

Chapter 8. Shellfishing and Finfishing

Chapter Summary

Residents of the four Pleasant Bay communities consider shellfishing and finfishing to be important Bay activities, even if they themselves do not partake in these activities.

Pleasant Bay's shellfish resources are managed by the towns of Orleans, Chatham, and Harwich, respectively. Historically, each town has managed its shellfish resources independently of the other towns. Although there is some compatibility among the local regulations, there are also tremendous differences.

- Aquaculture is allowed in Orleans, but Chatham has adopted a policy to oppose the cultivation of private aquaculture grants in its waters.
- While the structure of shellfish permits is similar among the towns, the schedule of fees varies significantly.
- Chatham is the only one of the three towns to use a percentage of its permit fees for the management and propagation of its shellfisheries.

Overall, the number of shellfish permits issued by the three towns has increased fifteen percent from 1993 to 1995, with commercial permits increasing more than thirty percent. This trend indicates that shellfishing for recreational and commercial purposes is likely to continue as a vital part of the profile of Bay uses.

Pleasant Bay is also one of the most popular recreational finfishing locations in the Commonwealth, particularly for bluefish and striped bass. Commercial finfisheries in the Bay include eel, flounder, and minor amounts of other species. Recent finfishing trends reveal a virtual disappearance of flounder, but a resurgence of bluefish and striped bass in the Bay.

8.0 Overview

Shellfishing is an important and highly valued public use of Pleasant Bay. The survey of residents of the four Bay towns indicated that one-third of all respondents use the Bay for shellfishing, and two-thirds view shellfishing as an important activity, suggesting that even those who do not shellfish themselves see value in the activity. Commercial shellfishing accounted for more than half of all commercial activities in the Bay reported by survey respondents. There are 4,794 acres potentially available for shellfishing in Pleasant Bay, of which more than ninety-eight per cent is approved for shellfishing by the Massachusetts Division of Marine Fisheries.

8.1 Local Shellfish Management

Pleasant Bay's shellfishery has a long history of management by individual town.¹ Local shellfish regulations are administered by the Orleans Shellfish Constable, Chatham Shellfish Warden, and Harwich Natural Resources Officer, respectively. The local regulations encompass permits, fees, seasons, allowable fishing methods, area restrictions, catch limits, and harvest reporting requirements, among other issues.

8.1.1 Permits and Fees

Harvesting of shellfish requires a shellfishing permit issued by the town in which the shellfish is found. Permits are issued annually. Orleans, Chatham and Harwich each issue a comparable variety of permit types including resident, non-resident, and commercial. In each town, commercial permits can only be issued to town residents. An exception to this rule is in Orleans, which shares its shellfishing rights with residents of Eastham. Permits apply to all shellfishing areas in a town, and hence are not limited to Pleasant Bay.

The schedule of permit fees varies significantly from town to town. Chatham has the highest residential and commercial fee structure of the three towns. The most striking differences are found among commercial permit fees. Chatham charges \$200 for a one-year commercial permit, and \$100 for a junior commercial permit. Orleans and Harwich charge \$50 and \$40 per year for a commercial permit, respectively, with no charge for junior or apprentice licenses. All towns issue senior citizens licenses for a nominal amount, or free. Currently, permit fee income is directed into the General Funds for Orleans and Harwich, respectively. In Chatham, seventy-five per cent of commercial permit fee income is directed to a special fund for shellfish propagation. This fund provides the town with a stable and reliable source of funds for shellfish management and propagation.

None of the towns limit the number of any type of permit that can be issued. In 1995 there were 4,271 permits issued by the three towns, compared to roughly 3,700 permits issued in each of the prior two years. Commercial permits constitute one-quarter of all permits issued in Orleans and Chatham, and only two percent in Harwich. Chatham issued the largest number of permits in each of the three years, followed closely by Orleans. Commercial permits tend to constitute a larger share of total permits in Chatham than in the other towns.

¹ Local shellfish regulations are promulgated under the authority granted the towns by applicable Massachusetts General Laws, including Chapter 130. State shellfish regulations are administered by the Massachusetts Division of Marine Fisheries.

SHELLFISH PERMITS BY TOWN, 1993 - 1995

TOWN	1993	1994	1995
ORLEANS			
Commercial	220	213	480
Family	960	985	1,262
Total	1,180	1,198	1,742
CHATHAM			
Commercial	546	532	530
Family	1,567	1,598	1,556
Total	2,113	2,130	2,086
HARWICH			
Commercial	9	4	11
Family	399	407	432
Total	408	411	443
THREE TOWNS			
Commercial	775	749	1,021
Family	2,926	2,990	3,250
Total	3,701	3,739	4,271

Source: Chatham Shellfish Warden, Orleans Shellfish Constable, Harwich Natural Resources Officer

8.1.2 Monitoring and Enforcement

Monitoring of shellfishing activity and enforcement of local regulations are the responsibilities of the respective shellfish officers in each town. Both Orleans and Harwich have combined the functions of harbormaster and shellfish warden under one position, with a limited number of assistant positions. Chatham's shellfish department is separate from its harbormaster's department, and has a budget for hiring part-time assistants. In some cases, the towns have deputized volunteers to monitor the flats and enforce regulations. The large geographic areas, and the broad responsibilities of each town's shellfishing department, place limits on the amount of time that can be devoted to enforcement, propagation, and other management issues.

