

**Testimony Presented To the Connecticut Environment Committee by the
Connecticut Department of Agriculture**

3/20/15

H.B. 5720 AN ACT REQUIRING THE DEPARTMENT OF AGRICULTURE TO DOUBLE THE CAPACITY FOR SHELLFISH SAMPLE TESTING AND TO ESTABLISH A SITE FOR SHELLFISH SAMPLE TESTING EAST OF THE CONNECTICUT RIVER.

The stated purpose of the proposed legislation is *“to reduce waiting times for the results of such testing.”*

At this time there is no typical wait time associated with scheduling samples in the Milford laboratory. The only wait time is that associated with the amount of time it takes to process and analyze the samples. Generally, most seawater analyses take 24 hours and shellfish tissue analyses generally take 48 hours. Results are available immediately upon completion of the analysis.

At no time during 2014 was any eastern region shellfish commission or commercial grower informed that samples could not be collected because of processing capacity issues.

The Department created and filled a second microbiologist position in the Laboratory in January 2014 after the Administration and OPM supported the Department’s critical funding and personnel action request. The addition of this position has increased the daily processing capacity of the Laboratory staff effectively “doubling the capacity”. The Laboratory had over the previous four years, as a result of reduced staff resulting from attrition, prioritized testing related to commercial shellfish operations over that associated with recreational activities. This administrative policy created a periodic capacity issue associated with the processing of **recreational** program samples.

Upon filling the position in January 2014, the Laboratory no longer imposed restrictions on the collection of growing water samples except as required during Holidays or mandatory FDA inspections or evaluations.

House Bill 5720 will not expand our state’s commercial shellfish industry. The commercial shellfish sector remains the agency’s priority with regard to sample collection. The Department cannot at this time demonstrate a need to once again double the capacity of shellfish sample testing.

Table 1. Types of Analysis performed at Bureau of Aquaculture laboratory in Milford.

Type of Analysis	Matrix	Time for Processing (Approx)
Fecal Coliform	Seawater	24 hours
Fecal Coliform	Shellfish Tissue	48 hours
Total and Pathogenic <i>Vibrio parahaemolyticus</i>	Shellfish Tissue	50 hours
Paralytic Shellfish Poison (PSP)	Shellfish Tissue	28 hours
Male Specific Coliphage (MSC)	Sewage, Seawater, Tissue	18 to 20 hours

The cost required to duplicate the capacity at an alternate location is considerable. The Laboratory processed approximately 6,500 water samples and 200 shellfish tissue samples annually over the past five years. This bill proposes achieving the capacity level of the existing aquaculture laboratory. We have projected the cost of appropriate laboratory equipment and proper laboratory space required to sustain this level of processing at \$175,000.

The proposed laboratory will require a facility of 1,000 to 1,500 square feet. If the space is not currently constructed as laboratory space, additional construction/renovations to the plumbing and venting within the work space will require significant infrastructure investment. The cost of renting will fluctuate based on location.

Two staff members at the Microbiologist 1 level will require salary and fringe benefits worth an additional \$ 175,000.

The proposed bill has a known equipment and laboratory space cost and two salaried positions costs totaling \$ 300,000 before any cost of space rental and plumbing renovations are considered. This expenditure does not support the expansion of our State's shellfish industry.

The addition of a Microbiologist 1 at the Milford laboratory in January 2014 has enabled the Department to eliminate policies which prioritized commercial samples above recreational areas when capacity exceeded the daily capability of the laboratory staff. Presently no capacity issues exist.

Table 1. Number and Types of Samples Analyzed by the Bureau of Aquaculture Laboratory in Milford

Year	Seawater Fecal Coliform	Phytoplankton Samples	Paralytic Shellfish Poison (PSP)	Shellfish Tissue Fecal Coliform	Total and Pathogenic <i>Vibrio parahaemolyticus</i>	Male Specific Coliphage
2014	6650	130	14	143	85	104
2013	6500	113	14	133	16	67

In 2014, the Department made administrative changes in order to improve efficiency and streamline administrative costs, and address program deficiencies as cited in the FDA Regional Specialist's Shellfish Growing Area evaluation. The FY2013 evaluation highlighted significant program deficiencies in Eastern Connecticut towns caused by insufficient growing area samples.

This administrative action required the shellfish commissions of Stonington, Groton, Waterford, and East Lyme to transport water and shellfish samples to the Milford laboratory, rather than relying on a state employee to transport samples to the laboratory on their behalf as had previously been the case. Staffing levels and assignments do not provide for professional employees serving as couriers for samples.

It was this additional **transportation** burden which has been inaccurately characterized as a *laboratory capacity* issue to the legislators representing four eastern Connecticut communities.

The Department acknowledges that collection of samples and transportation to the Milford laboratory requires a commitment of time and effort by local shellfish commissions. However, it is important to note that the towns of Greenwich, Stamford, Fairfield, Guilford, Madison, and Clinton have always routinely collected and transported seawater and meat samples to the laboratory in support of their shellfish programs. These commissions have never had transportation provided to them by the Department of Agriculture.

The Department of Agriculture would like to clarify the Bureau of Aquaculture's current situation and outlook in terms of laboratory capacity for shellfish growing area sampling. It appears that there is a perceived limitation of Bureau laboratory capacity by shellfish commissions. This concern has been relayed to legislators, however, laboratory capacity is not the issue. The primary issue impacting the shellfish commissions is that of the inability to provide a paid courier of the samples to the Bureau laboratory in Milford from the towns located in the eastern end of Long Island Sound.

