

Aquaculture Advisory Council
October 14, 2011
Meeting Minutes

Attendees: Secretary Douglas H. Fisher, Mr. Dave Chanda (Commissioner Bob Martin), Mr. Rich Ritota (Acting Commissioner Mary O'Dowd), Dr. Dave Bushek, Mr. Gef Flimlin (Mr. George Saridakis), Mr. Bill Avery (Mr. Oliver Twist), Mr. Steve Carnahan, Mr. James Tweed, Mr. Paul Waterman, Mr. Walter J. Canzonier (Mr. Robert Munson)

In Absentia: Mr. Joe Constance (Ms. Caren Franzini), Dr. Robert Goodman, Mr. John Maxwell, Ms. Jeanette Vreeland, Mr. Gilbert Ewing Jr.

Public in Attendance: Mr. Russ Babb, Mr. Tony Bonfiglio, Dr. Gustavo Calvo, Mrs. Lisa Calvo, Mr. Bruce Friedman, Mr. Ned Gain, Ms. Betsy Haskin, Mr. Barney Hollinger, Mr. Bob Keogh, Dr. Janet Koscianski, Dr. John Kraeuter, Mr. Joseph J. Myers, Mr. Bill Riggan, Mr. Bob Shuster

Secretary Fisher called the meeting to order. Mr. Myers performed roll call. There is quorum for this meeting.

Sec. Fisher asked for a motion to approve the minutes from the April 2011 meeting and the minutes from the marketing subcommittee meeting in July 2011. Mr. Carnahan made the motion, which was seconded by Mr. Canzonier. All voted in favor and the motion passed.

Sec. Fisher introduced Lisa Calvo as the new aquaculture extension agent serving the Delaware Bay. Mrs. Calvo described her history working with members of the industry through the Haskin Lab and her work in oyster genetics and coastal education. Dr. Kraeuter noted that the grant for this position will last for three years and was contingent upon Rutgers supporting this position beyond year-three. Mrs. Calvo said her focus will be on shellfish aquaculture.

Sec. Fisher introduced the draft print copy of the Update to the Aquaculture Development Plan. Mr. Myers asked the Council to evaluate the layout and the list of contributors. Sec. Fisher commended the Council for their work on this project and pointed out that the document emphasizes the opportunities and potential of aquaculture over the roadblocks. The Lieutenant Governor is in charge of economic development in the State and the NJDA should be notified of any additional key contacts that can help move aquaculture forward to receive a copy. Mr. Flimlin asked about support for the Non-Insured Crop Disaster Assistance Program (NAP). Sec. Fisher said that the disaster assistance declaration has already been made. Mr. Myers said that shellfish are already covered under the NAP and discussed a recent effort in Connecticut to have oysters from managed seed beds covered under the NAP program. Mr. Flimlin said that frosts early in the spring that affect peach farmers also cause losses to clam hatcheries in Atlantic County. The peach growers have been covered but the clam growers were not covered by NAP. Sec. Fisher said that the NJDA would draft questions and submit them to USDA. Mr. Myers said that an electronic version of the Plan will be available after all of the final edits to the layout changes have been made. Mr. Canzonier asked that traditional oyster aquaculture not be excluded from the pictorial layout. Mr. Myers described the intended launch of the Plan Update and building a press event around the launch to generate as much interest as possible.

Mr. Friedman who has been in his role as Chief of the Bureau of Marine Water Monitoring (BMW) pollution strategy described his 22 years of experience in NJDEP working in marine enforcement and inspection and the initial aquaculture policy development and discharge exemptions. He is attending at request of the Council and the NJDA to discuss pollution prevention strategies and the shellfish growing area closures following Hurricane Irene. Consistent with NJDEP's transformation and stakeholder process he asked the Council for their input on how current water pollution policy impacts aquaculture and the needs of the industry. Sec. Fisher opened the floor to discussion. Mr. Canzonier put into perspective that BMW cannot make policy, but are very important

