

Program Report Card: CT Shellfish Sanitation Program:
Water Quality for Shellfish Harvest
(CT Department of Agriculture Bureau of Aquaculture)

Quality of Life Result: The CT shellfish industry is an important cultural and economic resource which benefits the CT economy through state revenue obtained directly through shellfish lease fees and taxes, as well as by supporting other CT industries, particularly those linked to Long Island Sound (local restaurants, tourism, marinas, boat service and fuel, shellfish wholesale dealers, retail seafood markets).

Contribution to Result: The CT Shellfish Sanitation Program identifies safe shellfish growing areas (through pollution source assessment and water quality and shellfish monitoring) which provide CT residents and commercial shellfish harvesters with a source of fresh and wholesome clams and oysters.

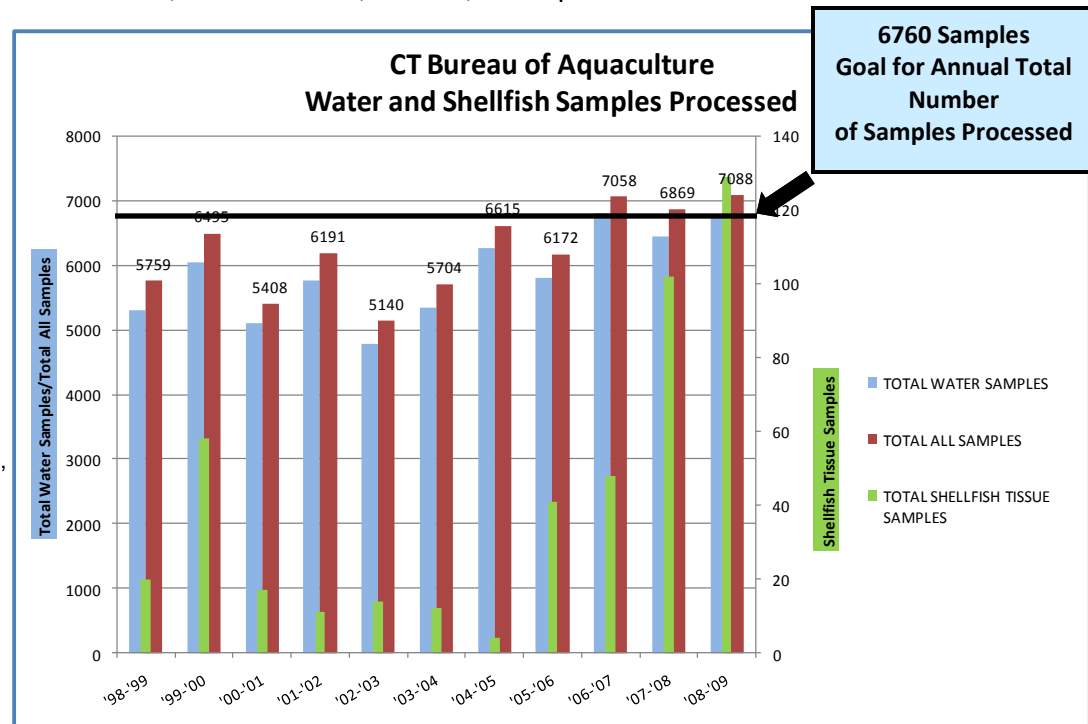
Partners: the Bureau of Aquaculture works with multiple partners in order to manage shellfish areas, identify and correct pollution sources and monitor water quality in protection of the shellfish beds and industry including: CT Shellfish Industry, Local Shellfish Commissions, Shoreline Health Departments, Harbor Management Commissions, Marine Police, Public Works, CT Seafood Council, CT Sea Grant, CT DEP, CT Department of Public Health

Performance Measure 1-Water Quality Monitoring: The number of samples processed each year for the Growing Area component of the Shellfish Sanitation Program includes total, water and shellfish tissue samples tested for indicator bacteria which are used to assess the suitability of shellfish harvested from the growing area for consumption.

Story behind the baseline: Water quality in the shellfish beds must be monitored and regulated carefully in order to ensure that the product that is harvested from these beds is safe to eat. In order to harvest shellfish for interstate sale, a state must meet the requirements of the National Shellfish Sanitation Program which defines the criteria a growing area must meet for harvest of shellfish for sale to the public. In 2009, the Bureau processed 7088 samples, which was the greatest number of samples ever processed by the program. A sample collection goal of 6760 was calculated based on the average of the most recent five years samples collected.

