

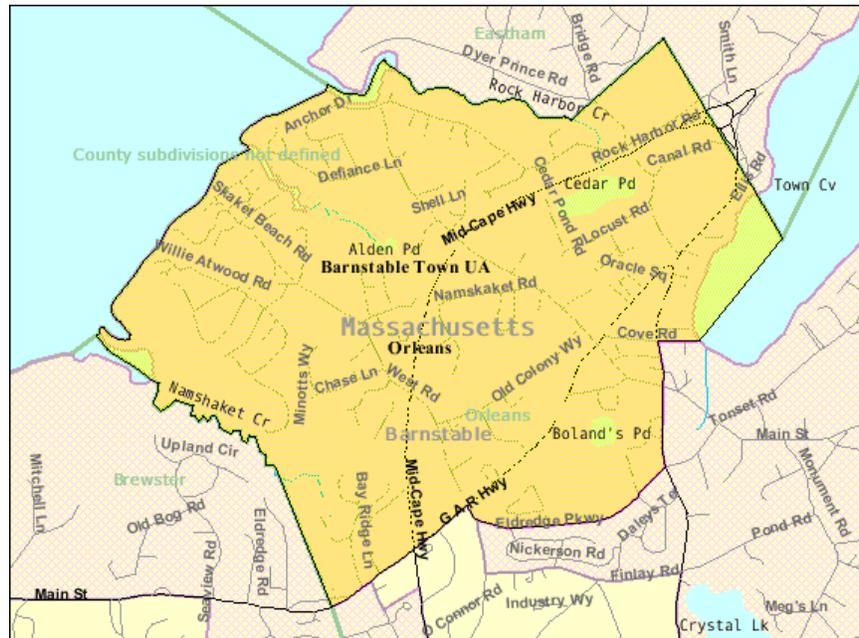
# ORLEANS, MA<sup>1</sup>

## Community Profile<sup>2</sup>

### PEOPLE AND PLACES

#### Regional orientation

The Town of Orleans (41.79° N, 70.00° W) is in Barnstable County in the state of Massachusetts. Orleans is located on outer Cape Cod (at the “elbow” of the Cape) in the southeastern part of the state between Cape Cod Bay and the Atlantic Ocean (Town of Orleans 2007). The town has a total area of 21.1 mi<sup>2</sup> of which 32.7% (6.9 mi<sup>2</sup>) is water (USGS 2008).



Map 1. Location of Orleans, MA (US Census Bureau 2000)

#### Historical/Background

The Town of Orleans was incorporated in 1797, with the first permanent settlement in 1642 by Nicholas Snow and his family. Orleans is now considered a resort community by the Town (Town of Orleans 2007). The Nauset Indians and the first settlers generally maintained a peaceful relationship and the last of the Indian settlements was in South Orleans. The Nauset taught settlers about shellfishing, which continues to be an important industry for the town. Salt has also been part of Orleans history, with salt works present on the bay and coves until the mid 1800s. The main commercial agricultural in the 1920s and 1930s was asparagus and cranberry harvesting was prevalent from the late 1800s to the 1930s. The town’s rich maritime history

<sup>1</sup> These community profiles have been created to serve as port descriptions in Environmental Impact Statements (EISs) for fisheries management actions. They also provide baseline information from which to begin research for Social Impact Assessments (SIAs). Further, they provide information relevant to general community impacts for National Standard 8 of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and information on minorities and low income populations for Executive Order (E.O.) 12898 on Environmental Justice.

<sup>2</sup> For purposes of citation please use the following template: “Community Profile of *Town, ST*. Prepared under the auspices of the National Marine Fisheries Service, Northeast Fisheries Science Center. For further information contact [Lisa.L.Colburn@noaa.gov](mailto:Lisa.L.Colburn@noaa.gov).”

extends back to whaling during the days of sail, while weirs and hand lining were traditional methods of fish harvest, an industry that has continued over the years.

The fishing industry has waxed and waned according to the health of the fish stocks over the years (Town of Orleans 2007). In the 18th century commercial fishing and shell fishing supplemented local incomes and residents worked on herring boats and hunted whales (CapeCodweb.com). Shipwrecks along the shores of Cape Cod and Orleans were a common occurrence until the Cape Cod Canal was built and ships and cargo salvage became part of the Orleans economy. Packet boats were the mode of transportation of goods and people until the arrival of the railroad in 1865, which also helped promote early tourism. Orleans is also the only U.S. site of attack by the Germans in WWI, when a German U-boat fired upon a tug and four barges in the Nauset area in 1918 (Town of Orleans 2007).

