

# GLOUCESTER SHELLFISH PACKET

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All shellfishing areas are subject to closures from red tide or severe weather events. It is the responsibility of all shellfish harvesters to know the status of shellfish areas before harvesting. **Call (978-281-9741 or (978) 325-5245 for updates. E-mail: [pseminara@gloucester-ma.gov](mailto:pseminara@gloucester-ma.gov)**

**Office: (978) 325-5248 Cell: (978) 949-1223**

Pursuant to Massachusetts General Law Chapter 130, Section 80, all Commercial Shellfish Harvesters must obtain a Commercial Shellfish Permit and transaction card from the Commonwealth of Massachusetts. Call (617) 626-1520 for details. Email: [marine.fish@state.ma.us](mailto:marine.fish@state.ma.us)

# Massachusetts Division of Marine Fisheries Designated Shellfish Growing Area Codes for:

## Conditionally Approved Shellfish Areas in N-9, N-7, as well as Growing Areas for Sea, Surf, Hen Clams

### N-9 – Annisquam River

**N9.12** - is primarily on the west side of the Annisquam River between the A. Piatt Andrew (Rte. 128) Bridge and the Railroad Bridge. It is open all year and is closed for 3 days after a 1" rain event. This flat is under a management plan and shellfish may only be harvested from this area on Mondays and Thursdays only. This includes areas known as:

**The Sandbar** (Mondays & Thursdays)

**Oakes Flat** (Mondays & Thursdays)

**Trunnel Cove** (Mondays & Thursdays)

**N9.10** – is **Little River south**. It meets conditionally approved water quality standards from October 15 – May 15 only. During that time frame it is closed for 5 days on a ½" rain event. This flat is under a management plan and shellfish may only be harvested from this area on Tuesdays, Fridays, and Sundays. This includes areas known as:

**Upper Little River** (10/15 – 5/15, Tuesdays, Fridays, & Sundays)

**Part of Piggery Creek (outside the buffer zone line)** (10/15 – 5/15, Tuesdays, Fridays, & Sundays)

**Most of the Presson Flat** (10/15 – 5/15, Tuesdays, Fridays, & Sundays)

N9.11 – is **Little River north**. It meets conditionally approved water quality standards from October 15 – May 15 only. During that time frame it is closed for 5 days on a 1" rain event. This flat is under a management plan and shellfish may only be harvested from this area on Tuesdays, Fridays, and Sundays. This includes areas known as:

**Nichols** (10/15 – 5/15, Tuesdays, Fridays, & Sundays)

**Red Pier Creek** (10/15 – 5/15, Tuesdays, Fridays, & Sundays)

N9.8 – is **Jones River**. It meets conditionally approved water quality standards from December 1 – April 30 only. During that time frame it is closed for 3 days after a 1" rain event. This flat is under a management plan and shellfish may only be harvested from this area on Mondays, Wednesdays, and

Saturdays – one designated tide per day. In the event of a rainfall closure, this area is open on the next available day. This includes areas known as:

**Clamshell Point (outside the buffer zone)** (12/1 – 4/30, Mondays, Wednesdays, & Saturdays – one designated tide)

**The Straits** (12/1 – 4/30, Mondays, Wednesdays, & Saturdays – one designated tide)

**Maud Gibbons** (12/1 – 4/30, Mondays, Wednesdays, & Saturdays – one designated tide)

**Upper Mutton Creek** (12/1 – 4/30, Mondays, Wednesdays, & Saturdays – one designated tide)

**N9.5** – is on the east side of the Annisquam River. It is open all year and is closed for 3 days after a 1” rain event. This includes areas known as:

**Montgomery’s & Frog Rock**

**N9.7** – is on the west side of the Annisquam River. It is open all year and is closed for 3 days after a 1” rain event. This includes areas known as (from south to north):

**Iron Bank**

**Jim Durneys**

**Front of Merchants**

**The High Flat / out front – northerly**

**The High Flat / Cove portion – southerly** is under a management plan and is open on Saturdays only

**Lower Mutton Creek**

**Cross Creek**

**Wingaersheek Beach non-commercial area** – from the #16 nun buoy by Cross Creek to the sandbar opposite the Annisquam Lighthouse

**N9.9** – is on the east side of the Annisquam River. It is open all year and is closed for 3 days after a 1” rain event. This includes areas known as:

**Plummers (Corliss Landing)**

**Wheeler Street Boatyard**

**N9.20** – is on the east side of the Annisquam River. It is open all year and is closed for 3 days after a ½” rain event from June 1 – October 31 and is closed for 3 days after a 1” rain event from November 1 – May 31. This is the area known as:

### **The end of Wheelers Point**

**N9.3** – is on the east side of the Annisquam River. It is open all year and is closed for 3 days after a ½” rain event from June 1 – October 31 and is closed for 3 days after a 1” rain event from November 1 – May 31. This is the area known as:

#### **Mill River**

**N9.19** – is on the east side of the Annisquam River. It is open all year and is closed for 3 days after a ½” rain event from June 1 – September 30 and is closed for 3 days after a 1” rain event from October 1 – May 31. This is the area known as:

#### **Goose Cove**

**N9.6** – is on the east side of the Annisquam River. It is open all year and is closed for 3 days after a 1” rain event. This includes areas known as:

#### **Lower Flat**

#### **Back Creek**

**N9.16** – is on the east side of the Annisquam River. It meets conditionally approved water quality standards all year and is closed for 3 days after a 1” rain event. This flat is under a management plan and shellfish may only be harvested from this area from October 1 through May 31. This is the area known as:

#### **Cambridge Beach**

**N9.17** – is on the east side of the Annisquam River. It meets conditionally approved water quality standards all year and is closed for 3 days after a 1” rain vent. This flat is under a management plan and shellfish may only be harvested from this area from October 1 through May 31. This is the area known as:

#### **Lighthouse Beach (Norwood Heights Beach)**

## **N-7 - Essex Bay**

**N7.6** – is **Outer Essex Bay**. It meets conditionally approved water quality standards from June 1 – December 15 and is closed for 5 days after a 6/10” rain event and meets approved (rain exempt) water quality standards from December 16 – May 31. Outer Essex Bay includes areas known as:

#### **The Spit**

#### **John’s Cove**

## **Spaulding Creek**

**N7.0** – is **Inner Essex Bay**. It meets conditionally approved water quality standards from June 1 – December 15 and is closed for 5 days after a 6/10” rain event and meets conditionally approved water quality standards from December 16 – May 31 and is closed for 5 days after a greater than 1” rain event. Within this area Farm Creek and Two Penny Loaf have designated days for shellfishing. Shellfish may only be harvested from Farm Creek and Two Penny Loaf on Mondays, Wednesdays, and Saturdays. Inner Essex Bay includes areas known as:

**Farm Creek** (Mondays, Wednesdays, & Saturdays)

**Two Penny Loaf** (Mondays, Wednesdays, & Saturdays)

**Lanes Creek**

**Walker (Joes) Creek**

## **Growing Area Codes for Sea, Surf, Hen Clams**

Non-commercial only – the catch limit is a maximum of one (1) bushel per week

**N8 Coffins Beach**

**N9.7 Wingersheek Beach**

**9N12.0 Good Harbor Beach**

All shellfishing areas are subject to closures from red tide or severe weather events. It is the responsibility of all shellfish harvesters to know the status of shellfish areas before harvesting. Call (978) 281-9741 for updates.

## Links to Shellfish Growing Areas Maps in Gloucester From the Massachusetts Division of Marine Fisheries

**N7** Essex Bay (ACEC)

<http://www.massmarinesfisheries.net/shellfish/dsga/N7.pdf>

**N8** Coffins Beach

<http://www.massmarinesfisheries.net/shellfish/dsga/N8.pdf>

**N9** Annisquam River / Gloucester Harbor

<http://www.massmarinesfisheries.net/shellfish/dsga/N9.pdf>

**N10** North Gloucester

<http://www.massmarinesfisheries.net/shellfish/dsga/N10.pdf>

**N12** Good Harbor

<http://www.massmarinesfisheries.net/shellfish/dsga/N12.pdf>

**N13** Eastern Point

<http://www.massmarinesfisheries.net/shellfish/dsga/N103pdf>

**N14** Magnolia

<http://www.massmarinesfisheries.net/shellfish/dsga/N14.pdf>



Paul J. Diodati  
Director



COMMONWEALTH OF MASSACHUSETTS

## Division of Marine Fisheries

Annisquam River Marine Fisheries Station  
30 Emerson Avenue  
Gloucester MA 01930  
(978)282-0308  
**(617)727-3337**

September 14, 2004

The Honorable Mayor John Bell  
9 Dale Avenue  
City Hall  
Gloucester MA 01930

Robert Knowles  
Gloucester Shellfish Constable  
9 Dale Avenue  
Gloucester MA 01930

Michael McLeod  
Gloucester Chief of Police  
197 Main Street  
Gloucester MA 01930

Christine Millhouse, Environmental Engineer  
Gloucester Water Pollution Control Facility  
50 Essex Avenue  
Gloucester MA 01930

Ladies and Gentlemen:

Pursuant to the MEMORANDUM OF UNDERSTANDING (MOU) that the Massachusetts Division of Marine Fisheries (MDMF) and the city of Gloucester signed on September 1, 1999 and revised July 14, 2003, MDMF has determined that additional revisions need to be made to the "Conditional Area Management Plan, Annisquam River – Gloucester Harbor" (Management Plan). These changes are necessary for MDMF and Gloucester to continue to meet the National Shellfish Sanitation Program's (NSSP) criteria.

Since the last revision to the Management Plan (July 2003), MDMF has completed a Sanitary Survey of N9.17, Norwood Heights/Lighthouse Beach, classifying that area as conditionally approved. Additionally, MDMF has modified the rainfall action levels triggering closures at N9.6, Back Creek and Lower Flat and N9.16, Cambridge Beach.

This revision to the Management Plan also changes the procedure which the Gloucester Water Pollution Control Facility (GWPCF) will use to report Wastewater Treatment incidences and Wastewater Collection System incidences (Management Plan – Section III, A. In the event of an incident, the operator in charge at the WPCF shall immediately notify MDMF *and* the Gloucester Shellfish Department.

As indicated in the original MOU of September 1999, the Management Plan ‘may be modified at any time by mutual consent due to changes affecting the classification of the harvest area or general operation of the MOU. Changes become effective after all parties have received modifications in writing.’ When all parties have signed the attached, amended MOU/Management Plan (dated August 2004), the changes will become effective. The most recent changes to the “Conditional Area Management Plan Annisquam River – Gloucester Harbor” are indicated in *italics*.

The Management Plan should be viewed as an “organic” document that will be revised and updated periodically as MDMF and the City of Gloucester work together to manage the shellfish flats in City of Gloucester and to stay in compliance with the NSSP.

Sincerely,

**Glenn Casey**

Glenn Casey  
MDMF Fisheries Biologist



# CONDITIONAL AREA MANAGEMENT PLAN

Annisquam River – Gloucester Harbor

AMENDED September 2004

(Amended sections are in italics.)