in administering the policy. This is a good opportunity to interact with BMW because shellfish are the primary driving force behind maintaining water quality. The restrictions on maintaining water quality for shellfish are more stringent than any other water quality program. Mr. Friedman said that his staff is well trained and capable of a number of water quality testing procedures. Fifteen thousand samples are taken across the state annually and 88-89% of the State's waters open to shellfish harvest. The remaining areas present a considerable area for progress and an opportunity to take a different investigative approach to see where further improvements can be made. Much of the closed areas are found in the northern part of the State in Raritan Bay. These are not easy fixed because the watersheds of these areas are impacted by many of the 206 combined sewer outflow systems (CSOS) in NJ, which does not include those in New York that impact New Jersey. Outside of northern NJ, additional CSOS are in Camden, Gloucester, and Trenton. It is estimated that \$8 billion is needed to fix these CSOS. A productive strategy is to look at isolated areas such as Wreck Pond and Red Bank where fixes to problems are possible. Some of the tools available in BMW to trace pollution problems include PCR where DNA technology is used to identify specific sources of contamination, optical brighteners that are used in laundry detergents, and fluoride detection. Resources can be allocated to focus on those pollution problems that are affecting aquaculture. BMW has been active in testing and water quality modeling in Barnegat Bay and also active in Wreck Pond which is responsible for numerous beach closures. The Commissioner is doing more to track down polluters and he also added a new position of a track-down coordinators.

Mr. Flimlin said that one issue is that clam farmers who have leases in seasonal waters are not allowed to work on leases out-of-season. Clam seed can be moved to leases that are in approved waters, but the issue is tied to the size definition of seed. Mr. Friedman said that similar issues surround moving below-market sized shellfish for conservation purposes. He would like to go back and look at shellfish policy with enforcement, NJDA, and FDA. His goal is to protect the industry yet not have the industry jump through unnecessary hoops. Mr. Avery said that prohibiting the movement of shellfish from less than approved waters inadvertently cost him money because it takes away his opportunity to sell larger seed. Mr. Tweed said that not moving from less-than-approved waters within six months from harvest is addressed on the NSSP model ordinance. Mr. Canzonier said NSSP model ordinance is guidance and the state converts this guidance to regulation. Mr. Friedman said that state regulations cannot be less stringent NSSP model ordinance. The discussions here can be shared with enforcement to be sure that the suggestions are enforceable. Mr. Canzonier said there is already a concept in Title 50 that recognizes the need to address sub-market sized oysters in Title 50, which may require additional legislative action. Mr. Hollinger said a study on Maurice River revealed that the water quality boundary line moving further down-river. This movement reduces the area available for tongers and a fecal contamination source was never isolated. Mr. Shuster said that antibiotic resistance results were coming back as wildlife as the source of contamination, but without isolation to a specific site. Mr. Hollinger said that the cause was erosion at mouth of river and controlling erosion may open shellfish beds. Opening of shellfish waters could be used as a justification for erosion control funding. Mr. Shuster said that another contributing factor is less meandering leads to a more direct flow of the river, which is supported by tracking salinity levels. Mr. Friedman said that a possible downgrade for upper Delaware Bay is also a possibility. Mr. Shuster said the possible downgrade is not in the same area as the mouth of the Maurice River. Mr. Friedman said that a downgrade of a small area may come from the annual reassessment. Mr. Hollinger asked if there would be different sampling in the next storm event. Sec. Fisher said the Commissioner very active in getting waters sampled in an effort to get waters reopened following Hurricane Irene.

Dr. Krauter said that a specific approach from marine enforcement remains an important missing piece of the pollution strategy from NJDEP. On most of the Atlantic Coast, much of the clam culture is done in shallow water. Most of the waters are closed around barrier islands simply because of the existence of a marina. Focusing in on more specific areas and better delineation may help to open up more areas to shellfish culture. As far as shellfish restoration, the best strategy is to get waters approved so that restoration efforts can follow, rather than sliding backwards. There are numerous areas closed and enforcement is not addressing them. The Council needs to know specifically what enforcement's plan is and to-date they have been fairly non-