Proposed actions to turn the curve: In the face of ever-increasing federal regulations, the CT Shellfish Sanitation Program must continue to meet the requirements of the National Shellfish Sanitation Program, which is regulated by the FDA. The Bureau has increased the number of samples collected for the program from a total of 5140 during 02-03 FY to an all-time high of 7088 during FY 08-09. The number of shellfish tissue samples processed increased from 4 during 04-05 to 129 during 08-09. Shellfish meat samples require 48 hours to process in the lab, as well as additional time spent in the field to collect these samples. While we do currently meet the requirements of the Program, it will be unlikely that we can continue to do so unless vacant positions are filled.

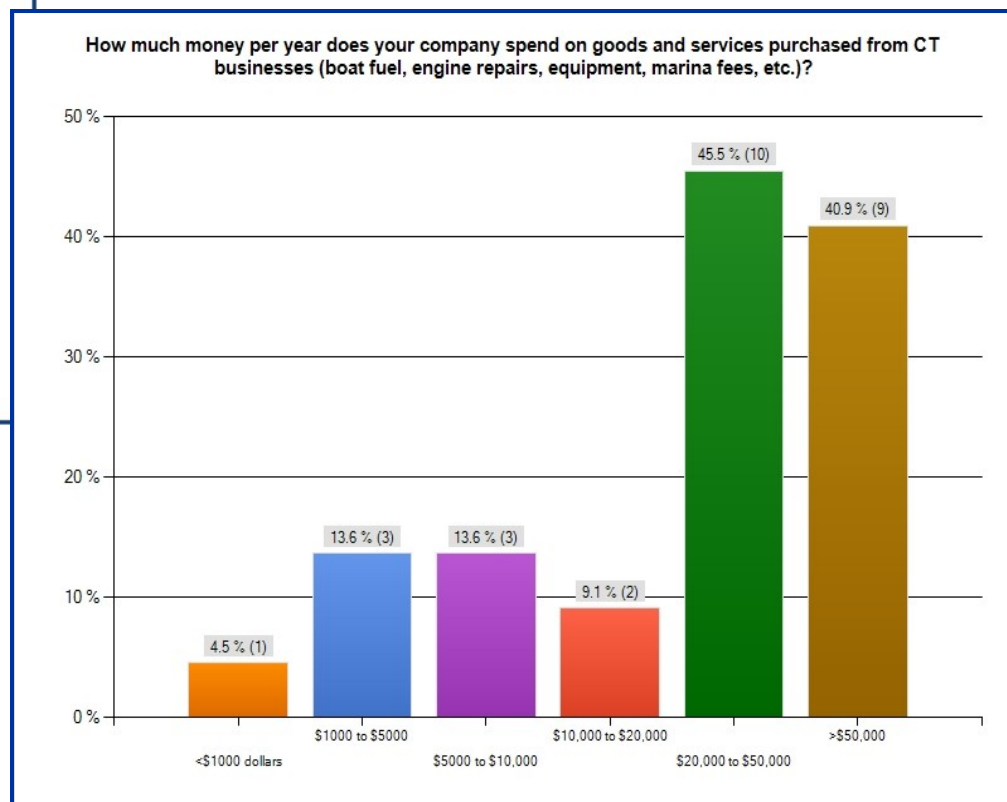
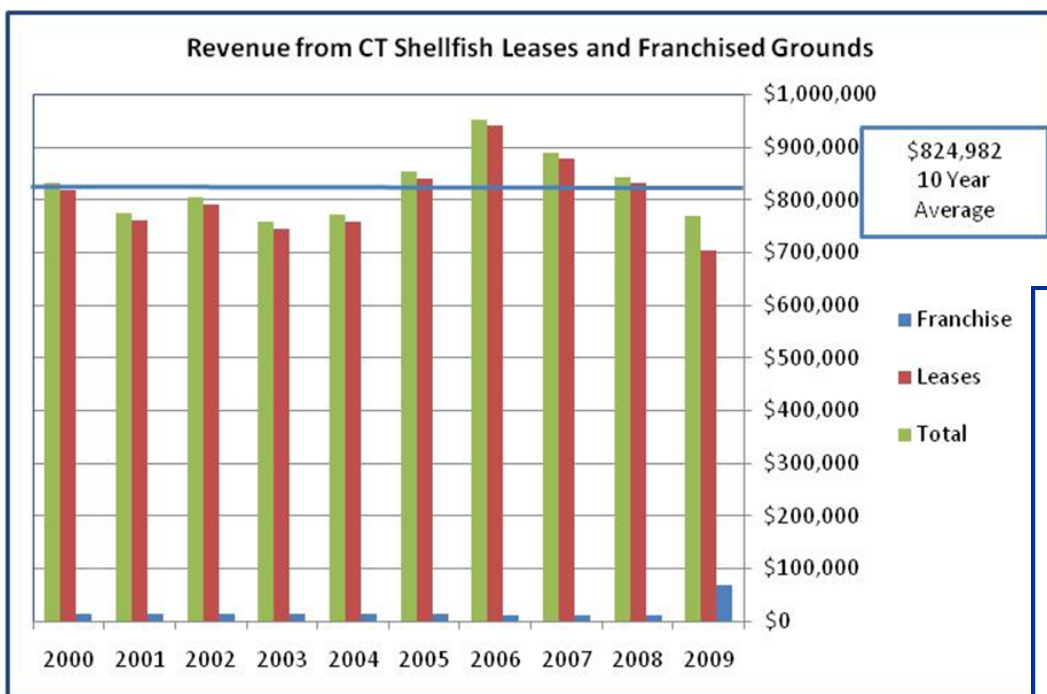
The CT Shellfish Sanitation Program will soon be required to further increase the types of monitoring that are performed to include virus studies, and a wider range of bacteriological and chemical analyses in order to meet the requirements of the program. The Bureau has begun sampling for *Vibrio*, a marine bacteria that can cause illness or death, and anticipates an increased need for *Vibrio* sampling in the upcoming fiscal year. The existing Bureau laboratory budget can absorb increased sampling without significant additional expenditure. However, in order to process these additional samples, the Bureau will need to fill vacant microbiology staff positions to meet the expanding regulatory requirements of the National program.



