said he wishes regulations could be relaxed once the stocks have rebounded. He also believes that states need separate open seasons for each species so that the market is not flooded all at once by different states targeting the same species. A second person interviewed added comments about the unfairness of some fluke regulations, specifically the rule that if a catch is a certain percentage over the limit, the whole catch will be confiscated rather than just the average.

He sees the goal of a maximum sustainable yield as problematic because not all species can reach MSY at the same time. There is a lack of trout now in large part because of the abundance of croaker and

rockfish. Species go through peaks and valleys at different times in different areas. He wonders why they don't take comprehensive landings data so that there is a history of a species before it needs to be regulated. He worries about measures like boat buy-backs because a drop in boats means a drop in fish house business. As he pointed out, banks won't continue to loan money to a business in decline. (Although he criticized boat buy-backs he also said it is unfair that the New England fishermen were the only ones to have a boat buy back program). He also worries about imports. The lack of regulations on international companies means lower prices for their products. He feels that US companies can't compete.

Supply and demand, he said, will manage stocks better than any regulations will. "Most watermen don't want to catch the last one," he observed. However, he added that the fishermen have "absolutely no cohesiveness. Many watermen can't agree on ice cream." He said they only come to the meetings in a crisis -- they are extremely independent and resent the regulations. At the same time, fishermen feel shut out at management meetings. He said they resent the assumption that they are only acting out of their own interest and therefore should not be taken seriously. He feels that the government works for its own benefit. He said that people in management act like the tail wagging the dog -- they work for the sake of the institution, not for the fish or fishers.

The fish house has lost the business of four trawlers in recent years. One sank and another ran aground. This brought up a discussion of the possibility that some boats sink not because of accidents but as "a way to get out [of fishing] with dignity." He told of one fisher who had his boat towed out to sea and sunk "with great ceremony." He said it was a deeply emotional experience for all involved since you normally fight with your life to save your boat. The man who sank his boat died soon afterwards of a heart attack. The informant thinks it was connected to the trauma of sinking the boat.

Very few young people are going into commercial fishing. The informant said the only ones he knew of were the children of a fishing related business in Newport News and some of the children in a local fishing "clan". He also said that nobody wants to buy a boat and that there's also quite a bit of difficulty in transitioning to a larger boat. He pointed out that it is illegal to transfer permits to vessels that are more than 10% larger or have more than a 10% greater horsepower.

One or two women work on crab boats. There are one or two women that longline (from Florida and New England). The informant said the longliners come for 2 to 3 months in the spring and fall, mostly following swordfish and tuna. There are two or three boats in Hampton with Vietnamese owners, captains and crews.

Hampton is also the northern arm of an important Wanchese-based North Carolina firm. Most of the fleet from North Carolina lands in Virginia when they are unable to get their boats into Oregon Inlet. At one time fishers used to congregate at a local store, but now there is no particular place where fishermen hang out for coffee or beer (McCay and Cieri 2000: 150-53).

### **3.5.20 The region of Hampton Roads/Newport News, VA, to Wanchese, NC, Ethnographic Community Profiles**

At this, the southern range of the ground fishing fleet, fishers who are native to the area have developed a multi-species, multi-gear, highly flexible fishing strategy that relies on state and federal waters and includes the commercial exploitation of several species. Unlike the fleet based in the Gulf of Maine, the winter season along North Carolina's Outer Banks and the mouth of the Chesapeake is a heavy sink net fishing season, when commercial fishers target weakfish, various basses, flounder, monkfish bycatch, and dogfish. During this season, as well, fishers from several ports in the northeast also land fish

at the fish houses of Wanchese, North Carolina and the two Virginia ports of Hampton Roads and Newport News. During a visit in March 1996, we encountered three New Bedford-based fishers off-loading monkfish and monkfish livers from a 40' craft at one of the principal seafood dealers in Wanchese, and in Portland we listened while fishers related stories of wintering off North Carolina's coast, as much to escape the chilling Gulf of Maine winter as to catch and land fish.

In part because fishers in this region depend nearly as much on fishing in state waters as fishing in federal waters, those we interviewed seemed less disturbed by federal regulations than fishers in other ports. At the same time, Eastern Dare/Outer Banks fishers were less concerned (although not entirely unconcerned) about water quality issues than fishers in the other four regions. They expressed some concern over the navigational difficulties surrounding Oregon Inlet, but were far less inclined to bring up the issues of hog waste, mining, or forestry than other fishers we interviewed. Because of problems with Oregon Inlet, many seafood dealers have moved their marketing and processing operations from Wanchese to the Newport News/Hampton Roads region, both expanding their seafood buying capabilities and creating more integrated linkages between the two ports.

Based on visits to the area and interviews primarily with seafood dealers, there are around 80 to 100 trawlers in the 60' to 100' range that land fish in the Hampton/Newport News area, although not all of these are local vessels. These fish for flounder--known throughout the Northeast as "fluke"--in the wintertime and scallop in the summer. An important bycatch of the scallop fishery in this region are monkfish. Seafood dealers interviewed ranged from the belief that changing regulations would affect no fisher to believing they would have negative impacts on around half of the fleet, with 25 percent moving into other fisheries and 25 percent, primarily the larger vessels, going out of business.

Local fishers felt that New England fishers had been infringing upon their fishing territories and water since before Amendment # 5, and Amendment # 7 has exacerbated this. Fishers operating out of the mouth of the Chesapeake expressed deepest concerns, among all the fishing issues, over problems with the quota systems for summer flounder. Fishing "inside" or in state waters for summer flounder has long been a central part of North Carolina and Virginia fishers, and they have, historically, supplemented these catches with summer flounder caught in federal waters. Quotas for summer flounder have caused them to shift from summer flounder to mackerel and dogfish, as well as move into the squid fisheries that are more popular along the New Jersey shore.