responsive. Mr. Friedman said that water compliance and enforcement, rather than fish and wildlife enforcement would be the proper one to outline the plan that the Council is seeking. He has informed the Commissioner that there are numerous efforts in NJDEP, all working on this same issue but not working together. The solution is to have these different offices working together. The NJDPES permit to maintain the infrastructure is the leverage to have these various groups work together. Maps in Shellfish Appraisal Reports show a considerable closed area in red, especially in some shallow back bays or where marinas exist. This information does not differentiate between administrative closure and an actual closure due to sampling. Dr. Kraeuter said that if the administrative reason is because the waters are too shallow, sampling areas should be accessed by wading. Mr. Friedman said that classification is moving away from paper maps to a GPS/GIS coordinate system. An example of using better mapping is a broken sewer line in Ventnor/Lakes Bay which caused a contamination problem. Dr. Kraeuter said that more of a legislative issue is that when a downgrade occurs, someone is required by law to fix the problem to get the approved classification back. Mr. Friedman said that shoreline surveys should be done when a downgrade occurs. Dr. Kraeuter said that the tolerance for small incremental closures can have a significant cumulative effect. Mr. Avery asked if mosquito ditches need to have a catch basin. Mosquito ditches are a straight flow to the bay and cause unnatural heating instead of sinking into the marsh. Mosquito ditch design can be improved to stem their contribution to water quality downgrades. Mr. Friedman said that mosquito ditches are analogous to storm water drainage in their effect on having untreated water flow rapidly into the bay. Mr. Carnahan said that NJDEP provided funds to bring a number of water quality agents on staff at Rutgers and they are potentially a good source of feedback on water quality improvement. Water quality improvement is a task that should not be handled by only one agency. Mr. Friedman committed to improve water quality to protect and expand the industry. Dr. Calvo announced that a presentation will be given by the Atlantic and Ocean Counties and the State on mosquito control and ditching on Monday at 7:00 p.m. at the Atlantic Coast Shellfisheries Council meeting

Mr. Friedman presented the timeline of the events and results surrounding Hurricane Irene and Tropical Storm Lee and the resulting shellfish closures (presentation available upon request). This immediately preceded a fire at a sewage treatment plant in New York that impacted the Hudson River. Although the hurricane damage assessments did not match with the predictions; projected flooding, power outages, pumping station failures and sewage treatment bypasses necessitated the unprecedented statewide shellfish closure. The second wave of flooding in the Delaware River watershed from TS Lee compounded these problems.

Sec. Fisher commented on Virginia's decision to leave waters open and asked what would happen if someone getting sick on Virginia product entering New Jersey. Mr. Friedman said that tagging would have revealed the source of the shellfish and a press release would have been done identifying the source of the shellfish. The argument from Virginia was that the small area that remained open is undeveloped and had negligible risk of contamination. Other areas surrounded by development in Virginia were closed. In the future, it is doubtful that FDA staff will allow such an area to remain open in another storm event. Competing states in interstate commerce on an uneven playing field is a problem. Sec. Fisher said this became a huge advantage for Virginia. Mr. Ritota said that NJDHSS maintains a list of all shellfish closures which is relayed to field inspectors and county health agencies. If any tag reveals shellfish from closed areas, there would be enforcement levied against all companies involved in the trace back study. Mr. Hollinger said that his understanding is that there was no closure of waters in the State of Delaware, although flow studies show that most flow of the Delaware River flow goes to the Delaware side of the bay. Mr. Avery said that he lost 20% of his customers to Virginia. Mr. Friedman said that if the State of Delaware never sampled, then they may have never closed. All of the states should be on the same page and they should have closed. New Jersey should make the State of Delaware aware of the results found in New Jersey. Mr. Riggan said it appears that the State of Delaware did not even think of a closure. Mr. Ritota said he would look into claim of the reported State of Delaware non-closure and if this did occur, that would mean a major breakdown of FDA oversight. If he would have been aware of the closure, he would have explored the possibility of prohibiting those products from entering the State. Sec. Fisher said that New Jersey should not be penalized for doing things correctly.

