

## Community Profile

### Ocean City, Maryland

By Bryan Oles

#### I. Community Description

The area of Worcester County, Maryland that encompasses the resort town of Ocean City and the unincorporated town of West Ocean City in Worcester County, Maryland constitutes a major site of recreational and commercial fishing activity. Geographically, the Town of Ocean City encompasses a barrier island on Maryland's Atlantic coast. It is bounded on the south by an inlet that was created by a storm in 1933, and stretches some 10 miles north to the Delaware State line. The town is separated from 'mainland' Maryland by a string of bays including Sinepuxent Bay, Isle of Wight Bay, and Assawoman Bay. West Ocean City, located just across the bay from the southern end of Ocean City, is the site of the commercial fishing harbor.

Ocean City is accessed by three main highways. From the north, Route 1 (Ocean Highway) enters Ocean City via the barrier islands of Delaware and from the west, Route 50 (Ocean Gateway) and Route 90 (Ocean City Expressway) span bridges to the island from across the bay. Route 50 is the main artery from the west, pumping tourists across the Chesapeake Bay Bridge into the area throughout the summer.

The history of Ocean City is deeply rooted in both tourism and fishing. A local farmer named Isaac Coffin is said to have established a small inn on the barrier island in 1869 to house fishermen and beach goers. Transportation to and from the area relied on the stagecoach and ferry. Over the next decade investors from Baltimore and Philadelphia began to develop the island. The luxury, 400-room Atlantic Hotel was built in 1875. A few years later, a railroad was extended to the nearby town of Berlin, MD and in 1880, the Town of Ocean City became incorporated. The following year, a railroad bridge over Sinepuxent Bay was completed, allowing train passengers to ride all the way to Ocean City itself. (<http://www.oceancity.md/portal/oceanhistory.cfm>).

In the early 1900s Ocean City expanded as both a resort destination and a commercial fishing site. Two men from Baltimore, Daniel B. Trimper and his brother, built an amusement park on the southern end of Ocean City that is still owned and operated by the Trimper family today. Ocean City's Boardwalk, an important tourist attraction to this day, was also constructed in the early 1900s. About the same time, Capt. Christopher Ludlum and his son moved into the area from Cape May, NJ and established the ocean pound net fishing industry which employed many of the local men. "While the men fished, the wives and mothers were instrumental in running the hotels that catered to vacationers" (<http://www.ococean.com/history.html>).

Perhaps the most significant event in the history of Ocean City was the storm of 1933 that plowed a trough through the barrier island, linking the bay side with the Atlantic Ocean. Shortly after this inlet was created, sport fishermen began using it to access the rich fishing grounds off

the coast. In 1934 the first white marlin was caught, and fishermen soon found them in great abundance close to shore. Ocean City became the "White Marlin Capitol of the World" for recreational anglers. The inlet also provided incentive for the establishment of a commercial fishing port for trawlers, gillnetters, and potters, which soon replaced the ocean pound net fishery.

Access to Ocean City was improved by the completion of the Chesapeake Bay Bridge in 1952, which opened up the Eastern Shore of Maryland to folks in the Baltimore-Washington corridor. The completion of the Bay Bridge Tunnel on Route 13 in 1964 provided an additional access route to the Eastern Shore of Virginia and Maryland for populations driving from the south (<http://www.oceancity.md/portal/oceanhistory.cfm>).

Since the 1970s, condominiums, resort accommodations, and tourism-related businesses have mushroomed across Ocean City. This development has included a burgeoning recreational fishing industry that includes hundreds of charter boats, numerous party boat operations, and over a dozen marinas and supporting businesses. Census data indicate that Ocean City had a population of 5,146 in 1990 that grew to 7,173 by 2000. The Town government is led by a mayor and a city council, members of which are elected to serve 4-year terms.

Unrelated to the development of the tourist industry, and perhaps existing in spite of it, is a tenacious commercial fishing industry centered in West Ocean City. West Ocean City is an unincorporated neighborhood on the Western side of the Sinepuxent Bay. This area is not administered by the Town of Ocean City, but by the Worcester County Government. Worcester County was established in 1742 and has been under Code Home Rule since 1976. The County seat is in Snow Hill, Maryland, which is approximately 25 miles southwest of West Ocean City. The County population was 35,028 according to the 1990 census and 46,543 in the 2000 census.

West Ocean City, which is located just across the Route 50 Bridge, is experiencing an expansion of tourist related businesses and residential developments. Travelers heading into West Ocean City on Route 50 from the west are greeted with miles of restaurants, outlet malls, shopping centers, and billboards that beckon visitors to myriad resort businesses in Ocean City. The bayfront of West Ocean City is dominated by recreational marinas, but new housing developments are growing as well. A multi-million dollar Park and Ride that has been newly established near the Route 50 bridge allows visitors to park outside of Ocean City and catch a bus into town. There are numerous lodging options, restaurants, and other tourism-related businesses located in West Ocean City. One real estate company describes the area this way: "Where the tiny fishing cottages of Trawler Captains once peppered the landscape, West Ocean City has evolved into an irresistible blend of vital, profitable neighborhoods. At its core is the most successful business region on Maryland's coveted Eastern Coast." (<http://www.southpointrealestate.net/westocean.html>)

In the midst of this is a small harbor where the commercial fishing fleet is centered. The harbor in West Ocean City accommodates a county-owned commercial dock, a limited amount of privately owned dock space, and three commercial packing facilities. The commercial fleet shares the harbor with a recreational fishing marina, waterfront restaurants, and a number of newly constructed houses.

During the 2000 Census, Ocean City had a population of 7184, in 3572 households. The average home is valued at \$152,200. The population is primarily Caucasian (95.2% of total population), with a median age of 47.

The industries that employed the most individuals were art (1,045 individuals, 29.5% of employed individuals), retail trades (457 individuals, 12.9% of employed individuals), and financial occupations (426 individuals, 12% of employed individuals). Agriculture, forestry, and fisheries employed 16 individuals (0.4% of employed individuals).

The per capita income in 2000 was \$26,078. In 2000, 361 individuals classified themselves as unemployed (5.6% of total population), compared to 203 (3.9% of the total population) in 1990. In 2000, 604 individuals (8.4% of total population) were living below the poverty level, compared to 479 (9.3% of the population) in 1990.

## **II. Dependency and Engagement in the Fisheries**

### A. Commercial Fishing

#### History and Current Description

Commercial fishing in the Ocean City area has changed significantly from the early days of pound net fishing. In the early 1900s, pound net fishing camps were established on the barrier islands. One company was based in the harbor of West Ocean City. Ocean pound net fishing was labor intensive. The pound net stakes were said to be 75 feet long, made of hickory. One end of the stake was sharpened and then driven into the ocean bottom. The nets were dipped in large iron pots of tar prior to hanging. Fish caught in the pounds were scooped up in a net and then ladled out with large iron strainers. This form of fishing required large crews who worked for the fish companies that owned the boats and the nets. They worked hard for little pay (information from a local fisherman's journal). In 1929, there were 44 pound nets owned by Worcester County fishermen among other gear types like fyke nets, eel pots, and gillnets (Fairbanks 1932:182). In that same year, Worcester County ranked 5th among all Maryland counties for total value landed - 7.8% of the State's total (ibid: 42). After the creation of the inlet in 1933, West Ocean City became the center of fishing activity. Markets to the west were supplied with Ocean City fish via railroad carts. Sea bass, inshore cod, and offshore lobster fisheries were later established by a fisherman whose family still owns and operates one of the fish packinghouses in the harbor (McCay and Cieri 2000). Dragners, gillnetters, and potters were attracted to the harbor. Ocean City also became an important surf clam and ocean quahog (SCOQ) port. According to one informant, there were approximately 30 SCOQ vessels in the harbor 20 years ago. The American Original dock had over 20 boats packing while "Smitty's", another SCOQ dock, used to have some 15 boats. There were also numerous other dragners and scallopers that used to pack out of the harbor. These two clam docks are no longer in existence. Another fish dock on the north side of the harbor, Davis and Lynch, is now the site of a restaurant. The dock went out of business in the 1980s. The Ocean City Fish Company, a fourth fish dock, went out of business in the past year.

Today, the commercial fishing industry in West Ocean City is considerably smaller than it was 20 years ago. It is also highly diverse. There is a small fleet of approximately five surf clam and ocean quahog boats, at least fifteen small boats that engage in potting, gillnetting, dredging, and/or handlining, and at least seven draggers. Vessel Trip Report (VTR) data indicate that 17 federally permitted commercial boats (excluding SCOQ vessels) landed in Ocean City in 2001. Twelve of these boats claim Ocean City as their principal port of landing. The most important gear types among these boats in 2001 include bottom fishing otter trawl, gillnet, handline, fish pot and conch pot. Other gear used included lobster pot, diving gear, and scallop dredge. Five other federally permitted boats that landed in Ocean City in 2001 hailed from Cape May, NJ; Dagsboro, DE; Hatteras, NC; Oyster, VA; and Scituate, MA. These boats represented a range of gear types including gillnet, handline, fish pot, and scallop otter trawl. The 17 boats landing in Ocean City in 2001 made 584 trips, averaging 34 trips per boat.

The fleet in Ocean City is primarily composed of small-scale owner operated boats. An analysis of 2001 VTR data on federally permitted boats that designate Ocean City as their principal port indicate that these boats (n=14) average 50 feet in length, 35 gross tons and 406 horsepower. The average year built is 1977, making it a rather old fleet. An exception to the size and age of these boats is the fleet of four SCOQ boats that is owned by a clam processing plant in Norfolk, VA. Captains of these vessels are paid a share of the profits and are responsible for hiring their own crews. They land their catch at a satellite dock in West Ocean City's harbor that is owned and operated by the Norfolk plant. The other boats landed 96% of their total catch in Ocean City in 2001, but a few boats from Ocean City also landed in Cape May, NJ; Indian River, DE; Lewes, DE; Mispillion, DE; and Wachapreague, VA. VTR data on the 14 boats fishing out of Ocean City indicate that they made a total of 578 trips, averaging 41 trips per boat in 2001. This is a significant decline from the total number of trips reported among Ocean City boats between 1995 and 2000. For example, in 1998, 19 boats made 1,130 trips. These anomalies could be due to reporting errors, changes in reporting practice, actual declines in the number of trips due to regulatory closures (dogfish is a likely possibility), or a combination of factors. In fisheries that experienced the imposition of a quarterly quota, these declines likely represent an actual reduction in trip numbers.

Appendix 1 depicts the different gear types used to land fish in Ocean City since 1994 and the percentage of value and pounds for which they account. It demonstrates the wide range of gear types utilized. The surf clam, ocean quahog dredge accounts for 81% of the value landed in 2001 and nearly 90% of the pounds. In terms of percent total value, this gear type is followed by the otter trawl, fish (8%), pelagic longline (3.5%), fish pot (3%), and sink gillnet (2%). Other gear types reported in weighout data for 2001 include conch pot, lobster pot, handline, otter trawl scallop, and other. From the diachronic perspective that this chart provides, the surf clam, ocean quahog dredge has maintained a significant share of the total value landed, from a low of 48% in 1997 to a high of 81% in 2001. This view also demonstrates that pelagic longlining accounted for a larger percentage of total value landed in past years (17% in 1995). Otter trawl fishing gear has maintained a steady role in the value of landings, with a low of 4% (1996) to a high of 13% (1999). In comparison to 2001, data for earlier years indicate that potting fish accounted for more of the value, particularly in the late 1990s where it reaches nearly 10%. One similar trend is

represented by sinking gillnets which accounted for up to 25% of the value in 1996, and only 2% in 2001.

Weighout data presented in Appendix 2 show the changing percentages of value and pounds of species landed in Ocean City between 1994 and 2001. They demonstrate that in 2001, surf clam/ocean quahog accounted for 81% of the total value landed in Ocean City. This is followed by finfish<sup>1</sup> (6%), fluke (4%), and a handful of species each under 2% including whiting, monkfish, flounder, pelagic, tuna, lobster, scallops, squid, shellfish, swordfish and 'other'<sup>2</sup>. Among the interesting trends is the decline in dogfish values, which represented up to 18% of the total value landed in the past (1996). Finfish have accounted for a fair percentage of the total value landed since 1994, peaking at over 12% in 1999. Fluke, too, has represented a consistent percentage of the total value (between 3% and 6%) landed since 1994.

### Seasonal Round

The seasonal activity of fishermen depends on gear type and regulations. Many of the smaller boats are outfitted with a diversity of gear, including gillnets, pots, handlines, and/or bandits. According to the manager of a local packinghouse, many of the fishermen are forced to pursue the same species when they are available just to make ends meet. Unfortunately, the derby-style fishing leads to gluts in the market and lower prices for the fishermen. For example, the manager cited the fact that the opening of shark started a 'gold rush', which led to falling prices. While there have been few new opportunities in the area, this informant explained that the monkfish fishery allowed his new packing business to be established. Increasingly stringent regulation of the monkfish fishery is, however, negatively affecting his business.

One fisherman who has diversified in order to stay in business described his seasonal round in detail. He is primarily a pot fisherman, targeting black sea bass from March through December. Between the months of March and May, he often fishes in Virginia waters because the sea bass arrive there first and he gets better prices. He has a Virginia landing license, which allows him to do this. He lands his catch and docks his boat in Wachapreague, 60 miles away from his home in Maryland. The quarterly quota system dictates when he can fish for sea bass and how much he can land. In addition to sea bass, his pots also catch lobster during the same period. He also sets conch pots in October and November. When he is not tending his pots he will set floating gillnets for menhaden in March and April, and sinking gillnets for croaker and Spanish mackerel between July and September; bluefish from September through December; and, rockfish in November. He typically hauls out in August for painting and maintenance, but maintenance is required throughout the year. He was not sure how this schedule compared to other fishermen in the area. For example, some fishermen target shark and/or tuna in the summer. This fisherman explained that the regulatory system has had the greatest effect on the seasonal round, forcing him to get into gillnetting as a result of lower quarterly quotas for sea bass. Unfortunately, the fish do not cooperate with the single-species style of management, or with the imposed seasons.

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<sup>1</sup> The "finfish" category includes atlantic croaker, scup, black sea bass, weakfish, striped bass, and spot

<sup>2</sup> The "other" category includes all species other than those accounted for in weighout data categories (whiting, monkfish, flounder, pelagics, finfish, tuna, fluke, dogfish, lobster, scallop, squid, shellfish, surf clam and ocean quahog, swordfish, eel, tilefish)

Often the fish are present when they can't be caught legally and gone by the time the season opens. This fisherman also explained that the environmental knowledge that fishermen have, such as the timing of species migrations based on climatic and natural cues, has become less meaningful as a result of the government imposed seasons that do not coincide with natural cycles.