Some fishers we interviewed cited a decrease in wintertime fishing opportunities--related, in part, to recent decline in oyster stocks--saying that this has led to increases in summertime fisheries, particularly crabbing in inside waters. As fishers come into the Pamlico and Currituck Sounds, they encounter crowding problems associated with the trap fisheries of North Carolina's Albemarle-Pamlico Estuarine System. Similar difficulties face crabbers in the Chesapeake, who have historically defined and defended territories. Thus, moving into inland waters is only a partial solution for fishers in this region.

Two factors influence the behaviors of fishers in this region: that they switch between federal and state waters and hence depend on several gears and species through the year, and that they rely heavily on nets. The former predisposes fishers in this region to object to some of the federal quota systems and to view competition from fishers from other states as problematic; the latter makes them more sensitive to those regulations affecting nets, particularly Florida's net ban (which has caused an increase in Florida net fishers fishing in North Carolina waters or the federal waters near North Carolina), mandated modifications to nets because of turtles or bycatch issues, and mesh size regulations.

Fishers along the Outer Banks and from Wanchese are especially sensitive to the historical importance of their fisheries and related marine lifestyles, beginning with the shore-based whaling fisheries of the early colonial period and going through subsequent periods where fishing families

provided life-saving services to hundreds of ships that make up the "Ghost Fleet" of the Outer Banks. Fishers we interviewed here mentioned the importance of this history in terms of the memories of old fishers. One claimed, for example, that there have been periods in local fishers' pasts that they had to migrate to Florida because of declines in local fish stocks, making the argument that regulations need to consider extreme fluctuations in fish stocks as part of the economic hazards of commercial fishing. This same fishers noted the importance of life-time experience in fishing and of the difference between knowledge gained through direct experience and knowledge gained through scientific methods; the latter, of course, may suffer from sampling biases, while the former may suffer from other kinds of biases (economic, political, religious, etc.), yet combining the two could far better inform the regulatory community than sole reliance on one or the other.

The heavy dependence on Wanchese as a fishing community demands special attention in this section. Seven principal families of seafood dealers ring the seafood industrial park and serve as the central locations of the estimated 200 fishing families who live in Wanchese as well as anchor the southern marketing behaviors of fishers from as far away as New Bedford, Massachusetts and Portland, Maine. The fleets that originate from here, and the fishing activity focused by the seafood dealers and the ports, concentrate around the seafood industrial park and fleets of trawlers organized or encouraged by seafood dealers. The large, >100' vessels, as is occurring elsewhere, have been less active recently, their captains and crews now fishing from smaller crafts.

These arrangements were replicated in the NewportNews/Hampton area. As one leaves either Wanchese or migrates across the Chesapeake, to Virginia's Eastern Shore and the other parts of the Delmarva Peninsula, more independent, owner-operator fishing operations prevail, with some long-time loyalties between fishers and fish dealers that hinge on the questions of slip space and access. In recent years, fishers in this region have become increasingly concerned that real estate development will entice dealers to sell their space to developers less interested in commercial fishing than in providing marinas and condominiums for recreational boating traffic (Griffith and Dyer 1996: 119).

### **3.5.21 Geographic Area: Norfolk--Virginia Beach--Newport News, Virginia**

#### *3.5.21.1 General Demographic Profile*

From the 1990 Census, the population of the Norfolk--Virginia Beach--Newport News region was 1,323,098, of which 100% was urban. 50.2% of the population was male and 49.8% was female. Approximately 64.6% of the town was between 18 and 65 years of age; 26.4% of the population was 18 years and under, and 9% was 65 years or older. 79.3% of the population graduated from high school, while 20.2% had a bachelor's degree. 67.1% of the population was white, 29.2% was black, 2.6% was Asian or Pacific Islander, 0.8% was "other," and 0.3% was American Indian or Aleut. 2.4% of the population reported being Hispanic. Of the ethnic categories reported in the census, which account for at least 5% of the population, German dominated (15.2%), followed by English (13.2%), Irish (11.7%), and "American" (6.4%). 48.3% of the population was born in Virginia, while 3.6% of the population was born outside of the U.S.; 6.3% of those older than five speak a language other than English. There were 467,944 households, of which 55.6% were married-couple families, 3.2% were male-householder families, 13.4% were female-householder families, and 27.8% were non-family households. The average number of people per household was 2.69.

### 3.5.21.2 Economic Characteristics

70.6% of the population in general, aged 16 years and older, was in the labor force, of which 5.2% was unemployed and 16.2% was in the armed forces. By gender, however, 81% of male residents were in the labor force, of which 3.8% were unemployed and 25.7% were in the armed forces. For women, 60.2% were in the labor force, of which 7% were unemployed and 3.6% were in the armed forces. The median household income was \$30,619, with a per capita income of \$13,431. 11.7% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 123 shows the relative proportions of industry for the Norfolk--Virginia Beach--Newport News region.

**Table 123.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	5,982	1.1 %
Mining	379	0.1 %
Construction	44,104	7.9%
Manufacturing, non-durable goods	17,829	3.2 %
Manufacturing, durable goods	57,923	10.4 %
Transportation	24,252	4.3 %
Communications and other public utilities	13,024	2.3 %
Wholesale trade	19,423	3.5 %
Retail trade	104,504	18.7 %
Finance, insurance, and real estate	33,078	5.9 %
Business and repair services	25,930	4.6 %
Personal services	20,069	3.6 %
Entertainment and recreation services	8,473	1.5 %
Health services	45,784	8.2%
Educational services	47,674	8.5 %
Other professional and related services	37,869	6.8 %
Public administration	52,262	9.4%
Total	558,559	100%

### 3.5.21.3 Norfolk as Homeport

Norfolk can be considered a port significant for scalloping during the 1999 fishing year as a designated homeport (Table 41). There were 41 limited access boats and 19 general category boats that listed Norfolk as their homeport. The 33 limited access boats that were actively scalloping accounted for virtually all kept pounds of scallops; only one Norfolk general category boat is recorded as catching any scallops. However, there were ten general category boats active in other fisheries, so their overall activities is described below. Logbook data show that dredge gear accounted for most of the scallops (by kept pounds) caught by boats home-ported at Norfolk: 69.4 % of scallops were landed by scallop dredge, followed by scallop bottom trawl (19.4%), other dredge (7.0%), other bottom trawl (4.0%), and other gear (<0.1%). Of fisheries that account for at least five percent of the total catch (by kept pounds) for limited access vessels, scallops accounted for 76.4%, followed by summer flounder (7%). For the general category boats, spiny dogfish accounted for 13.8% of their total catch (by kept pounds), followed by horseshoe crabs (13.3%), large-mesh groundfish (11.2%), calico scallops (8.9%), summer flounder (8.4%), striped bass (7.2%), crab-nk (7.2%), pandalid shrimp (7.0%), smooth dogfish (6.8%), and Atlantic croaker (5.7%), with sea scallops accounting for less than 0.01% of the total catch.

