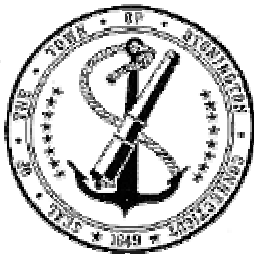


Stonington Shellfish Commission

www.stoningtonshellfishcommission.org/shellwebsite/stonington_shellfish_commission.htm

Shellfish Resource Management Plan

Town of Stonington, Connecticut



Approved by the Stonington Shellfish Commission 06 August 2002
Approved by the Stonington Board of Selectmen 09 October 2002
Approved by the CT Dept. of Agriculture; Bureau of Aquaculture 11 December 2002

Last Updated/Amended—15 March 2005

Jurisdiction & Authorities

An active shellfish management program is required to maintain the productivity of shellfish resources. In the case of clams, continued lack of harvesting leads to overcrowding and clam beds that become too dense and diminish in productivity. In some areas the character of the bottom can decline to the point that it can no longer support a viable shellfish population. Recovery is possible, but not without a major, well-organized and concerted effort that is often expensive as well, and not guaranteed to be successful.

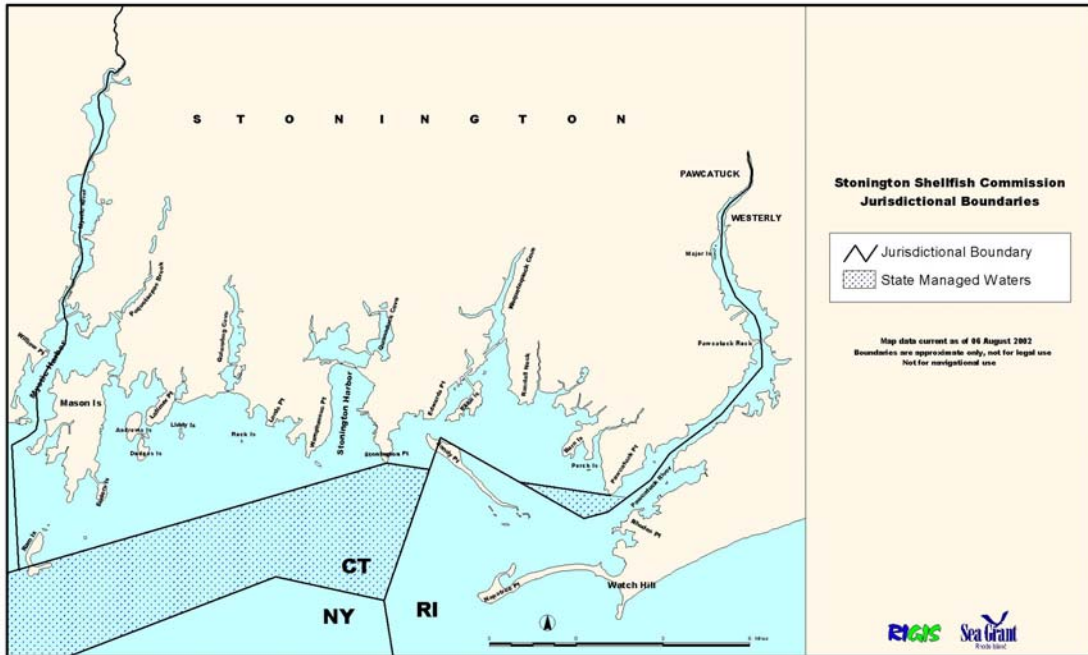
Maintaining shellfisheries in Stonington waters preserves one of the defining characteristics of the town—its lineage of seafarers and fisher folk. This seafaring tradition defines an important aspect of the culture and character of Stonington, both within the state and the region. This tradition, at least in part, is dependent upon good water quality. Managing coastal waters for shellfish harvesting helps ensure high water quality as the harvest of shellfish is only allowed in waters of excellent quality. Preserving access to shellfish populations, and the quality of the ecosystems they inhabit, also helps to maintain traditional town character. It promotes development of economic ventures that rely upon the towns' coastal resources, and provides opportunity for stewardship through economic sustainability. Residents and visitors to Stonington have the opportunity to partake of a wholesome, traditional recreational activity—harvesting shellfish—that not only gets them on the water and enjoying a day out of doors, but also provides for a tasty treat when freshly collected shellfish are served as part of the days repast.

Furthermore, if shellfish resources are not used on a continuing basis, the resources around them—the shoreline, bay and harbor bottom, and the water column itself—become usurped for moorings, docks and other uses that destroy shellfish habitat and limit access. Once lost, access is difficult if not impossible to reacquire. Shellfish populations, and more so the ecosystems they rely upon, may be expensive, if not impossible to recreate once lost.

LEGAL AUTHORITY & JURISDICTION

The Stonington Shellfish Commission was established by the Board of Selectmen in January 1983. The commission derives its authority from the General Statutes of the State of Connecticut Volume 8, Title 26, Chapter 492. In accordance with Stonington's Town Charter (revised 03 November 1998) the Shellfish Commission consists of five members who are appointed by the Board of Selectmen. During 2004 however, the Board of Selectmen approved the appointment of two (2) alternates to serve on the Shellfish Commission, enlarging it to become a working body of seven (7) members. The commission holds regular meetings and special meetings, as necessary, and posts its minutes in the Town Clerk's office.

The jurisdictional area of the Stonington Shellfish Commission is bounded to the east by the Stonington/Westerly line, to the west by the Stonington/Groton line and to the south by the Stonington/State of Connecticut line.



Jurisdictional boundaries of the Stonington Shellfish Commission.

Within the commission's jurisdiction, General Statute Sec. 26-257a sets forth the legal authority of towns to establish shellfish commissions to manage local shellfish resources, Sec. 26-291a sets forth Stonington's ability to regulate the harvest of clams and oysters and Sec. 26-292 sets forth Stonington's ability to regulate the harvest of scallops.

The term "shellfish" is defined in Sec. 26-192 as mussels, oysters, all varieties of clams and whole and roe-on scallops, but does not include scallops if the final product is the shucked adductor muscle only. Because the use of the final shellfish product is significantly different for scallops—adductor muscle only—scallops are regulated in a different manner than other shellfish species, as defined below and in more detail later in this document.

HARD CLAMS AND SCALLOPS are regulated by the Stonington Shellfish Commission to manage the harvest of shellfish in a sustainable fashion. Regulations are reviewed annually by the commission and amendment made as necessary or required. In general, harvest of hard clams may occur throughout the year while the harvest of scallops is typically limited to the time from mid-October to late March.

OTHER SPECIES OF SHELLFISH, such as blue mussels, surf clams and razor clams, exist in modest quantities in town waters and are not under special management or regulation by the commission. These species may, with the appropriate town permit, be harvested in any area open to shellfishing. State statutes, regulations and/or restrictions to harvest should be referenced regarding these and other species not under specific regulation by the commission. These species **MAY NOT** be harvested by recreational shellfishers for any use, including use for bait, in any areas other than those legally open to recreational shellfishing.