Another fisherman who employs a number of different gear types described his seasonal round. He lives in Delaware, but he lands his fish here because there is nowhere to pack and sell his fish in Delaware. There are four or five others from Delaware who also fish out of West Ocean City. He uses a dredge for crabs December through April, and dredges for conch in March and April. He pots for sea bass April through June and October through December, and traps lobster July through September. This fisherman also invests a lot of time in conch potting, April through June and September through December. He also traps eels in March and April, and hook and line fishes for yellowfin tuna in August and September. He plans to diversify even further to make ends meet. He just bought another boat for gillnetting and plans to go for spot and bluefish in July and croaker in September.

Conching has become a much more common practice among the smaller boat fishermen. According to the manager of one fish dock, the closure of dogfish pushed fishermen into conch potting. It is the only fishery that is not overly regulated. Seven years ago, he and the owner of another fish dock lobbied for a 6" minimum on conch, which, he says, is the only reason conch are still in the area. Conching does have its problems and these problems often relate to bait. Conchers use horseshoe crabs for bait. According to one informant it takes approximately 200 crabs to bait 400 pots. Horseshoe crabs can cost as much as 1.50 each, which means that the price for conch must be high enough to cover the bait bill and provide a profit. Despite the cost of bait, high market prices for conch have attracted many fishermen into this fishery for certain times of the year.

The five surf clam and ocean quahog boats that fish out of Ocean City fish year round. Each boat in the fleet owned by the processing company based in Norfolk, VA has a certain amount of quota assigned to it and the company attempts to keep them going throughout the year. A number of interviewees believe that the SCOQ crews are probably doing much better on average than the small boat owner-operators due to the stable quota that they are allowed and the big business behind them.

The fishermen interviewed explained that most fishermen in the area fish full-time, year round and do not rely on other land-based jobs. Full-time employment in fishing has become more difficult since the closure of the dogfish fishery in the mid-Atlantic. The dogfish fishery kept many of the fishermen and packinghouses busy throughout the winter - a traditionally slow time of year for anything but dogfish. In 1998 the Northwest Atlantic US population of spiny dogfish *Squalus acanthias* was declared to be overfished by the National Marine Fisheries Service. A controversial fishery management plan took effect in 2001 that limited dogfish harvest to a by-catch fishery. The small quota that is currently granted for the capture of dogfish is quickly filled in the Northeast, preventing mid-Atlantic fishermen from pursuing dogfish when they are available.<sup>3</sup> These measures resulted in the loss of this fishery among gillnetters in Ocean City

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<sup>3</sup> A fishery management plan was approved in 1999 but was held up by a series of political struggles among

and other ports along the Mid-Atlantic. Since dogfish has been eliminated as an option, some fishermen have to turn to other jobs in the winter like welding. One fisherman claimed to know a number of fishermen who crew on sport fishing charters in Florida during the winter.

### Crew Description

Few, if any, fishermen are said to live in the Town of Ocean City. Informants stated that most fishermen who keep their boats at the West Ocean City Harbor live within 20 or 30 miles in Maryland towns such as Snow Hill and Berlin. Others reside in Delaware. Estimates for crew are difficult to establish. One informant estimated that there are between 60 and 100 captain and crew, based on an estimate of 30-35 boats and a crew of two to three for each boat. A separate informant who assisted in identifying federally permitted boats from the NMFS 2000 permit list provided information that places the number of crew at approximately 80. This does not include participants in the small scale bay fisheries. VTR data indicate that in 2001, 14 boats with an average crew of two made trips out of Ocean City. This does not include the five SCOQ boats that average four to five crewmembers each, transient boats that land in Ocean City, or the smaller boats that are not required to make Vessel Trip Reports.

Crewing the fleet has been extremely challenging in recent years according to informants. Fewer fish, more regulations, lower prices at market, and unpredictable pay are a few of the factors that make it difficult for captains to find reliable crew. Fishermen have a hard time attracting good crew when land jobs like landscaping and construction offer steady pay and fewer risks. The lack of new recruits reflects the lack of hope that crew have in some day owning and operating their own boat. Tighter regulations are held responsible for eliminating the natural cycle of recruitment through which crew move from deckhand to captain. Today, the crews often float between boats. They are said by some to have drug and alcohol problems as well, but one captain disagrees, pointing out that, "Crew don't drink more than they used to, they just work less." The following journal entries, generously provided by a fishing family from the area, illustrate the problems associated with crewing the fleet in West Ocean City:

7/19/02: A fisherman... [...] hired a [foreign] crewman who is now a United States citizen. The crewman lives on the boat. They are tuna fishing. [A] dragger man replaced his crackhead crewman, who did not show up, with a man who showed up on the dock, claiming to be down to his last 20 dollars.

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different stakeholders over the status of the stock. The plan, which attempted to eliminate the directed dogfish fishery by reducing mortality from .3 to .03, was implemented during the 2001 fishing season. A small by-catch quota of 3 million pounds was to be allocated between two 6-month seasons (58% in the first and 42% in the second) in order to allow fishermen from New England and mid-Atlantic to harvest fish when they are seasonally available. However, the Atlantic States Marine Fisheries Commission (ASMFC), which also governs migratory species that can be caught in different states, used different numbers to arrive at an 8 million pound quota. This allowed fishermen to exceed the 3 million pound federal quota when capturing dogfish inside the three mile limit of territorial state waters. It so happens that Massachusetts, and other New England States quickly capture the federal quota and the additional ASMFC allowance during the spring and summer months in New England states, leaving nothing for mid-Atlantic fishermen during the winter. The 42% that should be left for mid-Atlantic fishermen to catch is all gone, because once 3 million pounds are caught the federal fishery closes. Besides the federal closure, the additional quota for state waters can not be caught in Maryland because the dogfish are typically found outside three miles.

9/5/02: There were five captains with no crews, standing on the dock, this morning. [One captain] said he had missed about thirty days this year from lack of crew.

9/9/02: [A captain] hired the swarthy man who was looking for work. The man...[...] has as his only possessions a couple of shirts, pants and a pair of swim trunks. He slept on the beach and worked at beach stands this summer. In winter, he goes to Florida and works on head boats. He found [the captain] a homeless Mexican, too. [The captain] said that [the new crewman] knew all the homeless, if [another captain] wanted a crewman.

The lack of consistent, reliable crewmembers results in captains crewing for one another as evidenced by the following journal entry:

6/22/02: Next door, a young man, Captain [A], who was one of Captain [B]'s crewmen, waited for his crewman, who never showed up. Captain [C]'s crewman, an alcoholic, did not show up, either, so he took Captain [A].

It also results in captains running their boats solo, which is very dangerous:

10/1/02: I would rather [that he] did not gillnet alone. Fishermen have gotten caught on gillnet spools. Sometimes they only break an arm, other times they get crushed under the net and ropes, a horrible death. When there is a crewman, he can stop the spool.

Finding and maintaining good, reliable crewmembers is one of the top priorities among commercial fishermen in West Ocean City as it is across the Eastern seaboard. The long hours, hard work, unpredictable pay, and the regulations that limit the profitability of fishing all contribute to this dilemma. Alternative employment in land based jobs that result from development like construction as well as opportunities in aquaculture, for example, offer greater profits at lower risk and siphon off the reliable workers available to the fishing industry.

### Infrastructure

Dock space in the harbor of West Ocean City is limited. The Worcester County Commission zoned the harbor area as a commercial marine district after being lobbied by fishermen who were worried about the trend of building large residences and private businesses on the waterfront. The harbor is now protected from further encroachments by developers. The four large residences at the eastern end of the harbor that were built prior to this zoning protection eliminated commercial dock space. The county also manages a commercial dock. Spaces are allocated under sealed bids for a period of two years. One informant estimated that spaces cost somewhere in the neighborhood of \$3000.00/year. Small boat owner/operators expressed concern over the fact that the surf clam operation can afford to outbid the smaller boats. They fear that an expansion of the surf clam industry could monopolize the county dock space. Without the county dock, commercial fishermen would have few places to moor their boats. The shortage of space is the reason why boats "raft up" - moor along side each other - in available

private spaces. A number of private landowners who have harbor front property lease dock space to commercial fishermen. One restaurant that replaced a clam dock now leases some space to commercial fishermen. Another property owner who leases dockage to a new fish packing facility also charges commission on the pounds landed. An informant said that while certain other fishermen were not happy about the arrangement the deal actually benefits fishermen by keeping their dock space from being sold or leased to other interests. Gear storage space is extremely limited. One fisherman explained that he has to store much of his gear at his house because there is no room around the harbor. His gear, some of which includes 1300 bass pots, 400 conch pots, anchors, weights, flags, and barrels of nets and rope, requires approximately 3/4 of an acre of land.

The harbor is home to three fish and shellfish packing facilities, two of which have been established within the last two years. The oldest packinghouse has been in business since 1957. The infrastructure of this family business includes: office building; retail market; packing dock for offloading fish; clam dock for unloading clams; ice room and ice machine; freezer for storing bait, shrimp, and fish fillets; cooler for storing fresh fish; delivery truck; small marine supply shop; and, storage sheds. During the field visit, the researcher noted that the dock was extremely clean and free of mess and junk. There were three older African Americans working in the packinghouse - loading ice and fish into boxes. An employee of the company explained that they take a pride in maintaining the cleanest operation on the East Coast. Not only do they keep the facilities clean, but also encourage employees and boat crews to behave properly and refrain from cursing. According to the employee, the owner has turned away boats whose crewmembers behaved in crude or rowdy fashion. The informant explained that this philosophy is related to the family's membership in the Jehovah's Witnesses.

This operation buys fish directly from the boats that land there and ship it to other buyers and markets. Scallops are paid for immediately, but other boats are paid per pound after the company sells the product. The company generally does not buy fish from longliners that land there except for the retail market; they simply pack and ship the product and get paid a shipping fee by the pound. Fluke and sea bass are two of the most important species, but the operation relies on everything that the fishermen land including, croaker in August; tuna, swordfish, shark in summer; horseshoe crab from July to November; and, *Loligo* squid between the months of April and May and again in October and November.

The owner of the facility also owns two draggers that land catch at this facility, but otherwise most of their product comes directly from other boats. Most of these suppliers are from Ocean City and have a long-standing relationship with the company. The operation occasionally buys lobster, tuna, shrimp, fluke, and other product from middlemen across the country (Maine, Philadelphia, Florida, Louisiana, and Texas). Product is shipped via three truck lines, all based in Maryland. The company does fillet some fish for sale to local restaurants (primarily fluke) and to markets in Philadelphia, New York, and Virginia. Some iced fresh seafood landed here is sold through their retail market and a small quantity is sold to local restaurants. The majority is sold to buyers in Philadelphia, New York, and Hampton, VA. Surf clams are sold to a company in Norfolk, VA while horseshoe crabs go to various buyers. During the field visit, an owner of a conch dealer in Atlantic, VA was at the dock buying horseshoe crabs to be sold as bait to his suppliers. His product is shipped to Hong Kong for processing.

The operation employs roughly five dockworkers, five retail market helpers, and three office assistants. The informant explained that the company is like a big family for many of the employees who have been with the company for years. It is difficult to keep retail market help because of the seasonal fluctuation in supply and demand. They usually hire foreigners who are in the area for the summer. Dockworkers are also difficult to find due to the long hours and hard work, but they have a stable core of long time workers. Three of the dockworkers are older African Americans and two are Latvian. Employees live in nearby Maryland towns such as Berlin, Pocomoke, and Whaleyville.

In November of 2001, a second fish packing facility was established next door to the operation just described. Unlike their neighbor, this fledgling operation has very little overhead and a skeleton staff. It is a satellite of a larger operation in Crisfield, Maryland that sells product from Florida to Maine and all the way to Hawaii. This operation has an office trailer, a small unloading area, a small freezer, and a 3.5 ton ice machine. They currently do not have a cooler and therefore use a refrigeration truck. The business utilizes the infrastructure and space that was left when Surf Clam Inc., a local surf clam ocean quahog dock, went out of business. According to the manager of the current operation, Surf Clam Inc. went out of business some five years ago when the size of the fleet diminished from 10-15 boats to two. The property was in neglect for a number of years and the property owner was going to sell it. The parent company of the operation put in a successful bid to lease it in 2001. The manager explained that the operation is a "pilot project" based on a two-year lease.

The dock buys 95% of its product from independent fishermen and 5% from middlemen, and sells it to other buyers, paying the fishermen after the product is sold. Monkfish, however, is not purchased, but rather shipped for a fee for the fishermen who market it themselves. Not all of the product is landed at this dock. Some of the business's suppliers land their fish at other packing facilities in places like Wachapreague, VA and then truck it in. The manager explained that the business is dependent on establishing good relationships with fishermen. His suppliers trust him to give a fair price for their product. He has a long history with the packing facility next door, and indicated that there is some competition for suppliers between the two operations, but believes that alternatives are good for the fishermen because they tend to get better prices for their catch. During the interview, the manager was tirelessly fielding calls from buyers and fishermen, looking for the best markets and discussing prices.

The operation's primary species include fluke (year round), monkfish (November through March), striped bass (November to April), and black sea bass (April to September), but depend on a large variety of other fish and shellfish for at least 25% of their profit. These additional species include conch, trout, bluefish, spot, scallops, bunker, and horseshoe crabs among others. The operation could move up to 125,000 pounds of fish a month, but they have actually had to turn some boats away. They are operating at 50-60% of capacity due to the lack of dock help and small size of the operation.

The operation has local, regional, and national markets for their product. The manager sells fish to a number of local restaurants, and some is also sent to the main plant in Crisfield where it is filleted or repackaged and sold. Most product is shipped to regional markets in Jessup, MD,

Washington DC, Philadelphia, Fulton Fish Market, Chicago, Pittsburgh, Boston, and Hampton Roads, VA.

The current operation is undermanned, employing only the manager and a single dockhand. The manager works all aspects of the business from unloading fish to marketing product. He would like to see the business expand in the future and has visions of building a nice office to replace the crowded trailer, obtaining a large cooler, and hiring more help to unload the fish.

The third packing facility in the harbor is a small satellite outfit of a clam processing facility based in Norfolk, VA. The operation, established in 2000, unloads the surf clam and ocean quahog vessels and trucks the product to Norfolk. The decision to expand the Norfolk operation to Ocean City was based on the location of the port in relation to the surf clam and ocean quahog grounds. According to the operation's manager, the plant in Norfolk is the southern most clam processing plant on the eastern seaboard. New Jersey is the primary state for SCOQ processing. New Jersey sends boats out to fish grounds to the north and south, but Norfolk is too far to land product. Ocean City is the southern most port that allows boats to reach the fishing grounds while simultaneously offering a southern packing site that allows trucks to deliver fresh product to the Norfolk plant without incurring unreasonable delivery costs. The facility includes a small office, a crane, clam cages, and truck bay. There is no storage on site. The company recently bought property just to the east of the current office, which includes a warehouse that is now being used as a welding shop and dockage for up to four boats. They plan to move two of the company's four boats into the slips and hope to lure others to the region for offloading.

