

DRAFT Meeting Summary
Oyster Advisory Commission (OAC) Meeting
 NOAA Chesapeake Bay Program Conference Center
 Annapolis, MD
 4:00 PM – 6:30 PM
 May 18, 2011

LIST OF ATTENDEES

Commissioners Present:

William Eichbaum (Chair)	Vice President, World Wildlife Fund
Don Boesch, Ph.D.	President, University of Maryland Center for Environmental Science (UMCES)
Torrey Brown, M.D.	President, Intralytix; Board of Trustees, Chesapeake Bay Trust; Chairman, Oyster Recovery Partnership (ORP)
Don Webster	University of Maryland Extension
Bill Richkus, PhD	Versar, Inc.
Doug Lipton, Ph.D.	University of Maryland (UMD), Sea Grant Coordinator
Douglas Legum	General Partner, Real Estate Development
Delegate Tony O'Donnell	Maryland Delegate, Environmental Matters Committee; Legislative Sportsmen's Caucus 2001
Ken Lewis	Coastal Conservation Association (CCA)
Peyton Robertson	Director, NOAA Chesapeake Bay Office
Don Meritt, Ph.D.	University of Maryland Center for Environmental Science, Horn Point Lab (UMCES HPL)
Bill Goldsborough	Chesapeake Bay Foundation (CBF)

Commissioners Unable to Attend:

Brian Rothschild, Ph.D.	Montgomery Charter Professor of Marine Science and Technology, School for Marine Science and Technology, University of Massachusetts Dartmouth (UMASSD)
Senator Richard Colburn	Maryland Senator, Dorchester County
Dave Smith	Maryland Saltwater Sportfishermen's Association
Jason Ruth	Harris Seafood Co. LLC
Mark Luckenbach, Ph.D.	Virginia Institute of Marine Science (VIMS), Wachepreague Laboratory
Eric Schott, Ph.D.	University of Maryland Biotechnology Institute (UMBI) - Center for Marine Biotechnology
Ben Parks	Maryland Watermen's Association, Dorchester County
Russell Dize	Vice President, Maryland Watermen's Association
Mark Bryer	The Nature Conservancy

Other Meeting Attendees Present:

Maryland Department of Natural Resources (MD DNR): Mr. Mike Naylor, Mr. Steve Schneider, Ms. Becky Thur, Mr. Eric Weissberger, Mr. Mitch Tarnowski

Oyster Recovery Partnership (ORP): Mr. Stephan Abel, Mr. Steve Allen

Coastal Conservation Association (CCA): Mr. Larry Jennings

Morgan State University (MSU): Dr. Kelton Clark

National Oceanic and Atmospheric Administration (NOAA): Mr. Peter Bergstrom

Maryland Department of Agriculture (MDA): Mr. Karl Roscher

Maryland Environmental Service (MES): Mr. Josh Chapman

Southern Maryland Oyster Cultivation Society (SMOCS): Mr. Len Zuza

Chesapeake Bay Seafood Industries Association (CBSIA): Mr. Bill Seiling

MEETING SUMMARY:

Opening Remarks/Review Objectives/Approve February 2011 Meeting Summaries (Bill Eichbaum, Oyster Advisory Committee (OAC) Chairman)

Mr. Eichbaum welcomed the attendees and asked if any corrections to the February 2011 OAC meeting minutes were needed. No edits were requested, and the meeting minutes were finalized. Mr. Eichbaum also welcomed Mr. Bill Goldsborough, who would represent the Chesapeake Bay Foundation at future OAC meetings.

Public Comments

Mr. Eichbaum opened the floor for comments from the public. There were no public comments.

Oyster Sanctuary Goals and Metrics (Peyton Robertson, NOAA)

Mr. Robertson explained that an Oyster Metrics Team (Team) was established to develop metrics to measure the success of oyster restoration in the Chesapeake Bay. The Team is composed of State and Federal regulators as well as scientists to represent diverse viewpoints on oyster restoration. The Team has developed a draft oyster metrics white paper; this draft has been circulated to several members of the scientific community outside the Team, including some members of the OAC, for comment. The Team is now working to incorporate comments received on the white paper for presentation to the Sustainable Fisheries Goal Implementation Team (GIT) meeting on June 7th-8th.

Mr. Weissberger updated the group on the progress of the Oyster Metrics Team and the incorporation of comments into the white paper. He noted that opposing viewpoints are sometimes expressed in the comments, complicating the task. The Team decided that ecosystem services derived from oysters would not be measured directly, but be estimated based on scientific experiments since the values of the variables of interest (e.g. water quality) are the result of many factors, including oysters. Many comments expressed concern that a single quantitative measurement could not accurately describe improvement or decline of ecosystem services. Mr. Weissberger noted that population and habitat level metrics would continue to be measured directly.