CRUSTACEANS, such as blue crabs and lobsters, are managed and regulated by the Connecticut Department of Environmental Protection Marine Fisheries Division. State regulations should be referenced regarding season, availability, size limitation and other particulars pertaining to these and other crustaceans taken from Connecticut waters.

GOALS OF THE STONINGTON SHELLFISH COMMISSION

The waters of the Town of Stonington support rich shellfish populations that are an important natural resource. This resource represents a significant source of adult shellfish for recreational and commercial shellfishing, as well as providing a breeding stock for sustaining populations of oysters, scallops, and hard and soft-shell clams. The goals of the Stonington Shellfish Commission are:

- ① Improve access to recreational shellfish resources;
- ② Enhance a traditional, seafaring economic livelihood by working with commercial shellfishing interests to promote their sustainability;
- ③ Provide benefit to the Town of Stonington and its residents through access to coastal and shellfish resources;
- ④ Sustain and improve shellfish resources and the ecosystems they are a part of;
- ⑤ Enhance water quality to maximize the extent of town coastal waters open to shellfish harvesting activities.

ENFORCEMENT

State statutes and local regulations pertaining to shellfishing are enforced by a variety of state and local entities:

SHELLFISH COMMISSION WARDEN performs regular patrols by foot and by boat of all town waters and their adjacent shoreline. The duties of the warden are to ensure that all shellfish harvesting activities, whether recreational or commercial, are conducted with proper permits, that activities comply with the permit held and the areas in which those activities can be undertaken. The warden does not possess the powers of arrest. Enforcement is carried out through education and awareness building. In those instances where greater enforcement power is required, the warden requests the assistance of either the Stonington Police or CTDEP Marine Enforcement Division, as appropriate. The Shellfish Commission maintains a vessel for use in patrols and enforcement, and provides funds for that maintenance, as well as for the payment of warden duties, through fees collected in its commercial and recreational shellfishing programs.

STONINGTON POLICE DEPARTMENT conducts marine patrols in town waters. While the focus of these patrols is enforcement of boating regulations and promoting boating safety, obvious shellfishing infractions (e.g., harvesting shellfish in prohibited areas) are enforced.

DIRECTOR OF HEALTH is the signatory to the Memorandum of Understanding with the State of Connecticut Department of Agriculture, Bureau of Aquaculture, which dictates the terms and conditions under which shellfish harvest can occur in town waters. The Director of Health is responsible for oversight of the MOU as well as for abating sources of pollution identified in shoreline sanitary surveys. A sanitary survey consists of a shoreline survey to identify and assess potential pollution sources and to suggest corrective action where necessary. Sanitary surveys are required for all shellfish growing area classifications, with the exception of PROHIBITED areas.

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) conducts marine patrols throughout the coastal waters of Connecticut. While the main intent of these patrols is

enforcement of boating regulations and promoting boating safety, obvious shellfishing infractions (e.g., harvesting shellfish in prohibited areas) are enforced.

DEPARTMENT OF AGRICULTURE, BUREAU OF AQUACULTURE (DA/BA) is the statewide authority and regulatory body with jurisdiction over all commercial shellfishing activities in the state. While the Bureau of Aquaculture does not regulate recreational shellfishing activities, it is responsible for classifying the waters of the state regarding their availability and suitability for both recreational and commercial shellfish harvesting. As such, these classifications designate those waters where recreational shellfishing is an allowable activity. Shellfish harvesting is further regulated by the US Food & Drug Administration (USFDA) National Shellfish Sanitation Program (NSSP) that provides national guidance to states, such as Connecticut, which conduct sales of shellfish on an interstate basis.

FISCAL OVERVIEW

Revenue from the sale of shellfish and scallop harvesting permits has allowed the Stonington Shellfish Commission to maintain its financial self-sufficiency since its establishment. In accordance with Sec. 26-257a of the State Statutes, all funds collected as part of the shellfish management and permitting program are retained by the commission and used for the management, protection, conservation and propagation of scallops and other shellfish in Stonington waters. The commission also has a line item in the Town of Stonington budget that has traditionally requested nominal funds from the General Fund of the Town Budget. In December of each year the Commission submits a budget request.

The Shellfish Commission is a self-sustaining entity, gaining the vast majority of operating revenue from the sale of commercial and recreational shellfish permits. A small portion of the commissions' annual income is from donations and grants. The Shellfish Commission channels the revenue from shellfish permitting and harvesting activities into recreational shellfishing opportunities for the residents of, and visitors to, the Town of Stonington. In many instances the commission will collect its "fees" from commercial operators in the form of shellfish product that is then transplanted into waters open only to recreational shellfish harvesting activities.

INTERACTION WITH HARBOR MANAGEMENT COMMISSIONS

The Town of Stonington has authorized three harbor management commissions to manage harbor activities in town waters. These commissions work under guidance and approval of the Connecticut Coastal Zone Management Program, and must develop plans for each of the towns major harbor areas. The shellfish commission works with each harbor management commission to minimize conflicting use of town resources and maximize the benefits of town coastal resource use for the residents of the town of Stonington and state of Connecticut. Chief efforts in collaborating with town harbor management commissions have been:

- ① Providing information on the location and use of existing shellfish resources for inclusion in harbor management plans;
- ② Reviewing and providing comment on draft harbor management plans to minimize the potential for conflicting use with shellfish resources;

- ③ Providing harbor management commissions, as appropriate, with aquaculture proposals for review to minimize conflict with approved town harbor management plans;
- ④ Provision of an annual update on commission operations to harbor management commissions, which includes, but is not limited to, a listing of new aquaculture applications and their status (e.g., approved, rejected, pending, etc.), updated maps of aquaculture operation sites, and any other information the commission deems pertinent to share for the purposes of better integrating shellfish management and harbor management efforts.

Major threats to recreational access of shellfish resources are boats and mooring fields. Anchored, docked or moored boats are considered by the USFDA as potential sources of human sewage discharges to shellfish growing areas. As such they are a major threat to shellfishing when boat concentrations increase in harbors and coves, and waters in and around mooring fields become prohibited for shellfishing activities. One of the major challenges facing the town shellfish commission and town harbor management commissions is to ensure that shellfishing opportunities do not become further restricted by increased boating activities. Though not a guarantee that waters will be open to shellfish harvesting, the designation of No Discharge Zones—areas where it is illegal to discharge wastes from on-board toilets—is often a significant step towards opening waters to shellfish harvesting in areas of heavy boat concentrations.

STATE INVOLVEMENT

The State of Connecticut Department of Agriculture, Bureau of Aquaculture (DA/BA), is the principal state agency mandated to regulate shellfishing activities within the state. The DA/BA must adhere to rules and guidance provided by the USFDA in the NSSP. Failure to comply with the NSSP would cause the state of Connecticut to lose certification to transport shellfish across state boundaries. This would create financial hardship for the numerous commercial shellfish growers and harvesters that make up a significant economic entity in the state. To ensure compliance with NSSP guidance, DA/BA has developed a relatively detailed scheme for designating access to and use of shellfish resources within Connecticut waters. These classifications are based on the concentrations of fecal coliform bacteria in surface waters of shellfish growing and shellfish harvesting areas. DA/BA should be contacted to access an up to date description of their classification system and its applicability to Stonington waters.