Ninety five percent of the product packed at this facility is landed by four boats owned by the company. Only five percent is landed by transients hailing from ports in New Jersey such as Cape May, Point Pleasant, and Atlantic City. The dock can move a maximum of 350 to 400 cages a day but are not operating at full capacity because there are not enough boats. They presently move roughly one million bushels a year, 65% of which are quahog, 35% of which are surf clam. Much of the product is processed and sold to major soup companies like Campbell's, who provide the processor with specifications on meat content, chop size, and juice content.

The satellite operation currently employs only a single dock manager. The facilities are neat and tidy. He explained that they are very careful to keep the dock clean and keep the noise to a minimum. While there are no ordinances that restrict offloading hours, the company insists on running an electric crane rather than a diesel crane to reduce noise and air pollution. The company's owner wants to maintain a good relationship with the county and the other businesses in the harbor. As will be explained in the following section, the surf clam ocean quahog industry has opponents in West Ocean City that makes this segment of the industry vulnerable.

Overall, the infrastructure associated with the commercial fishing industry in West Ocean City is holding on, but it has been in decline for years. While one new fish dock and one new clam dock have settled in over the past few years, at least two fish docks and one clam dock have disappeared over the past 10 years. Two additional clam docks were eliminated within the past 20 years. In addition, two diesel mechanics have left town. Dock space has been eliminated by the establishment of harbor side vacation homes, restaurants, and a recreational marina.

## Economic Networks

The importance of the commercial fishing industry in Ocean City is not restricted to the packing facilities, boat owners, captains, and crew. There are numerous local, regional, national, and international businesses embedded in the economic networks tied to the commercial fishing industry of the area. Commercial fishermen who were asked to detail their economic ties to other businesses provided information that reveals the scope of these networks. Boat fuel is obtained from Ocean City Service Oil, in Ocean City and Cropper, in Berlin, MD. Cool Ice in Berlin, MD delivers ice to the area, and others get ice from the docks. One packing facility that produces ice also sells it to recreational fishermen in the area. While many fishermen do some of their own welding, major jobs are provided by Davis Machine Shop in Berlin, MD, Liberty Steel Works in Liberty Town, MD and Bill House Welding in Powellville, MD. There are two major local marine electronics dealer in West Ocean City - Martek and L and L but other outfits also provide electronics like Sunset Provisions and Ake Marine, Inc. Fishermen from the area also rely on Melson Marine in Davis Wharf, VA and Shore Electronics in Onancock, VA, both on the lower Eastern Shore. Fishermen use haul-out facilities at Shanty Town, and Sunset Marina in West Ocean City as well as facilities out of state or on the Chesapeake Bay. Much of the nets, lines and fishing gear is obtained through mail order from places like Mike Keller in North Carolina; IMP in New Bedford; Cape Port in New Jersey; and Ocean Products in Virginia. However, some local equipment dealers like Ake Marine receive business from the commercial industry. Safety at sea equipment is ordered through Vane Brothers in Norfolk and USA in Annapolis. Economic networks also include the loans that fishermen get from banks such as Farm Credit and insurance from Flagship in Norfolk, VA. These networks do not even include the nodes in the web of product distribution from retail markets and restaurants to bait shops and cutting houses.

Managers at the packing houses described a full range of local businesses that they rely on including auto part stores, welding suppliers, welding services, diesel fuel companies, office supply companies, water supply, and oil companies. Some sell product to local restaurants and bait suppliers. Regional businesses engaged in commercial fishing economic networks include a paper supply company in Salisbury, MD; a box and staple company in Easton, MD; marine supply shops in Cape May, Maine, Massachusetts, Pennsylvania, and Kansas City; oil suppliers in Salisbury, MD; an ice company from Seaford, DE; trucking companies in Crisfield, MD and Chincoteague, VA; welders in Berlin, MD; divers in Ocean City; and hydraulic winch and motor suppliers in New Jersey.

The extent of economic networks was exemplified by the 29th Annual East Coast Commercial Fishermen's and Aquaculture Trade Exposition held at the Ocean City Convention Center in 2003. The trade expo, sponsored by the Maryland Watermen's Association, featured 120 exhibitors from across the U.S. and Canada. Myriad businesses were represented including electronics, hydraulics, marine supply, insurance, engine manufacturers, propeller sales, packaging, and many others.

## Social Networks and Community Relations

The economic networks in which the fishermen in West Ocean City are embedded also tend to be social networks. The trade exposition held in Ocean City, for example, provided a venue for

the expression of social networks and community relations. One of the local fish docks in West Ocean City sponsored a "Mid-Atlantic Commercial Fishing Skills Contest" in which contestants tried their hand at net-mending, rope tying, trotline baiting, rope splicing, rope throwing, and survival suit-donning. Over a hundred people watched the events and over a dozen watermen took part in the competition.

Economic ties between fishermen and buyers are also imbued with a social dimension. The buyer that a fisherman sells his fish to is not chosen simply because he gives the best price. Fishermen and dealers interviewed explained that long-standing relations of trust are the foundation of the economic ties between suppliers and buyers. Fishermen explained that they tend to socialize with others who use the same dock, but these ties are crosscut by mutual interest groups based on gear type and other interests.

Despite the fact that West Ocean City, itself, is not both a commercial fishing port and a centralized town in which most fishermen live, the fishermen who keep their boats here share a sense of community with one another. One fisherman explained that, "there are only a few of us here, but I feel like part of a community. When we are out on the water we are all talking to each other." He also explained that the at-sea community provides mutual aid and assistance in time of need. One fishing family's journal describes numerous examples of this expression of community. In one case, every fishing boat in the harbor went to sea in search of a missing boat in late December. One of the missing fishermen was rescued by another fishing boat, but tragically, the other crewman died of hypothermia.

On land and at sea, fishermen from West Ocean City share information - on catches, market conditions, fishing grounds, crewmembers and potential employees, weather conditions, and a host of other fishing related issues. The fishermen also provide material and financial assistance to one another by loaning money, informal exchange of goods and services, and reciprocal lending practices.

Just like any community, relationships among community members can be based on both cooperation and conflict. Interviewees explained that, overall, the relationships among the fishermen in West Ocean City are positive. However, gear conflict between user groups does erupt from time to time. Some provided examples of draggers running through pots, or other boats tearing up gillnets. By far the greatest gear conflict seems to involve sport fishermen. While sport fishermen and commercial fishermen occupy the same grounds and the same town, they may be said to occupy separate social communities in Ocean City that are often at odds. According to commercial fishermen interviewed, the disdain that sport fishermen have for the commercial industry is based on a lack of education and ignorance. They believe that sport fishermen know very little about their activities at sea, the gear that they use, and the nature of commercial fishing in general. The fishing family's journal is replete with instances of conflict between commercial and sport fishermen.

8/22/02: There must be a lot of media propaganda against commercial fishing. Recreational boaters are the worst enemies of gillnets, whether they go through them from ignorance or on purpose. [Captain X] had some nets run through by

sports. He followed them back to the dock, where he confronted them...[...]. He explained they had torn some valuable net. They replied with an arrogant, "So." [Captain X] got their attention by grabbing three of their expensive rods and reels and walking off. When they reacted, he told them they could have them back when they paid for his net. They gave in.

It would be a mistake, however, to assume that this sort of conflict accurately characterizes all relationships between recreational and commercial fishermen. Recreational fishermen rely on commercial fishermen for bait and ice, and often follow commercial fishermen to productive fishing grounds. Some have good relationships with commercial fishermen and provide mutual assistance. The different user groups, however, are most often at odds over the management of marine resources.

The relationship between commercial fishermen and other tourists in Ocean City is also ambivalent. On the one hand, the harbor and its commercial boats are an attraction for some who patronize the waterfront restaurants for the atmosphere. One fisherman explained that tourists are often curious about commercial fishing and want to learn more by coming to the dock. During my visit a man and his son were on the dock, watching the boats unload. On the other hand, commercial fishermen feel that tourists are fed negative images and stereotypes. This is exemplified by another journal entry:

8/30/02: [A fisherman] was unloading horseshoe crabs from [a] dragger, when a large tour boat full of tourists, came into the harbor. The captain [of the tour boat] announced to the passengers, "That's what's happening to your horseshoe crabs!" implying the fishermen were slaughtering them all. [The fisherman] got up and told the man off in front of the crowd.

While the harbor of West Ocean City is a focal node of community among the fishermen who operate there, the social ties that fishermen maintain extend beyond the harbor and immediate environs. One fisherman, when asked to describe his community, explained that it includes the entire eastern seaboard. He personally knows fishermen and members of the industry from Massachusetts to North Carolina and he learns about many more through the grapevine. The mobility of fishermen coupled with the strong identity among members of this occupational group expands the geographical boundaries of community.

#### Discussion: Community/fisheries dependency and engagement

While many local and regional businesses are engaged in the economic networks of the commercial fishing industry centered in West Ocean City, the fishermen themselves expressed ambivalence about the role and importance of commercial fishing in the area. On the one hand, the informants portrayed fishing as an important part of the local economy and on the other expressed a sense of marginalization and alienation, especially in relation to the sport fishing industry. One fisherman who was busy offloading a catch of horseshoe crabs responded tersely to a question about the fishing industry of the area: "It's done." He pointed to the morbidly large houses at the end of the dock, and then to the new marina across from the harbor occupied by million dollar yachts, both in stark contrast to the aging fleet of commercial boats. Another

fisherman said that the industry was very important to the area because it is a tourist attraction, and employs a lot of people in the area. He added weight to this by remarking that, "Boats produce food; desk jobs produce paper."

When asked about the sport fishing industry's presence in the area, one fisherman explained: "Commercial fishermen do not feel welcome. We are resented and unwanted [by sport fishermen]." Another fisherman declared that while fishing may not be valuable to the economy as a whole, especially next to tourism, it is "damn important to me, my family, and the other fishermen."

The town of Ocean City does not offer any significant expressions of a commercial fishing identity. There are no industry-related festivals, no blessing of the fleet, nor monuments dedicated to the commercial industry. The town is concerned to represent itself through print and Internet publications as a premier resort destination, and hence emphasizes beach activities, nightlife, and water sports including recreational fishing (<http://www.oceancity.org/>). A representative of the town's Department of Planning and Community Development said that the community is built on the family-oriented resort identity. They are concerned with protecting this image and encouraging family vacationers to return year after year through generations. Recreational boating and fishing is an essential component of this identity, but commercial fishing is not.

The economy of Worcester County is very dependent on the northeastern region that encompasses Ocean City and West Ocean City. As one representative of the county explained, this area is, "the goose that lays the golden eggs" for the county. The resort and service industry, along with agriculture are the most important components of the county's economy. In December 2002, they had the highest unemployment rate in the state, largely a result of the seasonal resort economy in the Ocean City area. . Despite the seeming insignificance of the commercial fishing industry relative to the resort economy of the area, a representative of the Department of Development Review and Permitting explained that commercial fishing is a respected and appreciated part of the county. "We respect it, cherish it, and seek to protect it." It is also an integrated aspect of the tourist economy in West Ocean City, where restaurants have been built specifically to take advantage of the "charm" associated with commercial fishing boats. The county has recognized the importance of sustaining the commercial fishing industry in West Ocean City, and has taken measures to do so. The county maintains a commercial dock that offers essential mooring for the boats of West Ocean City. It has also implemented zoning protections in the harbor that provide some measure of safety to the commercial businesses along the waterfront. The harbor is zoned "commercial marine district", which prevents any non-commercial uses from encroaching upon the present commercial property. Prior to this zoning classification, development interests started to erode the commercial fishing businesses and dock space in the harbor. The county's comprehensive plan recognizes the importance of preserving commercial fishing and according to the Department of Development Review and Permitting, "the county intends to keep commercial fishing in the harbor."

So, while commercial fishing occupies a small part of the overall economy of a very large county, its participants and those businesses that depend on them form a fragile network that constitutes a valued social and cultural dimension of the area's community. Like fishermen

elsewhere, the men and women (there are female crewmembers in Ocean City) who make a living fishing from Ocean City have a deep attachment to the profession. Finding a land job is generally not considered an option by the owner-operators, whose very identity is bound to the water.

## B. Recreational Fishing

### History and Current Description

Ever since Ocean City was on the map, people were going there to fish for sport. The area's reputation as a premier sport fishing destination was solidified after a storm created an inlet in 1933, providing access to offshore fishing grounds. Soon after charter boats began running out of the inlet, Ocean City became known as the White Marlin Capital of the World. The Ocean City Marlin Club was established in 1936. Informants recalled that white marlin were caught very close to shore in the 1930s and 1940s - within two to three miles. While marlin has been the high profile target among sport fishermen in Ocean City, numerous other species have been important targets among recreational anglers through the years.

Among the ocean-going boats in the party boat industry, porgy was the number one fish throughout the 1940s, 50s and 60s. Since that time, they have declined in abundance. Sea bass became a favored fish until its decline encouraged a shift in attention to ling, or red hake, in the 1980s. Sea bass is now on the rise again, thanks in part to efforts of the OC Reef Foundation that endeavors to build artificial reef habitats in the area, but other historically important species like cod are long gone. Bottom and wreck fishing for sea bass, tautog, ling, trout, bluefish, and mackerel is now a mainstay of the five larger, ocean-going party boats in Ocean City, but there are also approximately half a dozen bay party boats that target summer flounder and inshore waters. One party boat offers crabbing trips in the bay. In addition, a number of the party boats offer evening whale watching and sightseeing tours that emphasize the local environment. The overall number of party boats has diminished according to one captain, who explained that stock declines put five full-day boats and two half-day boats out of business.

The charter boat industry centered in Ocean City is also marked by historical trends in targeted species. White marlin represented the crown of charter boat fishing in the early years of the industry, but bluefish became important through the middle of the 20th century. These two species dominated the focus of charter fishing through the 1950s and 60s. In the 1970s and 1980s, shark fishing became more popular. One informant related this trend to the popularity of the movie "Jaws." Bluefish declined during this same period, but another fishery was gaining adherents among charter clientele: tuna. The technique of "chunking" for tuna with butterfish made catching tuna much easier than trolling, allowing people to bring home more meat for the table. According to one informant, this brought more blue-collar clientele to the charter fleet. Among the charter fleet today, few trips are booked exclusively as "marlin" trips. Most are "offshore" charters for tuna. Billfish, wahoo, and dolphin are usually incidental catches. The larger, more expensive and exclusive charter boats still target marlin, but this has remained a more elite fishery. Resurgent striped bass populations have encouraged some to offer striped bass charters. Currently there are no full-time charters that target inshore waters. This is due to a

limited entry system for obtaining a "guide license" to fish the inshore waters up to three miles. A number of captains would like to start chartering in the bay but are prevented from doing so because all of the slots are currently filled. The logic behind the system is to prevent over-fishing in the Chesapeake, but there are far fewer charter boats on the coast, which is why a number of charter captains are working with the state to get a coastal license program for those who want to charter in the coastal bays out to three miles but not in the Chesapeake. According to one informant, fly-fishing is gaining popularity among charter clientele but because the "masses want meat," it is not likely to expand much more.