### Demographics<sup>3</sup>

According to Census 2000 data, Orleans has a total population of 1,716, up 1.0% from the reported population of 1,699 in 1990 (US Census Bureau 1990). Of this total in 2000, 55.5% were female and 44.5% were male. The median age was 53.7 years and 84.6% of the population was 21 years or older while 39.4% was 62 or older.

The population structure for Orleans (see Figure 1) shows the greatest number of females in the 70-79 age grouping but a significant number are also found in the 60-69 and 80+ age groups, indicating a larger proportion of retirees. Males exceed the number of females in the 10-19 and more significantly in the 40-49 age groups, which may be an expression of those working in the fishing industry. Otherwise, more females than males are found in all other age brackets except 0-9 where the proportion is very similar.

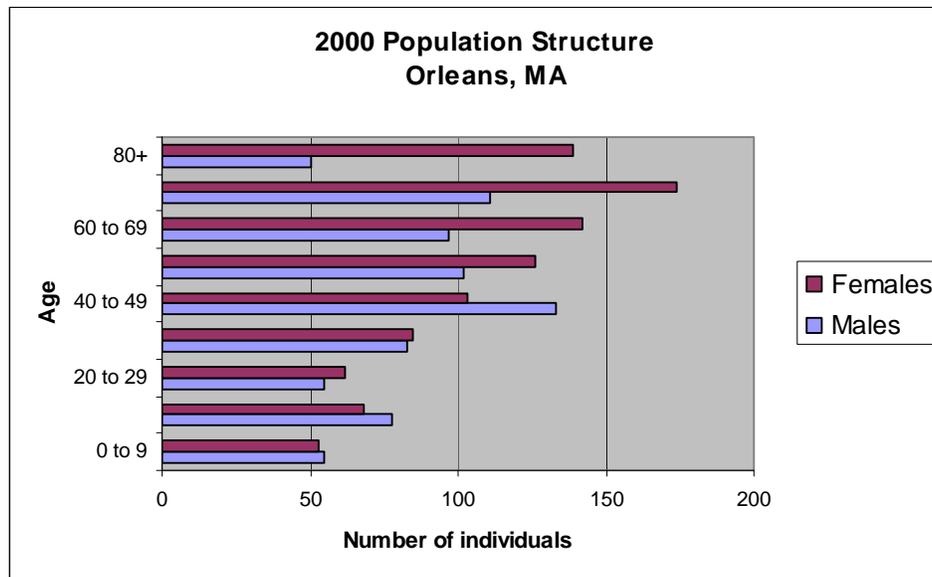


Figure 1. Population structure by sex in 2000 (US Census Bureau 2000)

<sup>3</sup> While mid-term estimates are available for some larger communities, data from the 2000 Census are the only data universally available for the communities being profiled in the Northeast. Thus for cross-comparability we have used 2000 data even though these data may have changed significantly since 2000 for at least some communities.

The majority of the population of Orleans is white (98.4%), with 0.5% of residents black or African American, 0.2% Native American, 0.6% Asian, and no Pacific Islander or Hawaiians (see Figure 2). Only 1.9% of the total population is Hispanic/Latino (see Figure 3). Residents linked their backgrounds to a number of different ancestries including: English (26.4%), Irish (21.3%), German (16.1%), Italian (10.4%), and French (6.8%). With regard to region of birth, 46.6% were born in MA, 46.9% were born in a different state and 6.1% were born outside of the U.S. (including 1.4% who were not United States citizens).