For simplicity, we group the DA/BA classification scheme into four distinct categories that relate to how they can be used, or not used, for commercial and recreational shellfish harvesting. Users requiring greater detail and resolution regarding commercial categories should contact DA/BA for a complete description of the Shellfish Growing Water Classification Scheme. The four simplified categories used in this document are:

APPROVED—ALL USERS—are areas where DA/BA allows for the growing or harvesting of shellfish for direct marketing and/or consumption. This classification shows strict conformance to state and federally defined water quality standards on a continuing basis. In general, APPROVED waters are available to both commercial and recreational harvesters. An APPROVED area may be temporarily closed following extreme climatic events, such as a hurricane or rainfall of greater than 3 inches.

A strong relationship between rainfall and water quality has been established—the longer and harder the rainfall event, the worse the water quality following. As the rain falls upon the landscape it runs off in a down slope direction. As the water flows across the landscape it picks up a variety of pollutants, such as oil, gas, pesticides, herbicides and other inorganic compounds; fertilizers, human and domestic animal waste products and other organic products. These pollutants enter coastal waters and cause degraded water quality conditions, at least until the rains recede and tidal ebb and flood, winds and currents disperses the pollutants.

Of particular concern are the organic pollutants of human origin, particularly sewage. As sewage wastes enter the water, sewage associated bacteria also enter the water. As polluted runoff enters coastal waters during a long or hard rain, bacterial concentrations in receiving waters increase, often to the point of making shellfish unsafe for human consumption. Furthermore, heavy rains also cause problems with the functioning of municipal sewage treatment facilities. Due to an aging and deteriorating sewer collection infrastructure, many collector pipes have cracks that are readily infiltrated with rainwater which, when arriving at treatment facilities, overwhelms the facilities' treatment capacity resulting in the discharge of partially treated sewage effluent. For these reasons shellfish beds, particularly those managed as **CONDITIONALLY APPROVED**, are often closed to harvest following significant rainfall events.

CONDITIONALLY APPROVED—RECREATIONAL USERS—are those areas that meet **APPROVED** criteria for a predictable period. A **CONDITIONALLY APPROVED** area is closed to shellfishing when it does not meet **APPROVED** criteria, such as after a rainfall event of a given magnitude. In general terms, **CONDITIONALLY APPROVED** areas in Stonington have good shore-based public access and the commission tends to reserve these areas for use by recreational harvesters. An agreement (MOU) between DA/BA and the town Department of Health defines the criteria by which **CONDITIONALLY APPROVED** areas are opened and closed to shellfishing.

Water quality is the major determinant of where shellfish harvesting is allowed, and not allowed, particularly with regard to recreational shellfishing. DA/BA and the Town of Stonington have an agreement, updated and agreed upon annually, that defines the classification of shellfish growing waters in Stonington. As water quality conditions change over time, DA/BA changes its Shellfish Growing Water designation accordingly, which is then reflected as either the closing of previously open shellfishing areas or the opening of previously closed areas. The most common trend, unfortunately, is that as growth and development continue water quality conditions deteriorate and more grounds become either closed to recreational shellfishing or remain open on a restricted or "conditional" basis. Maintenance of high quality coastal waters is therefore of paramount importance in maintaining access to shellfish, particularly for recreational users. The Shellfish Commission however, has little if any direct control over the activities and decisions that have the greatest impacts on water quality—growth and development and their resulting changes in sewage discharges, storm water runoff and secondary growth impacts. The commission has, and will continue, to collaborate with and educate other boards and commissions so that the impacts of the cumulative decisions made within the town have the least possible negative impacts on shellfish resources and their uses, and where possible, will enhance access to and usability of shellfish resources.

VARIOUS RELAY/DEPURATION DESIGNATIONS—COMMERCIAL USERS—are those areas that, according to DA/BA criteria, only allow harvesting of shellfish for relay

and/or depuration prior to their consumption. Relay and/or depuration of shellfish may only be conducted by commercially licensed entities, and these areas are therefore closed to recreational harvest at all times. Persons interested in the details of these designations should contact DA/BA or the commission for a current map for Stonington.

PROHIBITED—NO USERS—are those areas where the harvesting of shellfish for any purpose, by all users, and at all times, except specific aquaculture operations licensed by DA/BA, are prohibited. This classification may result from the presence of conditions that could pose a persistent health hazard, such as a sewage treatment facility effluent outfall.

Shellfish Resources

Shellfish resources in Stonington waters have historically been rich, and provided an essential source of food to Native American tribes and to early settlers of the region. As growth, development and subsequent alterations in marine habitat and water quality have occurred, shifts in shellfish distribution, abundance and availability has also occurred. Oysters, once quite prolific in their distribution, have become limited in their overall extent in town waters. Hard clams, often called quahogs, continue to be the most predominant shellfish species of importance, and exist in nearly all town waters along the coast. Scallops have been and continue to be a very important element of the recreational shellfishing program, but due to its intermittent natural abundance cycles, interest and opportunity to harvest this shellfish species peaks and ebbs according to that cycle.

While shellfish distributions have changed over time, so has access to the resource. Coastal development has privatized much of the shoreline of Connecticut, which has severely restricted land-based access to coastal resources. Furthermore, changes in water quality, mainly due to contamination with bacteria and viruses considered to be threats to public health as a result of the consumption of raw shellfish products, many areas have become prohibited to the harvest of shellfish.