## I. General Description of Conditionally Managed Area

The Annisquam River/Gloucester Harbor complex, shellfish growing area N9, is a 2,425 acre river and embayment system which bisects Cape Ann. The river runs from Ipswich Bay to the north to Gloucester Harbor to the south. Gloucester Harbor is connected at its most northwesterly point to the Annisquam River by the Blynman Canal. The mouth of the harbor faces south and is framed by Mussel Point to the west and Dog Bar Breakwater to the east. The river/harbor complex is entirely in the City of Gloucester. The estuarine system associated with the river drains a watershed limited by the granite ridges which frame the river to the east and west. Therefore, there is a short distance to the growing area for storm water runoff. The harbor watershed is primarily urban with densely populated neighborhoods. The head of the harbor is ringed with fishing related industries. The river is more sparsely populated with a much lower percentage of impervious surface. Populations along the river portion of the complex increase significantly in the summer months. All conditionally approved areas in the N9 growing area are located in the Annisquam River. All shellfish growing areas in Gloucester Harbor are currently prohibited and therefore closed to shellfishing.

The Massachusetts Division of Marine Fisheries (MDMF) has determined that portions of shellfish growing area N9 in the Annisquam River and Gloucester Harbor in the City of Gloucester, Massachusetts meet the National Shellfish Sanitation Program (NSSP) criteria for a conditionally approved classification based upon established rainfall amounts.

The Division of Marine Fisheries and the City of Gloucester concur that the below defined shellfish areas N9.3, N9.5, N9.6, N9.7, N9.8, N9.9, N9.10, N9.11, N9.12, N9.16, N9.17, N9.19, and N9.20 in the City of Gloucester classified as "CONDITIONALLY APPROVED" shall be opened to shellfish harvesting and managed under the conditions stipulated herein by the governmental agencies involved.

The "CONDITIONALLY APPROVED" areas are described as follows:

### CONDITIONALLY APPROVED AREAS

N9.3 (formerly N9.5M)

Mill River

Rain action level/closure:  $\geq 0.50$ " / 3 days, 6/1 - 10/31 inclusive

Rain action level/closure:  $\geq 1.00$ " / 3 days, 11/1 – 5/31 inclusive

"The waters and flats of the Mill River in the City of Gloucester north of the Washington Street Bridge and south of a line drawn from the 1<sup>st</sup> stone and wood pier at #6 Riverside east to #50 Vine Street."

N9.5

Montgomery's

Rain action level/closure:  $\geq 1.00$ " / 3 days

"The waters and flats of the eastern shore of the Annisquam River in the City of Gloucester from the Route 128 highway bridge north to Sunset Point."

N9.6 (formerly N9.5L/N9.5B/N(.5BC)

Lower Flat/Back Creek

Rain action level/closure:  $\geq 1.00$ " / 3 days

"The waters and flats of the Gloucester shoreline known as Back Creek and Lower Flat, north of a line drawn from the house at #50 Vine Street west to the 1<sup>st</sup> stone and wood pier at #6 Riverside and south of the southernmost bridge abutment of the Washington Street Bridge at the mouth of Goose Cove.

N9.7 (formerly N9.4)

Rust Island to Farm Point

Rain action level/closure:  $\geq 1.00$ " / 3 days

"The waters and flats of the western shore of the Annisquam River in the City of Gloucester from the Route 128 highway bridge to Farm Point including those flats east of a line drawn from the marked boulder on Point Field south to the house on Ram Island, and then to the pier on Ram Island south to the westernmost point on Pearce Island, and east of the flagged markers in the strait north of Rust Island."

N9.9 (formerly N9.5P/N9.5W/N9.5WC)

Plummer's Cove/Wheeler's Cove

Rain action level/closure:  $\geq 1.00$ " / 3 days

"The waters and flats of the eastern shore of the Annisquam River from the northern point of Sunset Hill northerly to the southern lot line at #150 Wheeler Street."

N9.8 (formerly N9.4JR)

Jones River

Season open: 12/1 – 4/30 inclusive

Rain action level/closure:  $\geq 1.00$ " / 3 days

"The waters and flats of the Jones River in the City of Gloucester, west of a line drawn from the marked boulder on Point Field south to the house on Ram Island, and then from the pier on Ram Island south to the western most point of Pearce Island, and west of the flagged markers in the strait north of Rust Island, excluding the waters and flats of shellfish area N9.21."

N9.10 (formerly N9.3S)

Little River South

Season open: 10/15 – 5/15 inclusive  
Rain action level/closure:  $\geq 0.50$ " / 5 days

"The waters and flats of the Little River, south of a line drawn from the stone pier at Little River Landing to the split rock at Susan Point and east of a line drawn due south across the mouth of Thurston Creek from the granite pier on Presson Point."

N9.11 (formerly N9.3N')  
Little River North  
Season open: 10/15 - 5/15 inclusive  
Rain action level/closure:  $\geq 1.00$ " / 5 days

"The waters and flats of the Little River, north of a line drawn from the stone pier at Little River Landing to the split rock at Susan Point, west of a line drawn from #5 King Phillip Road north to Biskie Head on Rust Island, and southeast of a line drawn from Susan Point to the most northwesterly point of upland on the Nichol Candy property in the City of Gloucester."

N9.12 (formerly N9.5)  
The Sandbar  
Rain action level/closure:  $\geq 1.00$ " / 3 days

"The waters, flats and tributaries of the Gloucester shoreline in the Annisquam River from the Boston & Maine Railroad Bridge north to the Route 128 highway bridge and east of an imaginary line drawn from #5 King Phillip Road north to Biskie Head on Rust Island, excluding the area known as Huck's Cove."

N9.16  
Cambridge Beach  
Rain action level/closure:  $\geq 1.00$ " / 3 days

"The waters and flats of Cambridge Beach on the eastern shore of the Annisquam River in the City of Gloucester from Babson Point north to the spindle."

N9.17  
Norwood Heights Beach  
Rain action level/closure:  $\geq 1.00$ " 3 days

"The waters and flats of Norwood Heights Beach in the Annisquam section of the City of Gloucester from the spindle north to Wigwam Point."

N9.19  
Goose Cove  
Rain action level/closure:  $\geq 0.50$ " / 3 days, 6/1 - 9/30 inclusive  
Rain action level/closure:  $\geq 1.00$ " / 3 days, 10/1 – 5/31 inclusive

“The waters and flats of Goose Cove in the City of Gloucester.”

N9.20

Wheeler’s Point

Rain action level/closure:  $\geq 0.50$ ”/3 days, 6/1 – 10/31 inclusive

Rain action level/closure:  $\geq 1.00$ ”/3 days, 11/1 – 5/31 inclusive

“The waters and flats of the eastern shore of the Annisquam River from the southern lot line at #150 Wheeler Street northerly to the 1<sup>st</sup> stone & wood pier at #6 Riverside in the City of Gloucester.”

## II. Factors Determining “Conditional” Classification

Analysis of all of the classification stations as it pertains to the relationship of rainfall amounts to fecal coliform levels indicates that rainfall does play a role in coliform loading. This role is immediate and of a short duration. Water quality, and therefore rainfall effects, in the river also vary on a seasonal basis in some areas. Cape Ann is a popular summer vacation destination in New England. Gloucester’s year-round population of 28,000 people increases to approximately 43,000 in the summer months. Many areas along the river still have seasonal cottages only in use during these summer months.

The Gloucester Waste Water Treatment Facility is located at the southern end of the Annisquam River adjacent to the Blynman Canal. The collection system and associated pump stations do not have any discharge points into the river or its tributaries. The facility itself also does not have a discharge point other than the main outfall located in 90’ of water outside of the mouth of Gloucester Harbor. However, in the past under emergency conditions, effluent has been diverted to a storm drain located in the parking lot of the facility. This storm drain flows into the Annisquam River on the opposite shore from the High School Boat Ramp. Water quality testing done following discharge into this storm drain indicates that negative impacts from the effluent rarely extend up into the river beyond the B&M Railroad Bridge. The furthest north into the river that effluent has ever been detected is in the Little River. No impacts have ever been detected north of the Route 128 bridge. Conditionally Approved shellfish areas which could potentially be impacted are N9.12, N9.10, and N9.11. The last time discharges were made by the plant into this storm drain was in 1991 under extreme weather conditions. Several improvements have been made to the treatment plant since 1991 making the potential for the use of this storm drain to be quite rare. Because the possibility exists for the storm drain’s use, notifications procedures are outlined in the following pages.

Shellfish areas N9.3, the Mill River, and N9.20, Wheeler’s Point, close for 3 days after rainfall amounts greater than or equal to 0.50” in a twenty-four hour period for the months of June through October. During the months of November through May, the area closes for 3 days after greater than or equal to 1.00” of rain in a 24 hour period. The watershed for these shellfish areas is limited to the upland on either shore making rainfall impacts of a short duration. However, these areas are not as well flushed as the main stem of the Annisquam River and a seasonally-lower rainfall action was needed to manage

these areas. The homes which border this area have all been tied into the city sewer line. N9.20 has been used as a soft shell clam relay area.

Shellfish area N9.19, Goose Cove, closes for 3 days after rainfall amounts greater than or equal to 0.50" in a 24 hour period for the months of June through September. During the months of October through May, the area closes for 3 days after greater than or equal to 1.00" of rain in a 24 hour period. This area is not as well flushed as the main stem of the Annisquam River and a seasonally-lower rainfall action level was needed to manage this area. Most of the homes which border this area have been tied into the city sewer line.

Shellfish area N9.5, Montgomery's, closes on rainfall amounts greater than or equal to 1.00" in a twenty-four hour period. The watershed for this area is limited by the granite ridges which frame the area making rainfall effects of a short duration. The area closes for 3 days after the 1.00" action level is reached. This area was only open seasonally when it first opened in 1997. Water quality has improved in this area as the City's Phase II Water Pollution Abatement Program has been implemented. Eight homes had existing systems in compliance with Title V. There are 114 sewered lots and 44 lots with on-site systems.

Shellfish area N9.6, which includes Lower Flat and Back Creek, closes for 3 days after rainfall greater than or equal to 1.00" in a 24 hour period. The effects of rainfall  $\geq 1.00$ " in a 24 hour period are of a short duration.

Shellfish area N9.7 encompasses the western shore of the Annisquam River. This area is very well flushed and is the least populated of the Annisquam River shellfish areas. The area closes on greater than or equal to 1.00" of rain in a 24 hour period.

Shellfish area N9.8, the Jones River, is open seasonally from December 1 through April 30 and closes for 3 days after 1.00" of rain in a 24 hour period. The area has one of the larger watersheds in the Annisquam River complex. Fecal coliform loading from pollution sources in the watershed increases drastically after 1.00" of rain in the winter months. During the spring and fall, increased rainfall and an elevated water table result in the same drastic increases in fecal coliform loading. Increases in summer land use in the watershed also negatively affect water quality in the river. These increases necessitate closing the Jones River under those conditions.