**Table 124.** Vessel and scallop trip characteristics, 1999 permit data and 1999 logbook data.

Permit Status	Average vessel length, in feet (all permitted vessels)	Average vessel gross tons (all permitted vessels)	Average crew size, per trip landing scallops*	Average days absent, per trip landing scallops*
Limited Access	78.1	133.6	6.8	10.6
General Category	62.4	75.7	3.0	7.9

\*For limited access boats, only trips which landed greater than 400 pounds scallops are considered; for general category boats, only trips that landed less than or equal to 400 pounds scallops are considered.

A number of statistical areas, concentrated on the Mid-Atlantic, were important fishing grounds for the Norfolk fleet, as shown in Table 125. There was a seasonality to this use of the different fishing grounds, however, as shown in Table 126, as well as a strong seasonality to common fisheries composition.

**Table 125.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
562	270928	10.8%	90.4%	32	80.8	149.9	6.9	8.4
615	304519	12.1%	93.3%	37	86.4	141.1	6.8	12.1
616	148564	5.9%	89.3%	15	85.8	140.5	6.7	15.5
621	437601	17.4%	69.6%	51	77.7	131.5	6.9	10.9
622	403710	16.0%	84.3%	50	79.3	140.8	6.9	9.8
626	602511	23.9%	73.1%	70	79.1	138.2	6.7	11.1

\*Only trips landing greater than 400 pounds.

**Table 126.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

Statistical Area	562	613	615	616	621	622	626
March 1999		7.4	15.4		32.2		40.8
April-June 1999			15.0	5.6	22.5	20.3	24.0
July-Sept. 1999	16.3		10.6	7.8	7.1	14.7	25.8
Oct.-Dec. 1999	38.9			5.5	19.8	14.2	6.8

**Table 127.** Percent of total kept lbs. (species with 5% or more of quarterly catch), by quarter, 1999 logbook data.

Species	Atl. croaker	Black sea bass	Spiny dogfish	Scallops	Loligo squid	Large-mesh groundfish	Pandalid shrimp	Summer flounder	Striped bass	Crab (nk)	Horse-shoe Crab
March 1999	15.9	12.0	10.3	36.9	12						
April-June 99				72.6		5.5					
July-Sept. 99				85.4			8.5				
Oct.-Dec. 99				33.9			5.5	25.0	5.1	7.0	11.0

Vessels home-ported at Norfolk landed the majority of their catch from all fisheries (27.9% of total kept pounds) at Seaford, followed by Hampton (21.4%), Cape May NJ (10.3%), and New Bedford MA (9.9%); 69.3% of the total catch was landed at Virginia ports. Similarly, these vessels landed most of their scallops (in terms of kept pounds) at Seaford (42.8%), Hampton (17.3%), Cape May (15.8%), and New Bedford (11.9%), with 71.7% of scallops landed in Virginia.

### 3.5.21.4 Norfolk, Ethnographic Community Profiles

The commercial fishery of Norfolk, VA today is actually typical of the more rural waterman communities. Only a few fish houses are left to buy from local fishers; other docks and wholesalers have closed down, and one wholesaler has changed to a retail store and restaurant. The fishery is a small inshore and bay fishery. Principal gears used are crab pots (55% of value), crab dredges (10%), clam patent tongs and rakes (4%), handlines (10%) and sink gillnets (12%). Other gears are haul seines, conch dredges, and eel and fish pots. Striped bass (10% of value) are caught with gill-nets, handlines and seines, as are Atlantic croaker (4% of value) and other estuarine and anadromous species. The small black sea bass fishery here (2.2% of value) is prosecuted with handlines, as is the summer flounder fishery (2.1%). Blue crabs make up two-thirds of the value of Norfolk's catch (64%); hard clams or quahogs account for 4%, and conch 4% as well (McCay and Cieri 2000: 147-148).

### 3.5.21.5 Newport News as Homeport

Newport News can be considered a port significant for scalloping during the 1999 fishing year as a designated homeport (Table 41) and as a port of landing (Table 40). There were 18 limited access boats and 1 general category boat that listed Newport News as their homeport. Since there was only one general category boat, its fishing activities will not be discussed in detail below. The 17 limited access boats that were actively scalloping accounted for all kept pounds of scallops. Logbook data show that dredge gear accounted for most of the scallops (by kept pounds) caught by boats home-ported at Newport News: 84.1 % of scallops were landed by scallop dredge, followed by other dredge (12.4%), other bottom trawl (1.8%), and scallop bottom trawl (1.6%). Of fisheries that account for at least 5% of the total catch (by kept pounds) for limited access vessels, scallops account for 77.6%, followed by large-mesh groundfish (7.0%) and loligo squid (6.1%).

**Table 128.** Vessel and scallop trip characteristics, 1999 permit data and 1999 logbook data.

Permit Status	Average vessel length, in feet (all permitted vessels)	Average vessel gross tons (all permitted vessels)	Average crew size, per trip landing scallops	Average days absent, per trip landing scallops
Limited Access	80.8	146.2	6.6	9.5
General Category	64	88	N/A	N/A

\*For limited access boats, only trips which landed greater than 400 pounds scallops are considered; for general category boats, only trips that landed less than or equal to 400 pounds scallops are considered.