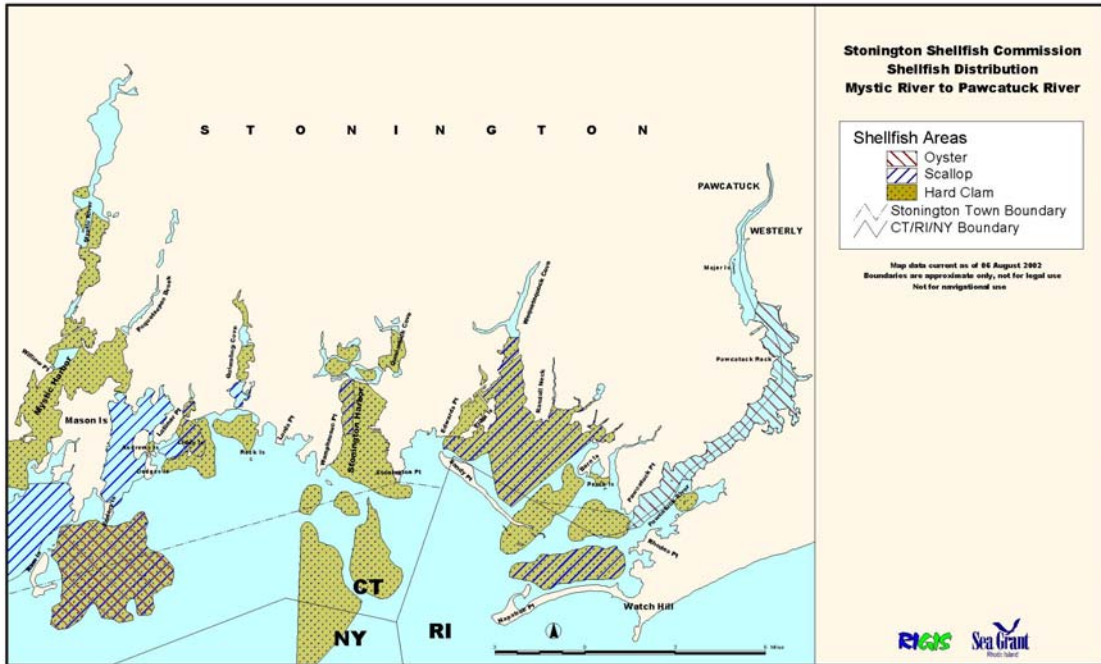
Eelgrass is an important element of the many bays and coves that make up the coastal ecosystem of Long Island Sound. Eelgrass provides important nursery habitat to finfish and shellfish, and particularly to the bay scallop that use eelgrass fronds as an attachment site to get off the bottom and away from predators during juvenile growth. Eelgrass is also important as a food source for a variety of species of waterfowl that nest in the region or migrate up the Atlantic flyway. Eelgrass also assists in removing nutrients, thereby reducing the probability of “nuisance algal blooms” in coastal waters.

Unfortunately, eelgrass has largely disappeared from areas where it once was plentiful. Little Narragansett Bay is a good example—local mariners used to literally curse the preponderance of eelgrass that would foul their propellers, and even as late as the mid-1990s Little Narragansett Bay was cited as containing some of the most lush beds of eelgrass in the Long Island Sound ecosystem. Today, eelgrass is all but absent from the bay. The causes are not well understood, but coastal development and increased nutrient additions to coastal waters, eelgrass blight and blooms of nuisance algae have no doubt all played a role in the loss of eelgrass.

The commission recognizes eelgrass as a critical component of coastal ecosystems, and as such, considers the presence of eelgrass in its decision-making processes regarding shellfish harvesting operations in Stonington waters. The commission will typically restrict or deny shellfish harvesting operations that infringe upon eelgrass beds. Furthermore, the commission actively takes part in the restoration of eelgrass populations through transplant activities, often in partnership with state, educational and private entities.

The following provides a summary of shellfish resources in Stonington waters and their availability for recreational and commercial harvest. Town waters are summarized for three broad regions that roughly correspond to the jurisdictions of each of the three town harbor

management commissions so that this information may more easily be accessed and applied for managing the shared coastal resources of Stonington.



Distribution of shellfish in Stonington waters.

Pawcatuck River

Resource Status

The Pawcatuck River supports relatively extensive shellfish populations. The upper river contains excellent oyster habitat, some of the best in Stonington waters. Oyster abundance is sporadic however, and may be tied to river flow and estuarine salinity at critical points in the oyster life cycle, such as during spawning and spat settlement. The river also contains extensive populations of hard clams, particularly in southern areas near the river mouth. Blue mussels, bay scallops, and soft-shelled clams are also found in the river, though to a lesser degree than the more abundant and widespread hard clams and oysters.

Management Status

Water quality in the Pawcatuck River at present does not allow for the taking of shellfish for direct human consumption and is therefore closed to recreational shellfishing. These waters remain closed due in large degree to the presence of two sewage treatment facilities (Westerly and Pawcatuck) in the upper reaches of the estuary.

MOUTH OF THE PAWCATUCK RIVER TO STANTON WEIR POINT is available to commercial harvesters only for depuration prior to consumption.

STANTON WEIR POINT TO HEAD OF TIDE (STILLMANVILLE BRIDGE) is classified PROHIBITED. No shellfish may be taken from this area except by aquaculture operations expressly licensed by DA/BA.

Commercial Activities

The river/estuarine ecosystem provides good conditions for the culture of oysters and hard clams, though shellfish must be relayed to state certified waters for depuration prior to harvest for market. Readers are instructed to visit the commission's web site for up-to-date information on location, extent and operations of commercial shellfish aquaculture operations in the Pawcatuck River area.

[http://www.stoningtonshellfishcommission.org/shellwebsite/stonington_shellfish_commission.htm]

Stonington Harbor & Little Narragansett Bay

Resource Status

Stonington Harbor supports a rich and extensive population of hard clams, but only limited populations of bay scallops, soft clams and blue mussels. The hard clams are widely and thickly distributed throughout the harbor. The scallops are thinly scattered in the eelgrass beds on the west side of the harbor. Although this is a small population that is rarely important for recreational harvesting, it is important as a breeding stock, in part because of the protection afforded by the healthy eelgrass bed.

Little Narragansett Bay also contains a rich and extensive population of hard clams, and in some years an extensive bay scallop population. There are lesser populations of soft-shelled clams, oysters and blue mussels. Hard clams are widely and thickly distributed. Scallops are usually limited to the area near Barn Island in the eastern part of the bay.

Management Status

Currently water quality in Stonington Harbor and Little Narragansett Bay does not allow for the harvesting of shellfish for direct human consumption and is therefore closed to recreational shellfishing.

STONINGTON HARBOR anchorage area, which encompasses most of the harbor, is open to commercial shellfish operations during a designated seasonal period for depuration. During the boating season this area is closed to all shellfishing activity. That area of Stonington Harbor located within a 1000-foot radius of the effluent outfall from the Stonington Borough Wastewater Pollution Control Facility is classified as PROHIBITED.

THE REMAINDER OF STONINGTON HARBOR, the entrance to Little Narragansett Bay and the bay itself are open to commercial shellfish operations that harvest shellfish for transfer to APPROVED areas for natural biological purification.

Commercial Activities

Stonington Harbor presents limited aquaculture opportunities due to its busy, congested nature, and because of the presence of a sewage treatment discharge. Readers are instructed to visit the commission's web site for up-to-date information on location, extent and operations of commercial shellfish aquaculture operations in the Stonington Harbor area.

[http://www.stoningtonshellfishcommission.org/shellwebsite/stonington_shellfish_commission.htm]

Mystic River

Resource Status

Nearly the entire Mystic River region is excellent habitat for shellfish. In particular, Mystic Harbor, and the waters all along Masons Island are exceptionally productive. Shellfish include hard clams, soft shell clams, bay scallops, oysters, blue mussels, razor clams, conch and whelk.