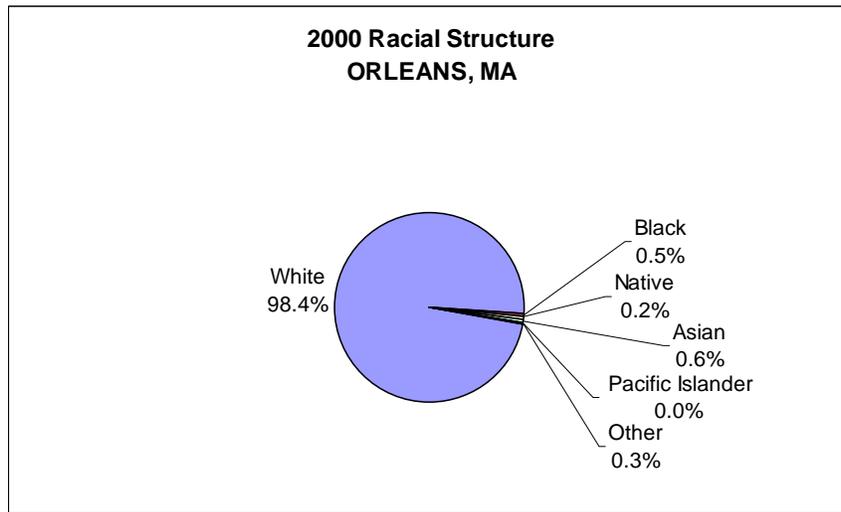


Figure 2. Racial Structure in 2000 (US Census Bureau 2000)

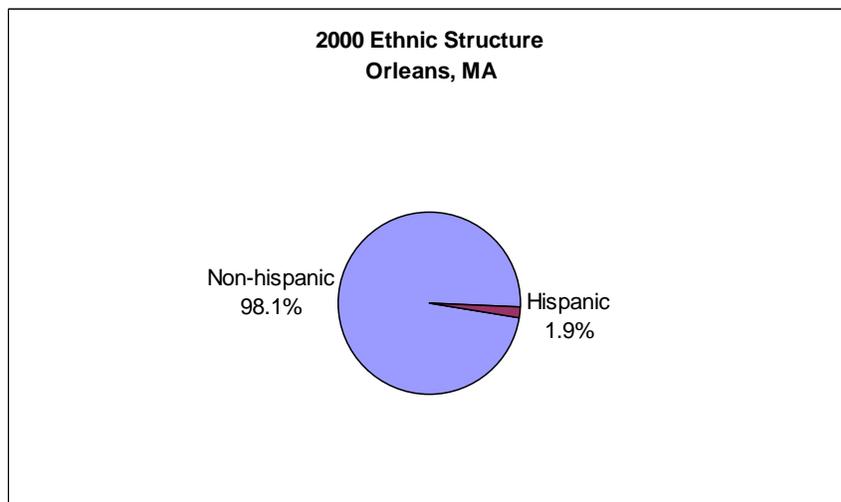


Figure 3. Ethnic Structure in 2000 (US Census Bureau 2000)

For 94.0% of the population 5 years old and higher, only English is spoken in the home, leaving 6.0% in homes where a language other than English is spoken, and including 1.3% of the population who speak English less than “very well” according to the 2000 Census.

Of the population 25 years and over, 92.8% are high school graduates or higher and 33.6% have a bachelor’s degree or higher. Again of the population 25 years and over, 0.6% did not reach ninth grade, 6.5% attended some high school but did not graduate, 24.8% completed high school, 26.7% had some college with no degree, 7.7% received an associate’s degree,

19.7% earned a bachelor's degree, and 13.9% received either a graduate or professional degree.

Although religious percentages are not available through the U.S. Census, according to the Association of Religion Data Archives (ARDA) in 2000 the religion with the highest number of congregations and adherents in Barnstable County was Catholic with 29 congregations and 63,729 adherents. Other prominent congregations in the county were Episcopal Church (11 with 7,093 adherents), United Church of Christ (17 with 6,141 adherents) and United Methodist Church (15 with 4,241 adherents). The total number of adherents to any religion was down 20.7% from 1990 (ARDA 2000).

### **Issues/Processes**

In the summer of 2005, the Massachusetts Division of Marine Fisheries (DMR) prohibited the taking of shellfish in Nauset Harbor, Orleans, as well as numerous other Cape towns, because of elevated levels of paralytic shellfish poison (PSP) toxin in shellfish. The closures were enacted due to a bloom of planktonic algae, often called "Red Tide". Red Tides can be a threat to human health and can even cause death. In response to the closures, the Small Business Administration issued low-interest loans to qualified individuals, but the Federal government decided the closures did not qualify fishermen for disaster relief funds (Buzzards Bay National Estuary Program 2005). Nauset estuary is the only place along the Massachusetts coast where red tide is known to reside, laying dormant on the seafloor until the proper conditions manifest for a bloom (Fraser 2007). Red Tides are likely to re-occur in the future, effecting not only local fishermen, but area seafood dealers and restaurants, forcing businesses in some cases to import clams from Seattle, Canada, and Maryland to meet the local demand (Mahoney 2005). But Orleans is familiar with closures, as each year, there is an annual red tide closure (usually from April – June) which has a significant economic impact on commercial fishermen in the area. However, the closure also has some benefit in that it allows juvenile shellfish a chance to grow unhindered.<sup>4</sup>