Mr. Eichbaum opened the floor to comments on the progress of the Team's work. Dr. Meritt stated that in his comments on the white paper he had expressed a need for a broader focus that

includes oyster bars open to public harvest in addition to sanctuary bars. Dr. Meritt added that a second round of review from outside scientific consultants would be helpful. Mr. Eichbaum asked if all members of the OAC could be given the opportunity to review the draft white paper. Mr. Robertson said that he would distribute the paper to the OAC.

Dr. Meritt stated appreciation for the white paper's effort to include design criteria from The Nature Conservancy, however, metrics used would also need to be flexible to allow individualized site metrics. For example, recruitment figures would not be of much importance to bars in areas that do not receive natural spat sets. Dr. Meritt added that previous Federal oyster restoration efforts have sometimes been inefficient due to a lack of consideration for the unique characteristics of various local oyster bars. Mr. Robertson asked which metrics would benefit from individualization. Dr. Meritt responded that a comprehensive dataset existed for disease pressure throughout the Bay, as did datasets for spat set, growth and survival rates.

Dr. Boesch recognized the need for data on oyster populations, but suggested a tiered structure of monitoring for oyster population metrics, to prioritize monitoring needs, which must be balanced with restoration needs to realize the maximum possible benefit to oyster populations with the funding available. Mr. Robertson agreed, noting that oyster metrics would not be useful without budget considerations. Dr. Boesch replied that metrics must also produce data recognized by the public as being scientifically rigorous and reliable. Dr. Meritt cautioned that data produced may still be misinterpreted by persons not familiar with conditions unique to the Chesapeake Bay.

Mr. Robertson concluded by noting that previous collaborative efforts between State and Federal agencies, such as the Bay bathymetry project undertaken by the National Oceanic and Atmospheric Administration (NOAA) and Maryland Geological Survey (MGS) have served as a model for collaboration on oyster metrics.

Aquaculture Update (Karl Roscher, MDA)

Mr. Roscher introduced himself as the aquaculture coordinator for Maryland Department of Agriculture (MDA), noting that this position will be transferred to MD DNR later this year. Mr. Roscher began by introducing the two types of aquaculture recognized by MDA: water-column aquaculture, in which oysters are kept in cages or floats, or on-bottom aquaculture, in which oysters are grown directly on the Bay bottom with no additional equipment. Mr. Roscher noted that this differed from on-bottom clam aquaculture, in which protective nets are placed over clam beds.

Mr. Roscher continued with a timeline of advances in oyster aquaculture policy in Maryland, beginning with the 2007 Best Management Practices (BMPs) for oyster aquaculture. Most recently, the State has worked to streamline the aquaculture permitting process by consolidating responsibility for the review process in MD DNR and the U.S. Army Corps of Engineers (USACOE) only; currently, four State departments are involved in the permitting process as well as USACOE. The streamlining is anticipated to shrink the permit application review time to 120 days, as opposed to the 12-18 months currently required for review. In addition, the State is currently holding monthly meetings with USACOE to discuss the progress of aquaculture permit review. Potential applicants are provided with a checklist of information required to apply for necessary permits and examples of the drawings required for permit applications. A pre-screening process for permit applications has also been developed to eliminate permit applications for areas off-limits to aquaculture, such as sanctuaries and important submerged

aquatic vegetation (SAV) habitat. The permit application itself has also been revised to be easier to use.

Currently, there are 487 bottom leases operating in the Bay over 4583 acres, with 61 of these leases (consisting of 814 acres) currently classified as dormant; these dormant leases will be terminated unless the lease owner submits an aquaculture plan to MD DNR. Of the 487 leases currently active, 12 are growing oysters in the water column. Additionally, there are 41 bottom leases and 11 water column leases under review.

The expansion of oyster aquaculture in Maryland is inhibited by several obstacles. Aquaculture requires a large initial investment, and funding assistance has not been widely available. Shell required for aquaculture operations is also prohibitively expensive. More recently, there has been a shortage of triploid oyster seed. In addition, disease continues to be a problem among Bay oysters. Maryland is working to eliminate these issues by continuing to search for sources of shell, boosting production of triploid oyster seed, increasing monitoring of disease in Bay oysters, identifying additional sources of funding to support aquaculture, and undertaking an outreach program to educate the public on aquaculture.