Mr. Friedman reported that 60 man-days were logged from August 29 through September 26. There was a good partnership with the industry to do collect meat samples from the field. These collections would not have been possible otherwise. Mr. Ritota reported that clams at the depuration plants in north Jersey stop filtering because salinity was too low. The plant needed to add marine salt to the water in the depuration system to keep clams purging. Salinity monitoring is now part of the HACCP plant in the depuration plant when rainfall exceeds certain levels. This emphasizes the importance of doing meat sample testing in shellfish growing areas. Sec. Fisher asked if the data was presented in real-time. Mr. Friedman said the results that were received at approximately 2 p.m. were posted by 3 p.m. Mr. Tweed said that the concentration of sampling in the Delaware Bay was higher than sampling in the lower Delaware Bay and requested more testing be done in the lower Delaware Bay where some leases are being worked, where the current nearshore oyster culture is occurring and where ADZs will be located. Mr. Friedman noted this is not normal testing procedure and sampling was modeled after predicted effects of the hurricane. Sampling subsequently moved more offshore where even lower water quality was detected. Mr. Shuster also noted that all of the sampling was being performed by only four people. Mr. Tweed said that growers lower in the Delaware Bay where salinity is higher and there is more flushing seem to be closed based on data coming out of the Lower Bay. Mr. Friedman said that sampling coverage will be modified to better cover growing areas, but even with sampling close by, it is doubtful that the lower Delaware Bay could have been opened much sooner given the mandatory seven-day wait following the statewide closure. Mr. Hollinger asked if a flow study could be used to better predict closures and their duration. Mr. Friedman said his bay flushing may be applicable in future emergencies. Small pockets of acceptable testing levels cannot be opened prematurely because they cannot be geographically isolated and trends may show that good water quality tests can worsen in storm events. Mr. Hollinger said that this situation was overall a good learning experience. Although some aspects need to be improved, he appreciated BMW's willingness to work with the industry. Mr. Shuster said BMW will review the sampling protocol on both the Atlantic Coast and Delaware Bay. Sec. Fisher and Mr. Friedman commented that the watermen, although put in a difficult economic situation, were cooperative and understanding about the closure and the process to reopen waters. Dr. Kraeuter said that if the rest of the State worked as well as BMW did in this scenario, many of the problems that we have in aquaculture would not exist. Mr. Friedman said that a maintenance worker in BMW volunteered to help with sample collection.

Sec. Fisher introduced Dr. Dave Bushek, the new Director of the Haskin Shellfish Research Lab who also serves on the Council. Dr. Bushek gave a brief history and background on his work on shellfish diseases and certification.

Mr. Myers presented the perspective of Hurricane Irene from the perspective of the NJDA. The role of the NJDA was to serve as an additional communication point between industry and other state agencies and monitor activities in other states because of the anticipated economic impact. The NJDA also compiled information on financial assistance to cover both physical damage and economic injury. Although the physical damage to product or property did not occur, the industry is better prepared to enroll in the various USDA programs to protect against future emergencies. The economic assistance available to producers to deal with lost sales during the closure is available from the US Small Business Administration in the form of low interest loans. The NJDA met with the NJ Shellfisheries Association, the Atlantic Coast section of the Shellfisheries Council, and with a few Delaware Bay oyster producers to explain the various aid programs and how they apply to Hurricane Irene and future events.

Mr. Flimlin asked about the status of the request from the Council to support the initiative to include shellfish as specialty crops. Sec. Fisher said that the State of NJ is declining to pursue farmed shellfish as a specialty crop. Mr. Flimlin said that the East Coast Shellfish Growers Association is asking their membership in each state to pursue this designation. Sec. Fisher said that this decision from the State does not prohibit individuals in this Council from pursuing this initiative individually; however, he cannot get authorization to pursue this initiative on behalf of the Council. Dr. Kraeuter said that in cases like this it is sometimes other groups that oppose new

groups having access to the finite pool of funds. Sec. Fisher said this does not appear to be the case behind the decision.

Mr. Myers reported on the activities of the marketing subcommittee which met in July of this year. The specialty crop designation, H.R. 1176 was extensively discussed and guidance from the State to not pursue this came after the marketing subcommittee meeting. The structured problem solving process around marketing problems with hard clams is complete, which has been active for the past two years. The next steps are to formulate strategies and tactics which can be implemented. However, the recommendation from the marketing subcommittee is to have individuals outside of aquaculture, yet experienced in marketing, assist with the strategic thinking based on the results that the problem solving process has revealed. The groups that could be helpful for these steps are the marketing class at the School of environmental and Biological Sciences or the Executive MBA program in Rutgers Business School. Mr. Flimlin added that having the two classes compete against each other would be a possible caveat to spark competition as an incentive. Mr. Myers said the marketing subcommittee would reconvene if necessary.

Mr. Keogh asked if the problem solving findings apply to oysters. Mr. Myers said the process could be replicated with oyster growers because no findings from the hard clam process could be extrapolated to oysters. Mr. Keogh asked if there was any determination made about how big the demand for local, half shell oysters. Mr. Myers said it is a fair question because the path of growing aquaculture production can only go so far before prices are negatively affected. Mr. Tweed said that his sales are strong, but it still comes down to marketing because he still must convince buyers to choose Delaware Bay oysters over other oysters. Mr. Myers said that information on demand of oysters is not available from one source, but by pooling some secondary data sources and incorporating demographics and economic analyses, a reliable estimate of demand could be made. Mr. Keogh said that price maintenance is a concern to him as he gets into the business. Mr. Flimlin said that he has done oyster tasting, but hard clam tasting has not yet been successful. Dr. Kraeuter said clams and oysters are very different in the marketing end. Hard clams do not have the level of differentiation.