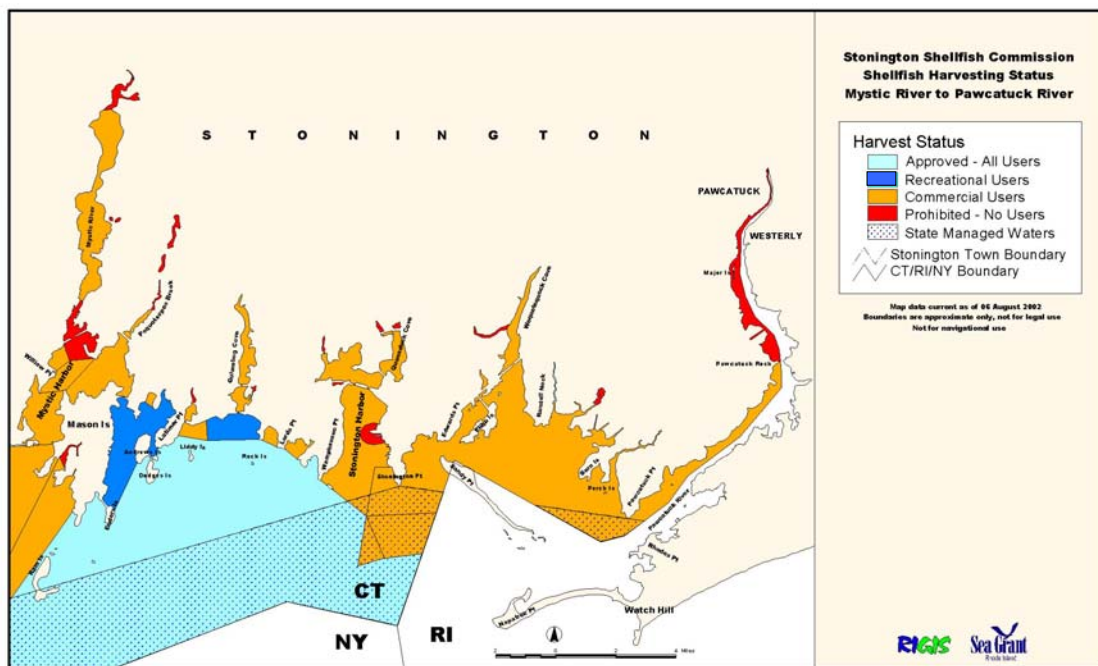
Management Status

THE UPPER MYSTIC RIVER and its mid sections are open to commercial shellfish harvesting operation. A PROHIBITED area is in the immediate vicinity of the Mystic Sewage Treatment Facility effluent outfall. Lower sections of the river are open to commercial shellfishing operations. There are some APPROVED areas in the outer harbor.

Commercial Activities

The Mystic River area provides significant opportunities for aquaculture ventures. Readers are instructed to visit the commission's web site for up-to-date information on location, extent and operations of commercial shellfish aquaculture operations in the Mystic River area.

[http://www.stoningtonshellfishcommission.org/shellwebsite/stonington_shellfish_commission.htm]



Summary shellfish harvesting status for Stonington waters. Categories are clumped for display purposes. See DA/BA for details.

The shellfish commission has developed a three-tiered approach to managing shellfisheries in town waters. A first tier pertains to the recreational shellfishery that is conducted for personal consumption of shellfish and is accessible to and by the public at large. The general public must obtain a recreational harvesting permit issued by the commission or its agent. A second tier is that conducted by commercial entities that engage in commercial shellfish harvest for wholesale or retail sales. These entities are licensed by appropriate state and federal agencies to conduct commercial activities, and are permitted by the shellfish commission to extract wild clams from town waters. The third tier pertains to the culturing (growing) of shellfish for commercial harvest and sale. In this instance, on top of holding appropriate federal, state and town permits and licenses, the commission and commercial grower devise and enter into a collaborative, shellfish management agreement.

RECREATIONAL HARVESTING

The majority of activities conducted under the commission's recreational shellfisheries program involve users, typically the general public, engaged in collecting small quantities of shellfish for personal use. There is nothing to preclude however, an appropriately licensed commercial entity from harvesting shellfish with a recreational permit, provided that all daily, seasonal and other town recreational harvesting regulations are followed and that all appropriate state and/or federal permits and licenses are obtained.

The recreational shellfishery is the most important aspect of the commission's overall program as it is through the recreational pursuit of shellfish that residents of the town of Stonington can most benefit from the efforts of the shellfish commission. The commission, as an element of its work with commercial harvesters and growers, often takes its "payment" in the form of shellfish that are then seeded into popular recreational shellfishing sites that are easily accessible on foot and by those of any age or ability. In these, and other ways, shellfish resources are managed in a fashion such that commercial efforts undertaken in town waters benefit residents, users and the resource itself.

Recreational Clam and Oyster Harvest

While oysters are relatively scarce in Stonington waters, hard clams, often called quahogs, are quite abundant and are readily sought after for making chowders or to be consumed raw "on the half-shell." Due to the high probability of clams and oysters being consumed in an uncooked state, there is considered to be a high risk to human health. If clams harvested from contaminated waters, particularly those contaminated with human sewage, are consumed in an uncooked state there is a risk of becoming ill, sometimes severely so. Because of this risk the recreational harvest of clams and oysters is strictly regulated according to water quality conditions.

RECREATIONAL HARVESTING PERMITS are required of all persons 12 years of age and older, and are available at modest fees at a number of vendor sites located throughout the town. There is a lesser fee charged to residents of the town of Stonington, though permit fees

are structured to promote use and enjoyment of the resource by all interested persons. Recreational permits are issued free to senior citizens 65 years of age or older. Permits must be physically present while engaged in the act of harvesting and/or transporting shellfish.

COPIES OF REGULATIONS pertinent to town waters, and maps identifying areas where waters are open to recreational harvest of clams and oysters can be found at vendor sites throughout town and at the commission web site:

[http://www.stoningtonshellfishcommission.org/shellwebsite/stonington_shellfish_commission.htm]

THE SHELLFISH WARDEN, a member of the shellfish commission, a Stonington marine patrol officer or state conservation officer may, and has all right, to request any recreational shellfish harvester to show their permit and to check harvested shellfish to ensure conformance to size and quantity limitations. Infractions will be noted, and arrests may be made and fines levied as appropriate.

AREAS LABELED APPROVED on shellfish maps obtained from vendors are open to shellfishing at all times. There may be extreme conditions or circumstances however, such as extraordinarily heavy rainfall or a hurricane, or major release of untreated sewage that force the closure of all areas, even those marked APPROVED on shellfish maps. It is the responsibility of the recreational harvester to check the status of town waters prior to harvesting shellfish. The commission maintains a "hot line" which contains up-to-date status information (Open/Closed) for shellfish harvest in town waters: 860-599-7575.

Management of CONDITIONALLY APPROVED Shellfishing Areas

CONDITIONALLY APPROVED shellfishing areas are designated Area A, Area B and Outer Quiambog Cove. The MOU between DA/BA and the Town of Stonington dictates the terms and conditions of recreational harvesting in these areas, and they require frequent water quality sampling and periodic shoreline surveys to document that water quality stays within appropriate guidelines. Any decline in the water quality may result in the closure of these recreational shellfish grounds.