Mr. Robertson asked what MDA's sources of triploid oyster seed were. Mr. Roscher replied that several sources of triploid oyster seed from Virginia were used. Dr. Meritt added that the hatchery at the Horn Point Laboratory (HPL) currently produces limited numbers of triploid oyster seed, but is looking to increase production of triploid seed to meet the large demand for the seed. Dr. Richkus asked what the reporting requirements were for aquaculture leases. Mr. Roscher replied that lease-holders are required to report their production annually.

Del. O'Donnell noted that he supported the streamlining of the aquaculture permitting process, noting that he has supported legislation to this effect for several years, but noted that there may be resistance to expansion of float aquaculture in Maryland for aesthetic reasons, and that historically, the Maryland Department of Health and Mental Hygiene (MD DHMS) has been very critical of water column oyster aquaculture. Del. O'Donnell expressed his support for water column aquaculture, noting that oysters in floats are able to reach market size in only one year (compared to three for on-bottom oysters) and are less susceptible to disease pressure.

Mr. Eichbaum added that water column aquaculture would be important to the future of the oyster industry in Maryland, though he recognized that there would be resistance from both the public and the oyster industry to the practice, however, the consolidation of responsibility for the permitting process would help expand aquaculture in all forms. Del. O'Donnell noted that the assertion that only two agencies would be involved in the aquaculture permitting process was somewhat misleading, as other agencies would still be involved, albeit to a lesser extent. Mr. Roscher agreed, and noted that the system would continue to be refined over time, and added that public outreach and education about float aquaculture would help to ease resistance to the practice.

Dr. Meritt clarified that the Oyster Recovery Partnership (ORP) rather than the University of Maryland (UMD) were working to produce triploid oyster seed at HPL, and added that early successful entrepreneurs in the aquaculture industry would create interest in the industry and provide a template for new aquaculture businesses. Mr. Webster agreed, noting that the most successful aquaculture techniques so far have not been those favored in the past. For example, triploid oysters grown in bottom cages were not widely grown prior to trials using non-native

triploid oysters. Mr. Robertson noted that the recent bathymetric survey of the bay could be used to identify areas well-suited to aquaculture; a map similar to the one recently produced for sanctuary areas could be produced to highlight these areas.

Mr. Webster noted that public resistance was currently a significant roadblock to the advancement of oyster aquaculture, having led to the rejection of permits for several water column aquaculture operations. Mr. Eichbaum asked where water column operations were typically located. Mr. Roscher replied that the majority of water column aquaculture operations were in the Coastal Bays, rather than the mainstem Chesapeake Bay. Mr. Goldsborough noted that the Chesapeake Bay Foundation (CBF) supports water column aquaculture, and suggested educating the public about the water quality and shoreline erosion benefits realized with float aquaculture. Del. O'Donnell suggested outreach to MD DHMH as well, which has been skeptical of nearshore float aquaculture operations.

Industry update (Frank Marengi, DNR)

Mr. Marengi presented MD DNR data on the 2010-2011 oyster season. In general, although the number of oyster surcharges paid was nearly equal to the number paid in the previous season, oyster harvest declined, with a 28% decrease in the total reported bushels harvested, a decline in the average number of days fished each month (down to 7.1 from 8.4 days), a decrease in the average number of days fished for all gear types except hand tongs and sail dredging, and an increase in the percentage of oyster surcharge payers reporting zero harvest (up to 19% from 12% in the previous season). Oyster prices were generally higher this past season, ranging from \$30 – \$40/bushel (bu), up from \$22 -- \$30/bu in 2009-2010. Reporting generally improved with 97% of surcharge payers submitting reports, up from 80% last year. Of the reports submitted to MD DNR, 72% contained bar-specific information, up from 68% in the last season.

Despite the opening of many new sanctuaries in the 2010 – 2011 season, geographic patterns of oyster fishing generally did not change, with 33% of all harvest occurring in the upper and middle Tangier Sound (an area which produced 51% of harvest last season). In addition, harvest reserve areas within sanctuaries, open for the 2010 season only, were popular, with 2,819 bu being harvested from these areas. Mr. Naylor noted that harvest reserve areas were oyster bars in new sanctuaries which were kept open for the 2010 season only because they had previously been seeded by the industry prior to the announcement of the expanded sanctuary system. Dr. Meritt added that some harvest reserve areas were not on sanctuaries; therefore the 2,819 bu figure overestimates the total harvest from sanctuaries.