The charter fleet in Ocean City has grown enormously since the 1930s. Today there are approximately 100 charter boats distributed among six major marinas. One informant attributes this to relative ease with which captains can get licensed. More courses are offered and they are easier to pass. Accordingly, this has increased the number of weekend charter captains who have alternative sources of income. The number of those who make a primary living by running a charter boat has probably decreased. This opinion was corroborated by a second informant who makes his living as a charter boat captain. He said that there is perhaps only one other full-time charter captain who relies on the business to make a living. Most captains in Ocean City are summer-time charters only, but there are a few who move their operations to southern waters like North Carolina and Florida in the winter. In addition there are an increasing number of boats from North Carolina that come up to fish in Ocean City during the summer due to the lull in business during the summer months in North Carolina.

Besides the undeniable draw of charter and party boat fishing in Ocean City, recreational anglers flock to the area to pursue their pastime on privately owned boats, rental boats, and on shore. Among these anglers, summer flounder fishing in the coastal bays has always been historically important to the region. In recent years, an increasing number of boats have been crowding Sinepuxent, Assawoman, and Isle of Wight Bays along with the Ocean City inlet. Drift fishing for flounder is one of the most popular forms of recreational angling in the coastal bays around Ocean City. However, one informant explained that as the size limit on flounder has gone up, there have been fewer keepers to go around. This has resulted in corresponding decline in the "meat fishing" in the area and some declines in flounder fishing. "The media has screwed things up by running headlines that inaccurately portray the fishing in the area as poor - there are other fish to pursue but it is hard to convince fishermen to target them." Striped bass is one fish that boat anglers in Ocean City are beginning to target more regularly, especially during fall. Drifting eels and jigging bucktails in the inlet for stripers during the fall, "...has really caught on in the past 10 years and has been a boon to the local economy. At the same time, the growing number of anglers on the water diminishes the fishing experience as well."

In addition to boat fishing, numerous anglers fish from shore. Popular shore-based fishing locations include the north jetty of the inlet, a number of public and pay piers, the Route 50 Bridge, and the surf. Shore based fishermen employ a variety of techniques in the pursuit of striped bass, flounder, bluefish, trout and many other species. Tautog is a fish that has gained popularity among shore fishermen in recent years. Surf fishing is popular in places such as the "3 Rs" which is part of Delaware State Park, just south of Indian River Inlet, the "Bull Pen" on Assateague Island, and numerous other hotspots along the Ocean City surf. Crabbing and clamming are also important in the region, but do not have as many adherents as sport fishing.

## Seasonal Round

Describing the seasonal round of sport fishing in Ocean City is complicated by the diversity of fisheries. For example, the offshore charter season differs considerably from the inshore party boat season, the offshore party boat season, and the activities of dedicated surf fishermen. In general, the pattern is as follows:

There is little activity in the winter. A few diehards may be found fishing for striper in the inlet, or in the surf during the months of January and February. March witnesses the arrival of mackerel. A few party boats are said to target mackerel during this time of year. Many more species arrive in the month of April including more striper, pursued in the surf and bay by trollers and eel drifters; summer flounder taken by drifting bait in the back bays; blues caught on bait in the surf and the bays; and, tautog taken on crab from inshore and offshore structure. The same species are pursued in May, but added to the list are sea trout, pursued with lures and peeler crabs at night, sea bass fished on the wrecks with bait, and porgy. In June more species are added including kingfish caught with bait in the surf, and shark, which is typically caught offshore by the method of chumming. In July some of the species that were available in greater abundance during the spring have diminished, but others move in to take their place such as spot and croaker. Offshore, the fishing for tuna, white marlin, wahoo, and king mackerel picks up considerably. August is much the same, but more warmwater fish can be taken including cobia, sheepshead, and triggerfish. In September and October, the surf fishing gets hotter with the arrival of red and black drum - mostly in the Assateague surf. This period through November is also good for targeting the migrating striped bass and bluefish. By December, the fishing has slowed yet stripers and tautog are caught occasionally.

One informant from the charter boat industry described the seasonal round from a charter captain's perspective. While few boats are actually running charters in January and February, tautog can be caught with crabs off the wrecks and stripers are taken trolling or casting artificials in the bay or just inside the three mile state waters. March is similar, but some will charter trips for mackerel, caught by jigging in waters between five and 15 miles offshore. Mackerel are still caught in April, but other species take on more significance including sea bass, caught with cut bait on wrecks five to 20 miles offshore, striped bass, bluefish, and tautog. The mackerel are gone by May, but some charters begin heading out 20-40 miles to chum for shark. Inshore, summer flounder and sea trout are arriving. In June, shark fishing continues and charters also start getting into blues (10-40 miles), tuna caught mostly by trolling 20-60 miles out, and dolphin. Sea bass, flounder and sea trout remain important throughout the summer. In July charters are having success trolling for marlin (20-100 miles) and king mackerel (15-20 miles) in addition to the other offshore species. August is similar, but in September the king mackerel are no longer caught. Sea trout and croaker are good targets at this time. October is the last month for marlin, tuna, shark, and dolphin. Wreck fishing for sea bass with bait is said to be outstanding as is striper fishing in state waters with artificials or eels. In November the striper are still caught, along with sea trout, tautog, sea bass, and blues - both in the surf and offshore five to 15 miles. A few charters book trips during December for striper, sea bass or tautog, but the activity by this time is all but extinguished.

A representative of the party boat industry, who captains a large, ocean-going party boat, described his seasonal round. Mackerel fishing used to be very important during March and April. They used to have trips booked solidly through the mackerel season. According to the informant, however, the stocks were terribly depleted as a result of a joint venture initiated in the early 1990s that increased the pressure on mackerel. The joint venture "...pounded the hell out of the mackerel," and they have not since rebounded. Now they are lucky to have 20-25 passengers for mackerel trips. They use jigs for the full-day trips. They fish five to 12 miles out and can go as far as 45 miles. On either end of the mackerel season they sometimes run full-day trips for tautog using crab for bait. Towards the end of April, black sea bass season begins and runs into September at which time they traditionally switched to sea trout, but with the decline of the trout, his operation no longer advertises specifically for trout fishing trips. They fish the wrecks for sea bass primarily using squid, clam, and jigs or spoons. Toward the end of July they have a few croaker trips between two and 25 miles drifting on open bottom or fishing the artificial reefs. They use squid and clam. During bad weather the croaker move offshore and are harder to locate, so they switch back to sea bass on the wrecks. The summer months also see the catch of summer flounder and trout, but they do not advertise the trips as such due to the low catches. The sea bass fishing picks up again in October and lasts into December. They rarely target striper because they are restricted to the three mile limit and perfect weather conditions are needed to make fishing successful.

### Fishing Grounds

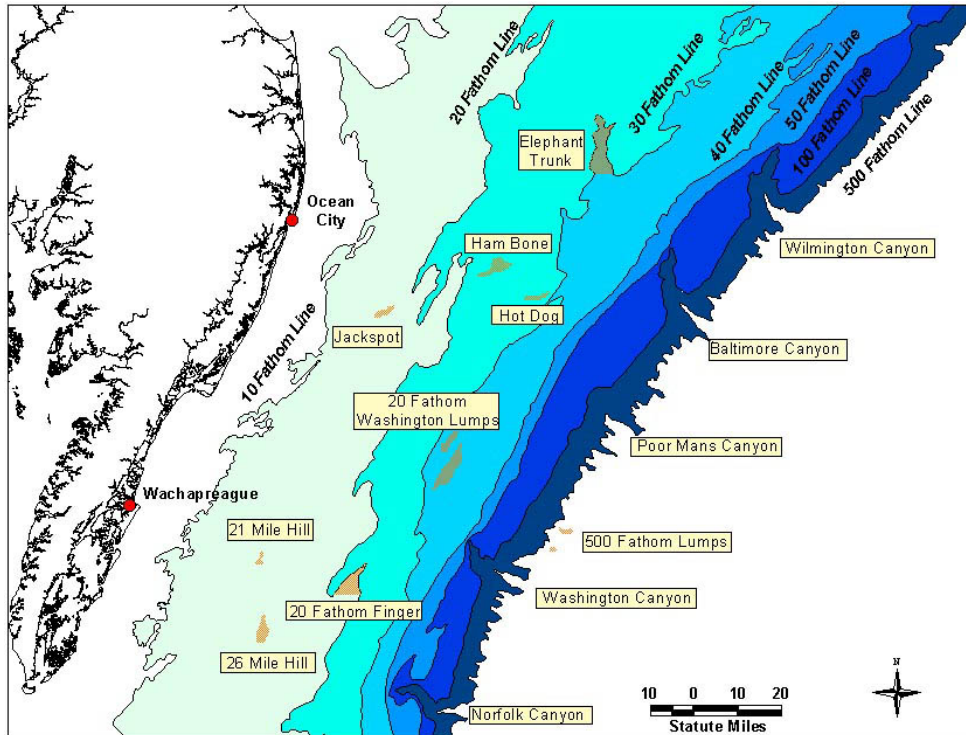
Fishing grounds vary by vessel type, gear type, and species targeted. Charter boats, party boats, private pleasure craft, and shore-bound anglers frequent different fishing grounds depending on the time of year, species available, clientele and angler preferences, weather, and a host of other factors. Despite the complexity there are a number of common fishing grounds that are well known among the various categories of fishermen.

Beginning with shore-based anglers, there are numerous public access points. Surf fishing is not allowed between the hours of 10:00 am and 5:30 pm during the summer, but there are no restrictions in the off-season. Surf casters prefer places like the "3 Rs" which is part of Delaware State Park, just south of Indian River Inlet, and stretches of Assateague Island surf like the "Bull Pen", where they can fish all day throughout the year. The north jetty of the inlet is a very popular spot for casting artificials for blues, striper and trout, as well as bait fishing for tautog in the rocks. Three pay piers are popular in the area: the Ocean Pier, located near the southern end of the boardwalk that juts out into the surf; the Oceanic Pier which provides access close to the western edge of the inlet; and the Shantytown Pier on the west side of the Route 50 Bridge. There are also a number of free public access areas. These include the Route 50 Bridge, which is a popular night fishing spot; the bulkhead between 2nd and 4th Street on the bayside, the 9th Street Pier on the bay, the bulkhead and pier behind the Convention Hall on 40th street, the public crabbing and fishing area on Isle of Wight, and the pier at 125th Street. (For a description of best times, species and techniques at these locations see <http://www.oysterbaytackle.com/fishlocs.asp>.)

Inshore boat anglers typically fish the inlet itself, especially near the southern jetty, and the channels and holes located in Sinnepuxent, Assawoman, and Isle of Wight Bays. There are

numerous favored locales in the bays, many of which have distinct names such as "the Thoroughfare" and "Convention Hall Channel."

Offshore fishing grounds are numerous. They include artificial reefs and wrecks, as well as a host of specifically named areas that are noted for bottom contours and bathymetric features. The following map from the Maryland Department of Natural Resources notes a few of these offshore fishing grounds (<http://www.dnr.state.md.us/fisheries/fishingreport/canyons.html>).



### Angler/Cientele Description

The people who fish for sport in Ocean City are as diverse as the species that they target. According to informants there are a number of different categories. For example, vacationers constitute one of the most common categories. Vacationers come from Maryland, Pennsylvania, New Jersey, New York, and Delaware. Informants tend to distinguish between those vacationers who know very little about fishing and those who come to fish on a regular basis. Among the former are parents who are taking their kids fishing for the first time. They go to a public or pay pier, or may rent a boat for inshore fishing. One informant has noted an increasing number of single moms who are taking their children fishing in the area. Among the more knowledgeable vacationers who come to fish, those from Pennsylvania and New Jersey are deemed highly capable and effective anglers. They may bring their own boats. One informant noted that those from Pennsylvania often win the local tournaments. They are also considered to be "meat" fishermen, many of whom come in for party boat fishing. They come from Lancaster, Red Lion, York, Pittsburgh and numerous other towns and cities. From one informant's perspective, the fishermen from New Jersey are avid fishermen who tend to come in for weekends.

Besides weekend and week-long vacationers, there are those who live in Ocean City during the entire summer season. Then there are the locals who tend to avoid fishing on weekends and holidays, preferring the spring and fall seasons when fewer people are on the water and the fishing is better. Among those vacationers, seasonal visitors, and locals there is a cross-cutting categorization based on method used and species targeted. A number of informants agreed that there is a group of hard-core flounder fishermen who fish almost exclusively for flounder. Some of these folk include the older, retired men who fish from pontoon boats in the bays. Bridge fishermen constitute another category, as do offshore marlin and offshore tuna fishermen. Then there are the surf fishermen. According to one informant, surf casters tend to be more catch and release oriented in comparison to the flounder fishermen and the party/charter boat clients. Most of the surf casters are male, but there are "...a lot of serious surf ladies on the Delaware State Park beaches," as well. Surf fishermen are said to include "purists" who are into trophy fishing and catch and release. They also tend to use high tech gear including GPS for marking and locating favorite beach spots. It should be noted that this group of surf anglers is not the same as those on vacation in Ocean City who decide to fish off the beach in front of their hotel or condominium.

Other categories include the south jetty inlet fishermen who fish from boats and drift the inlet. According to one informant, these are mostly younger men but some of the older flounder fishermen do this as well. There is another category of ocean bottom fishermen and what one informant referred to as a "subculture" of shark fishermen that gets started in June.

Socioeconomic status, ethnicity and other demographic characteristics are thought by some to be related to preferred species and techniques among anglers in Ocean City. For example, middle to upper class anglers tend to be more catch and release oriented while those of lower socioeconomic status tend to fish for food. Ethnicity also plays a role according to informants. African Americans and anglers of Asian descent tend to eat the fish that they catch. They are frequent clients on party boats that target sea bass and tautog. According to one informant, although the fish tend to be bony, anglers in these ethnic groups don't mind the bones because they cook the fish with head and tail on and use the carcass for stews and other dishes. One informant generalized that meat fishermen typically like to fish for flounder, tautog, tuna, and sea bass while catch and release fishermen tend to target billfish, striper, red drum and trout. Even so, he noted that there is a lot of cross over and that some flounder anglers are now beginning to release big flounder.