### **Cultural attributes**

The Orleans Chamber of Commerce hosts 'Pops in the Park' featuring the Cape Symphony Orchestra every summer (Orleans Chamber of Commerce 2007). A prominent landmark is the Jonathan Young Windmill, built in the early 1700's to turn millstones to grind grain. The mill is located on Route 6A on the Town Cove, and is open to visitors in the summer months (Orleans Historical Society 2007). The Cultural Council is an active committee in Orleans, established to stimulate and encourage the arts and consists of five to twenty-two members (Town of Orleans 2007a).

## **INFRASTRUCTURE**

### **Current Economy**

According to the U.S. Census 2000<sup>5</sup>, 49.1% (732 individuals) of the total population 16 years of age and over are in the labor force (see Figure 4), of which 0.3% are unemployed, none are in the Armed Forces, and 48.8% are employed.

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<sup>4</sup> Personal Communication, Dawson Farber, Orleans Harbor Master & Shellfish Warden, Town Hall, 19 School Road, Orleans, MA 02653, November 6, 2006

<sup>5</sup> Again, Census data from 2000 are used because they are universally available and offer cross-comparability among communities. Some statistics, particularly median home price, are likely to have changed significantly since 2000.



Figure 4. Employment Structure in 2000 (US Census Bureau 2000)

According to Census 2000 data, jobs in the census grouping which includes agriculture, forestry, fishing and hunting, and mining accounted for 14 positions or 1.9% of all jobs. Self employed workers, a category where fishermen might be found, accounted for 124 positions or 17.0% of jobs. Retail trade (17.3%) is the industry grouping that accounts for the most employment. Professional, scientific, management, administrative, and waste management services (15.1%), arts, entertainment, recreation, accommodation and food services (13.5%), and construction (11.7%) were the primary industries.

Median household income in Orleans was \$30,238 (up 44.6% from \$20,917 in 1990 [US Census Bureau 1990]) and per capita income was \$23,033. For full-time year round workers, males made approximately 34.9% more per year than females.

The average family in Orleans consists of 2.59 persons. With respect to poverty, 1.8% of families (down from 5.9% in 1990 [US Census Bureau 1990]) and 6.9% of individuals earn below the official US Census poverty threshold. This threshold is \$8,794 for individuals and ranges from \$11,239-35,060 for families, depending on number of persons (2-9) (US Census Bureau 2000b). In 2000 28.3% of all families of any size earned less than \$35,000 per year.

In 2000, Orleans had a total of 1,279 housing units of which 67.8% were occupied and 50.2% were detached one unit homes. More than 10% (12.4%) of these homes were built before 1940. Mobile homes, boats, RVs and vans accounted for 0.4% of housing units; 17.9% of detached units have between 2 and 9 rooms. In 2000, the median cost for a home in this area was \$179,900. Of vacant housing units, 23.3% were used for seasonal, recreational, or occasional use. Of occupied units 34.9% were renter occupied.

## **Government**

Town Meetings are lead by an elected Board of Selectmen (5 members) and a Town Administrator manages day-to-day affairs. There are eighteen Departments and numerous committees addressing town issues. The Town of Orleans also has a Harbormaster/Shellfish Constable responsible for regulating shellfishing within the town waters. The Harbormaster manages the town's waterways in Cape Cod Bay, Nauset Inlet, and Pleasant Bay, along with the twenty-seven town landings which serve those estuaries (Town of Orleans 2007).

### *Fishery involvement in government*

Residents of Orleans can obtain a commercial shellfishing permit for a fee of \$100 for residents aged 16-69 and \$50 for those 70 years or older. The town as well as the Massachusetts Division of Marine Fisheries or the Massachusetts Department of Public Health can restrict and prohibit shellfishing in certain areas for safety or ecological purposes. There are extensive regulations on size, species, time and fishing gear restrictions imposed by the town. The town also has a Shellfish and Waterways Improvement Advisory Committee with nine members, two of which are wild fishermen, commercial shellfish license holders, or Cape Cod Bay dragger fishermen.<sup>6</sup> Orleans has a harbor master as well.