Shellfish area N9.9 is comprised of both Plummer's Cove and Wheeler's Cove. The overlying waters of both these shallow coves are comprised of the main channel of the Annisquam River. Both coves are well flushed and receive little fresh water input from the upland. Rainfall effects after  $\geq 1.00$ " of rain in a 24 hour period are of a short duration. This results in a 3 day closure following the 1.00" action level.

Rainfall levels greater than or equal to .50" in a twenty four hour period cause elevated fecal coliform levels in the Little River, N9.10, at its southern extremity. The northern portion of the Little River, N9.11, is negatively impacted on rainfall amounts greater than or equal to 1.00" in a twenty four hour period. The negative impacts of these elevated fecal coliform levels are seen for a longer duration in the Little River than in other portions of the Annisquam River complex. Its watershed is more extensive than

other Annisquam River shellfish areas. Rainfall closures in the Little River extend for 5 days for both Little River north and Little River south. The Little River shellfish areas are only opened to shellfishing on a seasonal basis from October 15<sup>th</sup> through May 15<sup>th</sup>.

The Sandbar and Wolf Hill, shellfish area N9.12, close on rainfalls  $\geq 1.00$  in a 24 hour period for a duration of 3 days. The overlying water quality of this area is governed by the main channel of the Annisquam River. There is relatively little influence from fresh water sources in the immediate upland. Rainfall effects are of a short duration and the area is very well flushed with each tide.

Shellfish areas N9.16, Cambridge Beach, and N9.17, Norwood Heights, are small shellfish areas located at the mouth of the Annisquam River as it enters Ipswich Bay. Both areas close on rainfalls  $\geq 1.00$  in a 24 hour period for a duration of 3 days. Rainfall effects are of a short duration and the areas are very well flushed with each tide.

These conditions are predictable and manageable making the Annisquam River and its tributaries appropriate for Conditionally Approved classification.

### III. Description of Predictable Pollution Events

#### A. Wastewater Treatment Facility

##### Gloucester Water Pollution Control Facility (WPCF)

1. Gloucester WPCF Reporting of Wastewater Treatment Incidences: In the event of any malfunction; planned or unplanned maintenance event; or flow rates above the daily average which necessitate the use of the storm drain outlet at Essex Ave., the individual or operator in charge shall immediately notify the Massachusetts Division of Marine Fisheries Shellfish Project and the Gloucester Shellfish Department. If, due to aforementioned conditions, the water quality of the river is determined to be significantly degraded, the Division of Marine Fisheries will close the area, or a portion thereof, for a period deemed reasonable. MDMF will decide if water samples are needed to reopen the closed area.
2. Gloucester WPCF Reporting of Wastewater Collection System Incidences: In the event of any planned or unplanned maintenance; malfunction; or damage of the collection system which results in the discharge of raw or treated sewerage to a water body, the individual or operator in charge shall immediately notify the Massachusetts Division of Marine Fisheries Shellfish Project and the Gloucester Shellfish Department. If, due to aforementioned conditions, the water quality of the growing area is determined to be significantly degraded, the Division of Marine Fisheries will close the area, or a portion thereof, for a period deemed reasonable. MDMF will decide if water samples are needed to reopen the closed area.

##### Water Pollution Control Facility Notification Procedure:

- i. Gloucester Water Pollution Control Facility (WPCF) operator or individual in charge will notify the Massachusetts Division of Marine Fisheries at (978) 282-

0308 (extension #160) and the Gloucester Shellfish Department immediately at (978) 281-9471 or (978) 283-5673.

- ii. The Massachusetts Division of Marine Fisheries will make a decision regarding the growing area's status and will immediately notify the Gloucester Shellfish Department at (978)281-9741.
- iii. In the event of a closure, The Massachusetts Division of Marine Fisheries will then notify the Massachusetts Division of Environmental Law Enforcement at (617) 727-6398.

## B. Hydrographic and Meteorological Characteristics

Meteorologically, the area experiences a variety of influences with observable seasonal patterns over some flats. The annual precipitation average for the Annisquam River area was 46.01" in 1996, as compiled by the MDMF from amounts recorded at the Gloucester Water Pollution Control Facility and at the Rockport Waste Water Treatment Plant. (The total precipitation average includes melted snow.) Wind direction and velocity vary throughout the year with northwesterly winds predominating. Fall and winter winds tend to be northerly with stronger, more short-lived northwesterly and northeasterly events occasionally developing.

The amount and duration of precipitation directly affects the introduction of coliform and other substances into the area. Sampling following rainfall events indicates that they have measurable influence on the area's water quality. Storm water runoff impacts the area throughout with the Little River, Jones River, and western shore of the Annisquam contributing drainage from marshes, saltponds, and relatively sparse dwelling developments via creeks, street runoff and storm drains. The eastern shore's storm water runoff, on the other hand, is collected in a thickly developed residential environment with minimal vegetative zones via street runoff and storm drains.

## C. Seasonal Events

- a. Marinas. There are 4 marinas in the Annisquam River. Only one of these marinas is located in a conditionally approved shellfish area. Heron's Way Marina is located in the shellfish area N9.11, the Little River north. The Little River is currently closed during the months that the marina is in operation. There is an anchorage of about 10 small boats located off of Montgomery's and at the tip of Wheeler's Point, but none of the boats are live-aboards.
- b. Seasonal tourism. The local population increases dramatically during the summer months. Many of the areas along the Annisquam River still have seasonal cottages which only open in the summer months. A campground located in the Jones River watershed opens during the summer months.
- c. Waterfowl, including various gulls, ducks, and geese, frequent the area year round. Numbers range from single digits to large flocks of ducks and geese rafting in various locations. Large numbers of cormorants can be found in the river during their fall and spring migrations. Even with these numbers, coliform geometric means analysis has not indicated a condition that can be predicted, nor has it demonstrated that waterfowl are a problem.

#### IV. Implementation of Conditional Area Closure

1. A rain gauge, approved by the Massachusetts Division of Marine Fisheries, shall be installed and maintained by the City of Gloucester at the Police Station. The rain gauge must record to the 100<sup>th</sup> of an inch. In case of mechanical failure, measurements from a backup gauge can be used but must be noted in the logbook. If both gauges are unable to be read, the aforementioned conditionally approved areas in the City of Gloucester will not be allowed to open for shellfishing on that given day. Circumstances causing the incident must be noted in the logbook. The logbook will be updated by the Shellfish Department.
2. The rain gauge located at the Water Pollution Control Facility on Essex Ave. will be used as the backup rain gauge in the case of mechanical failure of the primary rain gauge.
3. If rain/snow has fallen within the previous 24 hour period, the Shellfish Department will contact the Officer on Duty at 5:00 AM EST and record in a logbook the amount of rainfall. If the reading is not taken by 5:00 AM EST, the aforementioned conditionally approved areas in the City will not be allowed to open for shellfishing on that given day, unless the backup rain gauge is used. Circumstances causing the incident must be noted in the logbook.
4. If greater than or equal to 0.50 inches of rain or greater than or equal to 1.00 inches of rain are recorded at 5:00 AM EST, the Shellfish Department will immediately contact the Division of Environmental Law Enforcement Radio Room with area closures (TEL: 1-800-632-8075). The Shellfish Department will then contact the Massachusetts Division of Marine Fisheries in Gloucester (TEL: (978)282-0308 extension #160).
5. A copy of the rainfall logbook shall be sent by the City to the Division of Marine Fisheries, Shellfish Program, in Newburyport at the end of each month.
6. The status of N9 and its subunits will be available by phone at the Shellfish Department, City Hall (TEL: 978-281-9741). No differ will leave the landing/dock before 5:15 AM EST. When rain/snow has fallen in the past 24 hours, diggers are responsible to know the status of N9



- and its subunits before leaving the landing/dock. If the City has not determined the status of N9 and its subunits by 5:15 AM EST, diggers must wait to leave the landing/dock until the Shellfish Department answering machine recording has been updated.
7. Should the backup rain gauge be used, the answering machine at the Shellfish Department, City Hall (TEL: 978-281-9741) will be updated by 5:15 AM EST with any delays. When rain/snow has fallen in the past 24 hours, diggers are responsible to know the status of N9 and its subunits, before leaving the landing/dock. When the backup rain gauge is used, diggers must wait to leave the landing/dock until the City can determine the status of N9 and its subunits and the Shellfish Department answering machine recording has been updated.
  8. Year round, if the amount of rain recorded at the aforementioned rain gauge station at 5:00 AM EST is greater than or equal to 1.00 inches, the status of N9.5, N9.6, N9.7, N9.9, N9.12, N9.16, and N9.17 shall change to closed to shellfish harvesting for three complete days. A complete day is defined as a twenty-four hour period starting at 5:00 AM EST. Shellfishing may resume on the fourth day following cessation of the rainfall event.
  9. During the period of 6/1 – 10/31, if the amount of rain recorded at the aforementioned rain gauge station at 5:00 AM EST is greater than or equal to 0.50 inches, the status of N9.3 and N9.20 shall change to closed to shellfish harvesting for three complete days. A complete day is defined as a twenty-four hour period starting at 5:00 AM EST. Shellfishing may resume on the fourth day following cessation of the rainfall event.
  10. During the period of 11/1 – 5/31, if the amount of rain recorded at the aforementioned rain gauge station at 5:00 AM EST is greater than or equal to 1.00 inches, the status of N9.3 and N9.20 shall change to closed to shellfish harvesting for three complete days. A complete day is defined as a twenty-four hour period starting at 5:00 AM EST. Shellfishing may resume on the fourth day following cessation of the rainfall event.
  11. During the period of 6/1 – 9/30, if the amount of rain recorded at the aforementioned rain gauge station at 5:00 AM EST is greater than or equal to 0.50 inches, the status of N9.19 shall change to closed to shellfish harvesting for three complete days. A complete day is defined as a twenty-four hour period starting at 5:00 AM EST. Shellfishing may resume on the fourth day following cessation of the rainfall event.
  12. During the period of 10/1 – 5/31, if the amount of rain recorded at the aforementioned rain gauge station at 5:00 AM EST is greater than or equal to 1.00 inches, the status of N9.19 shall change to closed to shellfish harvesting for three complete days. A complete day is defined as a twenty-four hour period starting at 5:00 AM EST. Shellfishing may resume on the fourth day following cessation of the rainfall event.
  13. During the period of 10/15 – 5/15, if the amount of rain recorded at the aforementioned rain gauge station at 5:00 AM EST is greater than or equal to 0.50 inches, the status of N9.10 shall change to closed to shellfish harvesting for five complete days. A complete day is defined as a twenty-four hour period starting at 5:00 AM EST. Shellfishing may resume on the sixth day following cessation of the rainfall event.
  14. During the period of 10/15 – 5/15, if the amount of rain recorded at the aforementioned rain gauge station at 5:00 AM EST is greater than or equal to 1.00 inches, the status of N9.11