In addition, MD DNR planted 11,346 bu of disease-tested oyster seed from Virginia in the Maryland portion of the bay, in cooperation with ORP. Seed was planted in four counties: Anne Arundel, Calvert, St. Mary's, and Charles. MD DNR was also able to recover 25,000 bu of oyster shell from a disused shell planting site in Crab Alley Bay. This shell was placed in Broad Creek, an area of high natural recruitment. MD DNR expects to be able to obtain an additional 5,000 bu of shell from the Crab Alley Bay site.

Dr. Meritt asked what the actual oyster harvest in the 2010-2011 season was estimated to be. Mr. Naylor replied that the industry estimates that the reported oyster catch represents about 50% of the total harvest. Dr. Meritt added that only 214 bu were caught per oyster surcharge paid, and suggested that the industry work with the academic community to help boost harvests. Dr. Lipton noted that the 214 bu figure was somewhat misleading, since 19% of oyster surcharge

payers chose not to harvest at all, and few watermen working oyster bars rely on oysters alone as their sole source of income.

Mr. Legum stated that oyster shell would be needed for habitat restoration, and suggested that MD DNR search out Federal funding, supplemented with State and industry funds, to purchase oyster shell, adding that oyster shell was plentiful in Florida, to the point where it is crushed and added to chicken feed to add calcium. Mr. Marengi replied that MD DNR is searching for sources of shell, however, it is often prohibitively expensive. Mr. Naylor added that MD DNR has a permit to recover previously-planted shell, however, extensive water quality monitoring is required following recovery due to concerns about re-suspended sediment resulting from recovery, hampering the progress of these efforts to recover shell. Del. O'Donnell asked what methods MD DNR used to recover shell. Mr. Naylor replied that shell was retrieved using mechanical means, including dredges.

Del. O'Donnell asked for an update on the current status of MD DNR's efforts to dredge fossil shell at Man O'War shoals. Mr. Naylor replied that MD DNR had submitted an application to USACOE to dredge fossil shell at Man O'War shoals, as required by law. MD DNR has not since made an attempt to expedite action on the permit; it is believed that the permit would not be approved at this time. Mr. Naylor added that recreational fishermen continue to be critical of the proposal, though the dredging now has the support of CBF.

Mr. Webster noted that last season's harvest, even when doubled to account for unreported catch, was still low when compared to previous years, and noted that the higher prices seen this year were likely due to decreased production in Louisiana following the oil spill. Mr. Webster added that interest in aquaculture was growing in the industry, with members of the Maryland Oystermen's Association expressing significant interest in aquaculture at a recent seminar at HPL.

Mr. Eichbaum asked how oyster catch was distributed amongst oyster surcharge payers. Mr. Marengi replied that five to six surcharge payers reported between 2,000 and 3,000 bushels each, and six to eight reported catches in the range of 600-800 bushels. The majority of surcharge payers caught only a few bushels. Mr. Eichbaum suggested that this data be attached to the minutes for the meeting.

Del. O'Donnell expressed discomfort at profiling the oyster industry using data collected by MD DNR, as it does not represent the value of the experience and equipment possessed by watermen, which can be valuable resources for oyster restoration. Dr. Boesch noted that data on the makeup of the oyster industry would be useful, and is not intended to marginalize the value of watermen working on oyster bars. Mr. Robertson stated that the data could encourage the transition to aquaculture, since it suggests that the role of the wild fishery in the oyster industry is declining. Dr. Lipton stated that the market would encourage acceptance of oyster aquaculture over time.

Dr. Meritt noted that the wild fishery would continue to be important to the oyster industry, but the limitations of the wild fishery would necessitate aquaculture. Mr. Eichbaum agreed, noting that both economic and ecological restoration of the oyster population must each be pursued in Maryland. Del. O'Donnell stated that many Marylanders seemed to be under the impression that a moratorium on oyster harvesting would revive the oyster population, including members of the OAC, and added that while the transition to aquaculture was needed, the continued existence of

the wild fishery is also essential for successful oyster restoration. Mr. Eichbaum replied that all members of the OAC recognize the process by which the OAC makes recommendations, regardless what their personal beliefs may be.

Dr. Meritt added that oyster habitat is currently severely degraded, and that a large-scale habitat restoration effort, on the scale of tens of thousands of acres, using natural shell, would be needed to restore the oyster population; restoring a series of small locations would prove to be ineffective.

Army Corps of Engineers Harris Creek Project (Eric Weissberger, DNR)

Mr. Weissberger presented an overview of the oyster habitat restoration project currently being undertaken by the USACOE in Harris Creek. Although USACOE has used fossil shell in past habitat restoration efforts, current efforts mainly utilize alternative substrate, due to limited availability of shell. The Harris Creek project will use granite, with a layer of shell deposited on top. The height of each artificial reef will vary between one and two feet, and the top of each reef will be at least 8 feet below the surface. USACOE has investigated each potential restoration site with sonar, and ensured that each site does not currently contain existing oyster reefs (a problem in previous years). USACOE will finalize the restoration plan and request bids from contractors in early June, with the bid being awarded in July, and construction beginning in the winter.