A separate informant noted that the decline in "meat fishing" in the area might be related to the rising cost of vacationing in Ocean City, coupled with the rising minimum size limits on "meat" fish like flounder and sea bass. Those from higher socioeconomic status (SES) brackets, who place less emphasis on having meat for the table, may be replacing those of lower SES who consider meat the justification for the cost of a fishing trip.

One party boat captain, however, disputed the notion that party boat clientele is hell-bent on bringing home meat.

"Over the last 12 years the party boat industry has gone from an 'over the rail into the pail' mentality to more catch and release. There has been a sea change in the

way that people fish. They used to kill everything that was landed. They were angered by increasing minimum size restrictions. When someone threw something back, other passengers on board would get mad at them."

Today, there is more understanding of the need for bag limits and size restrictions among the party boat clientele.

According to this captain, party boat clientele includes all ethnicities. He also explained that there are no clear-cut preferences for particular species among members of different ethnic categories. In the summer, much of their clientele includes tourists who simply want to catch fish and go out for a boat ride. More dedicated clients generally call and ask what is being caught so they know ahead of time what they are likely to catch. They have also witnessed more female clients in recent years.

Most of their clients come from the Washington, DC-Baltimore area, but quite a few come from Pennsylvania, Ohio and other states on the Atlantic seaboard from Massachusetts to Virginia Beach. They have a high rate of return business and he estimates that 60-70% of the clients on any one trip are return customers. "I attract clients by putting them on fish." While the operation publishes some advertisement in trade publications and local papers, they primarily rely on repeat business built upon a sound reputation.

A charter boat captain described the area charter industry's clientele. While there have been increasing numbers of African Americans who charter boats for sea bass wreck fishing, the majority of clients are Caucasian. The industry gets a fair number of Asian clients for the spring mackerel run, but this has not been significant in recent years. Ninety five percent of the clientele is male and they are mostly in their 30s, 40s and 50s. Most of the clients are middle class, but they do get clients from all SES levels. Billfish and fly fishing clients tend to come from higher SES levels, while those who book tuna and shark fishing trips are extremely diverse. Client referrals are considered to be the best form of advertising, but charter operations attract customers through brochures, attendance at sport shows and conventions, and through the Internet.

### Crew Description

According to informants, captains of the area party and charter boats tend to be much more stable than the mates and deck hands. Crew turnover is high in both party and charter boat fleets. According to a party boat captain, retaining crew "has been brutal." "They are asked to work too many hours and there are too many other tourist industry jobs available in Ocean City. Just last week we lost three mates." When asked how they recruit new mates, he responded, "Beg."

According to a charter captain, mates are typically recruited through word of mouth or they offer their services to captains at the dock. Certain marinas maintain a list of people looking for work. Boat captains attempt to keep their mates for at least a summer, but preferably longer. The turnover among mates is high because they either leave for another job or become captains themselves. There are approximately half a dozen father-son crews among the charter fleet in Ocean City.

The total number of crew in the party and charter boat fleet of Ocean City is estimated to be at least 232. Vessel trip reports for larger party boats indicate that they averaged four crewmembers per trip, while charter boats averaged two crewmembers per trip. A charter captain also estimated that each charter boat has approximately two crewmembers including captain and mate. Extrapolating from these numbers, the 100 or so charter boats in Ocean City have a crew of at least 200 and the five larger party boats have a crew of at least 20. In addition, the six or so smaller bay party boats have an estimated 12 crewmembers (two each). This is a minimum estimate, considering that there are more than 100 charter boats and that some party boats have more than four crewmembers and also employ additional support staff.

Less than 50% of the charter boats have at least one crewmember living on board. Transient boats that are fishing from Ocean City do tend to house crew on board. A few crewmembers live year-round in Ocean City or just outside of town, and some rent here during the summer. Others live in surrounding towns like Salisbury, Maryland or in Delaware.

Mates in the party boat industry rely on wages and tips. In the charter industry, the most common arrangement involves a commission that averages around 10% of the trip rate, plus tips that range from 10% to 20% of the trip rate. Some mates who work on corporate boats receive a salary. They are responsible for maintaining the boat when it is not fishing. Other mates receive a wage.

Mates may go to fish in southern regions during the off-season, return to school, or find employment elsewhere. One mate on a party boat explained that he crews on a boat in Costa Rica during the winter.

The captains who are hired to run an owner's boat are typically more stable and reliable, unless the boat owner treats the captains poorly, in which case there is a higher turnover. Charter captains may also get paid a strict salary if they are operating and maintaining a corporate boat. Another arrangement is strict commission, which is usually 30% of the trip rate. Others have a combination of salary and commission, each of which is usually lower than what it would be if they were getting one or the other. The salary is important in cases where owners come into town to run the boat for tournaments. This is a common practice among boat owners. By this arrangement, the crew will still get paid while the owner is out using the boat.

The vast majority of owner/operator charters in Ocean City run charters part-time or strictly during the summer season. In other words, they do not rely on charter fishing for their livelihood. There are only a few owner-operators who rely on charter fishing for their livelihood. There are an increasing number of full-time captains who make their living by running charters for boat owners. They fish the boats out of Ocean City in the summer and then move the boats to southern states like North Carolina and Florida in the winter.

### Infrastructure

Ocean City supports a massive sport fishing industry as evidenced by the number of businesses directly related to fishing. The primary sport fishing businesses such as marinas, boat yards,

marine supply, and bait and tackle shops, are numerous and diverse, serving the needs of a varied customer base. In addition, much of the waterfront development features condominiums with private boat slips, adding to the numbers of recreational boaters. Secondary support for the industry comes in the form of dozens and dozens of hotels, motels, restaurants, bars, and convenience stores. As one informant explained, the recreational fishing industry is an integral component of the overall tourist economy of the region.

In the past, most of the recreational fishing infrastructure was centered on the eastern side of the Route 50 Bridge in the vicinity of Talbot and Dorchester Streets. This is still an important locus of fishing infrastructure, but the industry has expanded into West Ocean City where three major marinas provide slip space for approximately 75% of the charter boats. In addition, two of the largest ocean-going party boats operate from West Ocean City along with a bay charter boat.

Among the dozen or so public and private marinas in Ocean City, there are those that cater to a range of customers. Some have fee based boat ramps while others eschew trailered boats. Some cater to million-dollar yachts while others rent boats to vacationing families. Among the larger marinas there are approximately five that offer boat storage and railway service. A new marina has a powerful travel lift that allows larger boats to haul out in Ocean City rather than travel elsewhere. There are three main marine suppliers and four primary marine repair shops in Ocean City and West Ocean City. Over one dozen businesses provide bait and tackle, some of which are 'sundry' or hardware shops and others that are exclusively bait and tackle. There is one wholesale bait house in West Ocean City, but a local fish-packing house also sells bait to recreational fishermen.

Worcester County also maintains a number of public boat launches. There are four ramps at the harbor in West Ocean City, and one at each of the following locations: next to the Verrazano Bridge, off Route 611 leading to Assateague; South Point off Route 611; Bering Road off of 94th Street; and Gum Point Road on the west side of Route 90. In addition, most area marinas offer the use of boat ramps for a fee.

Public access for shore-based fishermen is limited to the three fee-based piers (Ocean Pier, Oceanic Pier, and Shantytown Pier); the Route 50 Bridge; the beaches (closed to fishing between 10:00 am and 5:30 pm during the summer); and a number of free piers and bulkheads located at 125th Street, 9th Street, north jetty of the inlet, Convention Hall, 2nd through 4th Street, and Isle of Wight.

Despite the seeming ubiquity of public access sites informants are in agreement that these facilities do not meet the needs of recreational fishermen in the area. A number of informants explained that there is not enough public access for families that want to go fishing with children. The public access sites that exist are generally not very productive places to catch fish. Most are too shallow. They used to have good fishing off of the remains of the Old Bridge at the end of Old Bridge Road, which was destroyed in the 1933 storm. Some individuals tried to get something rebuilt there but were unsuccessful in getting it funded. A popular clamming site called "Savage's Ditch" is also closed due to the use of the site as grounds for experimental grasses. In addition, the biggest problem with the infrastructure for private boaters is parking. People are not allowed to leave a trailer anywhere on city streets. This makes it difficult for

people who bring their boats in on trailers. There is also need of a public launch area in northern Ocean City.

According to a charter captain, the tremendous tourist trade draws many clients to the area. The infrastructure supports the industry by providing excellent offshore access via a well-maintained inlet, and well-maintained facilities such as marinas and marine supply shops. In addition, the fishing is good - there is a lot of variety. In 1999, a new marina was built in West Ocean City and the area has witnessed the growth of fish cleaning services and boat maintenance and cleaning businesses. However, he did point out that there are limits to growth of the industry. Slip space is at a premium and many marinas have capped the number of charter boats that they allow to rent slip space.

### Economic Networks

The infrastructure of the recreational fishing industry in Ocean City appears capable of being self-sustaining, but the economic networks are extensive. Informants from the party and charter boat industry described the source of goods and services that are important to the industry. Most purchase their fuel from local marinas that are supplied by a fuel company in Salisbury, Maryland. Marinas also supply ice, but some purchase ice from a local commercial fish dock. Ice companies such as Cool Ice in Cambridge, MD supply the marinas. Bait is also obtained by most through local bait and tackle shops and marinas, but a few charters catch their own bait. Very few buy from wholesalers, but the one in West Ocean City meets most of the demand. There are two local electronics suppliers, but many outfit their boats with products from discount stores and catalogs. For engine repair most rely on local mechanics, however, some have been known to fly in their personal mechanics during tournament emergencies. One informant noted that engine maintenance is one service that needs to expand in order to meet the demands. Haul out facilities are available locally, but the use of these depends on the movements of the boats. One large party boat used to haul out in Cape May, NJ, Cambridge, MD, Chesapeake Bay, VA or Port Lucy, FL but is now able to stay in town and utilize haul out services at a new marina in West Ocean City. The captain noted that, "It was nice not having to go anywhere." In the summer season, most supplies are purchased from four or so marine supply shops in Ocean City but many use the discount shops and catalogs in the off-season. Safety at sea equipment is also purchased at a local marine supply, or through Vane Brothers in Norfolk, VA. Boat insurance businesses vary, but Flagship in Norfolk is said to be popular.

Recreational anglers engage in a great array of economic networks when one considers the link between tourism and sport fishing in Ocean City. Many of the clients on charter boats and party boats spend a week or more in the town on vacation, purchasing all manner of goods and services. Most who are coming in just to fish on a charter or party boat will spend at least a night. The same is true for casual fishing vacationers who head to the piers, and more serious anglers who bring their boats on vacation. The tourist trade during the summer brings people down for weeks at a time when they spend money on lodging, food, entertainment, and merchandise. One informant explained that the fishing industry becomes even more important during the "shoulders" of the tourist season (October through November and March through May). During these times, more day trippers come into the area specifically to fish. Some come down and stay three or four days and fish the entire time.

## Social Networks and Community Relations

The social networks among sport fishermen are difficult to trace due to the mobility of fishermen, the diversity of interests and gear types, and the diffuse nature of community among sport fishermen. Despite this difficulty, Ocean City offers numerous expressions of a recreational fishing identity within and between cliques of resource users.

According to a charter captain, the captains, mates, and other private boat owners and operators who hang out at the marinas are locally referred to as "OC Fish Heads." Boat mechanics refer to this group as "boat monkeys". Three of the larger marinas in Ocean City have bars that are considered summer watering holes among the captains who keep their boats at those marinas. These bars include M.R. Ducks, Canyon Club, and Fish Tales Bar and Grill. In the winter the community disperses but the Harborside Bar and Grill in West Ocean City still attracts a fair number of sport fishermen.

There are numerous local clubs and associations in Ocean City that provide a venue for social activities among sport fishermen. For example, the Ocean Pines Fishing Club is composed of members of Ocean Pines, a planned community of over 8,000 people in West Ocean City. The club features fishing tournaments and socials. Offshore fishing clubs include the Ocean City Marlin Club, which was started in 1936 by pioneers of marlin fishing in Ocean City. The club is open to the public. In recent years the club has become more political, but it remains primarily a social club where fishermen can gather. It also sponsors numerous fishing tournaments. The Ocean City Light Tackle Club, a splinter of the OC Marlin Club, is a more exclusive association among well-to-do sport fishermen who pursue billfish on light tackle. They sponsor their own tournament that restricts line to 20-pound test or lighter and also hold social functions. There are also a number of fishing clubs among surf fishermen including OC Surf Anglers and the Assateague Mobile Sportfishermen Association (AMSA). The OC Surf Anglers hold an annual "locals-only" surf fishing tournament and the AMSA features beach clean-ups, a scholarship program, outdoor expo, and numerous other social functions.

Fishing tournaments are among the most prominent expressions of Ocean City's recreational fishing community. There are upwards of a dozen major tournaments held each year in Ocean City. In June, the OC Reef Foundation sponsors a tournament, Bahia Marina holds the Mako Mania Shark Tournament, Ocean City Fishing Center features the Ocean City Shark Tournament, and the Ocean City Marlin Club sponsors the Small Boat Tournament for craft 25 feet and under. July is filled with tournaments including the Canyon Kickoff Tournament, sponsored by the Ocean City Marlin Club, the Tuna Tournament, held at the Ocean City Fishing Center, and the Marina Shootout, also sponsored by the OC Marlin Club. There are at least four tournaments in August including the grand-daddy of them all - the White Marlin Open, dubbed "the world's richest fishing tournament." In 2002, the tournament drew 402 boats, paid out over \$2,000,000 in prize money, and witnessed the best fishing results in tournament history including the capture of 1,104 white marlin and 37 blue marlin over five days of fishing (see [http://www.whitemarlinopen.com/2002\\_index2.htm](http://www.whitemarlinopen.com/2002_index2.htm)). Other tournaments in August include Bahia Marina's Poor Girl's Open, Ocean City Marlin Club's Light Tackle Tournament, and their Tuna Chunkin' Tournament, and the Maryland Saltwater Sportsmen's Association's Offshore and

Mini-Flounder Tournament. The Ocean City Marlin Club also has a Labor Day Weekend White Marlin Tournament in September. Bahia Marina holds the Rocktoberfest in October. In addition, there are at least three surf fishing tournaments in the area and the Ocean City Public Relations Office with the Ocean City Marlin Club sponsors the annual Amateur Angler Fishing Contest, which starts each Memorial Day and runs through Labor Day.

These local expressions of community belie the regional nature of sport fishing social networks in this area. According to a number of informants, the fishing community of which they feel a part extends far beyond Ocean City. One informant explained that the fishing community ranges from Cape Henlopen, DE to the Chesapeake Bay Bridge Tunnel in Virginia. "Fish have tails and so fishermen follow the fish - they are not confined to a single area or body of water." As an example, he cited the fact that fishermen from New Jersey traveled to fish the "Hotdog", an offshore fishing ground much closer to Ocean City, due to the abundance of tuna there. Further, many of the charter boat fishermen run out of Hatteras, NC in the fall.