- shall change to closed to shellfish harvesting for five complete days. A complete day is defined as a twenty-four hour period starting at 5:00 AM EST. Shellfishing may resume on the sixth day following cessation of the rainfall event.
15. During the period of 12/1 – 4/30, if the amount of rain recorded at the aforementioned rain gauge station at 5:00 AM EST is greater than or equal to 1.00 inches, the status of N9.8 shall change to closed to shellfish harvesting for three complete days. A complete day is defined as a twenty-four hour period starting at 5:00 AM EST. Shellfishing may resume on the fourth day following cessation of the rainfall event.
  16. Under conditions that do not exceed the established rainfall standard, precipitation or runoff amounts that may result in excessive loading of coliform bacteria, e.g. rains causing melting of significant amounts of snow or several consecutive days of rain, the MDMF may close the area to shellfishing for a period of time deemed appropriate.
  17. If, due to the discharge of raw or treated sewerage to the growing area, the water quality of the growing area is determined to be significantly degraded, the MDMF may close the area to shellfishing for a period of time deemed appropriate.
  18. At such time as the area reverts to a 'closed' status due to degraded water quality, anyone shellfishing in the conditional areas shall be required to stop harvesting shellfish, report to the appropriate shellfish officer on site, then vacate the area. No boat shall leave the area until inspected by the shellfish officer.
  19. If fecal coliform levels in water samples collected in the conditionally approved portions of the River exceed the NSSP criteria to maintain an 'open' status for the harvest of shellfish, the MDMF shall immediately notify the Gloucester Shellfish Department and close the area to shellfishing.
  20. The City of Gloucester shall produce a shellfish management plan that lists the City's rules and regulations for the harvesting of shellfish. This plan, along with a copy of the 'Conditional Area Management Plan' will be issued to each fisherman. By signing a shellfishing license, fishermen acknowledge receipt and understanding of the plans. A copy of each signed shellfishing license and/or application for the license will be maintained by the City.
  21. Shellfishing in an area which has been closed to harvesting is in violation of Massachusetts General Laws, Chapter 130, sections 74A and 75. Constables or their deputies from the City of Gloucester must provide sufficient patrols to intervene in the illegal harvest of shellfish when the Annisquam River & Gloucester Harbor, N9, are 'closed' to the harvesting of shellfish. Sufficient patrols must be present when N9 flats are 'open' to enforce provisions of local and state management plans and to intervene in the illegal harvest of shellfish from adjacent closed areas.

## V. Re-opening Criteria

### A1. Rainfall Closure

Rainfall closures are based on previous events and historic data. The MDMF has collected

samples from stations around the Annisquam River following rainfall events. The criteria for reopening areas under 'routine' events are set in the Closure Policy.

#### Emergency Closures:

If the area is closed due to an unusual storm event, a rain event in excess of 3.00 inches during a twenty-four hour period, or a discharge of raw or treated sewerage from the Gloucester WPCF or its collection system, the DMF may close the area to shellfishing for a period of time deemed appropriate. Testing is not mandatory.

#### A2, A3, A4

As scheduled in the MDMF Rainfall Policy, the Annisquam River generally flushes within one day following an inch rainfall with two days added for natural shellfish depuration. The following areas are exceptions. The Little River south flushes within three days following a half inch rainfall from October 15<sup>th</sup> through May 15<sup>th</sup> with two days added for natural shellfish depuration. The Little River north flushes within three days following an inch rainfall from October 15<sup>th</sup> through May 15<sup>th</sup> with two days added for natural depuration. Goose Cove flushes within one day following a half inch of rainfall from June 1<sup>st</sup> through September 30<sup>th</sup> with two days added for natural depuration. The Jones River flushes within one day following an inch of rainfall from December 1<sup>st</sup> through April 30<sup>th</sup> with two days added for natural depuration. The Mill River and Wheeler's Point flush within one day following a half inch rainfall from June through October. Two days are added to these areas for natural shellfish depuration.

## VI. Synopsis of Effectiveness and Cooperation

The above-mentioned descriptions and procedures should effectively manage the conditional shellfish area and ensure the public health. Water quality as it relates to rain events, seasonality and other pollution factors will be monitored on at least a monthly basis by the MDMF with appropriate adjustments in conditional elements.

Cooperation among the City departments involved and the MDMF has been outstanding. Not only has the Shellfish Department been a willing participant in the monitoring of the area, the Shellfish Department, the Board of Health, and the DPW have been extremely helpful in mitigative efforts to eliminate pollution sources.

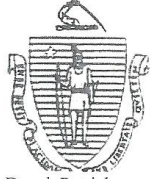
Based on the conditions described in this management plan, classification of N9 as 'Conditionally Approved' is appropriate, safe, and manageable.



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Deval Patrick  
Governor  
Ian A. Bowles  
Secretary  
Mary B. Griffin  
Commissioner

Amendments to the Essex Bay Conditional Area Management Plan

Provisions for the conditional management of Essex Bay contained herein replace and supersede certain rainfall action levels and definitions originally described in the Essex Bay Conditional Area Management ~~PI~~ referred to within the Memorandum Understanding, dated January 22, 1999.

Rainfall Action (closure) Levels:  
(New Action Levels)

Year round

3.00"

N7.0	Essex Bay Proper	- retest to open
N7.4	Middle Castle Neck River	- retest to open
N7.5	Lower Castle Neck River	- retest to open
N7.6	Outer Essex Bay	- retest to open

December 15 thru May 31

2:: 1.00"

N7.0	Essex Bay Proper	- 5 day closure
N7.4	Middle Castle Neck River	- 5 day closure
N7.5	<b>Lower</b> castle Neck-rover	- seasonally approved (rainfall exempt, so called)
N7.6	Outer Essex Bay	- seasonally approved (rainfall exempt, so called)

June 1 thru December 14

0.60"

N7.0	Essex Bay Proper	- 5 day closure
N7.4	Middle Castle Neck River	- 5 day closure
N7.5	Lower Castle Neck River	- 5 day closure
N7.6	Outer Essex Bay	- 5 day closure

Area Description  
Conditionally Approved  
(New Descriptions)

N7.0 (Inner Essex Bay)

“The waters, flats, and tributaries of Essex Bay in the City of Gloucester and the Towns of Essex and Ipswich within the following metes and bounds: West of a line drawn southeasterly from the Choate House on Hog Island to a boulder with a red/orange colored mark on the western most point of Corn Island; west of line drawn southeasterly from the relic chimney on the southeast most point of Cross Island to a red/orange colored marker near Tommy Island and the Essex/Gloucester corporate boundary; north of a line drawn from a red/orange colored marker on the property at No. 237 Concord Street to a red/orange marker on the property at No. 257 Concord Street; north of a line drawn west and north from a red/orange colored marker on the south bank of Lufkin Creek at the Essex River confluence to a red/orange colored marker on the opposite bank of the Essex River; south of line drawn due west from a red/orange marker on the western most point of Hog Island to a red/orange colored marker to the eastern bank of the ‘State Wildlife Management Area.’”

N7.6 (Outer Essex Bay)

“The waters, flats, and tributaries of Essex Bay in the City of Gloucester and the Towns of Essex and Ipswich within the following metes and bounds: East of line drawn due north from the boulder on the north side of Long Island to a red/orange marker on the Castle Neck spit; east of a line drawn southeasterly from the Choate House on Hog Island to a boulder with a red/orange colored mark on the western most point of Corn Island/ east of line drawn southeasterly from the relic chimney on the southeast most point of Cross Island to a red/orange colored marker near Tommy Island and the Essex/Gloucester corporate boundary/ north and west of line drawn northeasterly from a rock outcropping with a red/orange mark on the property at No. 175 Concord Street to the green colored No. 3 Spindle; north of a line drawn due east from the green colored No. 3 Spindle to Two Penny Loaf; and west of a line drawn southeasterly from the southernmost tip of Crane’s Beach to the northern tip of Two Penny Loaf.”





# Conditional Area Management Plan

## Essex Bay

### I. **General Description of Conditionally Managed Area**

Essex Bay, designated shellfish growing area N9, is a 2,052.21 acre tidally dominated well mixed drowned river valley estuary. Essex Bay is located immediately north of Cape Ann along the Massachusetts north coast and is divided among the corporate boundaries of the City of Gloucester and the Towns of Essex and Ipswich. The bay is fringed by 2,321 acres of salt marsh and is separated from the ocean by a sandy spit known as Castle Neck and Crane's Beach. Eight (8) tidal and drainage basic tributaries feed into the bay: Castle Neck River, Essex River, Ebben Creek, Farm Cree, Lanes Creek, Lufkin Creek, Joe's Walker Creek, and Soginese Creek.

The intertidal flats of Essex Bay contain between 500 and 850 acres of highly productive or potentially productive soft shell clam (*Mya arenaria*) habitat. Razor clams (*Ensis directus*), to a limited degree, may also inhabit soft shell clam flats. A relatively small but recreational important surf clam (*Spisula solidissima*) resource exists near the bay inlet, blue mussels (*Mytilus edulis*) are scattered around the bay perimeter, and American oysters (*Crassostrea virginica*) as well as European oysters (*Ostrea edulis*) may be found in tributaries or the bay proper, respectively.

Land use around Essex Bay is an extremely diverse mixture of rural and urban applications. Northern sections within the Towns of Essex and Ipswich are generally rural in flavor with small farms, individual houses or small clusters of homes dotting the area. Little commercial development is evident. A greater portion of the land adjacent to the northern shoreline is conservation restricted property divided in use between limited recreation and/or wildlife management. In contrast, the southern half of Essex Bay, particularly southwest sections, have experienced far greater development pressures. Here, built around the upper reaches of the Essex River, lies the Essex town center and a small commercial district. Restaurants, shoppes, marinas and filling stations characterize downtown businesses. A suburban sprawl, essentially the traditional village blended with modern suburbanization, radiates out from the town center gradually giving way to a more country-like setting and open space dispersed with individual houses. The southeast quadrant of Essex Bay is occupied by the City of Gloucester and represents one of the least developed shoreline areas within that city. Although numerous single family homes line the upper portions of Joe's Walker Creek, the extreme southeastern corner of the bay (e.g. Farm Creek) approaches the near pristine setting found within northern sectors.

Few roadways penetrate to the bay shoreline which tends to concentrate development away from the bay proper and along existing thoroughfares crisscrossing the watershed. All



sanitary waste disposal within the surrounding watershed is by means of subsurface systems. The most likely pathway and portal for bacterial contaminants to be introduced into Essex Bay is therefore through the various tributaries providing a direct conduit to the bay.

The Massachusetts Division of Marine Fisheries has determined that portions of shellfish growing area N7 in the City of Gloucester and the Towns of Essex and Ipswich, Massachusetts meet the National Shellfish Sanitation Program (NSSP) criteria for a conditionally approved classification based upon established rainfall amounts.