USACOE has said that any feedback from the OAC on the restoration would be appreciated. Based on feedback from the Talbot Co. oyster committee and Mr. Russell Dize, who represents the Maryland Watermen's Association on the Tidal Fisheries Advisory Commission (TFAC) and the OAC, the Turkey Neck restoration site has been identified as an unsuitable location due to a deposit of shell at the location which could be retrieved for future restoration; USACOE is currently looking into reclaiming shell from this site. Mr. Dize has also expressed opposition to the entire artificial substrate restoration project. Mr. Naylor stated that Mr. Dize's opposition was based on concerns that the reefs would snag gill nets and trot lines, since the proposed reefs would vary in height across each restoration area. Mr. Goldsborough suggested that this topic be revisited, and noted that all oyster restoration, by its nature, creates reefs that can snag fishing and crabbing equipment. Mr. Abel noted that oyster habitat restoration traditionally incorporates mounds of substrate into the restoration area.

Dr. Richkus asked what the budget for the project was. Mr. Naylor replied that the budget was \$1 to \$2 million. Dr. Meritt asked why spat-on-shell oysters were planned to be placed on top of artificial substrate, noting that a significant amount of spat would slip between pieces of substrate suffocating the spat. Mr. Abel added that a significant amount of shell is needed to completely cover artificial substrate, and some shell is invariably lost in this type of restoration. Del. O'Donnell asked why USACOE did not send a representative to collect feedback and respond to questions concerning the project. Mr. Eichbaum added that the USACOE's schedule did not seem to leave ample time for changes based on feedback from outside groups to be incorporated into the restoration plan.

Dr. Brown asked why a restoration project with the potential problems discussed would be undertaken when a restoration project with methodology proven effective could be used. Mr. Lewis noted that the USACOE representative who presented the project at the Sport Fish Advisory Commission (SFAC) meeting had said that the restoration methodology had indeed

been proven effective. Mr. Robertson noted that USACOE may not be able to wait for affordable shell to become available, since funding for restoration in this fiscal year may not be available in the next fiscal year.

Mr. Eichbaum stated that the OAC did not have enough information to comment on the plan. Del. O'Donnell added that the OAC should not be listed as a group contacted for feedback on the project. Mr. Eichbaum said that he would get in touch with the USACOE restoration project contact to ensure that the OAC is not listed as being having been contacted for feedback.

Open Discussion

Mr. Abel noted that watermen paying oyster surcharges were qualified to receive compensation for participation in bar rehabilitation programs, which may have encouraged surcharge purchases. Dr. Boesch asked how many watermen participated in these programs. Mr. Abel replied that 488 boats were part of the effort. Mr. Eichbaum noted that this may also inflate estimates of the numbers of watermen working oyster bars. Mr. Webster added that some oyster harvesters choose to pay the oyster surcharge to show support for the oyster industry.

Dr. Richkus noted that Virginia was considering turning down \$2 million in funds for oyster restoration, and asked if Maryland would be able to use these funds if they were not accepted by Virginia. Mr. Goldsborough replied that CBF has been pushing for Virginia to accept the funding, since it would almost certainly be cut from the budget entirely if turned down.

Public Comment

Mr. Len Zuza, Southern Maryland Oyster Cultivation Society (SMOCS), stated that Maryland should allocate funding to community aquaculture programs, which could undertake restoration projects on a large scale, and provide aquaculture education programs similar to those provided by the Coastal Conservation Association (CCA), CBF, and ORP. Mr. Zuza also suggested broadening the Marylanders Grow Oysters (MGO) program to include float aquaculture, noting that community aquaculture programs could improve public attitudes to float aquaculture if awarded funding for public outreach and education programs. Mr. Eichbaum suggested that the OAC discuss the role of community groups in oyster restoration at the next OAC meeting.

Mr. Larry Jennings, CCA, asked if shell from oysters harvested in Maryland were being recovered for restoration. Mr. Abel replied that programs did exist to recover oyster shell from Maryland shucking houses and restaurants, but that supplementary shell is still needed.

Closing Remarks

Mr. Eichbaum noted that the next scheduled OAC meeting was in August, and suggested that the OAC schedule a July meeting to discuss the issues brought up during the May meeting. MD DNR will work with the OAC to schedule a July meeting.

Meeting adjourned at 7:00