## **Institutional**

### *Fishery associations*

In the nearby town of Chatham, the [Cape Cod Commercial Hook Fishermen's Association](#) is a non-profit, member-based organization that supports community fisheries issues on the Cape and in New England. Several of the organizations Board of Directors and a portion of the member base are from Orleans. There is also a Nauset Fishermen's Association in Orleans, although it is unclear whether they hold regular meetings.

The [Massachusetts Fisherman's Partnership](#) focuses on issues for fishermen in different ports in Massachusetts. The Partnership responded to the need of health care for fishermen and their families by developing the Fishing Partnership Health Insurance Plan with federal and state aid. This plan has been in place since 1997 and reduces the amount of money that fishermen's families have to pay to be covered by health insurance (Hall-Arber et al. 2001).

### *Fishery Assistance Centers*

The [Cape Cod Commercial Hook Fishermen's Association](#) in Chatham offers assistance, advice and resources of a wide range in their "S.S. Shanty", a community action center open to the public.

### *Other fishing-related institutions*

The Conservation Commission, located in Town Hall, enforces the Wetlands Protection Act and Orleans bylaws relating to wetlands (Town of Orleans 2007c).

## **Physical**

Orleans is located on Cape Cod, bordered by Eastham on the north, the Atlantic Ocean on the east, Chatham and Harwich on the south, and Brewster and Cape Cod Bay on the west (State of Massachusetts 2007). The nearest Municipal Airport is in Hyannis (21 miles) and the nearest international airport is Logan in Boston (90 miles) (MapQuest 2007). Orleans can be accessed from Route 6, the Mid-Cape Highway.

Today there is a large [charter boat sports fishing fleet](#) located in Rock Harbor, a tidal harbor, which has been the center of maritime commerce and history in Orleans for years [/](#). Rock Harbor has "Quahog Trees" that mark the deep channel leading into the working harbor which has numerous private charter boats and commercial shell fishing areas. Cape Cod Marine offers boat services, sales and repairs, and [Northside Marina](#) is the largest full service marina on

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<sup>6</sup> Personal Communication, Dawson Farber, Orleans Harbor Master & Shellfish Warden, Town Hall, 19 School Road, Orleans, MA 02653, November 6, 2006

Cape Cod Bay. [Other marinas in Orleans](#) include: Arey's Pond Boat Yard Orleans, Nauset Marina Orleans, and of course Rock Harbor Orleans.

## **INVOLVEMENT IN NORTHEAST FISHERIES<sup>7</sup>**

### **Commercial**

A significant industry in Orleans is shellfishing. The Nauset estuary supports as many as 18 full-time shellfishermen in Orleans and Eastham during the spring, and both towns combined sell nearly 400 commercial shellfish permits each year. Although the closest major commercial fishing port is Chatham, some fishermen who fish from Chatham live in Orleans.

There are several local fish markets where residents can buy mostly local and regional products. A few of these businesses include: Friendly Fishermen's Fish Market, Nauset Fish and Lobster Pool, and Young's Fish Market. Venture Fisheries, located on Old Colony Way, is a wholesale dealer of Massachusetts aquaculture products.

Data provided for Orleans combine data listed under both Orleans and Nauset, the name of the harbor within Orleans. The most valuable species landed in Orleans is lobster, with landings of more than \$600,000 averaged for 2000-2006. Landings were not recorded at the port level in Orleans for 1997-1999. The landings of lobster in 2006 were somewhat lower than the seven-year average value. The landings of "other" species, the second most valuable in Orleans, were much higher in 2006 than the average landed value for the same time period. Landings generally increased during this time period to over \$1 million for 2004-2006. The number of home ported vessels in Orleans rose from 36 in 1998 to 54 in 2001, and then fell to 30 in 2006. The number of vessels with owners living in Orleans displayed a similar trend.

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<sup>7</sup> In reviewing the commercial landings data several factors need to be kept in mind. 1) While both federal and state landings are included, some states provide more detailed data to NMFS than others. For example, shellfish may not be included or data may be reported only by county and not by port. 2) Some communities did not have individual port codes until more recently. Before individual port codes were assigned, landings from those ports were coded at the county level or as an aggregate of two geographically close small ports. Where landings were coded at the county level they cannot be sorted to individual ports for those earlier years, e.g., prior to 2000. 3) Where aggregated codes were used, those aggregate codes may still exist and be in use alongside the new individual codes. Here the landings which are still assigned to the aggregate port code cannot be sorted into the individual ports, so port level data are only those which used the individual port code. 4) Even when individual port codes exist, especially for small ports, landings may be coded at the county level. Here again it is impossible to disaggregate these to a port level, making the port level landings incomplete. 5) In all these cases, the per port data in this profile may under report the total level of landings to the port, though all landings are accounted for in the overall NMFS database.