AREA A is open on a year-round basis, and closes for a minimum of 7 days after a 1" rainfall. Following any major failure of the Mystic Sewage Treatment Facility, Area A closes and water quality must meet bacterial standards for APPROVED shellfish growing waters before the area may be reopened again to recreational shellfishing.

AREA B is open on a seasonal basis, being closed for the boating season (May 1 through October 31) due to the presence of moored and/or anchored boats between Masons Island and Andrews Island. (Area B contains a special anchorage area noted on NOAA chart 134214). During the season when it is open, Area B closes for a minimum of 7 days after a 1" rainfall. Following any major failure of the Mystic Sewage Treatment Facility, Area B closes and water quality must meet bacterial standards for APPROVED shellfish growing waters before the area may be reopened again to recreational shellfishing.

OUTER QUIAMBOG COVE is open on a year-round basis, and closes for a minimum of 7 days after a 1" rainfall. Maps showing these areas can be found at the commission's web site:

[http://www.stoningtonshellfishcommission.org/shellwebsite/stonington_shellfish_commission.htm]

Harvesting status information (Open/Closed) can be determined by calling the commission's "hot line" at: 860-599-7575.

NEW RECREATIONAL SHELLFISH HARVESTING AREAS are opened by the commission through ongoing collaborative efforts with the Town Sanitarian and DA/BA to improve water quality. As water quality improvements are verified through water quality sampling programs, new opportunities for recreational shellfishing are created.

Recreational Scallop Harvest

Unlike the harvest of other shellfish, which is often restricted due to water quality not meeting specific criteria for the safe consumption of raw shellfish, scallops may be harvested from all waters¹. Risk to human health from bacterial contamination is considered minimal since only the adductor muscle of the scallop is generally consumed, and most often in a fully cooked fashion. A further difference in the regulation of scallop harvest is that scallops can only be taken during a given period of time, generally mid-fall through the 31st of March of the following calendar year. The reasoning behind this "scalloping season" is that most mature, 2-year old adults have spawned and will not live through another winter to spawn in the spring, and therefore they may as well be harvested for human consumption.

RECREATIONAL SCALLOPING PERMITS are required of all persons 12 years of age and older, and are available at modest fees at a number of vendor sites located throughout the town. Recreational permits may be purchased in two forms: seasonal or daily permit. There is a lesser fee charged to residents of the town of Stonington, though permit fees are structured to promote use and enjoyment of the resource by all interested persons. Recreational permits are issued free to senior citizens 65 years of age or older. Permits must be physically present while a person is engaged in the act of harvesting and/or transporting shellfish.

COPIES OF REGULATIONS pertinent to town waters, and maps identifying areas where waters are open to recreational harvest of scallops can be found at vendor sites throughout town and at the commission web site:

[http://www.stoningtonshellfishcommission.org/shellwebsite/stonington_shellfish_commission.htm]

THE SHELLFISH WARDEN, a member of the shellfish commission, a Stonington marine patrol officer or state conservation officer may, and has all right, to request any recreational shellfish harvester to show their permit and to check harvested shellfish to ensure conformance to size and quantity limitations. Infractions will be noted, and arrests may be made and fines levied as appropriate.

¹ There are several areas closed to recreational harvest of scallops. These areas are under lease by commercial harvesters from the State of Connecticut, and are marked on town maps that accompany town regulations.

COMMERCIAL HARVESTING

The shellfish commission permits commercial harvesting of wild shellfish from town waters. Commercial harvesters, unlike recreational harvesters, must undergo special licensing and permitting at the state level in order to harvest and sell their shellfish product either wholesale or retail. Licensing and permitting is conducted in a vigorous manner to ensure the product can be consumed raw without posing significant threat to human health from contamination. Commercial harvesters must also obtain a town permit from the commission to harvest in Stonington waters. The town permit may contain restrictions and stipulations not required at state or federal levels, such as restricting harvest activities between certain hours or on certain days, and/or limiting the area within which shellfish can be harvested.

At present, commercial shellfish harvesting activities in town waters are relatively minor in extent, mainly due to the small area available in which they can conduct the harvest of wild shellfish. In general terms, the shellfish commission does not allow commercial activities to occur in areas that sustain regular recreational use. The commission may however, on occasion, allow commercial harvesting in little used recreational areas provided there is significant transfer of shellfish into popular recreational shellfishing areas.

The commercial shellfishery—the harvest of wild shellfish—is an important facet of the commission's recreational program. Due to increasing privatization of the coast resulting in reduced public access, and therefore increasing pressure on easily accessible shellfish beds open to recreational harvest, clam abundance often becomes the limiting factor to recreational success. In an effort to compensate for these demands on our coastal resources, commercial harvesters most often make "payments" to the town, at the request of the commission, in the form of shellfish that are then seeded into popular recreational shellfishing sites. Recreational shellfish harvesters gain direct benefit from this in that they get access to a continuing supply of high quality shellfish.

Commercial shellfish harvesters are also partners in shellfish and natural resource improvement and restoration efforts. When the coastal waters are not "worked" by commercial or recreational harvesters for long periods of time, they often become silted over or compacted, losing value as a site for the settlement and growth of shellfish. Commercial operators "groom" the bottom during harvesting activities, increasing the potential for future wild shellfish growth. Furthermore, commercial operators assist the commission in their efforts to restore wild populations of eelgrass, scallops and oysters to Stonington waters.

COMMERCIAL HARVESTERS MUST APPLY to the commission for a permit to harvest shellfish on town owned bottom by filing an application. The application is reviewed at a commission meeting, at which point it may be rejected or accepted. Most often commercial applications have several limitations and stipulations attached to them.

COMMERCIAL HARVESTING IS NOT ALLOWED, in general, in popular or heavily used recreational areas, nor is it generally allowed in eelgrass beds. Some submerged bottom areas may not be available for commercial harvest with a permit issued by the commission as they may be in use for other purposes. The "Shellfish Grounds Map" kept in Town Hall, or

posted on the commission's web site, should be referenced to determine where commercial harvest of wild shellfish is not allowed.

[http://www.stoningtonshellfishcommission.org/shellwebsite/stonington_shellfish_commission.htm]

COMMERCIAL OPERATORS ARE RESPONSIBLE for any and all other licenses they must have, as defined by state and/or federal regulations. Holding a Town of Stonington shellfish harvesting commercial permit does not override or preclude the need for other state or federal licenses or permits, or vice versa.

COMMERCIAL VESSELS WORKING IN STONINGTON WATERS may be boarded upon the request of any member of the shellfish commission, the shellfish warden, a Stonington marine patrol officer or a CTDEP conservation officer to have permit validation checked as well as to determine that the shellfish being harvested fall within any stipulations and/or limitations of any and all permits issued by all permitting agencies. Commercial vessels must have onboard all required permits while operating under their town permit in town waters.