Performance Measure 2-Economic Benefits: The amount of revenue brought into the state from CT Shellfish Industry directly through Lease and Franchise fees as well as indirect benefits to the CT economy through other industries which benefit from the success of the CT Shellfish Industry, including marinas, which provide anchorage for shellfish boats, as well as boat fuel operations, refrigeration and transportation dealers and services, mechanical services, marine fabricators, etc.

Story behind the baseline: The CT Shellfish Industry pays Lease and Franchise fees for shellfish beds on an annual basis which generate an average of \$825,000 per year. The table on the left shows the annual revenue brought into the state through shellfish bed leases and franchises. The table on the right shows that 40.9% of CT harvesters spend >\$50,000 (mustard colored bar), per year on goods and services while 45.5% spend between \$20,000 and \$50,000 (green bar). Water quality in the shellfish beds must be monitored and regulated carefully in order to ensure that the product that is harvested from these beds is safe for human consumption. Without the CT Shellfish Sanitation Program to perform this monitoring, there would be no harvest allowed from shellfish beds, and no income generated for the state from leases and other shellfish-related economic benefits.

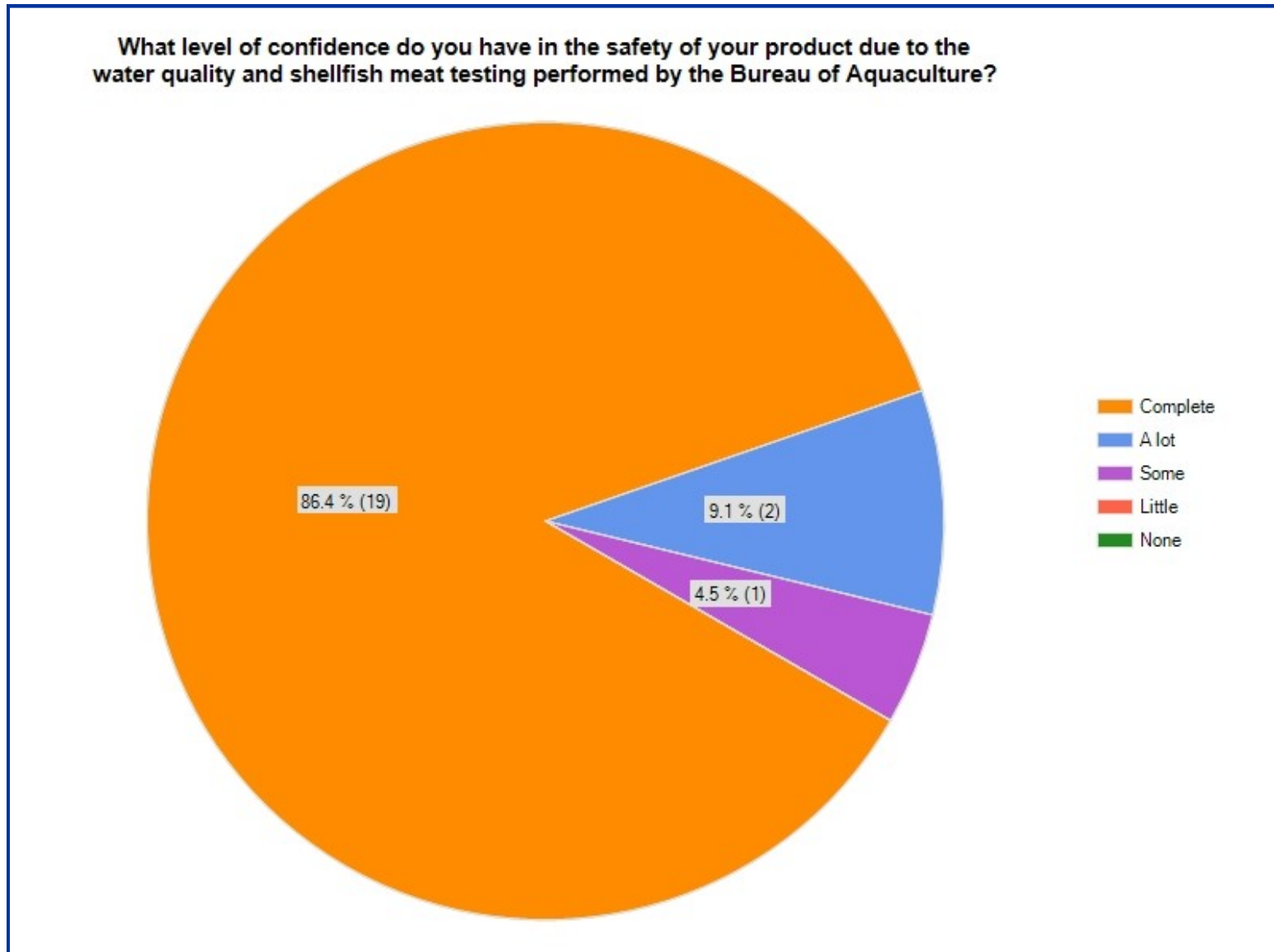
Proposed actions to turn the curve: In the face of ever-increasing federal regulations, the CT Shellfish Sanitation Program must continue to meet the requirements of the National Shellfish Sanitation Program, which is regulated by FDA. If the pollution source identification and water quality monitoring programs are not maintained at minimum levels in the growing areas, all harvest from these beds will be prohibited, and shellfish leases will be discontinued. The CT Shellfish Sanitation Program will soon be required to increase the types of monitoring that are performed to include virus studies, and a wider range of bacteriological and chemical analyses, including Vibrio and Paralytic Shellfish Poisoning testing in order to meet the requirements of the program.