A number of statistical areas, in both New England and the Mid-Atlantic , were important fishing grounds for the Newport News fleet, as shown in Table 129.

**Table 129.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
562	265799	17.8%	81.6%	27	78.1	152.2	6.9	8.0
615	137583	9.2%	92.7%	14	81.3	160.0	6.8	12.3
621	239704	16.0%	93.7%	27	79.0	144.8	6.7	11.4
622	225870	15.1%	70.1%	31	80.1	153.5	6.4	8.5
626	292829	19.6%	91.1%	38	78.6	152.2	6.3	9.6

\*Only trips landing greater than 400 pounds.

There was a seasonality to this use of the different fishing grounds, however, as shown in Table 130, as well as a seasonality to common fisheries composition.

**Table 130.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

<i>Statistical Area</i>	<i>522</i>	<i>526</i>	<i>552</i>	<i>562</i>	<i>610</i>	<i>613</i>	<i>615</i>	<i>616</i>	<i>621</i>	<i>622</i>	<i>626</i>
<i>March 1999</i>					6.7		33.3		9.8		42.1
<i>April-June 1999</i>						7.6	10.0		32.1	22.3	22.1
<i>July-Sept. 1999</i>		5.0	5.1	28.5			6.8	5.0	8.8	13.4	19.4
<i>Oct.-Dec. 1999</i>	7.8	7.7	10.9	34.7						9.8	6.2

**Table 131.** Percent of total kept lbs. (species with 5% or more of quarterly catch), by quarter, 1999 logbook data.

<i>Species</i>	<i>Skates</i>	<i>Scallops</i>	<i>Loligo squid</i>	<i>Large- mesh ground-fish</i>	<i>Monkfish</i>	<i>Summer flounder</i>
<i>March 1999</i>	5.0	35.4	24.8	23.7		
<i>April-June 99</i>		69.8	5.6	15.7		
<i>July-Sept. 99</i>		94.5				
<i>Oct.-Dec. 99</i>		82.8			9.6	6.4

Vessels home-ported at Newport News landed most of their catch from all fisheries (48.0% of total kept pounds) at Newport News, followed by New Bedford MA (40.6%), and Cape May NJ (6.9%); 48% of the total catch was landed at Virginia ports. Similarly, these vessels landed most of their scallops (in terms of kept pounds) at Newport News (55.0%), New Bedford (35.1%), and Cape May (8.8%), with 55% of scallops landed in Virginia.

### 3.5.21.6 Newport News as Port of Landing

Newport News is also a significant place for scallopers as a port of landing (Table 40). That listing is based upon dealer weighout data, which recorded 3,100,451 landed pounds of scallops compared to the logbook data that recorded 2,823,454 kept pounds of scallops during the same period. Logbook records show there were 51 limited access vessels and seven general category vessels that visited Newport News at least once during partial fishing year 1999. 28.8% of kept pounds landed (from all fisheries) came from boats listing Newport News as their homeport, followed by New Bern NC (13.6%); 49.3% came from boats listing Virginia as homeport state. In terms of scallops, 29.2% of kept pounds of scallops came from boats listing Newport News as homeport, followed by New Bern NC boats (15.5%), Norfolk VA (10.0%), and Cape May NJ (10.0%); 50.5% of scallops kept pounds came from boats listing Virginia as homeport state.

64.4% of scallop kept pounds were landed with scallop dredge, followed by scallop bottom trawl (18.9%), other dredge (10.0%), and other bottom trawl (6.7%). Logbook records show 99.4% of scallop kept pounds landed by limited access boats, with general category boats landing 0.6%. In terms of kept pounds, 84.1% of the total catch came from scallops, followed by summer flounder with 7.5%. Scallops accounted for 79.8% of landed value in fishing year 1999, (Table 40). Scallops landed at Newport News came predominantly from Mid-Atlantic waters, as shown below.

**Table 132.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

<i>Statistical Area</i>	<i>Kept pounds, scallops</i>	<i>Percent of total scallop kept lbs.</i>	<i>Areal % of scallops to all species kept lbs.</i>	<i>Number of trips to that area*</i>	<i>Ave. vessel length in feet, per trip recorded*</i>	<i>Ave. vessel gross tons, per trip recorded*</i>	<i>Average crew size, per trip recorded*</i>	<i>Average days absent per trip recorded*</i>
562	138673	5.0%	95.1%	14	82.3	163.9	6.8	8.9
620	195463	7.0%	90.7%	19	79.5	149.5	6.8	12.9

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
621	591289	21.1%	94.1%	64	79.6	138.8	6.7	11.9
622	415912	14.9%	88.6%	40	76.4	137.1	6.7	11.7
626	1033482	36.9%	84.5%	127	78.5	136.1	6.6	9.9

\*Only trips landing greater than 400 pounds.

The following two tables show the distribution of both the statistical areas from which scallops predominantly were caught, and the overall composition of fisheries landed at Wellfleet, by quarter.

**Table 133.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

Statistical Area	562	615	616	620	621	622	626
<i>March 1999</i>		7.7%		7.0%	32.3%		40.8%
<i>April-June 1999</i>				10.7%	23.9%	19.7%	31.5%
<i>July-Sept. 1999</i>	9.7%		6.9%		14.8%	11.0%	44.4%
<i>Oct.-Dec. 1999</i>	25.6%				13.4%	19.7%	31.8%

**Table 134.** Percent of total kept lbs., by quarter (species with 5% or more of quarterly catch), 1999 logbook data.

Species	Monkfish	Black sea bass	Sea Scallops	Loligo Squid	Summer Flounder
<i>March 1999</i>	5.0%	10.3%	69.3%	10.7%	
<i>Apr.-June 99</i>			88.2%		
<i>Jul.-Sep. 99</i>			98.1%		
<i>Oct.-Dec. 99</i>			50.1%		42.3%

### 3.5.21.7 Newport News, Ethnographic Community Profiles

There are six commercial fishing businesses in Newport News, all located within or near a seafood industrial park on the city's small boat harbor. We talked with an employee at one of the packinghouses. He said that recently there has been an increase in smaller, faster boats in the Hampton Roads area. Researchers saw more than 25 boats smaller than 40-feet long docked near the mouth of the harbor. The informant said even the larger boats now often steam out only 20-30 miles before returning back to the dock. The informant used to work at a commercial fish house in Wanchese and established in 1995 the packinghouse in Newport News where he now works. The business also runs two factory ships off the coast of Argentina. They used to have two longliners, but they were major losses. They have one 120-foot longliner that has been sitting idle at the dock for the past two years.