The Division of Marine Fisheries, the City of Gloucester, Town of Essex, and the Town of Ipswich concur that the below defined shellfish sub-areas N7.0, N7.4, N7.5, and N7.6 as located in Essex, Gloucester, and Ipswich and classified as “CONDITIONALLY APPROVED” shall be opened to shellfish harvesting and managed under the conditions stipulated herein by the governmental agencies involved.

The “CONDITIONALLY APPROVED” sub-areas are described as follows and shown on Figure 1 (area map):

## SUB-AREA DESCRIPTION CONDITIONALLY APPROVED

### N7.0 (Inner Essex Bay)

“The waters, flats, and tributaries of Essex Bay in the City of Gloucester and the Towns of Essex and Ipswich within the following metes and bounds: West of a line drawn south and east from the Choate House on Hog Island along several red/orange colored markers to No. 175 Concord Street; south of a line drawn from No. 175 Concord Street to the green colored No. 3 Spindle; north of a line drawn westerly from a red/orange colored marker on the property at No. 237 Concord Street to a red/orange marker on the property at No. 257 Concord Street; north of a line drawn westerly from a red/orange marker on the south bank of Lufkin at the Essex River confluence to the windmill on the property now or formerly owned by William and Sarah Ridge off of Spring Street; south of a line drawn due west from a red/orange marker on the western most tip of Hog Island to a red/orange colored marker on the eastern bank of the State Wildlife Management Area.”

### N7.4 (Middle Castle Neck River)

“The waters, flats, and tributaries of the Castle Neck River in the Towns of Essex and Ipswich within the following metes and bounds: West of a line drawn due south to a red/orange marker on the south bank of the Castle Neck River from the dock on the property now or formerly owned by E.O. Jennings at No. 207 Argilla Road; east of a line drawn from a red/orange marker located on the north bank of the Castle Neck River near the Shurcliff Dock, so-called, south to a red/orange marker located on the northwest point of Smith Island.”

#### N7.5 (Lower Castle Neck River)

“The waters, flats, and tributaries of the Castle Neck River in the Towns of Essex and Ipswich within the following metes and bounds: East of a line drawn due south to a red/orange marker on the south bank of the Castle Neck River from the dock on the property now or formerly owned by E.O. Jennings at No. 207 Argilla Road; north of a line drawn from a red/orange marker on the western most tip of Hog Island due west to a red/orange marker on the eastern bank of the State Wildlife Management Area; west of a line drawn due north to a red/orange marker on the Castle Neck spit from the boulder on the north shore of Long Island.”

#### N7.6 (Outer Essex Bay)

“The waters, flats, and tributaries of Essex Bay in the City of Gloucester and the Towns of Essex and Ipswich within the following metes and bounds: East of a line drawn due north from the boulder on Long Island to a red/orange marker on the Castle Neck spit; east of a line drawn south and east from the “Choate House” on Hog Island along several red/orange markers to No. 175 Concord; north and west of a line drawn east and north from No. 175 Concord Street to the green colored No. 3 spindle; and west of a line and south from the northern tip of “Two Penny Loaf” to the southern most tip of Crane’s Beach.”

## **II. Factors Determining “Conditional” Classification**

Analysis of water quality data collected from classification stations located throughout the bay proper and tributaries under a wide variety of climatological conditions found a direct relationship exists between rainfall and water quality. Comparisons indicate a pattern where moderate amounts of rain have a tendency to cause elevated fecal coliform levels. In order to evaluate the influence of rain on water quality, samples were collected one to several days following rainfalls of varying magnitude. There exists sufficient information to cause select portions of the growing area to be classified as CONDITIONALLY APPROVED and divided into a series of classification sub-areas.

## **III. Description of Predictable Pollution Events**

### **A. Meteorological & Hydrological Events**

The annual precipitation average at the Essex Bay area, as compiled over a 10 year period at the Essex Water Filtration Plant (1988-1997), is 53.25 inches of rain with an average snowfall of 59.31 inches. Precipitation is relatively constant throughout the year although more intense rainfalls are apt to occur during the late summer and fall seasons.

Adverse pollution conditions, that is, elevated bacterial (i.e. fecal coliform) levels begin to appear within several hours of specific amounts of rain as recorded over a 24 hour period. There is sufficient evidence to indicate the amount of rain needed to trigger a contaminating episode and establish action levels and also that the amount of rain varies by sub-area and/or season to wit:

Sub-area	Rainfall (Action level)	Season
N7.0	$\geq 0.40''$	June 1 <sup>st</sup> to Dec. 14 <sup>th</sup>
N7.0	$> 0.75''$	Dec. 15 <sup>th</sup> to May 31 <sup>st</sup>
N7.4	$\geq 0.25''$	Year round
N7.5	$\geq 0.40''$	June 1 <sup>st</sup> to Dec. 14 <sup>th</sup>
N7.5	$> 0.75''$	Dec. 15 <sup>th</sup> to May 31 <sup>st</sup>
N7.6	$\geq 0.40''$	June 1 <sup>st</sup> to Dec. 14 <sup>th</sup>
N7.6	No Adverse Impacts	Dec. 15 <sup>th</sup> to May 31 <sup>st</sup>

Based upon rainfall information compiled by the Essex Water Filtration Plant over a ten year period (1988-1997), seasonally dependent action level rainfalls can be expected to occur 43.0 days per year with 0.25 inches of rain; 15.4 days per year with 0.4 inches of rain; 4.2 days per year with greater than 0.75 inches of rain; and 1 day per year with rainfalls exceeding 2.60 inches.

The temporal pattern of the first flush is well documented. Bacterial concentrations rise and peak within one (1) day to two (2) days and then precipitously decline to acceptable bacterial levels within two (2) to three (3) days. However, the temporal scale of a pollution event changes with excessive rain. During the summer and fall seasons (i.e. June 1<sup>st</sup> to Dec. 14<sup>th</sup>), protracted contaminating episodes have been observed bay wide with rainfalls exceeding 2.60 inches over a 24 to 48 hour period. Insufficient information exists to predict the duration of prolonged contaminating events. Moreover, available data suggests the term of extended pollution events may be proportional to the amount of rain where increasing amounts of rain require longer periods of time for the bay to clear bacterial loads. Contaminant removal occurs, largely, by way of tidal flushing although grazing, settlement, and die-off likely influence bacterial diminution. There is some hydrographic information to indicate protracted pollution events are linked to enhanced tributary flows.

#### B. Seasonal Events

1. Marinas. Three (3) marinas are located in the upper reaches of the Essex River, a "Prohibited" area. Dilution analysis indicated no adverse impacts on the DownStream study area. There are no marinas within the study area. An anchorage of about 30 to 40 small boats is located off the Conomo Point area, but none of the boats are live-aboard.
2. Seasonal Rainfall. Cape Ann is a popular summer destination. The local population increases dramatically during the summer months owing to day visitors, vacationers, and summer residents. The summer population increases daily water demands by up to 40% in some locales which in turn places greater demands and burdens on sub-surface disposal

- systems. Observed seasonal rainfall effects on water quality are believed to be the result of increased use of sub-surface disposal systems.
3. Waterfowl Migration. Various species of gulls, ducks, and geese frequent the area year round. Numbers may range from a few individuals to large rafting flocks. In addition, large numbers of cormorants can be found in the bay and tributaries during the annual spring/fall migration. Despite occasional large numbers of birds, coliform geometric mean and ten (10) percent analysis has not demonstrated a problem.

#### **IV. Implementation of a Conditional Area Closure**

- 1) A rain gauge, approved by the Massachusetts Division of Marine Fisheries, shall be installed and maintained by the Town of Essex and the Town of Ipswich at the respective Police Stations.
- 2) The Town of Essex and the Town of Ipswich shall read their respective rain gauges daily, seven days a week at 5:00 A.M. and record in a log the amount of rainfall. If the reading is not taken by 5:00 A.M. at the Essex rain gauge station, then the aforementioned Conditionally Approved areas in the City of Gloucester and the Towns of Essex and Ipswich shall not be allowed to open for shellfishing on that given day. If the reading is not taken by 5:00 A.M. at the Ipswich rain gauge station, then the Conditionally Approved area N7.4 in the Towns of Essex and Ipswich shall not open to shellfishing on that given day.
- 3) A copy of the rainfall logbook shall be sent to the Massachusetts Division of Marine Fisheries Shellfish Program in Newburyport, Massachusetts, at the end of each month.
- 4) In the event of a malfunction of the Essex rain gauge, rainfall measurements can be made from a backup gauge located at the Essex Water Filtration Plant. A description of the malfunction and the rainfall measurement from the backup gauge shall be duly noted in the Essex rainfall logbook. When a malfunction of the Essex rain gauge occurs, aforementioned Conditionally Approved areas in the City of Gloucester, Town of Essex, and Town of Ipswich shall not be allowed to open for shellfishing until the backup gauge is read. In the event of a malfunction of the Ipswich rain gauge, rainfall measurements can be made from a backup gauge located at the Ipswich Waste Water Treatment Plant. A description of the malfunction and the rainfall measurement from the backup gauge shall be duly noted in the Ipswich rainfall logbook. When a malfunction of the Ipswich gauge occurs, the Conditionally Approved area N7.4 shall not be allowed to open for shellfishing until the backup gauge is read.
- 5) Year round, if the amount of rain recorded at either the Essex rain gauge station or the Ipswich rain gauge station equals or exceeds 0.25 inches, then the status of the Conditionally Approved area N7.4 shall change to closed to shellfish harvesting for five (5) complete days. A complete day shall be defined as beginning at 5:00 A.M. and running for twenty-four (24) hours.; The area N7.4 may revert to an open status for shellfish harvesting on the sixth (6<sup>th</sup>) day following the recording of 0.25 and greater inches of rain.