A mate on a charter boat expressed a similar sense of community when he said that everyone who fishes year-long knows the other boats in the charter community.

"You see the same boats in North Carolina and Florida during the winter and you get to know the crew as well. There is a lot of movement between ports depending on the season. Billfishers tend to go to the same ports at the same time of year."

He also explained that the tournament regulars travel around to the major events on a consistent basis. The crews get to know each other, and the boats are always recognizable. A party boat captain explained that the fishing community does not really have geographical boundaries; rather it is an occupational community among those who make their living through client-based boating and fishing. To him, Ocean City is a "beach community," not exactly a fishing community.

Another informant explained that the community at-large does not realize the importance of the sport fishing industry to the local economy. But among those in the non-fishing community who are not indifferent, the sport fishing industry is a valuable asset to the area. According to one informant, people enjoy going to the marinas to watch the boats come in, especially during tournaments when they can witness the weigh-ins.

Relations between the recreational fishermen and the non-fishing community are said to be good for the most part. According to one informant, the locals are fine with fishing because they fish a lot themselves. Those locals who fish are also said to be very involved in non-fishing community organizations such as Sons of Italy, Veterans of America, American Legion, AARP, and local recreational departments, serving as coaches. Many of the locals who fish are said to be retirees who are deeply involved in the local community.

They occasionally get complaints from out-of-town vacationers who do not want surf fishermen out on the beach in front of their hotels. There have also been a few complaints

from residents about the late hours at which some recreational boaters put their boats in and out of the water at the ramp near Route 90.

The relationship among and between sport fishermen is also described in positive terms, although one informant explained that different sectors and interest groups sometimes collide. One example involves the debate over summer-time flounder closures: locals usually support a closure during the summer because they can fish anytime and all year long, but the retail bait and tackle shops and boat rental businesses don't want the closures because they can be very costly during the peak tourist season.

A charter boat captain explained that, within the charter fishing fleet, everyone gets along for the most part but they are in competition with each other, nonetheless. "You don't want any one to catch more fish than you. It does not mean that you want someone to do poorly, but you just want to do better." The captains that run charters from the same marina tend to constitute information sharing cliques. They talk on the radio frequently and will tell each other where the fish are biting. Between boats from different marinas, however, there is little cooperation. An informant explained that this is simply because they don't know each other as well and so there is more secrecy and less sharing.

Descriptions of the relations between recreational fishermen and commercial fishermen in Ocean City ranged from "very good" to "worsening." Overall, most interviewees in the sport fishing industry seemed to agree that the relations were surprisingly good. One informant who runs a tackle shop explained that many recreational fishermen base their negative opinion of commercial fishing on an ignorance of commercial operations: "There are some old farts who think that commercial clam boats are sucking up all the fish." The same informant pointed out that recreational fishermen fail to realize that they rely on commercial fishermen for bait.

A charter captain explained that as stocks have declined over the past 10 years, increasingly strict regulations have befallen the industry, prompting a reaction against commercial fishing. "They see the commercial guys pulling in boatloads and they can't catch as many as they once could, so they typically blame the commercial guys for the depleted stocks." This informant expressed sympathy for the plight of commercial fishermen in the area, noting that, "they are a dying breed." Despite the animosity that some feel, this informant said that there is no overt conflict over fishing grounds because commercial fishermen often fish at night and use other areas.

A party boat captain explained that, from his point of view, commercial and party boat operators are in the business "for the long haul." Therefore, they should share the same values and recognize the need for having fish to catch in the future. He also said that relations are good on the whole, and that there are no overt conflicts, like, "midnight pot-stealings or shootouts."

#### Discussion: Community/fisheries dependency and engagement

Ocean City is the "White Marlin Capitol of the World." Sport fishing has been an integral dimension of the area's economic and social foundation from the earliest years of its existence. A 1932 report from the Maryland Development Bureau of the Baltimore Association of Commerce noted Ocean City as one of the State's important sites of

recreational fishing (Fairbanks 1932:162). A representative from the Ocean City Department of Planning and Community Development explained that recreational fishing is one of the most important draws to the region and remains one of the most significant aspects of the tourist economy. The informant noted that the "family-friendly resort" image that they are striving to create goes hand in hand with boating and fishing. A representative from the Worcester County Department of Development Review and Permitting was even more unequivocal: "Recreational fishing is a well-known facet of the area's identity." People go to Ocean City for the bays, access to the ocean, the fishing tournaments, and the water-centered businesses and services. Members of the recreational fishing industry also feel that sport fishing is essential to the cultural identity of the region and to the area's economy.

Not everyone is aware of the size of Ocean City's sport fishing industry. As one informant noted: "There is a huge fishing community here but the town itself does not seem to recognize the size of the fleet. Many of the tourists have no clue how important fishing is to the area - it is not like Montauk where everyone knows it is a fishing community. On the positive side the mayor and the city council express an awareness of the importance of the fishing industry."

The town of Ocean City and Worcester County both demonstrate an awareness of the importance of recreational fishing in the area. The county maintains boat ramps in four separate locations. Piers have been rebuilt at 9th Street and 127th Street. The recreational fishing area on Isle of Wight is also being upgraded. The town's comprehensive plan encourages water uses on the bay and the construction of marinas.

Despite the recognition given to the recreational fishing industry by the town and county governments, informants note that little is actually done to promote the industry. There is a shortage of dock space that has not been addressed, and the town has done little to support the mission of the Ocean City Reef Foundation. According to one informant, the county had a chance to buy the land on the bay known as "Stinky Beach" and turn it into a park with public access, but this opportunity was dismissed by the county commission. Stinky Beach was a good fly fishing spot for stripers but it is now being developed by private interests. This has not been unfavorable for all segments of the recreational industry, however, because a marina was constructed on the site featuring 200 wet slips, two boatels with space for over 400 boats, a marine supply shop, and other infrastructure. There are 22 charter boats that now run out of this marina.

While some segments of the industry have grown, such as charter boats, boat sales, and retail shops, others such as party boat fishing have diminished somewhat. Even so, a party boat captain explained that the popularity of party boat fishing is building along with rebounding fish stocks. Ocean City is a "beach town" with a large sport fishing dimension.

### **III. Vulnerability and Cumulative Impacts**

#### **A. Commercial Fishing**

## Gentrification and Economic Development

The commercial fishing fleet of Ocean City is centered in a tourist town that is experiencing economic growth and rising waterfront property values). The development and gentrification of the area is considered by fishermen to be a threat to the infrastructure of commercial fishing, but it is not treated as a cost of living issue. One informant claimed that most of the commercial fishermen in Ocean City live in rural areas and small towns of surrounding counties within 10 to 30 miles of the harbor. A lack of affordable housing was not noted as an important issue, as it was elsewhere like Montauk, NY. It does, however, contribute to the difficulty of crewing the fleet as will be described below.

The Ocean City area boasts each of the fifteen indicators for gentrification used in this study, including sprawling condominiums, trendy retail shops, and large recreational marinas. The area appears to be anything but a locus of a thriving commercial fishing industry. Tourism and development have been a reality of the area for decades, but fishermen feel that it is rapidly contributing to the demise of commercial fishing in Ocean City.

Fishermen expressed the fear that, due to the revenue generated by the sport fishing industry, the commercial industry could be driven out of the harbor in favor of more lucrative recreational slip and condominium development. One fisherman counted off the fishing related businesses that have been eliminated in the recent past, including two fish packers, a clam dock, and two diesel mechanic operations. Despite the commercial marine zoning of the harbor, many feel vulnerable to displacement by recreational and development interests. A case in point involves a section of harbor front property between a restaurant and the only clam dock in the harbor. According to one informant, developers want to turn the property into houses with yacht slip space. They are attempting to argue their way around the commercial zoning by claiming that the slips and condos will be used by fishermen who have commercial licenses for landing swordfish and shark. According to the Worcester County Department of Development Review and Permitting, the case involved two party boat captains who claimed status under the commercial marine zoning. Their case has apparently been approved and two houses will be built on this property. The dock space in front of the property will be used for their party boats.

Fishermen also cite the recent development of "Stinky Beach", a previously undeveloped area of marshlands just to the north of the harbor, as evidence for the inevitable encroachment of the sport fishing and condominium culture. A multimillion-dollar, top-end marina has been developed in the middle of the land and a channel dredged to allow for the passage of yachts that occupy the slips. Vacation homes are also being developed on this parcel of land. According to the Worcester County Department of Development Review and Permitting, "Stinky Beach" was always privately owned. The owner sold it to the corporation that built the new marina and housing development. According to one informant, however, the county did own a plat of land on Stinky Beach that was given in exchange for a piece of land for a fire station. The scandal surrounding this property resulted in three county commissioners being voted out of office.

The owner of a well-established marine business in West Ocean City described the increasing emphasis on the recreational industry and the concomitant decline in commercial fishing. In the

not too distant past, 50% of the business relied on commercial sales and service. Today it accounts for a mere five percent. He made the decision to get out of the commercial servicing business because of the liability issues. Today the primary customers are tourists, local boat owners, and party and charter operations. Like the commercial fishermen interviewed, he also predicts that doomsday for the commercial industry is tied to rising property values and the pressure to develop: "Commercial fishing is done; the property is getting too valuable."

Despite these fears and predictions, Worcester County officials claim that the county is committed to preserving the commercial fishing harbor. The county maintains a dock for commercial boats and enforces zoning of the harbor as "commercial marine district," which is designed to prevent any further erosion of commercial fishing infrastructure. Dock managers of the newer packing facilities in the harbor expressed confidence that expansion would be possible in the future, and one of the operations recently bought and expanded into adjacent harbor property.

### Environment

Informants did not specify any environmental issues as constituting particularly pressing problems. The Ocean City Inlet, though subject to siltation, is well maintained by the U.S. Army Corp of Engineers. Fishermen did, however, express the concern that environmental interests groups threaten the future of the fishing industry. The hue and cry of birdwatchers and environmentalists over the effect of the horseshoe crab harvest on bird populations and ecosystems has resulted in significant consequences for some local fishermen. The ramifications of horseshoe crab reductions are not felt only among commercial horseshoe crab harvesters. They are experienced by commercial conch potters who rely on horseshoe crabs for bait; conch dealers like Sea King, in Atlantic, Virginia (the owner of which regularly buys horseshoe crabs in Ocean City); small scale eel potters who depend on horseshoe crabs for bait; striped bass sport fishermen who use eels for bait; and bait shops that rely on sport fishermen for business. Some feel that environmental lobbies generate bad press about fishermen and bombard the public with inaccurate, negative characterizations of fishing practices and gear that lead to their vilification. These lobbies are also considered to have considerable power at the state and federal levels of fisheries management, compounding the sense of marginalization among fishermen.

### Fisheries Management

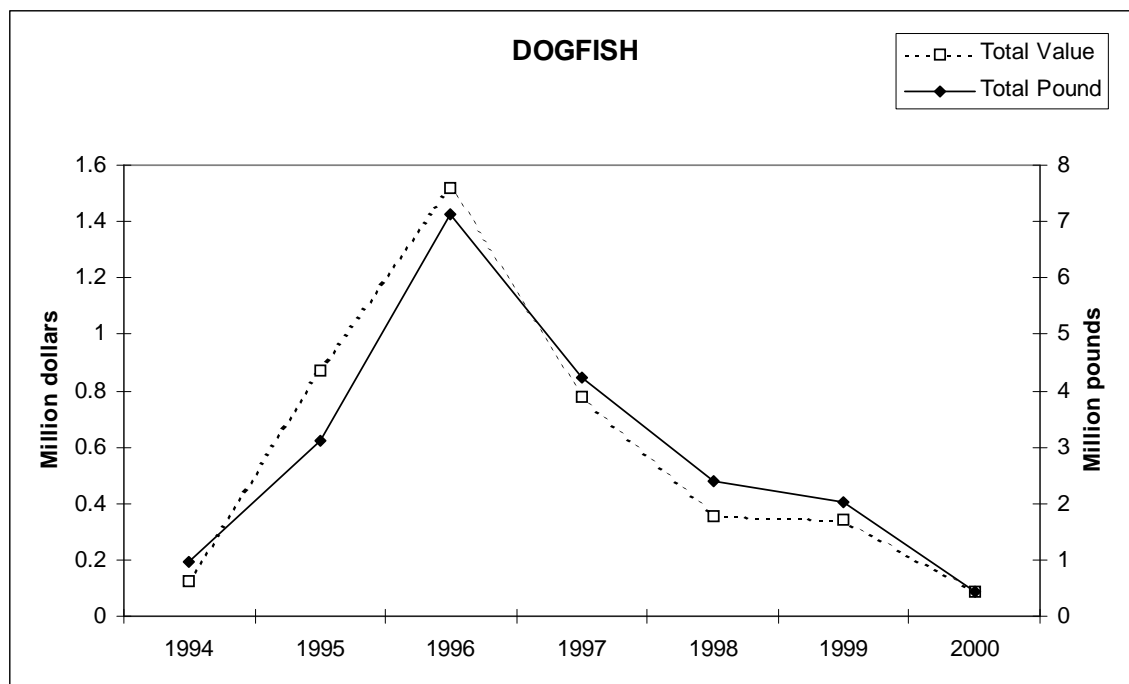
As worrisome as waterfront development is to commercial fishermen in Ocean City, of equal (if not greater) concern to those interviewed are the cumulative effects of state and federal fisheries management measures. The harbor of Ocean City once had up to thirty SCOQ boats landing at numerous clam docks. Today, there are five SCOQ boats, all but one of which are owned by a single company based in Norfolk, VA. The loss of owner-operated SCOQ boats and the diminished fleet in this area are direct results of the institution of the SCOQ Individual Transferable Quota (ITQ) system. According to one informant, the ITQ system, which has consolidated the quota of SCOQ among a few large companies, allowed quota owners to reduce the size of the fleet and lay off crew:

"The 50 and 60 year old guys in the business had no alternatives for work - they were on the street looking to stay in the clam business. The glut of available workers allowed owners to reduce the percentage paid to the boats. In the past they were paid 33%; now the scabs will work for 25% or less. It has gotten better, but not what it used to be. You'll never see another independent clammer in the business."

While these measures did reduce the size and nature of the SCOQ fleet in Ocean City, the SCOQ fishery continues to provide an important dimension to the overall activity of the Ocean City port. The newest satellite clam dock has expanded and hopes to attract more transient boats to the area. A local restaurant owner lobbied to prevent this clam dock from being established in the harbor, claiming that the business would bring back the large SCOQ fleet, which in his opinion, included dirty boats and unsavory crew. His efforts failed but the business is aware of the opposition, which is one reason why they take great pains to keep the property clean and the operation as innocuous as possible.