He said that local trawlers bring him tilapia, summer flounder, gray trout, croaker, bluefish, sea bass, porgies, squid, Atlantic mackerel, butterfish, and scallops. Most of the landed weight used to be scallops, but this is no longer the case. The boats go out on 30 to 40-mile trips. When scalloping they go for 14 to 15 days. When fishing they go for 7 days. Right now, they are going out for day trips because of quota limitations, according to the informant. "They spend more time coming and going than working," he said. At present they pack four of their own trawlers (1 dragger and 3 scallopers) as well as 8 other owner-operated boats. The number of owner-operators that use this particular dock pack varies seasonally. Most of the company's wholesale product is sent to New York, Philadelphia, Baltimore, Boston and Florida. It sells some bait to Japanese markets.

He said there are 50 to 60 boats working out of the Small Boat Harbor that scallop and fluke -- they retool for each season. He estimated that the total catch brought into the harbor is 65% fluke, 25% scallops and 10% bycatch.

An issue identified by this informant is the effect of regulations (and decline in fish catches more generally) on the quality of labor available. He said the packing house no longer stays open long enough to keep good employees. Many of its workers come in "off the street." He blames the regulations for "destroying our business. We've become machines, not a business." He has a lot of people applying for work at the packing house, but he has not had the product to keep them busy.

Getting and keeping good crew is also a problem. He said the captains would rather hire local "drunks" than neophyte fishermen because they've done the work before. "We hire some of the worst that are out there. We could keep them busy if the government would let us." Most captains and crews have other jobs (e.g. carpentry) and fish on other boats. He said that problems with getting good crew have worsened and that they may be more serious for fishing businesses than dealing with the regulations. He added that they can't afford to train new help because they lose productivity when they do this.

His crew members are mostly local. He mentioned a law that prohibits American boats from having more than 25% of their crew as non-US citizens. He did say there are some Mexican captains in the area and one or two black captains. He said there have been a few female crew in the past. Some women may still be on current crews.

This person wanted mostly to talk about regulations. He said that the biggest problem is the way stock assessments are conducted. He thinks that true stock assessments will never be achieved, but that it's a good way for scientists to keep their jobs. He was frustrated because the "economic impact guys" promised more money per pound with the scallop regulations, but the regulations instead took away their market, and the prices have bottomed out. He was also frustrated by the flounder regulations. Not only is their quota small, but also because of the size limitation they are having a hard time catching the portion-size flounder that restaurants want. While imports are not affected by these size regulations, the local flounder caught is too big for the optimal portion size. "It's a crying shame what the government has done," he said. He also believes that scallops from Georges Bank are now too large to be marketed effectively, after being off limits to commercial fishermen for too long a time. "The economic impact is disastrous," he said.

He thinks there should be a watchdog group over NMFS. He estimated that the NMFS stock assessments are three years behind actual stock fluctuations. He thinks that the current quota system creates a madhouse effect at the packinghouses when boats rush after their quotas. "Quotas aren't helping the stocks; they're just causing more to be thrown overboard," he said. He thinks regulators should focus on input rather than output. He said that captains need multiple permits to survive but that the regulations have limited their ability to diversify. He added that boats have had to sit for too long, and that "when they sit, they need more repairs" (McCay and Cieri 2000: 146-147).

### **3.5.22 Geographic Area: Pamlico County, North Carolina (for Lowland, NC)**

#### *3.5.22.1 General Demographic Profile*

From the 1990 Census, the population of Pamlico County was 11,372, of which 100% was rural. 48% of the population was male and 52% was female. Approximately 59.4% of the town was between 18 and 65 years of age; 23.8% of the population was 18 years and under, and 16.8% was 65 years or older.

65.9% of the population graduated from high school, while 11.6% had a bachelor's degree. 73.5% of the population was white, 25.9% was black, 0.3% was American Indian or Aleut, 0.2% was Asian or Pacific Islander, and 0.1% was "other." 0.5% of the population reported being Hispanic. Of the ethnic categories reported in the census, which account for at least 5% of the population, English dominated (20.8%), followed by "American" (14.5%), Irish (13.6%), and German (8.6%). 79.3% of the population was born in North Carolina, while 0.8% of the population was born outside of the U.S.; 2.8% of those older than five speak a language other than English. There were 4,523 households, of which 60.1% were married-couple families, 2.6% were male-householder families, 12.1% were female-householder families, and 25.2% were non-family households. The average number of people per household was 2.49.

### 3.5.22.2 *Economic Characteristics*

57.3% of the population in general, aged 16 years and older, was in the labor force, of which 6.9% was unemployed and 1.2% was in the armed forces. By gender, however, 67.7% of male residents were in the labor force, of which 4.2% were unemployed and 1.7% were in the armed forces. For women, 47.9% were in the labor force, of which 10.3% were unemployed and 0.5% were in the armed forces. The median household income was \$21,060, with a per capita income of \$10,665. 18.9% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 135 shows the relative proportions of industry for Pamlico County.