AQUACULTURE

The Stonington Shellfish Commission recognizes that opportunity for the harvest of natural populations of shellfish on a commercial basis is limited in town waters. Furthermore, the commission recognizes that aquaculture operations, particularly so-called “cottage industries,” diversify the economy of the town and maintain a significant traditional use of coastal resources. As such, the commission has developed a process, in accordance with Sec. 26-240, that will allow for the growth of aquaculture ventures in town waters. Any licensed shellfish/aquaculture business may apply to conduct aquaculture operations in Stonington waters. The process engages the commission and commercial grower as partners in managing the use of submerged lands and the waters over it in a way that benefits the town and allows for economically viable aquaculture to occur.

Global human population is growing rapidly and is projected to continue to do so through at least the first half of this century. All indicators are showing that agriculture has nearly reached its capacity and will not be able to provide enough protein to feed the growing global population. From this understanding is arising a growing interest in what is being labeled the “Blue Revolution”—the growth of aquaculture in coastal waters to fill the gap in global food production.

The commission believes that while aquaculture in Stonington waters can contribute only a small part of the solution to this global problem, it can assist the town in several ways, as well as provide a viable, sustainable local food resource. Aquaculture operations have a vested interest in maintaining very high water quality, and as such are conscientious stewards of the coastal environment. They also tend to be highly supportive of coastal enhancement, restoration and protection programs, often providing services, facilities, time and even money to programs and projects that help sustain functional coastal ecosystems. Aquaculture is fast becoming a major partner in habitat and species restoration programs by providing a portion of their “crop” for restoration efforts.

Aquaculture also provides economic diversity, job opportunities, and a tradition of “working the sea” that is part of the culture and history of Stonington. Furthermore, aquaculture may be able to act as a local training ground for students embarking upon professional careers in what may be the next global effort to feed a hungry and growing world population.

Who Can Apply

Any legally incorporated and licensed shellfish/aquaculture business may apply to conduct aquaculture operations in Stonington waters.

Application Process

Interested parties obtain an application form from the commission, and once completed, submit all requested materials for review. The following provides details on the information needs of the commission from an applicant. A “Guidance” document is provided to applicants to assist them in the development of applications that the commission will find complete, and with sufficient detail to warrant further review and discussion. The Guidance Document, as well application forms, etc., can be accessed via the Commission’s web site:

[http://www.stoningtonshellfishcommission.org/shellwebsite/stonington_shellfish_commission.htm]

THE EXTENT OF AREA applied for is not to exceed 20 acres.

THE EXTENT OF TIME applied for is not to exceed 10 years.

ACCEPTANCE OF AN APPLICATION does not signify approval of the proposed work.

APPLICATIONS ARE DATED and given a unique ID number upon receipt and are considered by the commission in the order received.

SPECIFIC INFORMATION REQUESTED OF THE APPLICANT WILL BE:

- Latitude/Longitude (or GPS) coordinates, provided in tabular format, defining the area to be used for aquaculture, as well as clearly shown on the map as noted following;
- NOAA Oceanographic/Navigation chart showing the approximate location and extent of the proposed aquaculture operation;
- Description of the site, focusing on bottom condition of the area to be used, and particularly noting the existence of eelgrass and/or shellfish populations or other significant natural resources, as well as docks or other pertinent man-made structures or features;
- Description of the specific type(s) of gear to be used;
- Description of the specific methodologies & timing of growing and harvesting;
- Description of any known or anticipated conflict with other users as a result of the proposed aquaculture operation (e.g., boating fairways, lobstering grounds, recreational fishing sites, etc.);
- Species to be grown and the number expected to be growing when at full production. NON-NATIVE SPECIES are not allowed for culture in Town of Stonington waters. Any application proposing the culture of non-indigenous species of shellfish will be denied;
- Time frame of the proposed venture and if renewal would be anticipated;
- Registration ID and a photograph for all vessels to be used;
- Certificate of Availability from the Town Clerk for the proposed site;
- Signed affidavit that the applicant has read and understood the guidance provided to aquaculture applicants.

STIPULATIONS APPLICABLE TO ALL SUCCESSFUL APPLICANTS WILL BE:

- The applicant **MUST** be the designee/permitted party to all town, state and/or federal permits and licenses applicable to the aquaculture operations being proposed;
- A license agreement will be developed and entered into by the commission and the applicant as the mechanism for the Town of Stonington allowing temporary use of town owned submerged lands;
- Ownership of all submerged lands used in any and all aquaculture operations is retained by the Town of Stonington in perpetuity;
- No application will be approved for implementation until copies of all approved state and/or federal permits have been submitted to the commission;
- The applicant will maintain all required state and federal licenses and permits, and will provide updated copies to the commission as appropriate according to permit/license renewal dates;
- Applicant will hold a valid Town of Stonington commercial shellfishing license, renewable each year;

- An annual report of activities will be filed with the commission in January of each calendar year, with a summary report filed with in commission in July of each year;
- The commission, or its designated agent, has full right to enter and assess operations, conditions and activities on the aquaculture site;
- Use of the aquaculture site for activities or purposes, or by parties other than those expressly stated in the license agreement, will be grounds for termination of any and/or all agreements between the applicant and the commission;
- No activities are allowed between the hours of sunset and sunrise;
- Payment to the commission for use of town owned submerged lands will be negotiated, and payment may be in shellfish product, cash, or other form that is deemed appropriate by the commission and agreed upon by the applicant;
- The town shall not be held responsible for any obligations, financial or otherwise, accrued by the applicant as a result of the permitted aquaculture operation nor shall it be held responsible for the value of any gear, shellfish product or other items associated with the aquaculture operations;
- Aquaculture areas shall not be “sublet” to any other operator and shall not be worked by any operator other than those defined in the license agreement;
- Aquaculture areas will be rehabilitated or restored by the applicant when the agreed upon term of use is completed. This will entail, at a minimum, the removal of all aquaculture gear from the site and may include a requirement for planting an appropriate species of shellfish at an appropriate population density.

Preliminary Review

THE COMMISSION WILL REVIEW THE APPLICATION UPON RECEIPT TO DETERMINE if it meets all the criteria requested and/or specified in the guidance provided to the applicant, and determine if the proposed work conflicts with any existing aquaculture operations, or with any applications submitted to the commission that are either pending review or are in the process of review, or with any other activities conducted or supported by the commission. If conflicting uses are found, the application will be returned, with explanatory text, for amendment or withdrawal by the applicant. Unless under special circumstances, “pending” applications or applications “under review” take precedence over newly submitted applications. The review of pending or in review applications will not be influenced by new applications submitted for review.

APPLICATIONS LACKING IN COMPLETENESS, that are vague, poorly written or otherwise difficult to read, understand or interpret, or are lacking critical and/or required information requested by the commission, noted in the guidance provided applicants, or defined in this document, shall be rejected and returned to the applicant.