## Landings by Species

Table 1. Dollar value of Federally Managed Groups of landing in Orleans, MA

	Average from 2000-2006	2006 only
<b>Lobster</b>	629,439	438,543
<b>Other<sup>8</sup></b>	181,920	682,293
<b>Largemesh Groundfish<sup>9</sup></b>	41,487	74,948
<b>Surf Clams, Ocean Quahog</b>	19,186	27
<b>Bluefish</b>	12,232	21,282
<b>Summer Flounder, Scup, Black Sea Bass</b>	2,178	2,644
<b>Scallop</b>	2,005	5,445
<b>Monkfish</b>	557	3,869
<b>Skate</b>	335	2,343
<b>Dogfish</b>	136	954
<b>Smallmesh Groundfish<sup>10</sup></b>	1	0
<b>Squid, Mackerel, Butterfish</b>	1	0

## Vessels by Year<sup>11</sup>

Table 1. All columns represent vessel permits or landings value combined between 1997-2006 for Orleans

Year	# Vessels (home ported)	# Vessels (owner's city)	Level of fishing home port (\$)	Level of fishing landed port (\$)
<b>1997</b>	40	27	107,383	NOT RECORDED
<b>1998</b>	36	29	87,815	NOT RECORDED
<b>1999</b>	43	32	253,950	NOT RECORDED
<b>2000</b>	44	28	158,502	601,880
<b>2001</b>	54	33	241,540	603,956
<b>2002</b>	54	37	294,973	556,976
<b>2003</b>	47	31	72,591	718,960
<b>2004</b>	38	26	632,036	1,095,721
<b>2005</b>	35	22	982,882	1,416,501
<b>2006</b>	30	19	618,693	1,232,348

(Note: # Vessels home ported = No. of permitted vessels with location as homeport  
 # Vessels (owner's city) = No. of permitted vessels with location as owner residence<sup>12</sup> Level of fishing home port (\$) = Landed value of fisheries associated with home ported vessels Level of fishing landed port (\$) = Landed value of fisheries landed in location)

<sup>8</sup> "Other" species includes any species not accounted for in a federally managed group

<sup>9</sup> Largemesh groundfish: cod, winter flounder, yellowtail flounder, American plaice, sand-dab flounder, haddock, white hake, redfish, and pollock

<sup>10</sup> Smallmesh groundfish: red hake, ocean pout, mixed hake, black whiting, silver hake (whiting).

<sup>11</sup> Numbers of vessels by owner's city and homeport are as reported by the permit holder on permit application forms. These may not correspond to the port where a vessel lands or even spends the majority of its time when docked.

<sup>12</sup> The Owner-City from the permit files is technically the address at which the owner receives mail concerning their permitted vessels, which could reflect the actual location of residence, the mailing address as distinct from residence, owner business location, or the address at which a subsidiary receives mail about the permits.

## Recreational

[Sportfishing](#) is primarily a summer activity in Orleans, with numerous private companies operating out of Rock Harbor. Anglers primarily pursue striped bass, blue fish, and blue fin tuna. A few of the [major charter companies](#) include: Mystery Sportfishing, Fin Addiction, Roxy and, Capt. Cook Sport fishing.

Shellfishing is both a commercial and a recreational pursuit. Recreational shellfishing is permitted in Orleans with a family shellfish permit, renewable each year. The cost for Orleans residents is twenty dollars (Town of Orleans 2007).

## Subsistence

Information on subsistence fishing in Orleans is either unavailable through secondary data collection or the practice does not exist.

## FUTURE

Orleans is in the process of developing a local wastewater management plan and is facing problems with water quality in many of the sub-embayments in the Pleasant Bay and Nauset estuaries.<sup>13</sup> There is concern over potential “Red Tides” affecting shellfish beds and fishermen in the future. Due to the nature of red tides, the algae causing the tide deposit ‘cysts’ on the ocean floor which can bloom again when exposed to fresh water. Since many fishermen make their income almost exclusively from shellfishing, future red tides can have devastating economic and social outcomes (Carlowicz 2005).

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<sup>13</sup> Personal Communication, Dawson Farber, Orleans Harbor Master & Shellfish Warden, Town Hall, 19 School Road, Orleans, MA 02653, November 6, 2006

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