**Table 135.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	427	9.1 %
Mining	50	1.1 %
Construction	322	6.8%
Manufacturing, non-durable goods	431	9.1 %
Manufacturing, durable goods	324	6.9 %
Transportation	267	5.7 %
Communications and other public utilities	81	1.7 %
Wholesale trade	218	4.6 %
Retail trade	717	15.2 %
Finance, insurance, and real estate	185	3.9 %
Business and repair services	210	4.5 %
Personal services	177	3.8 %
Entertainment and recreation services	27	0.6 %
Health services	305	6.5%
Educational services	476	10.1 %
Other professional and related services	185	3.9 %
Public administration	316	6.7%
Total	4,718	100%

### 3.5.22.3 *Lowland as Homeport*

Lowland can be considered a port significant for scalloping during the 1999 fishing year as a designated homeport (Table 41). There were eight limited access boats and two general category boats that listed Lowland as their homeport. The four limited access boats that were actively scalloping accounted for all kept pounds of scallops. Since there were only two general category boats, their fishing activities will not be described in detail below. Logbook data show that dredge gear accounted for most of the scallops (by kept pounds) caught by boats home-ported at Lowland: 53.3 % of scallops were landed by scallop dredge, followed by other dredge (40.9%), and other bottom trawl (5.8%). Of fisheries that

account for at least 5% of the total catch (by kept pounds) for limited access vessels, scallops accounted for 52.7%, followed by pandalid shrimp (30.0%), shrimp-nk (6.9%), and summer flounder (7.3%).

**Table 136.** Vessel and scallop trip characteristics, 1999 permit data and 1999 logbook data.

Permit Status	Average vessel length, in feet (all permitted vessels)	Average vessel gross tons (all permitted vessels)	Average crew size, per trip landing scallops*	Average days absent, per trip landing scallops*
Limited Access	74.4	106.8	6.9	9.6
General Category	66	72.5	N/A	N/A

\*For limited access boats, only trips which landed greater than 400 pounds scallops are considered; for general category boats, only trips that landed less than or equal to 400 pounds scallops are considered.

A number of statistical areas, concentrated on the Mid-Atlantic, were important fishing grounds for the Lowland fleet, as shown in Table 137.

**Table 137.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
562	19658	10.9%	88%	2	**	**	7.0	8.8
621	32390	18.0%	93.6%	5	73.2	120.0	6.6	8.7
622	25945	14.4%	92.1%	3	77.3	145.3	7.0	10.0
626	84941	47.2%	97.6%	8	77.4	145.9	6.9	10.7
632	9862	5.5%	100%	1	**	**	7.0	13.1

\*Only trips landing greater than 400 pounds.

\*\* Not reported to preserve confidentiality.

There was seasonality to this use of the different fishing grounds, however, as shown in Table 138, as well as seasonality to targeted fisheries.

**Table 138.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

Statistical Area	562	621	622	626	631	632
March 1999		32.3%		67.7%		
April-June 1999		31.3%	37.4%	25.1%	6.3%	
July-Sept. 1999				75.5%		15.3%
Oct.-Dec. 1999	88.1%			11.9%		

**Table 139.** Percent of total kept lbs. (species with 5% or more of quarterly catch), by quarter, 1999 logbook data.

Species	Summer flounder	Scallops	Shrimp (nk)	Pandalid shrimp
March 1999	5.3%	90.5%		
April-June 99		78.2%	12.1%	4.8%
July-Sept. 99		50.1%	5.7%	43.9%
Oct.-Dec. 99	22.3%	22.8%	5.7%	42.8%

Vessels home-ported at Lowland landed the majority of their catch from all fisheries (49.3% of total kept pounds) at Newport News VA, followed by Lowland (25.1%), New Bedford MA (6.6%), Georgetown SC (6.5%) and Wanchese NC (5.4%); 30.5% of the total catch was landed at North Carolina ports. Similarly, these vessels landed most of their scallops (in terms of kept pounds) at Newport News (81.6%) and New Bedford (10.9%), with 3.6% of scallops landed in North Carolina (only at Wanchese).

### 3.5.23 Geographic Area: New Bern city, North Carolina

#### 3.5.23.1 General Demographic Profile

From the 1990 Census, the population of New Bern was 17,363, of which 100% was urban. 44.9% of the population was male and 55.1% was female. Approximately 57.2% of the town was between 18 and 65 years of age; 26% of the population was 18 years and under, and 16.8% was 65 years or older. 69.9% of the population graduated from high school, while 16.0% had a bachelor's degree. 55.6% of the population was white, 43.6% was black, 0.4% was Asian or Pacific Islander, 0.3% was American Indian or Aleut, and 0.2% was "other." 0.7% of the population reported being Hispanic. Of the ethnic categories reported in the census, which account for at least 5% of the population, English dominated (13.8%), followed by German (11%), Irish (9.6%), and "American" (6%). 72.0% of the population was born in North Carolina, while 1.8% of the population was born outside of the U.S.; 3.1% of those older than 5 speak a language other than English. There were 7,264 households, of which 41.4% were married-couple families, 2.9% were male-householder families, 18.9% were female-householder families, and 36.7% were non-family households. The average number of people per household was 2.33.

#### 3.5.23.2 Economic Characteristics

59.3% of the population in general, aged 16 years and older, was in the labor force, of which 5.4% was unemployed and 2.8% was in the armed forces. By gender, however, 69.6% of male residents were in the labor force, of which 5% were unemployed and 5.1% were in the armed forces. For women, 51.4% were in the labor force, of which 5.9% were unemployed and 0.4% were in the armed forces. The median household income was \$19,894, with a per capita income of \$10,893. 23.2% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 140 shows the relative proportions of industry for New Bern.

**Table 140.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	100	1.4 %
Mining	0	0.0 %
Construction	420	5.8 %
Manufacturing, non-durable goods	495	6.8 %
Manufacturing, durable goods	746	10.3 %
Transportation	257	3.5 %
Communications and other public utilities	203	2.8 %
Wholesale trade	163	2.2 %
Retail trade	1,369	18.9 %
Finance, insurance, and real estate	394	5.4 %
Business and repair services	247	3.4 %
Personal services	342	4.7 %
Entertainment and recreation services	77	1.1 %
Health services	803	11.1 %
Educational services	558	7.7 %
Other professional and related services	475	6.5 %
Public administration	610	8.4 %
Total	7,259	100 %

### 3.5.23.3 New Bern as Homeport

New Bern can be considered a port significant for scalloping during the 1999 fishing year as a designated homeport (Table 41). There were six limited access boats and no general category boats that listed New Bern as their homeport. All six limited access boats showed at least some scallop landings. Logbook data show that scallop net accounted for most of the scallops (by kept pounds) caught by boats home-ported at New Bern: 78.4 % of scallops were landed by scallop bottom trawl, followed by other bottom trawl (17.3%), and scallop dredge (4.3%). Of fisheries that account for at least 5% of the total catch (by kept pounds) for limited access vessels, scallops accounted for 80.0%, followed by pandalid shrimp (7.5%).