- 6) Between December 15<sup>th</sup> and May 31<sup>st</sup>, inclusive, of any one year, when the amount of rain as recorded at the Essex rain gauge station exceeds 0.75 inches, the status of the Conditionally Approved areas N7.0 and N7.5 shall change to closed to shellfish harvesting for five (5) complete days. The areas N7.0 and N7.5 may revert to an open status for shellfish harvesting on the sixth (6<sup>th</sup>) day following the recording of greater than 0.75 inches of rain.
- 7) Outer Essex Bay, area N7.6, so described above, does not appear to be adversely affected by storm related rainfall during the time period of December 15<sup>th</sup> and May 31<sup>st</sup>, inclusive, of any one year. Therefore, between December 15<sup>th</sup> and May 31<sup>st</sup>, area N7.6 shall be seasonally approved to the taking of shellfish.
- 8) Between June 1<sup>st</sup> and December 14<sup>th</sup>, inclusive, of any one year, when the amount of rain as recorded at the Essex rain gauge station equals or exceeds 0.4 inches, then the status of the Conditionally Approved areas N7.0, N7.5, and N7.6, so described above, shall change to closed to shellfish harvesting for five (5) complete days. The areas N7.0, N7.5, and N7.6 may revert to an open status for shellfish harvesting on the sixth day following the recording of 0.40 and greater inches of rain.
- 9) Between June 1<sup>st</sup> and December 14<sup>th</sup>, inclusive, of any one year, when the amount of rain as recorded at the Essex rain gauge station equals or exceeds 2.60 inches over one 24 hour recording period or two consecutive 24 hour recording periods, the status of the Conditionally Approved areas N7.0, N7.4, N7.5 and N7.6 shall change to closed to shellfishing harvesting and remain closed to shellfish harvesting until the Division of Marine Fisheries determines the areas meet N.S.S.P. criteria for approved area harvesting.
- 10) The City of Gloucester, the Town of Essex, and the Town of Ipswich shall install and maintain telephone answering machines, herein referred to as a "Shellfish Hotline" and update said answering machines when there is a change of status, opened or closed, of any Conditionally Approved area within the respective community.
- 11) Prior to shellfishing in any conditional area within the City of Gloucester, Town of Essex, or Town of Ipswich so described above, it shall be incumbent upon any shellfish harvester to learn the open or closed status for shellfish harvesting by calling the appropriate "Shellfish Hotline". (In Gloucester call: 281-3741; in Essex call: 768-3915; in Ipswich call: 356-6671.) Shellfish harvesting in a Conditionally Approved area where the status has changed to closed is a violation of Massachusetts General Laws, Chapter 130, sections 74A and 75, and shall be enforced accordingly by the Essex, Gloucester, and Ipswich Shellfish Constables, Deputy Shellfish Constables, or other duly authorized municipal enforcement agents within their respective jurisdictions. Being the primary enforcement agents for the provisions of this "Conditional Area Management Plan," the Essex, Gloucester, and Ipswich Shellfish Constables shall provide sufficient patrols to reasonably assure intervention in the illegal harvest of shellfish from closed areas.
- 12) When the amount of rain as measured by the Essex rain gauge at 5:00 A.M. requires a Conditionally Approved area or areas to be closed to shellfish harvesting, the reader of the gauge shall immediately notify the Essex Shellfish Constable. In turn, the Essex Shellfish

- Constable shall immediately update the “Shellfish Hotline” and inform the Ipswich Shellfish Constable and Gloucester Shellfish Constable as to a closure in their respective communities. The Essex Shellfish Constable shall then contact the Division of Environmental Law Enforcement (Tel.: 800-632-8075) and the Division of Marine Fisheries (Tel.: 978-465-5947 or 978-465-3553), as soon as possible, with area closure information.
- 13) When notified of a closure by the Essex Shellfish Constable, the Gloucester Shellfish Constable and the Ipswich Shellfish Constable shall immediately update their respective “Shellfish Hotlines” with area closure information.
  - 14) When the amount of rain as measured by the Ipswich rain gauge at 5:00 A.M. requires the Conditionally Approved area N7.4 to be closed to shellfish harvesting, the reader of the gauge shall immediately notify the Ipswich Shellfish Constable. In turn, the Ipswich Shellfish Constable shall immediately update the “Shellfish Hotline” and inform the Essex Shellfish Constable as to the closure. The Ipswich Shellfish Constable shall then contact the Division of Environmental Law Enforcement (Tel.: 1-800-632-8075) and the Division of Marine Fisheries (Tel.: 978-465-5947 or 978-465-3553), as soon as possible, with area closure information.
  - 15) When notified of a closure of area N7.4 by the Ipswich Shellfish Constable, the Essex Shellfish Constable shall immediately update the “Shellfish Hotline” with the area closure information.
  - 16) The City of Gloucester, Town of Essex, and Town of Ipswich shall install and maintain red/orange markers delineating the boundaries of Conditionally Approved areas as described in the above definitions.
  - 17) If red/orange markers clearly delineating the boundary between area N7.6 (Outer Essex Bay) and adjacent areas N7.0 and N7.5 are not maintained during the time period between December 15<sup>th</sup> and May 31<sup>st</sup>, inclusive, of any one year, then the area shall not be managed on a seasonally approved basis but instead shall be managed solely on a rainfall basis in accord with provisions contained in item number six (6) of this plan for the management of Conditionally Approved areas N7.0 and N7.5. In addition, signs shall be placed along the line of demarcation indicated the seasonal “rainfall exempt area.”
  - 18) Signs will be used to notify shellfish harvesters than an area is classified as Conditionally Approved, Restricted, or Prohibited. In areas classified as Restricted or Prohibited, the sign should indicate that the area is closed due to contamination and that shellfishing is not permitted under any circumstances. In Conditionally Approved areas, the sign should indicate the area is periodically closed due to contamination and instruct the reader to contact the local “Shellfish Hotline” to learn whether the area is currently opened or closed to shellfish harvesting. Signs shall be posted at commonly used and/or public access points.
  - 19) The Division of Marine Fisheries shall monitor water quality, conduct Shoreline Surveys, Sanitary Surveys, annual evaluations and triennial reevaluations and make written reports for the central file, on the findings of these activities in accord with methods, procedures and standards set forth in the National Shellfish Sanitation Program Guide for the Collection of Molluscan Shellfish (N.S.S.C. 1997).

20) If water quality is determined to be degraded by reason of unacceptable bacterial levels and/or a public health risk may exist owing to the presence of a poisonous or deleterious substance (e.g. marine biotoxins, toxic chemicals, etc.), an area or areas so described above may be closed by the Division of Marine Fisheries to the harvest of shellfish, or the harvest of an individual species or several select species of molluscan bivalve from an area or areas described above may be prohibited.

#### **IV. Re-opening Criteria**

A1.) If an area or areas so described above are closed due to rainfall there exists sufficient information to forecast the term of a contaminating episode. Moreover, the Division of Marine Fisheries collects water samples on a monthly basis while the area is open to harvest of shellfish, in many instances following rainfalls subject to action levels and in the first day of a reopening, in order to maintain a current verification that rain driven pollution event is not present. Areas closed due to excessive seasonal rainfall (i.e. 2.60") shall remain closed until the Division of Marine Fisheries collects water samples that provide results of acceptable fecal coliform levels.

A2.) Studies indicate that the area typically flushes fecal coliform bacteria within three days following defined rain events with an additional two days allotted for further shellfish depuration.

A3 & A4.) Studies indicate the two day depurative period will allow shellfish to sufficiently purge bacterial contaminants so as to meet acceptable shellfish quality standards.

#### **V. Synopsis of Effectiveness and Cooperation**

The aforementioned descriptions and procedures should effectively manage the conditional shellfish area and safeguard the public health. Water quality as it relates to rain events, seasonality, and other pollution factors, will be monitored on at least a monthly basis by the Division of Marine Fisheries with appropriate adjustments in conditional elements.

Cooperation among the municipalities and the Division of Marine Fisheries has been outstanding. Not only have the Shellfish Constables in each municipality been willing participants in the water quality monitoring and conditional management of the area but various municipal departments have been most effective in mitigative efforts to eliminate pollution sources.

# Chapter 20 - SHELLFISH, SEAWORMS AND EELS\*

## (current May 31, 2017)

\*Editor's note – Ord. No. 49-1995, sec I, adopted Nov. 28, 1995, amended former Ch. 20, sections 20-1 – 20-10, 20-20 – 20-28, to read as herein set out. Former Ch. 20 pertained to similar subject matter and derived from the Code of 1970 and the following:

Ord. No.	Section	Date	Ord. no.	Section	Date
		10-28-80			6-5-84
		2-2-82			7-10-84
		3-2-82			1-22-85
		4-13-82	16-1991		5-28-91
		5-18-82	17-1991		5-28-91
		11-9-82	18-1992		7-7-92
		4-19-83			

Cross reference(s) – Animals, Ch. 4: harbors and related tidal waters, Ch. 10.

State law reference(s) – Marine fish and fisheries, M.G.L.A. c. 130; local control of shellfisheries, M.G.L.A. c. 130 sections 52-56.

### ARTICLE I. - IN GENERAL

#### Sec. 20-1. - Shellfish constable; deputy shellfish constables.

The mayor shall appoint a shellfish constable in accordance with M.G.L. A. c. 130, § 98, and may appoint two full-time or part-time deputy shellfish constables. Each shellfish constable shall be paid such salary as is established by ordinance. The mayor also may appoint as many unpaid deputy shellfish constables as he deems necessary.



(Ord. No. 49-95, § I, 12-29-1995)

**Cross reference**— Officers and employees generally, § 2-140 et seq.

**State Law reference**— Shellfish constables, M.G.L.A. c. 130, § 98.

### **Sec. 20-2. - Shellfish advisory commission.**

(a) *Created; membership; appointment; compensation.* There is hereby created and established in the city a commission to be known as the shellfish advisory commission. The commission shall consist of five (5) members all of whom shall be citizens of the city and shall be appointed by the mayor, subject to confirmation by the city council, and shall be unpaid.

(b) *Terms of members; chairperson.* All members of the shellfish advisory commission shall be appointed for three (3)-year terms. The commission shall choose one (1) of their members to be chairperson.

(c) *Compensation.* The shellfish advisory commission shall consist of three (3) persons from the shellfish industry, the chairperson of the conservation commission or his designee and a marine biologist, if available.

(d) *Duties.* The shellfish advisory commission shall advise the mayor and city council on all matters pertaining to shellfish, seaworms and eels. The commission may establish, subject to approval by the city council, a management plan with rules and regulations relating to the issuance of permits and taking of shellfish, seaworms and eels.

(Ord. No. 49-95, § I, 12-29-1995)

**Cross reference**— Boards, commissions, councils, and committees, § 2-400 et seq.

### **Sec. 20-3. - Definitions.**

The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

*Bushel* means a unit of measure, equivalent to four (4) pecks or sixty (60) pounds.

*City* means the City of Gloucester.

*Commonwealth* means the Commonwealth of Massachusetts.

*Fulltime student* means a student submitting proof of fulltime student status, providing school transcript showing full course load, proof of age and parental consent if under age of seventeen (17).

*Private grant* means a time limited lease of a specified shellfish growing area to one or more individuals.

*Resident* means a person whose primary residence is the city.

*Seaworm* means invertebrate animals belonging to the Phylum Annelida, specifically, sea worms, sometimes called blood worms or clam worms.

*Seed clam* means juvenile shellfish.

*Shellfish* means invertebrate animals belonging to the Phylum Mollusca, specifically, soft shell clam, blue mussel, horse mussel, quahog, ocean quahog, oyster, razor clam, surf clam, bay scallop, sea scallop.

*Shellfish industry* means activities involving the cultivation, harvest, processing, selling of shellfish.

*Temporary resident* means a person who owns real estate in the city or possesses a yearround lease on real estate in the city and who occupies that real estate on at least a seasonal basis.