ONCE AN APPLICATION RECEIVES PRELIMINARY APPROVAL, and proceeds to the full review process, an application fee will be levied upon the applicant sufficient to cover all costs to the commission incurred as a result of processing the application. The fee may include, but is not limited to, costs associated with advertising a public notice, costs associated with dictation of public comment at the public hearing, if required, copy costs and/or production of maps necessary for distribution as part of the review process, and costs associated with updating the “shellfish lease” map maintained at town hall.

APPLICATIONS MAY NOT BE MODIFIED once they have received preliminary approval. Any significant, or major modification made to the application by the applicant which is not made at the specific request of the commission, shall be denied without prejudice by the

commission and returned to the applicant. No modification what so ever will be made to an application once the Public Review process is underway.

Full Review

A PUBLIC COMMENT PERIOD will be set by the commission and a public hearing will be scheduled at the convenience of the commission. Any costs associated with the public hearing process will be borne by the applicant.

THE COMMISSION WILL VOTE ON APPROVAL OR REJECTION of the application after the public comment period has been closed, and after the commission is satisfied that all its questions and/or concerns have been adequately addressed, and that it has had sufficient time to discuss and debate the application and any submitted comments.

Approval/Rejection Process

APPLICATIONS REJECTED OR DENIED by the commission are returned to the applicant and lose all standing in the application process. Applications, should they be revised and resubmitted, enter into the process of review sequentially as a newly submitted application, and as otherwise stated in the Guidance document.

ONCE AN AQUACULTURE PROPOSAL HAS COMPLETED THE REVIEW PROCESS and has been approved by the commission, a license agreement will be developed in a collaborative fashion and signed by both parties.

- The license agreement will be the mechanism conveying temporary use of Town of Stonington submerged lands;
- The license agreement will designate the rate and form of payment to the commission for use of town submerged lands;
- The license agreement will contain a description of the aquaculture area, including latitude/longitude coordinates sufficient to define the exact boundaries of the aquaculture area;
- The license agreement will designate the length of time the agreement will be in effect and binding upon both parties.

THE FEE FOR USE OF THE SUBMERGED LANDS FOR AQUACULTURE will be determined and set during negotiation and carried forth into the formal license agreement. The commission may seek remuneration for use of the aquaculture site in the form of shellfish product rather than in monetary units, or in some combination of the two. While shellfish product will most often be the preferred form of "payment," the commission may opt for payment in other manner or method that helps it achieve its desired endpoint of improved recreational shellfishing opportunities and improved coastal resource conditions and habitat restoration.

IN ACCORDANCE WITH SEC. 26-240, fees for the use of submerged lands for aquaculture shall be paid to the Shellfish Commission and shall be used by the commission in managing, enhancing and promoting shellfish resources and their associated habitats in the Town of Stonington.

THE DEVELOPMENT OF A DOCUMENTATION AND REPORTING PROCESS to be followed by the applicant and provided to the commission will be one element of the approval process. One aspect of the reporting process will be assessing the extent of eelgrass, if any,

within the aquaculture area, on an annual basis. The reporting process will assist the commission in making decisions regarding the appropriateness of the work, potential for conflict with other uses of the resource, and the desirability of allowing renewal.

UNLESS AGREED UPON BY THE APPLICANT, either as a condition in their license agreement or as negotiated during the course of renewal, other work or efforts under the authorities of the commission will not be allowed in the area designated for aquaculture by the applicant.

UPON APPROVAL AND SIGNING OF THE LICENSE AGREEMENT, the “shellfish grounds map” and associated files kept on file at Town Hall will be updated to reflect the new use of Town of Stonington submerged lands.

IN ACCORDANCE WITH SEC. 26-243, the license agreement will be recorded by the Town Clerk and the Shellfish Grounds Map will be amended to reflect the new use once the agreement is validated and fees have been collected.

A LICENSE AGREEMENT MAY BE AMENDED, by either party and through mutual agreement of both parties, to reflect changes in gear, processes and other advancements in aquaculture and shellfish rearing/harvest technologies provided the proposed amendments do not significantly alter the purpose and/or extent of the aquaculture operation and do not present conflict with neighboring uses of coastal resources.

Renewal

IN GENERAL TERMS, LICENSE AGREEMENTS ARE RENEWABLE. However, the license agreement and other details of the agreement will be reviewed and/or amended as appropriate or necessary upon request for renewal by the applicant. The holder of an aquaculture site will be given preference, assuming there is no reason not to give preference, for continuing use of the site through renewal in a manner similar to that of the original license agreement.

THE COMMISSION IS UNDER NO OBLIGATION TO RENEW A LICENSE AGREEMENT upon its expiration. Desirability of renewal will be assessed based upon performance and adherence to original license agreement specifications, details provided in the reporting and documentation process, and overall agreeability of the working relationship between parties.

RENEWALS WILL NOT BE SUBJECTED TO PUBLIC REVIEW or other approval outside that of the commission provided that significant change has not been proposed to occur in use of the site from that designated and delineated in the original license agreement, and provided there is no conflict with existing state and/or federal regulatory proceedings.

Termination

THE LICENSE AGREEMENT CAN BE TERMINATED by the commission if and when any stipulation(s) of the agreement is not carried out by the applicant as stated in the license agreement. The Town of Stonington retains the right to terminate the agreement should an urgent, critical or other need, for the overall public good of the town, state or nation, arise that would necessitate use of the area for other than aquaculture operations.

THE LICENSE AGREEMENT WILL BE TERMINATED by the commission in any and all cases where the applicant is not actively, consistently and continually working the designated

aquaculture site in a manner that would reasonably lead to the growth, harvest and profitable sale of shellfish as designated in the license agreement.

IN THE EVENT OF TERMINATION, the applicant will be given a reasonable amount of time within which to harvest, transplant and/or otherwise remove shellfish product and aquaculture gear from the site.

Liability

THE TOWN CLAIMS NO LIABILITY for any gear, shellfish product, effort or other investments made by the applicant under the terms of the license agreement. The applicant is responsible for the complete removal of all gear and equipment associated with their project upon termination or expiration of the license agreement, and will be billed for any clean up or gear removal activities that must be undertaken by the commission or its assigned agent to restore the area to pre-aquaculture conditions and/or uses.

Bibliography/References

THIS DOCUMENT, AS WELL AS OTHER USEFUL INFORMATION, REGULATIONS, APPLICATION FORMS, PENDING AQUACULTURE APPLICATIONS, ETC., CAN BE FOUND AT THE WEB SITE MAINTAINED BY THE SHELLFISH COMMISSION:

http://www.stoningtonshellfishcommission.org/shellwebsite/stonington_shellfish_commission.htm

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DYE STUDIES---MYSTIC/PAWCATUCK/STONINGTON

WEQUETEQUOCK COVE STUDY---CT SEA GRANT

ZEITLIN-HALE SUMMARY

INTERSTATE PLAN TECHNICAL DOCS---BOATING & BIOLOGY

BANISTER MACROALGAE SURVEY

MOU/SHORELINE SURVEY REPORT