**Table 141.** Vessel and scallop trip characteristics, 1999 permit data and 1999 logbook data.

Permit Status	Average vessel length, in feet (all permitted vessels)	Average vessel gross tons (all permitted vessels)	Average crew size, per trip landing scallops*	Average days absent, per trip landing scallops*
Limited Access	74.5	103	7.0	10.1

\*For limited access boats, only trips which landed greater than 400 pounds scallops are considered; for general category boats, only trips that landed less than or equal to 400 pounds scallops are considered.

A number of statistical areas, concentrated mostly on the Mid-Atlantic , were important fishing grounds for the New Bern fleet, as shown in Table 142.

**Table 142.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
621	115919	25.3%	93.3%	13	78.3	116.5	6.9	9.9
622	34055	7.4%	93.4%	4	74.5	113.8	7.0	9.6
626	264052	57.7%	97.6%	34	74.0	103.6	7.0	10.0

\*Only trips landing greater than 400 pounds.

There was a seasonality to this use of the different fishing grounds, however, as shown in Table 143, as well as a strong seasonality to common fisheries composition.

**Table 143.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

Statistical Area	521	616	621	622	625	626
<b>March 1999</b>			71.4%		8.8%	19.8%
<b>April-June 1999</b>			22.9%	12.3%		64.8%
<b>July-Sept. 1999</b>		15.0%	22.8%			62.2%
<b>Oct.-Dec. 1999</b>	20.6%		6.8%	11.4%		55.1%

**Table 144.** Percent of total kept lbs. by quarter (species with 5% or more of quarterly catch), 1999 logbook data.

Species	Calico Scallops	Sea Scallops	Pandalid shrimp	Summer flounder	King Whiting
<b>March 1999</b>	22.9%	70.7%			
<b>April-June 99</b>		95.1%			
<b>July-Sept. 99</b>		83.4%	14.0%		
<b>Oct.-Dec. 99</b>		62%	14.4%	11.1%	6.3%

Vessels home-ported at New Bern landed the majority of their catch from all fisheries (78.9% of total kept pounds) at Newport News VA, followed by Oriental NC (11.8%), the only North Carolina port of landing. Similarly, these vessels landed their scallops (in terms of kept pounds) at Newport News (94.4%), New Bedford MA (4.3%), and Cape May NJ (1.3%), with no scallops landed in North Carolina.

### 3.5.24 Geographic Area: Oriental town, North Carolina

#### 3.5.24.1 General Demographic Profile

From the 1990 Census, the population of New Bern was 786, of which 100% was rural. 46.1% of the population was male and 53.9% was female. Approximately 55.3% of the town was between 18 and 65 years of age; 15.3% of the population was 18 years and under, and 29.4% was 65 years or older. 86.5% of the population graduated from high school, while 30.8% had a bachelor's degree. 87.4% of the population was white, 12.5% was black, 0.1% was Asian or Pacific Islander, and none of the population claimed American Indian, Aleut, or "other." 0.3% of the population reported being Hispanic. Of the ethnic categories reported in the census, which account for at least 5% of the population, English dominated (32.9%), followed by German (13.6%), Irish (9.0%), "American" (6.7%), Scotch-Irish (5.3%) and Scottish (5.3%). 62.7% of the population was born in North Carolina, while 2.6% of the population was born outside of the U.S.; 2.6% of those older than 5 speak a language other than English. There were 365 households, of which 63.3% were married-couple families, 1.4% were male-householder families, 10.7% were female-householder families, and 24.7% were non-family households. The average number of people per household was 2.15.

#### 3.5.24.2 Economic Characteristics

46.4% of the population in general, aged 16 years and older, was in the labor force, of which 1.3% was unemployed and none was in the armed forces. By gender, however, 54% of male residents were in the labor force, of which 1.2% were unemployed and 0 were in the armed forces. For women, 39.9% were in the labor force, of which 1.4% were unemployed and 0 were in the armed forces. The median household income was \$26,339, with a per capita income of \$14,719. 17.2% of the people for whom poverty status was determined in 1989 fell below the poverty level. Table 145 shows the relative proportions of industry for Oriental.

**Table 145.** Employed persons 16 years and older, employment by industry sector. Source: 1990 U.S. Census.

Sector	Number Employed	Percent Employed
Agriculture, forestry, and fisheries	9	2.9 %
Mining	0	0.0 %
Construction	23	7.4%
Manufacturing, non-durable goods	19	6.1 %
Manufacturing, durable goods	27	8.7 %
Transportation	24	7.7 %
Communications and other public utilities	5	1.6 %
Wholesale trade	11	3.5 %
Retail trade	58	18.6 %
Finance, insurance, and real estate	16	5.1 %
Business and repair services	6	1.9 %
Personal services	19	6.1 %
Entertainment and recreation services	2	0.6 %
Health services	22	7.1%

Sector	Number Employed	Percent Employed
Educational services	35	11.2%
Other professional and related services	21	6.7 %
Public administration	15	4.8%
Total	312	100%

### 3.5.24.3 Oriental as Homeport

Oriental can be considered a port significant for scalloping during the 1999 fishing year as a designated homeport (Table 41). There were five limited access boats and 3 general category boats that listed Oriental as their homeport. Due to the small number of general category boats, their fishing activities will not be described in detail below. All five limited access boats showed at least some scallop landings. Logbook data show that scallop dredge accounted for most of the scallops (by kept pounds) caught by boats home-ported at Oriental: 57.8 % of scallops were landed by scallop dredge, followed by scallop bottom trawl (22.6%), and other bottom trawl (12.3%), other dredge (4.3%) and other gear (3.1%). Of fisheries that account for at least 5% of the total catch (by kept pounds) for limited access vessels, scallops accounted for 57.6%, followed by summer flounder (16.9%), large-mesh groundfish (8.5%), and pandalid shrimp (7.1%).

