

Honorable Members of the Joint Standing Committee on Marine Resources,

I am Valy Steverlynck, an oyster grower from Freeport and the Industry Representative for the Review of the Water Quality/Public Health Division at the Department of Marine Resources (ME DMR).

Before I begin I would like to thank all of you for making this review possible in the last Legislative session. Moving LD 1318 along has been a great learning process for all, not always easy, at times trying and frustrating- yet how far we have come cannot be underestimated. We have worked hard, and here we are: This report is an invaluable set of recommendations from the three experts who spent a week in Maine (and many days at home) getting to know our coastline and our program. It is a solid document written by an expert team of people knowledgeable in National Shellfish Sanitation Program/ Model Ordinance (NSSP/MO) rules and FDA regulations.

For those of you who are not familiar with the process, the team of reviewers was jointly selected by DMR, Sea Grant and Industry and it was charged with generating a set of recommendations that all sides agreed to abide by from the very beginning. The time has come for us to implement the team's suggestions. Maine's shellfish industry is eager to work with DMR and FDA to ensure that the findings become a reality on the ground in the very near future.

Contrary to what you may have read, I am confident that this report can be implemented without putting Maine's program out of compliance with FDA rules. We will need to be creative: Municipalities, diggers and growers will have to step up to the plate and provide DMR with resources that may not be readily accessible to the agency. And DMR will have to be willing to accept this help.

The protocols suggested by the team are nothing novel: To the contrary, they are very similar to those used by all the other water quality programs in the country. The report basically outlines widely accepted depths for water sample collection and provides models for locating sampling stations that are used in every other state in the nation. Of special interest to industry are the review team's recommendations to establish an all tide minimum sampling depth of 18", to encourage the use of boats for accessing sampling stations, to add "sentinel" stations in the middle of the growing areas and to leverage existing resources such as municipal boats, wardens and volunteers.

As of late, a lot of discussion has centered around water sampling protocols. For those who are not familiar with water sampling, I will briefly describe why this seemingly insignificant step is so central to the program:

Water samples are used to determine the water quality of shellfish growing areas. These samples are collected at fixed locations called "sampling stations" that are established by the department to monitor possible pollution sources and assess the quality of the water in shellfish growing areas. The test used to process these water samples is designed to

measure fecal coliform levels. Growing areas are classified as “open” or “closed” based on a statistical average of the last 30 scores— or “P90,” in technical jargon. In the vast majority of water bodies, fecal coliforms tend to concentrate in the very top layer (that is, the surface of the water) and in the bottom sediments. When collecting a water sample that is representative of the overlying waters that shellfish feed from it is of utmost importance that one not take the sample from the very top layer (surface water), and even more important is that one not scrape the bottom or disturb and suspend sediments. This is why it is very difficult, even for an experienced sampler, to draw a valid sample in shallow water. (by “valid” I mean a sample that has not been contaminated with sediments). And that is why Industry agrees with the reports’ recommendation to change Maine’s minimum sampling depth for low-tide from 6” to 18” and is eager to see this suggestion implemented.

****PRESENTATION: SAMPLING TECHNIQUE:** demonstrate plunging technique: high tide (with hip boots) can be done. Low tide: SOP directives are to wade 6” and plunge bag 4-10” below the surface—can sample be collected in 2” of water without scraping the bottom and compromising the sample? NO. Even bag-swirling motion will re-suspend sediments. 6” is not adequate, but at least it is better than the 3” proposed by DMR in their March draft SOP.

Comment on **variability**: greatest variability derives from inconsistent field sampling techniques, not from use of multiple labs.**

Going back to the review, it is important to recap the factors that led to it. As I stated in my testimony last Monday, our state has lost 10,000 acres of productive shellfish areas in the last four years. When asked why, I gave three reasons:

1. Higher-than-normal rainfall in 2005 and 2006;
2. Coastal Development and the loss of green space to filter runoff and clean it of pollutants before it reaches our bays and estuaries; and
3. Inadequate sampling protocols used to collect water samples.

There is much debate about how much each of these factors has contributed to the loss of flats. One thing is undeniable, though: DMR’s sampling protocols -which were revised in 2000-2001 to collect more samples at low tide- have contributed to this trend. I can make this statement with relative certainty based on what I’ve learned from other states. For example: Our neighbor New Hampshire, a state that has experienced weather patterns much like Maine’s and faces similar coastal development pressures has *not* been subject to anything like the vast downgrade in growing areas that we have seen in Maine- and neither have the other New England states. We find additional clues in the table you’ll find in your packet:

If we compare the Standard Operating Procedures (SOPs) for water collection in all states in the nation, we can see that despite pronounced differences in shoreline topography and

tidal fluctuation among these states (2' tides in Florida vs. 8' tides in NH, for example), they all –with one exception, Maine- share very uniform protocols:

- **All these states sample heavily –if not exclusively- by boat.**
- **They all sample in a minimum depth of 1 ½ to two feet of water, even at low tide.**
- **They all actively discourage wading to sampling stations given that this practice leads to bottom sediment suspension and can easily contaminate a sample.**
- **They all monitor growing areas with *both* shoreline stations located in the intertidal zone *and* stations located in the middle of the growing areas – almost always in the subtidal zone. This is what I will refer to as the “sentinel station model” for the remainder of my presentation.**