One small boat fisherman from Ocean City opined that the SCOQ fleet, crew, and business are probably doing just fine economically and socially, in comparison to the hardships being experienced by the majority of dragger, gillnet, and potter operations in the harbor. This fisherman explained how the regulations have affected his business and the operations of other local fishermen. He, like many others in Ocean City, uses a variety of gear types including pots, gillnets, and handlines. One of his primary concerns is not being able to catch fish when they are most readily available. He explained that the quarterly system of catch allocation creates difficulties because the fish do not behave according to a quarterly system. In addition, some seasons are only open when the fish are not on the fishing grounds. Trout (weakfish) is one example: the open season (September and October) does not coincide with fish availability in the area, which usually takes place in November. He also expressed concern over the restrictive permitting system that prevents fishermen from diversifying. "The permit situation has everyone cornered - no one can really move around to other fisheries. State by state quotas for black sea bass, for example may knock me out of the Virginia fishery. Boats are not stationary - they are meant to move with the fish." Unfortunately, he also experiences horsepower restrictions that prevent him from upgrading his engine and result in longer steam times to his fishing grounds. Gear regulations are also burdensome. He explained that his fishing pots must be fitted with biodegradable vents, the size of which was changed requiring him to refit hundreds and hundreds of pots. Marine mammal break-a-ways are required for gillnets which are not only costly but a "maintenance nightmare." Closures have also affected his business, most notably the closure of the spiny dogfish fishery. Many of the small boats in Ocean City along with the packinghouses relied on dogfish in the winter.

This decline is illustrated by the following graph:



Dogfish accounted for 18% of the total value and 44% of the total pounds landed in Ocean City in 1996. If SCOQ is excluded from the analysis (there are only five SCOQ boats in the harbor), the percentage of total value landed that is represented by dogfish jumps to 35%. One informant knows of at least one fish packing operation in the harbor that was put out of business as a result. Certain fishermen who relied on dogfish have responded by shifting emphasis to conch potting at other times of the year to make up for the shortfall.

Monkfish regulations have also hurt the area according to one informant. Monkfish accounted for over seven percent of the total value landed in Ocean City in 1997 compared to less than two percent in 2001. A representative from one of the newer packinghouses said that his operation would not have been established were it not for the monkfish fishery. Now that landings have been reduced, his operation is struggling.

### Resilience and Representation

The alternatives for fishermen in Ocean City are few. Highly regulated fisheries like monkfish prevent fishermen from specializing or pursuing any one species and encourage them as a group to focus on the same fisheries at the same time of year, putting additional pressure on the resources. When asked about alternative options in commercial fishing, one fisherman explained that there is too much risk associated with experimenting on other fisheries: "Fishermen are under the thumb and have no time to waste on experimental fisheries - you have to do what you do best and what you already know, otherwise you will go gear broke." He explained that "gear broke" refers to being over-invested in too much gear and jumping from fishery to fishery. However, the need to avoid unnecessary expenditures on experimental fisheries has to be balanced with the need to diversify. This same informant explained that pot fishermen have had to invest in gillnetting just to stay in business.

Alternatives outside of the commercial fishing industry do exist, but they are far less attractive to men who have spent their entire lives on or near the water. The economy of the area is heavily dependent on seasonal employment related to the tourist industry. Outside of this, the options are few. A fishing family's journal covering an entire year indicates that fishermen, both captain and crew, have found alternative employment that include: crewing on a charter boat in Florida; clam aquaculture; and, landscaping. One entry illustrates how regulations in the dogfish and monkfish fisheries affected employment among fishermen in the area:

10/12/02: [Captain Z] came across [Captain A] mowing the grass in front of a house he is going to rent, which will be his family's third home this year, I believe. The grass cutting business has not been good this year due to the drought. [Captain A] missed fishing, saying you had to learn that; you do not have to learn anything about cutting grass. With fishing, he learned what happened when buoy lines on nets were too long, or anchor lines too short. When his main fishery, dogfish, closed, he was hard up to make a living fishing. [Captain A's] neighbor is a fisherman who worked for [Captain Y] and took up grass cutting when monk fishing closed. These men are in their forties and... [...] by the time the government says the dogfish have recovered, there will be no fishermen to catch them.

One informant from a packinghouse explained that Maryland's government is partially responsible for the regulatory difficulties experienced by the Ocean City fishermen. According to him, the Maryland Department of Natural Resource (DNR) used to work with the fishermen on issues but that Governor Paris Glendenning's administration created a DNR that caters more to the environmental lobby and recreational interests. "The governor expelled middle of the road people and put in those with anti-commercial fishing tendencies." He provided the example of horseshoe crab regulation to demonstrate the vulnerability of fishermen in Maryland. According to him, Maryland was the number one harvester of horseshoe crabs over the past 10-15 years but the governor recently instated an emergency 72% harvest reduction. Commercial harvesters had the support of an expert on horseshoe crab biology for their own plan to reduce harvest by 40% but Annapolis told them to not even come to the public meeting because the decision to reduce it by 72% was already made.

This example also illustrates the feelings of alienation from the management process experienced by local fishermen. One fisherman explained that unlike North Carolina and states in the Northeast, Maryland does not support the fishing industry. There are no legislators who advocate for fishermen, such as Barney Frank and Ted Kennedy, in Maryland, nor is there positive media attention to the needs of fishermen like there is in North Carolina. One fisherman explained that they do have representation from the Maryland Waterman's Association, but that many fishermen cannot make it to hearings because they have to work. "We have to decide between going fishing and going to a meeting." Feeling alienated from the decision making process at the State and Federal levels does not encourage active participation. Excerpts from a fishing family's journal describe these feelings in reference to a Mid-Atlantic Fisheries Management Council meeting:

5/1/02: We got up at 4:00 am to go to the Council meeting in Hampton, Virginia. It would have been a good fishing day [...]. We needed to talk to our four Maryland representatives, one of whom was head of the Maryland Waterman's Association. Only one of them had attended the Maryland public hearing, and he was not saying anything. The others had no idea what we wanted, did not seem to have read the public comments or even the amendment [...]. They seemed surprised to learn we did not want state quotas. We were unable to persuade anyone to make a motion for [the option that we favored]. The government experts thought they knew what was best for us poor dopes. Our state fisheries director had not even bothered to come [...]. They never discussed anything but state quotas with the perverted percentages that were like nothing in the data. The fishermen complained this had not been in the public hearings, but they were ignored. Why bother to come to a meeting when the states had already made up their minds to state quotas?

Certain fishermen in Ocean City feel vulnerable, in part, because they feel voiceless in the management process. This theme was echoed in conversations with fishermen who feel that the seaside fishermen of Maryland have been eclipsed by the attention given to the Chesapeake baymen. The differences between seaside and bayside interests in the state are crosscut by differences within ports based on gear type. The management measures favored by draggers, for example, will not necessarily favor the gillnetters or the potters. The ability to organize in response to perceived threats to the industry is further hobbled by the diversity of special interests in the area.

Taken together, the various regulations over time, coupled with additional pressures from gentrification and development create an environment in which it is difficult to make a sustainable living from fishing. One informant knows of three sea bass potters from the area who went out of business within the past year. According to him, the number of fishing families in the area is declining as the uncertainties associated with fishing mount. Uncertainty is one of the more nefarious cumulative impacts.

In Ocean City, this uncertainty is partially responsible for the difficulty captains have crewing their boats. It is difficult for captains to attract reliable crewmembers when they cannot guarantee steady work. This problem is exacerbated by the seasonality of fish availability coupled with regulatory restrictions. The fishing family's journal illustrates how tough it can be during the summer months:

8/26/02: [Captain Z] caught nothing, not even jellyfish. No one is catching anything; the water is too hot. Crews are quitting. [Crewman A] quit the boat he was working on and returned to mowing grass, his alternate source of income. The captain of the boat has not gone out since.

The situation is made more difficult by the location of the commercial harbor amidst high cost housing and a resort economy. Reliable transportation is essential for crew who live outside of the area and who must travel to the harbor. The crew problems outlined in the previous section are also due, in part, to competition with businesses spawned by gentrification such as

construction firms and landscaping companies. The industry in the area is not recruiting new labor at a pace necessary to sustain itself. According to one fisherman, the youngest fishermen in Ocean City are in their 30s. "The industry is fading because the knowledge and experience of the older fishermen is not getting passed on to younger fishermen." Safety at sea is compromised by inexperienced and unreliable crew, and also by the regulations that help create the crew problems. The quota system, for example, creates a 'derby fishing' mentality that encourages fishermen to brave harsh weather conditions to earn their share before the entire quota is harvested. Without experienced deckhands, the risks of injury and accident during such trips are increased.

In addition, good dock help is essential to the maintenance of a fishing fleet. Fish have to be unloaded in a timely fashion and the infrastructure needs to be capable of handling the product. An excerpt from the fishing family's journal explains the importance and vulnerability of infrastructure:

5/6/02: [The packing house] is falling into disrepair. [The fishermen] wonder what they would do if the [operator] lost the dock. They wonder what they are going to do anyway, with everything falling apart. They would probably have to do like [Captain A] and his stepson did in Indian River, where there is no commercial dock and packinghouse. They would unload the fish at the boat slip, putting the fish in their truck. [Captain A] had two ice machines to supply the boat and the truck. They would drive sixty miles to Secretary, Maryland to the dealer there, who did not pay them very well since they had no other dealer to go to. Fisheries managers do not seem to realize that commercial fishing is a very fragile industry. Fishermen must have places to dock, good access to the ocean, and markets for their fish. These things are scarce, especially when fishing competes with real estate development.

Local packinghouses find it difficult to find and keep dockworkers. One manager explained that the work is hard, the hours long and irregular, the pay low, and the benefits few to nonexistent. "Good workers are sucked up by companies that provide benefits."

The cumulative effects of management and the forces of gentrification are squeezing the commercial fishing industry of Ocean City. The foundations of the industry, such as docking, offloading and marketing infrastructure, as well as crew recruitment are not as robust as they once were. The people and businesses that comprise the industry are extremely vulnerable to further negative perturbations brought about by strict regulations and waterfront development. The latter, though less likely to cause immediate harm in light of the zoning protections provided by the county, may prove too powerful in the long term. At present, the fishermen and the businesses they depend on are still demonstrating a remarkable resilience, but some consider the end just a matter of time.

## B. Recreational Fishing

### Gentrification and Economic Development

The economic growth and rising waterfront property values described above as banes of commercial fishing industry are having more positive effects on Ocean City's sport fishing industry. The development of "Stinky Beach" brought a high-end marina into West Ocean City that, according to Worcester County Department of Development Review and Permitting, is one of the most popular on the East Coast. The marina manager explained that fishing is "the most important thing" to boaters who use the marina.

Not all growth and development, however, favors all segments of the recreational fishing industry. For example, the sale of Stinky Beach eliminated shoreline access for bank fishermen. In addition, one informant noted that increasing residential development of waterfront in the area has reduced the number of slips available to the public, and encouraged some marinas to become private. Less land is available for the development of public marinas. According to the Ocean City Department of Planning and Community Development, ample areas are zoned for marine activities. However, no area is zoned solely for marine use, making marinas and sport fishing infrastructure vulnerable to residential development.

The sale of "Shantytown" in West Ocean City offers an example of how economic growth and gentrification can negatively affect particular segments of the sport fishing industry. Shantytown is a cluster of tourist shops and restaurants styled as a nautical village on the Sinepuxent Bay. Since 1976 the quaint attraction has greeted visitors to Ocean City as they approach the Route 50 Bridge from the west. The property is also home to two of the largest party boats in Ocean City, a bait and tackle shop with a popular pay fishing pier, and a large boathouse. The property's buyer plans to raze the village and build 14 single-family homes and a 32-unit townhouse community on the property. The application to change the zoning of the area from business to residential was approved by Worcester County. The owner of the two party boat operations has already sold one of the party boats and plans to sell the other because there are no other places with sufficient parking space for clients. The former captain of one of the party boats that was sold bought a smaller boat and is going into business for himself. There are no other areas to dock a large party boat besides the county dock in the harbor. Unfortunately, the county leases dock spaces only to commercial boats, and the leases have a three-year duration based on sealed bid. The sale of Shantytown will also result in the loss of the bait and tackle shop and the fishing pier.

## Environment

Erosion, storm damage, and wave action constitute one of the primary environmental concerns in Ocean City. The Ocean City Inlet is constantly monitored and maintained by the Army Corps of Engineers. The south jetty was rebuilt in 2002 and over 700,000 cubic yards of sand were dumped on the beaches as part of a replenishment project. Despite the vigilance and work of the Corps, informants note that the bays are filling with sand, making fishing more difficult and less productive. One informant suggested that the north jetty should be extended because the "ebb shoal" has grown as northeast winds push sand around the jetty and into the inlet. The sand that gets deposited in the bay is dredged from the channels, but outside the channels, the water is getting shallower. Coupled with the increasing boat traffic in the bay, this condition is making navigation more difficult, especially for recreational boaters.

On the positive side, the efforts of the Ocean City Reef Foundation are enhancing fish habitat off Ocean City. Their artificial reef building program has helped improve bottom conditions for sea bass and a host of other fish. The Foundation, which was established in 1997 to supplement the efforts of the Maryland State Reef Program, has since assumed all responsibilities for reef building since the termination of the State program in 1997 (<http://www.ocreeffoundation.com/>). One of the area party boat captains who is intimately involved in the program's operation believes that their efforts are enhancing fish habitat and consequently providing better fishing.

### Fisheries Management

Different segments of the recreational fishing industry are concerned about different regulations, but overall, informants expressed an understanding of the importance of regulations. For example, a party boat captain explained that he and another boat were the first in Maryland to impose a 9" minimum on sea bass, which was nine years before the state did so and six years before federal government. Current regulations on sea bass allow 25 fish per person at a minimum of 11.5 inches. While these regulations have not been too difficult to bear, the closed seasons on sea bass have been problematic. According to this informant, the closed season in 2001 was supposed to be lifted in 2002, but because the council was too slow in passing the measure, it reverted to last year's regulations. A separate informant noted that the closures on sea bass, flounder and tuna encourage fishermen to target other "meat" fish because these are not popular fish among catch and release anglers for the most part. Bait and tackle shop owners and other related businesses have been negatively affected by summer flounder closures that are scheduled for the height of the tourist season (in 2002: July 25th through August 11). This closure, coupled with the increased minimum size (17") hurts local businesses according to a number of informants. The overall effect of increased minimum size restrictions on party boat industry is that there are fewer clients traveling from greater distances who are willing to come and fish. However, while some business has been lost among these fishermen, others have been attracted by the quality and size of the fish.