**Table 146.** Vessel and scallop trip characteristics, 1999 permit data and 1999 logbook data.

Permit Status	Average vessel length, in feet (all permitted vessels)	Average vessel gross tons (all permitted vessels)	Average crew size, per trip landing scallops*	Average days absent, per trip landing scallops*
Limited Access	75.4	125.6	6.9	11.2
General Category	68.7	105.3	N/A	N/A

\*For limited access boats, only trips which landed greater than 400 pounds scallops are considered; for general category boats, only trips that landed less than or equal to 400 pounds scallops are considered.

A number of statistical areas, concentrated mostly on the Mid-Atlantic , were important fishing grounds for the Oriental fleet, as shown in Table 147.

**Table 147.** Distribution of scallop fishing grounds (areas having 5% or greater of scallop catch) 1999 logbook data.

Statistical Area	Kept pounds, scallops	Percent of total scallop kept lbs.	Areal % of scallops to all species kept lbs.	Number of trips to that area*	Ave. vessel length in feet, per trip recorded*	Ave. vessel gross tons, per trip recorded*	Average crew size, per trip recorded*	Average days absent per trip recorded*
562	42619	14.5%	77.5%	5	79.8	135.2	7.0	7.7
614	14787	5.0%	97.2%	1	**	**	7.0	14.7
615	42772	14.5%	92.6%	4	78.5	133.0	6.8	17.4
621	85950	29.1%	96.0%	9	77.4	128.2	6.9	13.3
622	40773	13.8%	46.3%	4	72.0	122.0	6.8	11.0
626	64689	21.9%	75.4%	10	75.2	125.8	6.9	8.7

\*Only trips landing greater than 400 pounds.

\*\* Not reported to preserve confidentiality.

There was a seasonality to this use of the different fishing grounds, however, as shown in Table 148, as well as a seasonality to common fisheries composition.

**Table 148.** Percent of areal contribution to scallop catch, by quarter (areas with 5% or greater of catch per quarter).

<i>Statistical Area</i>	<i>562</i>	<i>614</i>	<i>615</i>	<i>616</i>	<i>621</i>	<i>622</i>	<i>626</i>
<i>March 1999</i>			68.8%		29.4%		
<i>April-June 1999</i>			19.1%		34.9%	11.2%	34.7%
<i>July-Sept. 1999</i>	18.3%	13.5%			29.5%	23.8%	14.8%
<i>Oct.-Dec. 1999</i>	81.0%			11.2%			7.8%

**Table 149.** Percent of total kept lbs. by quarter, (species with 5% or more of quarterly catch), 1999 logbook data.

<i>Species</i>	<i>Monkfish</i>	<i>Sea Scallops</i>	<i>Large-mesh Groundfish</i>	<i>Pandalid shrimp</i>	<i>Summer flounder</i>	<i>Scup</i>	<i>Flounder (nk)</i>
<i>March 1999</i>	19.1%	49.3%	29.8%				
<i>April-June 99</i>		66.0%	14.1%		14.1%		
<i>July-Sept. 99</i>		82.1%		8.7%		6.7%	
<i>Oct.-Dec. 99</i>		20.4%		18.0%	49.3%		6.4%

Vessels home-ported at Oriental landed the majority of their catch from all fisheries (44.4% of total kept pounds) at Newport News VA, followed by Oriental (19.8%), Hampton VA (10.5%), New Bedford MA (10.5%), and Point Pleasant NJ (9.1%); 21.4% of the total catch was landed at North Carolina ports. Similarly, these vessels landed their scallops (in terms of kept pounds) at Newport News (69.9%), New Bedford MA (14.5%), and Hampton VA (11.1%), with no scallops landed in North Carolina.

### 3.5.25 North Carolina Ports, Ethnographic Community Profiles

Some families have developed large harvesting, processing and marketing operations, but small-scale owner-operator fishing remains the norm. In more highly developed coastal areas, such as Beaufort and Wanchese, recreational fishing has a major presence as well, and fishing infrastructure competes with that of tourism and housing development.

Fishing is important to North Carolina's economy. Diaby (1999) showed that the 228.5 million pounds of seafood landed in 1997 generated as many as 27,000 direct jobs, in harvesting, processing, wholesale, retail, and food service, and that through its direct and indirect efforts, the commercial harvesting sector alone may have generated about 22,000 jobs in 1997 (Diaby 1999: vi). However, these figures are estimated based on the questionable assumption that the number of "endorsement to sell" (ETS) licenses is a good measure of actual participation; actual participation is likely to be considerably lower, judging from how many report through North Carolina's trip ticket program (Diaby 1999: 35).

Diaby's study, which included data from trip tickets, the state ETS licenses, and other sources, also showed average fishing incomes in comparison with average annual wage per worker in each of the coastal counties of North Carolina. In the counties with major fisheries (Hyde, Pamlico, Dare, Beaufort, and Carteret), average income from commercial fishing exceeded the average annual income for all workers (Diaby 1999: 35). This was also true for Tyrell County. In the other counties, income from fishing was considerably lower than the average annual wage per worker; this is interpreted as due to the fact that many commercial fishermen in those counties are part-time, supplementing other jobs or retirement income (Diaby 1999:34).

The people who fish and process and market fish live and work out of the small towns and unincorporated communities that are scattered along the state's estuarine shoreline. Local economies are often greatly dependent on fishing (Diaby 1999: 14-15). According to Johnson and Orbach (1996), most North Carolina commercial fishermen have highly diversified annual rounds, which often includes