(Ord. No. 49-95, § I, 12-19-1995; Ord. No. 11-96, § I, 4-2-1996)

#### **Sec. 20-4. - Area set aside for noncommercial taking of shellfish.**

The city council does hereby set aside the area of tidal flats located in the city, commencing from a point west of No. 10 nun buoy bordering Annisquam River, thence in a northerly direction to the sand bar opposite Annisquam Light. From this area, shellfish may be taken, for their own family use, by any resident of the commonwealth holding the permit mentioned in [section 20-22](#), and from which area the commercial taking of shellfish is hereby prohibited in accordance M.C.L.A. c. 130, § 52.

(Ord. No. 49-95, § I, 12-29-1995)

#### **Sec. 20-5. - Taking shellfish from contaminated areas.**

(a) No person shall dig or take shellfish from prohibited areas as defined by the state division of marine fisheries.

(b) No person shall dig or take shellfish from restricted areas as defined by the state division of marine fisheries unless they hold a permit to do so issued under [section 20-21](#).

(Ord. No. 49-95, § I, 12-29-1995)

**State Law reference**— Shellfish in contaminated areas, M.G.L. c. 130, § 74 et seq.

#### **Sec. 20-6. - Continuing biological evaluation of shellfish flats.**

The mayor shall cause a continuing biological evaluation of the shellfish flats to be made by a qualified marine biologist from either the state division of marine fisheries or such other qualified marine biologist selected by the mayor. The mayor shall submit the findings and recommendations of the marine biologist to the shellfish advisory commission and to the city council.

(Ord. No. 49-95, § I, 12-29-1995)

### **Sec. 20-7. - Closing of flats for shellfish taking.**

The city council may, from time to time, to preserve the shellfish resources, close any flat and prohibit the taking of shellfish for a period not to exceed three years. The areas so closed by the city council shall be plainly marked by stakes and bounds and at each shall be posted a written notice setting out the fact of closing and the period during which such areas shall be closed. After the areas have been so closed and posted, it shall be unlawful for any person to take shellfish therefrom or to injure the flats.

(Ord. No. 49-95, § I, 12-29-1995)

### **Sec. 20-8. - Mill Pond closed for taking of eels from December 1 to April 1.**

The taking of eels from the waters of the Mill Pond, in that part of the city called Riverdale, the extent of which pond is shown on a plan in the city engineer's office, is hereby prohibited from December 1 to April 1 each year.

(Ord. No. 49-95, § I, 12-29-1995)

**State Law reference**— Municipal authority to prohibit taking of eels, M.G.L. c. 130, § 52.

### **Sec. 20-9. - Removal of shellfish or marine worms at night prohibited.**

No person shall dig, take or carry away, shellfish or marine worms between one-half hour after sunset and one-half hour before sunrise from any water, flats, or creeks within the limits and bounds of the city.

(Ord. No. 49-95, § I, 12-29-1995)

### **Sec. 20-10. - Interfering with seeding, cultivation, etc., of oysters.**

The digging, molesting, or in any way interfering with seeding, cultivation and propagation of shellfish, their seedlings and equipment is hereby prohibited.

(Ord. No. 49-95, § I, 12-29-1995; Ord. of 3-13-2001(01), § I)

### **Sec. 20-11. - Penalty for violations of chapter.**

The sections of this chapter shall constitute regulations under the authority of M.G.L. c. 130, § 2, and each violation of this chapter shall be punished by fine of not less than \$100.00 nor more than \$1,000.00. Fines imposed under this section shall be in addition to any suspension or revocation of licenses or permits granted under this chapter. The only exception to the above being that any violation of [section 20-30\(a\)](#) or violation of [section 20-30\(b\)](#) shall be punished as follows:

- (1) First offense: One hundred dollars (\$100.00) fine and loss of license for thirty (30) days;

- (2) Second offense within one (1) year of the first offense: Two hundred dollars (\$200.00) fine and loss of license for ninety (90) days;
  - (3) Third offense within one (1) year of the second offense: Three hundred dollars (\$300.00) fine and loss of license for one (1) calendar year.
- (Ord. No. 49-95, § I, 12-29-1995)

**Secs. 20-12—20-19. - Reserved.**

**ARTICLE II. - PERMITS<sup>[2]</sup>**

**Sec. 20-20. - Required—Generally.**

Unless otherwise provided by this chapter or the laws of the commonwealth, no person shall dig or take shellfish, seaworms, or eels within the city without a valid permit. Any person who loses their right to take the aforementioned, whether through expiration, suspension or revocation of their permit issued by the commonwealth, by judicial or administrative action or otherwise, shall not later than five (5) days thereafter surrender their municipal permit to the city clerk who shall retain the permit until the termination of the period of revocation, suspension or other loss of right to take shellfish. No municipal permits shall be issued to any person whose aforementioned permits from the commonwealth or permit from this or any other municipality within the commonwealth is under suspension.

(Ord. No. 49-95, § I, 12-29-1995)

**Sec. 20-21. - Same—For commercial purposes.**

- (a) The licensing agent may issue permits to take shellfish, seaworms or eels at any place within the city, except the area mentioned in [section 20-4](#) for commercial purposes in accord with the provisions of this section.
- (b) To be eligible for a commercial permit under this section, an applicant must be a resident of the city for one (1) consecutive year, prior to June 30, of the year application is made. Such applicant shall complete their permit application and submit it to the licensing agent for review together with any additional information or documentation required by the licensing agent to demonstrate eligibility.
- (c) For the purpose of preserving or protecting shellfish, sea worms and eels, the city council from time to time may establish limits on the taking thereof for commercial purposes. Such limits shall apply to such places, whether approved or restricted and for such period of time as the city council may determine.
- (d) All commercial permits, including renewal applications, issued under this section shall be issued during the month of June of each year only, effective July 1 and shall expire on June 30 of each year.
- (e) Any inhabitant of the commonwealth who is not a resident of the city who wishes to apply for a commercial permit to take shellfish from restricted areas only within the city must apply for same during the month of June of each year.

(f) Any fulltime student whose primary residence is the city and meeting the requirements of fulltime student as defined in [section 20-3](#), definitions, may purchase a commercial shellfish permit for one-half (1/2) price.

(Ord. No. 49-95, § I, 12-19-1995; Ord. No. 11-96, § II, 4-2-1996; Ord. No. 88-1998, § I, 4-29-1998)

#### **Sec. 20-22. - Same—For noncommercial purposes.**

(a) The licensing agent may issue to any resident of the commonwealth, permits to take, for one's own use, and for the use of one's family and guests, but not for commercial purposes, shellfish, seaworms or eels.

(b) Any resident of the commonwealth who is neither a permanent nor a temporary resident of the city may obtain a daily or annual permit under this section. Nonresidents may also obtain a noncommercial shellfish and seaworm permit. Any resident of the commonwealth who is either a permanent or temporary resident of the city may obtain an annual permit under this section.

(c) A permit issued under this section shall not allow the taking of shellfish, seaworms or eels of a size or at a season prohibited by law.

(Ord. No. 49-95, § I, 12-29-1995)

#### **Sec. 20-23. - Taking of seaworms—In accordance with chapter provisions.**

(a) It shall be unlawful for any person to take any sea worms from any place within the city except in accordance with the provisions of this chapter.

(b) Any resident of the commonwealth who holds a permit issued under section 20-22 may take seaworms subject to the limitations contained in [section 20-30\(c\)](#) and that the worms are to be used as bait for the personal use of the resident and seaworms shall not be taken for commercial purposes. This subsection shall not authorize the taking of sea worms from areas that are closed for municipal cultivation or set aside as private grants.

(Ord. No. 49-95, § I, 12-29-1995)

#### **Sec. 20-24. - Same—for commercial purposes.**

The licensing agent may issue permits authorizing the commercial taking of sea worms from any areas within the geographical limits of the city and waters thereof, except those areas which are closed for municipal cultivation or set aside as private grants.

(Ord. No. 49-95, § I, 12-29-1995)

#### **Sec. 20-25. - Handheld fork to be used in taking shellfish and sea worms.**

A handheld tined-type fork is the only implement that may be used for the digging or taking of shellfish and sea worms.

(Ord. No. 49-95, § I, 12-29-1995)

**Sec. 20-26. - Permit to take eels generally; restrictions as to traps; Fyke nets prohibited.**

(a) No trap shall be set in a manner likely to take mammals or be set to block streams or channels. No Fyke nets shall be allowed. No person shall have eels in their possession less than six inches in length, unless they have a special permit to do so.

(b) All traps set for the taking of eels must have owner's identification such as name or the last four (4) digits of social security number on the buoy.

(Ord. No. 49-95, § I, 12-29-1995; Ord. No. 61-1997, § I, 9-2-1997)

**Sec. 20-27. - Permit for scientific work in coastal waters and flats of city.**

(a) No person shall conduct scientific experiments, investigations, research or laboratory work on the coastal waters and flats of the city without obtaining a special permit therefor from the city council.

(b) The only exception to the requirement of this section shall be collection permits granted by the state division of marine fisheries for the purpose of conducting scientific experiments. School and scout groups may be exempted when conducting experiments.

(Ord. No. 49-95, § I, 12-29-1995)

**Sec. 20-28. - Free permit for senior citizens.**

Residents seventy (70) years of age and over shall be granted free permits.

(Ord. No. 49-95, § I, 12-29-1995)

**Sec. 20-29. - Fees.**

The following fee schedule (per annum) shall be followed:

- (1) Resident, commercial, shellfish/sea worm: \$225.00.
- (2) Resident, commercial, shellfish, fulltime student (to be reviewed in two years after the adoption of this amendment): \$100.00.
- (3) Resident, commercial, senior (70 + yrs), shellfish/sea worm, eel: free.
- (4) Resident, commercial, sea worm: \$40.00.
- (5) Resident, commercial, eel: \$30.00.
- (6) Resident, noncommercial, eel: no permit.
- (7) Resident, noncommercial, shellfish/sea worm: \$25.00.
- (8) Resident, noncommercial, senior (70 + yrs) shellfish/sea worm: free.

- (9) Nonresident, commercial, restricted areas, shellfish: \$400.00.
- (10) Nonresident, noncommercial, one day, shellfish: \$15.00.
- (11) Nonresident, noncommercial, shellfish/sea worm: \$100.00.

(Ord. No. 49-95, § I, 12-29-1995; Ord. No. 11-96, § III, 4-2-1996; Ord. of 5-28-2002(01), § I)

### **Sec. 20-30. - Limits.**

(a) *Shellfish, commercial.* Each duly licensed commercial shellfisherman may harvest from approved and conditionally approved areas two hundred (200) pounds (including sack weight) of any or all kinds of shellfish per tide except:

(1) Sea clams (which may not be harvested commercially) where the noncommercial limit shall apply.

(2) Areas periodically designated by the city council as shellfish management areas to which special limitations may apply. When water quality allows for harvesting in the following areas: Cambridge Avenue Beach, Lighthouse Beach, Hodgkins Cove Beach and Plum Cove Beach, that they be seasonally closed for Shellfish Harvesting from June 1 through September 30, inclusive.

In addition, no person shall take or have in their possession soft-shelled clams less than two (2) inches in longest diameter of the shell to the amount more than five (5) percent of any one (1) batch.