Sec. Fisher said that people understand Jersey Fresh and local food and the NJDA continues to build that connection. The NJDA has organized All-Jersey Dinners, Farm-to-School and Farm-to-Fork programs. Jersey Wines and Jersey Seafood are differentiated from Jersey Fresh. Sec. Fisher is trying to make Jersey Scallops the official state recognized seafood. Mr. Myers said some of the efforts he has in place focus on marketing the production process more so than the product. Mr. Myers said that there has been a small resurgence of hard clams in farmer's markets and he has been discussing developing a community-supported model for hard clam culture. Mr. Flimlin said he has looked at community-supported fisheries modeled after some of the CFS's in Maine. He has met with NJDHSS to outline the health requirements. He is working with the Garden State Seafood Association to host a "Responsibly Harvest Fish Dinner" at the Academy of Culinary Arts on November 14. This is based on the "outlaw fish dinner" held by Legal Seafood last year in Boston where media is invited to hear from the fishermen directly, instead from environmental groups about which fish to buy. There would be one held in south Jersey and another in Hudson County for the New York market. Sec. Fisher said that when NJ competed in the Great American Seafood Cook-off, product sustainability was the first question.

Dr. Calvo gave a presentation about the latest status of the Aquaculture Development Zones presentation (available upon request). There are encouraging developments that will allow ADZ leases to be administered into next spring. Mr. Keogh asked if other access points could be used. Dr. Calvo said that distant access points that require long travel distances down the beach would be a problem with shorebird interactions during the use-restricted times of the year. Outside of this part of the year, there would be no issue with beach traffic. Dr. Kraeuter noted that the current access road to the Cape Shore not a Rutgers-owned access road. Leaseholders will need to secure permission from the landowner. Sec. Fisher asked if the plans for the ADZ have been shared with the Audubon Society. Mr. Chanda said the staff wildlife biologists have been part of the plans for the ADZs since the beginning and he would be sure to share baseline shorebird research data directly

with Audubon. Mr. Keogh asked if there is any easement on state property from Route 47 to the Cape Shore. Mr. Chanda said that the State is always interested increasing access to the resource and would be interest in purchasing property in this area. Mr. Myers said the point is that leaseholders want to have options in case use of any private access road is rescinded. Mr. Babb said that the lease agreement does not guarantee access by NJDEP. Mr. Keogh asked if an application would be required for each ADZ. Mr. Babb said that a separate application would be required for each ADZ, along with a separate \$1,000 fee for each. Mr. Tweed asked if all ADZs would become operational along the same timeline. Mr. Babb said that would be true depending on the ability to get the necessary buoys and markers in place. Mr. Tweed asked about the progress on Tidelands assessing fees for activities outside of the ADZs as well as if the fee would be tied to square footage of actual structure or to the size of the lease. Mr. Babb said the assessment is tied to the square footage of the structure. Regardless of the philosophical differences that remain, significant progress at hand given the numerous years sent in developing the ADZ concept and with other permitting issues that are set to launch. Mr. Myers much of the delay arisen from arguing hypothetical issues, so the efforts of NJDEP staff by focusing more on implementing a program over winning arguments is commendable. Mr. Babb said that the lease agreement outlines that fishing rights are preserved, but separate statute allows for the recovery of fees if gear or product is damaged. Dr. Kraeuter requested that NJDEP present at the next Council meeting the latest results of the Cape Shore bird study.

Mr. Flimlin announced the release of conservation practice standards for shellfish culture from the USDA-NRCS, noting they are impractical for a farmer to implement. Mr. Myers said the reason for the emergence of these conservation standards remains unclear. They are based on many of the same practices that the NJDA tried to develop to help aquaculturists gain access to conservation funding, but ended up being used in a way that is not very beneficial to shellfish farmers.

The next AAC meeting is tentatively scheduled for January 27, 2012 and April 20, 2012. Venue for the next meeting would be in or around Trenton. Mr. Myers asked for a motion to adjourn. Mr. Canzonier provided the motion which was seconded by Mr. Ritota. All voted in favor and the motion passed.