8.1.3 Municipal Propagation

Publicly-sponsored aquaculture is undertaken in the Bay by the three towns as a way of sustaining wild shellfish stocks for commercial and recreational harvesting. Orleans, Chatham, and Harwich each have municipal seeding programs underway in Pleasant Bay. The method used by all three towns is to obtain seed from a hatchery and then grow the seed in nurseries. In Pleasant Bay, the propagation nursery areas tend to be located in protected areas. The field planting of the quahog seed after the nursery grow-out period takes place throughout the Bay. Depending on the size of the quahog seeds when purchased and conditions which influence growth, the normal nursery grow-out period for these plantings is between two and four years.

The level of propagation undertaken by each town varies. Harwich planted 600,000 quahogs in the Bay in 1994, and this year placed two million seed under mesh in Round Cove for the winter. Chatham has the largest propagation program of the three towns. Like the other towns, Chatham's propagation program emphasizes quahogs. Six to seven million hatchery seed were raised and planted across town last year. Orleans

plants quahog seed annually in the Bay, and will begin experimenting with scallop propagation this year. Orleans annually purchases 500,000 to one million seed quahog which are placed in nursery cages in several protected locations in the Bay.

The results of municipal seeding programs are difficult to gauge. Quahog seeding is perceived to be successful on a "put and take" basis, but actual survival rates after field planting of nursery stock are difficult to determine. It is assumed that a percentage of hatchery-raised stock remains as brood stock and helps to sustain the wild shellfishery. The success of future scallop propagation efforts will be even more difficult to gauge because of the migratory nature of the species.

8.2 Private Aquaculture Grants

Small-scale private aquaculture has been undertaken in Pleasant Bay, specifically Orleans, since the 1920's. Currently, Orleans is the only town with active private aquaculture grants in Pleasant Bay. The primary species being cultivated in these grants are quahogs, oysters, and soft shell clams.

Orleans has identified an area of the Bay, referred to in the resource management plan as the Aquaculture Grant Area, as being suitable for private aquaculture grants. Within the Area, Orleans has allowed twenty-two private shellfish grants, utilizing a total of twenty-four acres. Seventeen of the existing private grants in the Area have the potential to expand up to two acres each, and five grants are fixed at one-half acre. Expansion of the existing grants could utilize up to eight additional acres within the Area. Orleans has also issued three private grants and one experimental grant outside the Area. Grants outside the Area have the potential to expand an additional four acres. In 1995, Orleans placed a moratorium on new grants in the Bay pending the completion of the Pleasant Bay Resource Management Plan.

PRIVATE AQUACULTURE GRANTS IN PLEASANT BAY

	Existing Grants (acres)	Expansion Potential of Existing Grants (acres)	Total Existing and Potential Expansion of Grants (acres)
In Aquaculture Grant Area	24	8	32
Outside Aquaculture Grant Area	4	4	8
Bay-wide Total	28	12	40

Source: Orleans Harbormaster/Shellfish Constable

8.3 Finfishing

Like shellfish, finfish are an important ecological, recreational and commercial resource in Pleasant Bay. Thirty-two percent of survey respondents said they use the Bay for fishing, and sixty-nine said that fishing is an important activity in the Bay. Twenty-nine percent of those who said they use the Bay for commercial purposes use it for fishing. It has been estimated that seventy-five percent of all motor boats using the Bay have at least one fishing implement on board.

The health of finfish stocks is also an important concern to eighty-five percent of survey respondents. The virtual disappearance of flounder from the Bay, and the resurgence of bass and blue fish, are among the finfish trends most often cited by local fishermen and officials. Concerns have been raised that sustained fishing of juveniles could threaten the viability of other species in the Bay. As discussed in Chapter 4, there is a need for an updated study of the Bay's finfish resources to learn more about population trends and develop appropriate management strategies.

8.3.1 Commercial and Sport Fishing

Pleasant Bay is well known as one of the most popular sport fishing areas in the Commonwealth. The 7,000 acre estuary (at high tide) is the second largest in the state. Migratory sportfish include the striped bass and bluefish which may be caught in the Bay from May through November. The popularity of winter flounder among commercial and recreational fisherman may account for the decline of the flounder population in the Bay. Other popular recreational species include pollock, tautog, scup, and tomcod. With the dramatic coast-wide resurgence of bass productivity in the last three years, the number of legal-sized fish being caught by sportfishermen in the Bay is believed to be at an all time high. The growing popularity of lobster among recreational fishermen is evidenced by the dramatic increase in the number of lobster pots set by recreational permit holders over the past decade.

Commercial fisheries in the Bay include eel, flounder, lobster, horseshoe crab and minor amounts of other species. A small number of commercial lobster fishermen fish exclusively in Pleasant Bay, while most others have a number of traps in other locations. Winter flounder were fished heavily up to the early 1980's. Since that time the number of flounder permits issued by the state has declined parallel with sharp decreases in flounder stocks. The flounder fishery is under continuing pressure despite efforts to sustain it. The state has effectuated a spawning closure area for flounder out to one mile offshore between November 1st and April 30th. However, because flounder are known to enter the Bay through the Chatham breakthrough to spawn, fishing pressure outside the inlet is heavy before the closure commences in November. A resurgence of flounder predators in the Bay, namely seals and cormorants, are adding to the flounder decline.

Eels are fished commercially for bass bait, and for the fresh food market. In years when winters are cold early, there is a high demand for eels around the holiday season.

Eels are generally fished near fresh water springs throughout the Bay.² Horseshoe crabs are fished in the Bay for commercial purposes.

² *Pleasant Bay Area of Critical Environmental Concern Nomination Report.* August, 1986.