In order to be available as a source of shellfish intended for human consumption, both commercial and recreational shellfish growing areas in Connecticut must meet National Shellfish Sanitation Program standards for an Approved or Conditionally Approved growing area. The majority of shellfish growing areas in Connecticut are highly susceptible to water quality impacts related to the densely developed nature of our coastal areas, and are managed on a Conditionally Approved basis. The requirements for managing Conditional Approved shellfish growing areas are extensive and require a significant investment in time and resources from both the State and the Municipalities.

The impacted nature of our waters here in Long Island Sound as compared to the rest of the country, where coastal areas are far less developed, requires much more extensive

management, sampling, and pollution source monitoring in order to ensure that shellfish are safe to consume from these areas.

Mandatory water testing: Why is testing required? When is testing required?

Shellfish are filter-feeding organisms that pump large quantities of seawater through their bodies as a part of the normal feeding process. As a result any microorganisms, including human pathogens, present in the growing area can become concentrated in shellfish meats by as much as 100 times that found in the water column. Sewage contamination is the main source of human pathogens in shellfish growing waters and the correlation between sewage pollution and disease has been demonstrated. In order to ensure the safety of shellfish for human consumption, shellfish growing areas are classified based on evidence of contaminationⁱ.

The Connecticut Department of Agriculture uses the guidelines and standards set forth by the National Shellfish Sanitation Program (NSSP) to classify Connecticut’s shellfish growing areas. The NSSP is a Federal/State cooperative program, recognized by the FDA and the Interstate Shellfish Sanitation Conference (ISSC), for the sanitary control of shellfish produced and sold for human consumption. Growing area classifications are based on evidence of contamination found through the shoreline survey and are reevaluated on an annual basis. The Sanitary Survey includes the identification of actual and potential sources of pollution that may adversely impact the growing area, an evaluation of meteorological and hydrographic factors, and an assessment of water quality.

The standards for recreational and commercial shellfish bed water testing are the same. The standards are required to prevent illnesses associated with the consumption of raw shellfish and therefore prudently applied to both categories of shellfish. Additionally, many of the recreational beds coexist with commercial shellfish beds.

Sampling requirements vary depending on the water quality classification associated with each growing area, but are summarized below.

Table 3. Sampling Requirements for each sampling station by Growing Area Classification. APC indicates “Adverse Pollution Condition” of rainfall, tide, river stage, etc.

Classification of Area	Number of Samples per Year	Reopening Samples	Monthly Open Samples
Approved	5 APC	After sewage bypass/3” rain event	NO
Conditionally Approved	5 APC	After every closure event	Yes
Conditionally Restricted	5 APC	Yes, prior to seasonal reopening	Yes, during open season
Restricted	5 APC	NO	NO

How long does testing take?

The Milford laboratory accepts water samples from Monday 8 am through Thursday at 1 pm, to allow for the 24 hour sample processing. Samples may be collected as early as Sunday at 6 am, as samples must be processed within 30 hours of collection. Shellfish tissue samples are accepted until Wednesday at 1 pm, to allow for 48 hour sample processing. All laboratory receiving time limitations are based on the processing time required to complete testing within normal business hours, although exceptions may be made in case of emergency to staff the laboratory on the weekend.

Are there any fees charged by the Department for these services?

The Department has not and currently does not charge a fee to either commercial companies or municipalities for any of these services.

A cost per sample was calculated by using current prices from our scientific vendor Fisher Scientific. This price includes consumable supplies and time of one individual in the laboratory processing the sample. The price is \$3.41 per sample. The price does not reflect infrastructure costs such as autoclave maintenance, cost of water purification system, energy costs and initial cost for equipment.

Historically there were private laboratories who were certified through the FDA to process the seawater samples for fecal coliform analysis, however the high cost per sample price discouraged shellfish commissions from using these private laboratories and the lack of sufficient business forced the private laboratories to drop the costly certification and analysis.

Commercial beds leased in Town waters and recreational shellfish permit fees provide funding to the municipalities for the management of these municipal shellfish programs. No funds are returned to the State for the activities permitted within Town waters.

The majority of commercial shellfish activity takes place in the western end of the sound. Commercial beds leased in State waters generate revenues that go into Connecticut’s General Fund:

Table 2. Revenues generate from commercial leases in State waters.

	State Acres Leased	Dollars Generated Annually
East of the Connecticut River	444.9	\$3061.08
West of the Connecticut River	47,660.1	\$742,349.49

Are there any additional laboratories available in Connecticut to take over the testing done at Milford?

There are currently two laboratories in state certified through the FDA to process shellfish seawater samples. The Department of Agriculture Bureau of Aquaculture Laboratory in Milford is the primary laboratory, and is the only laboratory certified to perform all of the microbiological testing required to satisfy all National Shellfish Sanitation Program requirements for Connecticut's specific pollution sources and hazards. As mentioned earlier, this includes not only fecal coliform testing of seawaters, but also shellfish tissue samples and a variety of advanced microbiological and molecular techniques which allow the Bureau to ensure rapid and accurate test results for shellfish harvested from Long Island Sound.

The Department of Public Health Laboratory in Rocky Hill operates as a backup for fecal coliform testing of seawaters, and processes the minimum samples required to remain certified. They remain certified in order to be available in the event that the Milford Laboratory becomes disabled.