Among offshore fishermen, bag limits on tuna have evinced the most negative reactions. According to one charter captain, many clients want to go home after they catch their limit of bluefin despite the fact that they can target yellowfin or else catch and release more bluefin. Even though the bag limit on bluefin has been increased, clients still complain that they "can only kill four." The captain explained that this is a result of a tenacious "meat fishing" mentality that is slowly changing. Lately, the industry has been better able to handle regulations as a result of the changing attitudes and education. Clients used to keep all that they caught but they are getting more accustomed to releasing fish. The same is said to be true among party boat clientele.

Beyond these regulatory issues, the one of greatest import for sport fishing in Ocean City involved the proposed listing of white marlin as a threatened or endangered species. In August 2001, the Biodiversity Legal Foundation petitioned the National Marine Fisheries Service (NMFS) to have the white marlin placed under the protection of the Endangered Species Act (ESA). Sport fishermen, sensing the gravity of the battle, attended hearings and made their case. One informant estimated that there were approximately 50 to 70 people in attendance at the hearing on the ESA status of white marlin in Ocean City. He felt that there should have been more people considering the importance of white marlin to the local recreational fleet and its

potential impact on tourist business. They argued that 95% of the marlin mortality is attributable to foreign commercial fleets operating outside the US EEZ, and that any moratorium would severely disable the sport fishing industry of the area. In 2002, the White Marlin Open paid out over \$2,000,000 in prize money and brought in boats from around the world. This tournament alone represents an important contribution to the local economy, and a central aspect of Ocean City's identity. In September, 2002 the NMFS determined that white marlin does not warrant listing under the ESA, much to the relief of area sport fishermen and charter captains.

Finally, some expressed the need for more transparent regulatory policies. Many recreational fishermen don't know what the regulations are because they are not well-publicized. Fishermen who trailer their boats to and from public or pay ramps have been fined for not tagging bluefin tuna at one of the approved tagging stations, many of which are not located next to boat launches. According to one informant, the marine police and Coast Guard do not even know all of the regulations properly and often cannot always tell the difference between fish species.

### Resilience and Representation

The sport fishermen in Ocean City have become more politically organized and active in recent years. This is due, in part, to the expanding regulatory structure of fishing practice. The threat of losing white marlin under an ESA designation was a shot across the bow of area offshore anglers and sport fishing businesses. Clubs that originally served a social function are becoming more important sources of industry representation. Anglers in Ocean City are members of numerous local clubs including: Ocean City Marlin Club, Ocean City Surf Anglers Association, Assateague Mobile Sportfishermen's Association, Ocean City Light Tackle Club, and the Ocean Pines Anglers Association. Many are members of more political regional and national associations such as the Coastal Conservation Association, the Recreational Fishing Alliance, and the Maryland Saltwater Sportfishermen's Association. Charter captains who dock at the Ocean City Fishing Center are members of the Ocean City Charter Captain's Association.

Despite the infrastructure for political action, informants from the charter and party boat industry note that few are truly proactive. One captain expressed frustration that others will gripe and complain about regulations but do little else. He was surprised by the low turnout for the white marlin ESA hearing. "Apathy is the word that best characterizes participation in the area." He attributes this to the fact that few charter captains actually depend on fishing for a living. "It is like pulling teeth to get them out of the bar and into a meeting... The reason is that many of these guys are not full-time and simply don't have the commitment."

In comparison to the commercial fishing industry in Ocean City, sport fishing does not appear threatened or overly vulnerable to change. The full-time party and charter boat operations are vulnerable to residential development as evidenced by the sale of Shantytown. Rising waterfront property values and limited dockage does have some worried about the future of party boat fishing. However, informants from the various sectors of the sport fishing industry expressed far fewer concerns over regulations, gentrification, and economic development than those from the commercial industry. Instead of a bleak outlook on the future, most expressed a hopefulness that stocks are being rebuilt and recreational fishing is on the rise. This has some concerned, of course, that the area is getting too congested with boat traffic and that the fishing experience is

being diminished. Overall, however, the concerns are focused on rebuilding fish stocks, encouraging participation in political process, and educating clientele.

One informant explained that charter boat and commercial fishermen should share a long-term commitment to the environment, however, they do not have to share the same constraints and vulnerabilities. In the past, captains fostered a feeding-frenzy mentality among clients. They never asked how many fish clients wanted, needed, or could handle - they simply let them limit-out. This "meat fishing mentality" made it incumbent upon the captain to return to the dock with fish, reducing the distance between the commercial fishing profession and the charter profession. Unlike commercial operations, however, charters can exist without bringing fish to the dock. According to this captain, this difference is one of the strengths of the charter industry that has yet to be fully realized. The challenge is re-education. "Filling the box is what matters to many clients when it should be to simply have a good time." He related the dismaying story of a 60-year-old client who, after having participated in catching the limit of fish for the day, went into the cabin and "pouted" over the release of fish that he wanted to kill.

Party boat operations are also in the midst of a changing mentality among clients that increases their resilience and ability to weather more restrictive bag limits and size minimums. As one captain noted, they are actually gaining clients as a result of bigger, higher quality fish. Some party boats have been able to diversify operations to take advantage of new markets. His operation, like others in the area, started offering "nature cruises" in response to the stock declines. During a nature cruise, tourists are ferried about in search of dolphins, whales, seabirds, and the ponies on Assateague Island.

In addition, the local marine supply shops have shifted the focus of business to the recreational sector. The owner of one shop estimated that 90% of his business comes from the recreational sector, whereas in the past it was 50%. For this business, the expansion of the recreational sector has offset declines in the commercial industry. The greatest challenge is not getting business, but rather complex tax laws that make point of service automation of the business virtually impossible.

Appendix 1: Port Activity by Gear Type and Landings, % Pounds and % Value, Ocean City, MD 1994-2001; Source: NMFS Weighout

Negear	Gearcode	1994		1995		1996		1997		1998		1999		2000		2001	
		% pound	% value	% pound	% value	% pound	% value	% pound	% value	% pound	% value	% pound	% value	% pound	% value	% pound	% value
020	HND	0.03	0.08	0.03	0.09	0.02	0.03	0.27	0.99	0.01	0.03	0.09	0.35	0.10	0.43	0.05	0.19
021		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
030	HRP	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
040	LLP	2	11.66	4.71	16.90	0.93	4.70	1.25	6.44	2.12	11.10	1.70	9.01	2.03	8.37	0.78	3.53
050	OTF	7	6.93	2.96	4.27	2.90	4.03	11.16	10.67	9.47	9.95	10.44	12.81	9.96	11.38	5.54	8.06
052	OTC	0	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.68	0.00	0.02
059	OTO	0	0.00	1.26	1.65	2.56	4.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
061		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
064		0	0.00	0.00	0.00	0.00	0.00	0.17	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
065		0	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	GNS	14	4.77	28.39	15.31	49.29	25.09	0.00	0.00	28.13	13.67	24.41	12.73	9.11	7.64	2.32	2.22
101		0	0.00	0.07	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	GNT	0.01	0.02	1.95	0.89	0.00	0.00	39.00	20.05	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00
112		0	0.00	0.01	0.01	0.20	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
131		0.007	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132	DRS	0	0.00	0.00	0.00	0.05	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.34	0.00	0.00
180	PTO, PTX	0	0.00	0.24	0.77	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
181	PTF	2	2.99	2.03	3.77	3.22	6.17	3.88	9.34	2.93	7.39	3.70	9.46	3.27	7.02	1.30	2.74
182		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
183	PTW	3	2.95	0.11	0.45	0.67	4.64	1.04	1.42	0.88	1.40	0.35	0.64	0.76	2.49	0.20	0.46
184		0	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200	PTL	0.02	0.09	0.06	0.35	0.13	0.80	0.21	1.44	0.10	0.68	0.09	0.65	0.54	3.22	0.08	0.44
201		0	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202		0	0.00	0.00	0.00	0.00	0.01	0.02	0.16	0.00	0.00	0.02	0.15	0.00	0.00	0.00	0.00
206		0	0.00	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
210		0.002	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.00	0.00
211		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
230		0	0.00	0.00	0.00	0.00	0.00	0.23	0.21	0.01	0.01	0.00	0.00	0.01	0.02	0.01	0.02
322		0.03	0.03	0.00	0.00	0.00	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
382		0.06	0.16	0.00	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400	DRC	72	70.30	58.15	55.26	39.97	49.23	42.65	48.40	56.34	55.76	59.18	54.12	73.12	56.54	89.36	81.40
999	OTH, MIX	0.0002	0.00	0.02	0.03	0.00	0.00	0.08	0.12	0.00	0.01	0.03	0.06	0.93	1.81	0.38	0.92

**Appendix 1 Gear Codes:**

<b>Ne gear</b>	<b>Gear Name</b>
20	HANDLINE
21	HANDLINE,AUTO JIG
30	HARPOON,OTHER/NK SPECIES
40	LONGLINE, PELAGIC
50	TRAWL,OTTER,BOTTOM,FISH
52	TRAWL,OTTER,BOTTOM,SCALLOP
59	TRAWL,OTTER,BOTTOM,OTHER/NK SPECIES
61	TROLL LINE,TUNA
64	POWER TROLL TUNA
65	POWER TROLL OTHER/NK SPECIES
100	GILL NET, FIXED OR ANCHORED,SINK, OTHER/NK SPECIES
101	GILL NET,SET/STAKE, SEA BASS
110	GILL NET,DRIFT, OTHER/NK SPECIES
112	GILL NET,DRIFT,SHAD
131	DREDGE,SCALLOP,BAY
132	DREDGE, SCALLOP,SEA
180	POTS + TRAPS,OTHER/NK SPECIES
181	POTS + TRAPS,FISH
182	POTS + TRAPS,EEL
183	POTS + TRAPS,CONCH
184	POTS + TRAPS,OCTOPUS
200	POT/TRAP, LOBSTER OFFSH NK
201	POT/TRAP, LOBSTER OFFSH WOOD
202	POT/TRAP, LOBSTER OFFSH WIRE
206	POT/TRAP, LOBSTER OFFSH PLASTIC
210	POT/TRAP, LOBSTER INSH NK
211	POT/TRAP, LOBSTER INSH WOOD
230	BY HAND,OTHER/NK SPECIES
322	FYKE NET, FISH
382	DREDGE,CLAM
400	DREDGE,SURF CLAM + OCEAN QUAHOG
999	UNKNOWN

Appendix 2: Port Activity by Species Landed, % Pounds and % Value, Ocean City, MD, 1994-2001

Species	1994		1995		1996		1997		1998		1999		2000		2001	
	% Pound	% Value	% Pound	% Value	% Pound	% Value	% Pound	% Value	% Pound	% Value	% Pound	% Value	% Pound	% Value	% Pound	% Value
<b>OTH</b>	6.8	2.6	3	2.4		2	2.1	1.3	3.7	2.4	2.3	1.6	2.2	1.6	0.7	0.6
<b>WHT</b>	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.001	0.0003	0.004	0.003	0.0002	0.0001	0	0.01
<b>MNK</b>	1.1	1.2	2.7	4.8	3	5.2	4.7	7.6	3.8	6.0	3.3	5.7	1.8	4.1	0.8	1.6
<b>FLN</b>	0.02	0.01	0.01	0.01	0.02	0.04	0.02	0.03	0.004	0.01	0.01	0.01	0.004	0.005	0	0.01
<b>PEL</b>	1.1	0.3	0.7	0.2	0.5	0.1	1.2	0.8	1.4	0.7	1.7	0.9	1.4	0.5	0.7	0.2
<b>FF</b>	2.6	4.1	3.6	5.5	4.9	8.2	6.6	11.3	6.4	10.0	7.7	12.3	7.8	12.2	4.8	5.7
<b>TUN</b>	1.2	4.8	2.7	10.7	0.5	2.7	1.4	6.0	1.1	5.7	1.2	5.7	1.5	6.1	0.5	2.4
<b>FLK</b>	1.3	3.5	1.1	2.9	1.4	4.5	1.4	5.3	1.6	5.0	1.6	5.5	2.1	5.4	1.3	3.6
<b>DOG</b>	7.9	1.6	25.4	10.2	44.2	18.4	32.2	10.9	21.6	5.6	19.0	5.5	4.7	1.3	0	0
<b>LOB</b>	0.1	0.4	0.2	1.3	0.1	1.2	0.3	1.9	0.2	1.2	0.1	1.1	0.6	4.0	0.1	1
<b>SCL</b>	0.02	0.1	0.03	0.2	0.06	0.6	0.01	0.1	0.02	0.2	0.03	0.4	0.2	1.6	0.2	1
<b>SQL</b>	0.1	0.1	0.4	0.3	0.4	0.6	0.1	0.1	1.0	1.0	0.7	1.0	1.4	1.4	0.3	0.4
<b>SHF</b>	5.4	4.7	1.2	1.5	1.8	6.0	7.4	4.4	2.0	2.1	2.5	1.7	2.7	3.1	1.1	1.3
<b>OQ</b>	71.5	70.3	58.1	55.1	39.9	49.0	42.5	48.2	56.3	55.6	59	53.6	73.0	55.9	89.2	81
<b>SWD</b>	0.9	6.2	0.8	4.9	0.2	1.4	0.3	2.0	0.7	4.5	0.7	5.0	0.6	2.8	0.3	1.6
<b>EEL</b>	0.01	0.002	0.01	0.003	0.02	0.01	0.002	0.001	0.0004	0	0.01	0.007	0	0	0	0
<b>TIL</b>	0.0003	0.001	0	0	0.01	0.04	0.005	0.02	0.004	0.02	0.001	0.002	0.001	0.002	0	0

Species Codes:

- OTH** Species other than those listed below
- WHT** whiting (silver hake)
- MNK** monkfish
- FLN** flounders: winter flounder, witch flounder, yellowtail, american plaice, sand-dab, flounders, southern flounder
- PEL** pelagics: bluefish, butterfish, king mackerel, menhaden
- FF** finfish: atlantic croaker, scup, black sea bass, weakfish, striped bass, spot
- TUN** tuna: bluefin tuna, big eye tuna, albacore tuna, yellowfin tuna
- FLK** summer flounder
- DOG** dogfish
- LOB** lobster
- SCL** scallop
- SQL** squid: loligo and illex
- SHF** shellfish: blue crab, horseshoe crab, panaeid shrimp, quahogs, conches, channeled whelk, oysters
- OQ** ocean quahog and surf clam
- SWD** swordfish
- EEL** American eel
- TIL** tilefish

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Newport Bay Realty: (<http://www.southpointrealestate.net/westocean.html>)

Ocean City Convention and Visitors Bureau and Department of Tourism:  
(<http://www.ococean.com/history.html>)

Ocean City Maryland Chamber of Commerce: (<http://www.oceancity.org/>)

Ocean City Reef Foundation: (<http://www.ocreeffoundation.com/>)

Ocean City Today: (<http://www.oceancity.md/portal/oceanhistory.cfm>)