**Department of Marine Resources Biotoxin Management Program meeting**

**Location: Ellsworth City Hall, City Council Chambers**

**Date and Time: April 8, 2013 from 1:00pm to 2:00pm**

**Present:** Meggan Dwyer and Kohl Kanwit from the Department of Marine Resources presenting on behalf of the public health program

**Frenchman Bay Partners**: Jane Disney, Chris Petersen, Bridie McGreavy, Emma Fox, Shannon White, Gary Edwards

**General Summary of the Meeting**

1. **Methodology and logistics:** The Department of Marine Resources is moving all mouse assays to the lab in Boothbay, instead of the Lamoine lab. The DMR will do High Performance Liquid Chromatography (HPLC) method at the Lamoine lab instead, which will allow them to run more samples and increase general efficiency. The mouse assay only allowed the DMR to run 60 samples at one time, while the HPLC method doubles the capacity and runs overnight. The mouse assay took an hour or two per sample depending on the number of samples and toxicity. The HPLC method takes fifteen minutes per sample and 50 can run in the machine on an automated overnight setting.

The switch to the HPLC method is only a change in monitoring, not the actual biotoxin threshold. The mouse assay required precision and there was a lot of error associated with the method, because rather than a measure the actual saxitoxin concentrations (like HPLC), the mouse assay was an indirect measure of toxicity dependent on other variables such as mouse weight and sample dilution. While the mouse assay method occasionally caused preemptive closures because there was a week in between samples, the HPLC method should increase fluidity between samples. Because each sample takes only fifteen minutes to run, the only limiting factor is the chemical supplies, which are less expensive anyway.

This year the DMR will sample the area, bring the sample to Lamoine, make the homogenate, and do the mouse assay at Boothbay on set days of the week. The HPLC will be run regularly as well, and can be run at any time in case of emergencies.

1. **Timeline:** The goal is to switch over completely to the HPLC method in the next year, and partner with Bigelow Labs once they get certified. Bigelow had some delays in the validation process, but they are under contract to get certified, and they are paying for their verification work.
2. **What other states and countries are doing:** The HPLC system is new, but the European Union is running it full-time for monitoring purposes. By the end of 2013, all EU countries have to switch to non-mouse methods. Canada also uses HPLC exclusively. Alaska has done all of the work to move to the HPLC method and will do a full switch soon. Maine is going to take the full switch more slowly and keep the mouse assay method going for another year because learning how to use the HPLC is a difficult step. The FDA does not yet have fully developed guidelines for the process.

The biotoxin monitoring methods do not relate to harvest or collection method. The FDA has started to create a set of guidelines for HPLC testing, which the Maine DMR has implemented. Maine DMR set up a technical advisory committee including Canada and Alaska programs to talk about the methods switch. The mouse assay method is still the primary management for the summer of 2013.

1. **The “statewide closures” mentioned in the initial proposal:** DMR representatives Kohl and Meggan agreed that the phrasing on the initial proposal was poor—it was meant to be a “straw man” statement to gauge reactions about closures and the methodology switch-over. The blanket closures are intended only for the offshore islands which aren’t considered commercially important by harvesters. The islands are “hotspots” for paralytic shellfish poisoning (PSP) toxins to be detected. The closures aren’t meant to prevent recreational harvesting; rather, they prevent Maine from having to institute an “eat at your own risk” policy such as Alaska has. Harvesters can request exception areas, which will allow the DMR to target sampling and keep the areas open which are important to harvesters.

While the mouse method is still the primary management for this summer, the combination of the closures around the offshore islands and the use of HPLC will make monitoring and biotoxin management a more practical process to manage for the DMR.

1. **Communication to the public and biotoxin closure monitoring:** The DMR is putting proposed closure maps on their website so that they are available to the public. There will be a fixed closure period once toxins show up; shellfish stay toxic for a while, so the monitoring will decrease in those biotoxin closure areas for awhile.

The DMR plans to use aquaculture lease sites as monitoring sites and to call on them when areas start to get toxic. They will use aquaculture site as line of defense for monitoring. The DMR wants to work with harvesters to keep areas open where they can, so harvesters aren’t forced into open areas. Everyone with a mussel harvesting permit from 2012-2013 received a letter about the proposed closures from the DMR.

1. **Communication about eelgrass restoration areas in Frenchman Bay:** Kohl and Meggan said that while they probably would not be able to get permission to put the Frenchman Bay Partners informal agreement with local mussel harvesters on the DMR website. However, Kohl mentioned that the Partners could ask the DMR webmaster to put a link to the FBP website on the DMR site.
2. **Volunteer phytoplankton monitoring:** The volunteer phytoplankton monitoring program will remain the same as in previous years. The DMR will still do training and ask for ASP/PSP testing on days with high toxic species counts. The new HPLC monitoring will help inform high counts from volunteers as well, with faster turnaround due to the on-house capabilities.
3. **Treatment of clam resources:** The DMR will be treating clam areas similarly. Mussels are the first concern because they show toxin contamination earlier than clams. With a mussel closure from high biotoxin levels, the clam areas will be more closely monitored and promptly closed if necessary. Harvesters can request exception areas as well.
4. **HPLC staffing:** The DMR is working out a partnership with Bigelow Labs, because Bigelow has more people trained to run HPLC—a chemist and an additional technician. Their testing program is called Bigelow Analytics. The workload-sharing with Bigelow will get worked out once they are officially certified through the FDA to do HPLC work for the state. The budgeting and sample allocation will get worked out once Bigelow is certified.

The DMR is training people specifically for the HPLC work; they plan to have three or four people (including a microbiologist) specifically trained for HPLC work. The DMR public health department is trying to add more depth to their staff for the future.

1. **Feedback on the proposal:** This was the second of three public meetings. Kohl and Meggan communicated that there have not been a lot of surprises in the process of getting the proposal out. The initial “straw man” proposal was not good—it scared a lot of people. However, after DMR representatives shared it out at the Fisherman’s Forum, the wording was changed after a lot of useful feedback.

Kohl said that harvesters were not very surprised at the nature of the proposal, as the mussel resource seems to be in decline. There have been large-scale local die-offs recently, and the DMR is not sure why. They took samples in for neoplasia testing, amongst other things, and there has been a recent and consistent observation that the mussels are dying in large numbers. There was a discussion about cyclical die-offs with mussels, but Kohl deflected the questions back to the feedback she’s been getting about the proposal.

There has not yet been a press release about the proposal. Bigelow did a press release about their side of the action—getting certified through the FDA for HPLC testing for the state. The DMR has hesitated on a press release because they are concerned about public perception of the biotoxin monitoring program proposal. There was a discussion about how the press perception of biotoxins in shellfish has gotten a lot better since a few years ago. There is a better understanding about why closures are made and how long it takes a site to naturally depurate.

The biggest surprise, Kohl said, is that the proposal has not been very contentious. The HPLC monitoring will make the closure process smoother for industry. Because the monitoring equipment and staff is being funded through federal grant money, there is no need for concern about getting their money’s worth for industry. The public health program’s monitoring money comes out of the general stream. The State of Maine is trying to streamline their expenditures, so while the DMR will try to contract summer monitoring positions through the general fund in the future, the HPLC monitoring was really the best option to make the most out of the federal grant money which runs out this year.

1. **Data availability:** Real-time data will not be available to the public because there are too many factors involved to explain the numbers or why a closure is made when the toxicity is just below the threshold level. The quohog fishery is the only one that gets any real-time data because they understand (as they have over the years) that it is a variable process. The DMR does not plan to disseminate the numbers to mussel harvesters because they do not have that same understanding.