Performance Measure 3-Industry Confidence: Percentage of shellfish harvesters who have “Complete” or “A lot” of confidence in the safety of their product due to water quality and shellfish meat testing performed by the Bureau of Aquaculture staff as part of the Shellfish Sanitation Program.

Story behind the baseline: The Bureau staff monitor water quality in the shellfish growing areas, open and close shellfish beds based on water quality, and license and inspect harvest operations and facilities. The pie chart below shows that 95.5% (orange and blue segments together) of shellfish harvesters have either “Complete” or “A Lot” of confidence in the safety of their shellfish product due to the water quality and shellfish meat testing performed by Bureau of Aquaculture’s Shellfish Sanitation Program.

Proposed actions to turn the curve: A 95.5% Confidence rating is very high, particularly considering that the actions the Bureau must take to open and close areas based on the water quality directly and immediately impact their harvest operations. This high rating shows that the industry understands and appreciates that the Bureau must take action to close areas to ensure the safety of the shellfish product in order to protect public health. The best way to maintain this high level of confidence is by transparent communications regarding pollution sources, water quality requirements, and water quality results, so that the harvesters have a better understanding of what the criteria are and if the environmental conditions are meeting the criteria.



Performance Measure 4-Industry Satisfaction: The percentage of harvesters who would rate the Bureau's service as "Good" or "Excellent" in a variety of responsibilities performed in support of the CT Shellfish Industry.

Story behind the baseline: The Bureau of Aquaculture staff administers the CT Shellfish Program by overseeing shellfish harvest in CT, monitoring water quality in the shellfish growing areas, opening and closing shellfish beds based on water quality, and licensing and inspecting harvest operations and facilities. The Bureau's service was rated "Good" or "Excellent" on 5 aspects of service by between 82.6% and 95.7% of shellfish harvesters.

Proposed actions to turn the curve: The CT Shellfish Sanitation Program is a multi-faceted program, which must perform a wide-variety of services in order to meet the requirements of the National Shellfish Sanitation Program, regulated by FDA. The CT Shellfish Sanitation Program must find ways to serve the industry in a more efficient manner as state program budgets and personnel are shrinking. A project is currently underway to improve the Bureau of Aquaculture website to make it more user-friendly, improve access to application and license change forms, sanitation forms, HACCP forms, etc. in order to make it easier for harvesters to make license changes and find information related to their operations. We have implemented a phone hotline recording service so that harvesters can call in and get information regarding closures and openings. This hotline service only serves harvesters in the Western region of the state at this time, but may be expanded in the future to serve harvesters in the Eastern region of the state. Please note: In the Eastern region, a number of municipalities share the responsibility for opening and closing areas; this may contribute to the lower ratings in the category.