And then we have Maine:

- **Maine is the only state in the nation that collects the vast majority of its samples by land.**
- **Maine is the only state in the nation that samples in less than 18” of water at low tide. In fact Maine allows samples to be drawn in as little as 6” of water at low tide.**
- **Maine is the only state in the nation where samplers wade in to collect the vast majority of samples.**
- **Maine is the only state in the nation that does not make a combination of close-to-shore and off-shore “sentinel” stations the keystone of its program.**

I’ve brought a diagram to illustrate the differences between the model most commonly used in Maine and the “sentinel” station model used by the rest of the nation:

****PRESENTATION: STATION LOCATION:** Show diagram of hypothetical bay with stations located only on the shoreline vs. the “sentinel station” model**

****Mention packet materials with real-life examples of both models:** aerial photos of ME growing areas at low tide, with all stations exposed. And map of Sarasota Bay in Florida with stations both along the shore and in the middle of the bay**

We see from these aerial photos that a great percentage of stations along the ME coast don't have any water during the lower tidal stages. If things were simple –but they never are– we would sample in 18” of water and not collect at stations when there isn't adequate depth, regardless of the tide. But that's when interpretation of rules and compliance come in: According to the NSSP/MO rules, states are required to collect samples “during all tidal stages.” Granted, states are given a lot of discretion in the interpretation of the phrase “all tidal stages,” and some states, such as Oregon, collect samples only during the half tides, both ebb and flood --while remaining in compliance with MO regulations (please note that Oregon has 9' tides, just like Maine). Maine, however, has chosen to take a more literal interpretation of the directive to sample in “all tidal stages”and encourages samplers to collect at the lower tidal stages- even if this means drawing a sample in as little as 6” of water. This practice of sampling in extremely shallow water, coupled with the fact that samplers have not always followed proper care and aseptic sampling technique, has skewed the data and contributed to the recent closures. (My comment about “proper care” refers to those instances when DMR staff have been seen drawing a sample after disturbing sediments and moving floating objects aside, thus compromising the integrity of the sample)

The program's compliance is of paramount importance to our shellfish industry: Not only do we care a great deal about the safety of those who consume our shellfish, we are also well aware that compliance is a requirement to conduct interstate commerce.

The need for all-tide data (however one chooses to define it) is also of great importance: water bodies are sometimes impacted by adversities that can only be found during the lower tidal stages. Areas that fall into this category can only be classified properly if this information is available. The availability of lower-tide data is a legitimate concern.

Yet compliance with the “all tide sampling” mandate shouldn't force our program into a position of following inadequate protocols.

What's the solution? You'll find it in the review team's report:

The report's recommendation that sentinel stations be added to Maine's growing areas is a win-win proposition: all-tide accessible stations could be adequately sampled at all tidal stages (including low tide), and would cover the compliance/low tide data issue.

**** PRESENTATION: ADVANTAGES OF SENTINEL STATIONS**

Show diagram of hypothetical bay with stations located only on the shoreline: no problem sampling at high tide.

Show where the water would be at low tide: stations are all exposed, samples cannot be collected- unless they are collected in inadequate depths.

Now add the sentinel stations in the middle of the bay: low tide sampling no longer a problem for this area: shoreline stations need no longer be sampled when very little water is present. Refer back to Sarasota Bay, FLA and Great Bay, NH: shoreline samples are not collected at low tide: depth is not adequate. **

The “sentinel station” model is not a new idea: *all* other states rely on that model when locating sampling stations. It is a very popular model because it permits programs to remain in compliance while ensuring that lower-tide samples are collected in adequate depths. Moreover, this model necessitates boat-sampling which, as was indicated in the report, is a preferable method for sample collection: Unlike wading from land, boat sampling ensures that no sediments are suspended prior to collecting a sample.

One seemingly insurmountable obstacle to this proposition is DMR’s lack of boats. And that’s where municipalities and Industry can play a critical supportive role: We, the members of the shellfish industry, harbormasters and wardens have come together to offer DMR the use of our boats for sampling. We will do whatever is necessary to make it possible for DMR to incorporate the “sentinel” model in its program. We are committed to supporting DMR as it embarks in this project to establish a minimum sampling depth of 18” and to add “sentinel” stations in the middle of bays and in the main flow of rivers. To make this possible, wardens, harbormasters and industry members are already at work compiling a list of the coastal areas that could be sampled by municipalities. As volunteers increase their already active role in supporting DMR, DMR staff will be able to focus more of their energy on interpreting data, conducting sanitary surveys and shorelines studies, writing reports and coordinating those volunteers.

The volunteer program will grow, no doubt, which causes some concern: In its response to the reviewers’ report, FDA has expressed concern with the loss of quality in the training if great numbers of volunteers are added to the program. The industry acknowledges that the volunteer coordinator will need additional help, but also wishes to point out that if other DMR staff are relieved of some of their current sampling responsibilities the net gain to DMR will be considerable.

I’ll close by saying that this review has provided us with the road map for a solution, a solution that is within reach if we all decide to pull in the same direction. Let’s not waste this opportunity. We have all worked extremely hard to get to this point and we cannot allow this valuable set of recommendations to be shelved. It’s time we put the past behind us and moved forward with the implementation of this report.

Thank you.

Valy Steverlynck
Industry Representative