(b) *Shellfish, noncommercial.* The amount taken by any individual for their family use shall not exceed fifteen (15) pounds of any kind or all kinds of shellfish in any one (1) day and shall not exceed sixty (60) pounds in any one (1) calendar week, except that in the case of sea clams, the entire calendar week unit of sixty (60) pounds may be taken in one (1) day. In addition, no person shall take or have in their possession soft-shelled clams less than two (2) inches in longest diameter of the shell to the amount more than five (5) percent of any one (1) batch.

(c) *Sea worms, noncommercial.* Any resident of the commonwealth who holds a permit issued under [section 20-22](#) may take not exceeding one (1) quart of sea worms at any one (1) tide provided the worms so taken are to be used for bait for the personal use of the resident and no commercial use is made of such worms. This subsection shall not authorize the taking of sea worms from areas which are closed for municipal cultivation or set aside as private grants.

(d) *Eels.* Any resident of the city may take eels by the following methods for noncommercial use: five (5) pots or less, eel spear or angling. The noncommercial limit shall be no more than twenty (20) eels per day.

(Ord. No. 49-95, § I, 12-29-1995; Ord. No. 61-1997, § II, 9-2-1997; Ord. No. 128-1998, § I, 10-27-1998)

### **Sec. 20-31. - Commercial shellfishermen; reciprocity.**

Any person who has resided in the city and has held a city commercial shellfish permit who changes their permanent residence to the Towns of Essex or Ipswich may apply for a city commercial shellfish permit which shall expire upon said person's having attained one (1) year's residence in the Towns of Essex or Ipswich.

(Ord. No. 49-95, § I, 12-29-1995)

**Sec. 20-32. - Public notice.**

In order to inform the public on the openings of previously closed shellfish areas that have either been closed due to unacceptable water quality or for conservation purposes, excluding red tide and rain closures, a public notice shall be placed in the local newspaper one (1) week in advance of the opening date.

Ord. No. 89-1998, § I, 4-29-1998)



**Commonwealth of Massachusetts**  
**Division of Marine Fisheries**  
**251 Causeway Street, Suite 400**  
**Boston, Massachusetts 02114 (617)626-1520**  
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## **SHELLFISH HARVESTING, HANDLING, AND TRANSPORT**

Massachusetts shellfish are renowned for their high quality. Commercial harvesters, including shellfish growers, are required by the National Shellfish Sanitation Program (NSSP) and by **Massachusetts Division of Marine Fisheries (Marine Fisheries)** and **Department of Public Health (DPH)** regulations to harvest shellfish only from open non-polluted areas, and to take steps that protect the shellfish from temperature abuse and exposure to contamination during handling and transport to wholesale dealers for sale.

Disease-causing bacteria and viruses can be found in raw shellfish. Contamination may occur at any point in the food distribution system, including the point of harvest. Since molluscan shellfish filter water to obtain food, any bacteria, viruses and protozoa in the water will be concentrated by the shellfish. Shellfish from waters contaminated with sewage wastes accumulate higher levels of disease-causing pathogens which can cause **Norovirus, hepatitis, cholera**, and various other forms of viral and bacterial gastroenteritis. Exposure to contaminants during transport and lack of temperature control can further degrade the shellfish and allow growth of pathogens that can cause illness from **Vibrio** bacteria. Remember, shellfish is considered ready-to-eat. Consumers may not cook it, a step that generally kills pathogens.

### **HARVEST**

Individuals commercially harvesting shellfish must have a state commercial fishing permit or other **Marine Fisheries** permit endorsed for commercial shellfish harvesting and the companion Shellfish Transaction Card (322 CMR 7.01 (2)).

Shellfish for direct marketing may only be harvested from waters classified as **Approved or Conditionally Approved by Marine Fisheries** and in the **“open status.”** **Harvesters should consult with local shellfish authorities or Marine Fisheries** to determine those areas that are open and safe for harvesting or closed to protect public health due to sanitary problems, biotoxins (Red Tide), oil spills, or chemical contaminants.

### **HANDLING**

Harvesters shall assure shellfish are harvested, handled, and transported in a manner to prevent contamination and deterioration. All containers used to hold shellfish shall be clean, free of debris, and fabricated using safe, easily cleanable materials (smooth surface). Shellfish should be covered or in a closed vehicle during transport to prevent exposure to direct sunlight and contaminants.

**Boats used in harvesting** must be kept clean. Shellfish should be stored on raised areas to prevent contact with bilge water and away from fuel, oil, and other chemicals. Shellfish should be covered to prevent exposure to hot sun and birds. Each harvest boat must have a sanitation device or container with a tight-fitting cover and be secured and placed to prevent contamination of shellstock by spillage or leakage. Containers should be emptied only into a sewage disposal system and cleaned. The overboard discharge of human waste is prohibited in Massachusetts.

Dogs, cats, and other animals are **not** allowed on harvest vessels.

**All containers of shellfish must be individually tagged.** The tag shall contain the full name of the harvester, DMF Commercial Shellfish Permit number, date and time of harvest, the type and quantity of shellstock, the initials MA, the shellfish area name and number, and if applicable the aquaculture site number. The following statement shall be written in bold capitalized type, **“THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY OR IS RETAGGED AND THEREAFTER KEPT ON FILE FOR 90 DAYS.”**

## **TRANSPORT**

All species of shellfish, regardless of the time of year, should be transported to a permitted wholesale dealer as soon as possible to be placed under refrigeration. Shellfish may also be sold to a wholesale dealer at the landing site. **Shellfish bound for market may not be stored at any unpermitted facility prior to delivery to a permitted wholesale dealer.**

# Public Rights Along the Shoreline

published in 2005

from The Official Website of the Executive Office of Energy and Environmental Affairs

Coastal managers are often asked, "Who owns the sea and shore?" If you have been curious, or perhaps a bit confused about what rights the public has along the shoreline, here's a brief primer on waterfront property law.

## Ownership of Tidelands

"Tideland" is the legal term for all land beneath the waters of the ocean, including lands that are always submerged as well as those in the intertidal area (i.e., between the high and low tide marks). In every coastal state, the use of tidelands is governed by a concept in property law known as the Public Trust Doctrine, which dates back centuries to ancient Roman law. The doctrine states that all rights in tidelands and the water itself are held by the state "in trust" for the benefit of the public. In most states, this means that public ownership begins at the high water mark.

The Massachusetts Bay Colony originally followed this rule, until its legislators decided to transfer ownership of certain tidelands to coastal landowners, in order to encourage private wharf construction on these so-called "intertidal flats." This general land grant was accomplished by the Colonial Ordinances of 1641-47, which in effect moved the line between public and private property to the low water mark, but not farther seaward of the high water mark than "100 rods," or 1,650 feet. This intertidal area (now called "private tidelands") is presumed to belong to the upland property owner, unless legal documentation proves otherwise for a given parcel (as is true in certain segments of Provincetown, for example).

Although the Colonial Ordinance changed the ownership of most intertidal flats from public to private, it did not transfer all property rights originally held in trust by the state. For one thing, no rights to the water itself (as distinct from the underlying lands) were relinquished by the Ordinance. Moreover, the law specifically reserved for the public the right to continue to use private tidelands for three purposes—fishing, fowling, and navigation.

## Scope of Public and Private Rights

Over the years, Massachusetts courts have ruled that the scope of activities on private tidelands covered by the reserved public rights of fishing, fowling, and navigation is broad, and includes all of their "natural derivatives." For example:

- The right to fish includes the right to seek or take any fish, shellfish, or floating marine plants, from a vessel or on foot;
- The right to navigate includes the right to conduct any activity involving the movement of a boat, vessel, float, or other watercraft, as well as the transport of people and materials and related loading and unloading activity; and
- The right to fowl includes the right to hunt birds for sport as well as sustenance. (The Massachusetts Attorney General takes the position that the right of fowling also includes other

ways that birds can be "used," such as birdwatching, but also notes that this issue has not yet been addressed by the courts.)

Clearly, these rights cover a variety of both old and new activities that many people enjoy, such as surfcasting and windsurfing. Still, the courts have imposed some limits. The right of fishing, for example, does not allow the use of structures for aquaculture or the taking of plant debris washed up on the beach. Also, courts have made it clear that the public right to use this area does not include the right to simply stroll, sunbathe, or otherwise engage in recreation unrelated to fishing, fowling, or navigation. Without permission from the landowner, such general recreation is trespassing. There is only one narrow exception to this rule—because there are no private property rights in the water itself, the public is allowed to swim in the intertidal zone provided the swimmer does not touch the private land underneath or use it to enter or leave the water.

The distinction between public and private rights is much simpler on either side of the intertidal zone, i.e. on submerged lands to the seaward side and on the dry shore to the landward side. Except on filled tidelands (which is another story altogether), all rights to use the area above the high water mark generally belong to the upland property owner, and public access on private land can occur only with permission. On the other hand, below the low water (or 100 rod) mark, the public is almost always within its rights to walk, swim, or enjoy other recreational activity. With very few exceptions, these tidelands are still state property.

### **Respecting the Rights of Others**

Respecting the rights of others—private property rights as well as public access and use rights—is an important part of visiting the coast. To prevent infringements on everyone's rights, it may be helpful to follow these guidelines. To help keep the peace, the visiting public should be careful not to trespass or otherwise infringe on the privacy of shoreline property owners, and should minimize their impact on the environment. Likewise, in posting signs and taking other steps to identify their private property, coastal landowners should not attempt to discourage the public from using the water's edge to the full extent allowable by law. In short, mutual respect is the key to meaningful coastal access for everyone.

### **Sources of Additional Information**

This information was adapted from [\*Massachusetts Coast Guide to Boston Harbor and the North Shore\*](#), which includes 22 full-color maps and nearly 400 public access sites, ranging from expansive parks with concession stands to small public landings and out-of-the-way spots. In addition, public rights also exist in filled tidelands, which are protected by a state law commonly known as "Chapter 91." Information about Chapter 91 (Waterways regulations) is available through the [Department of Environmental Protection's \(MassDEP\) website](#).

The following table illustrates the increase in yields which might be expected if soft shell clams are allowed to grow even a fraction of an inch.

For example, the same number of clams at 2" long would almost double in volume if left to grow to 2.50".

VOLUME INCREMENTS

Initial Size	1"	1.25"	1.50"	1.75"	2"	2.25"	2.50"	2.75"	3"
Harvested Size	Increase in Volume								
1"									
1.25"	1.96								
1.50"	3.4	1.73							
1.75"	5.41	2.76	1.59						
2"	7.99	4.08	2.35	1.48					
2.25"	11.41	5.82	3.36	2.11	1.43				
2.50"	15.69	8	4.62	2.9	1.96	1.37			
2.75"	20.91	10.67	6.15	3.87	2.62	1.83	1.33		
3"	26.98	13.77	7.94	4.99	3.37	2.36	1.72	1.29	

Table is from: INCREASING CLAM HARVESTS IN MAINE