

Meeting Summary
Oyster Advisory Commission (OAC) Meeting
Maryland Department of Natural Resources (DNR), Tawes State Office Building
Annapolis, MD
(6:00PM – 9:00 PM)
July 25, 2016

LIST OF ATTENDEES

Commissioners Present:

Kelley Cox (Co-Chair)	Phillips Wharf Environmental Center (PWEC)
Scott Eglseder (Co-Chair)	Eglseder Wealth Management Group, Inc.
J.D. Blackwell	38° North Oysters
Robert T. Brown	Maryland Watermen’s Association
Kelton Clark	Morgan State University (MSU)
Ron Fithian	Kent County Commissioners
Bill Goldsborough	Chesapeake Bay Foundation (CBF)
Jeff Harrison	Talbot County Watermen’s Association
Steve Hershey	State Delegate
Bill Kilinski	Charles County Watermen’s Association
Ken Lewis	Coastal Conservation Association (CCA)
Jim Mathias	State Senator
Johnny Mautz	State Delegate
Jim Mullin	Maryland Oystermen’s Association (MOA)
Ben Parks	Maryland Watermen, Dorchester County
Jason Schmidt	Talbot County Seafood Heritage Association
Eric Schott	University of Maryland Center for Environmental Science (UMCES)
Angie Sowers	U.S. Army Corps of Engineers (USACE), Baltimore District
Ann Swanson	Chesapeake Bay Commission
Aubrey Vincent	Lindy Seafood

Commissioners Unable to Attend:

Deborah Rey	State Delegate
Don Boesch	University of Maryland Center for Environmental Science (UMCES)
Peyton Robertson	National Oceanic and Atmospheric Administration (NOAA) Chesapeake Bay Office

Other Meeting Attendees Present:

Maryland Department of Natural Resources (DNR): Secretary Mark Belton, Deputy Secretary Joanne Throwe, Mr. Dave Blazer, Mr. Dave Goshorn, Mr. Chris Judy, Ms. Jodi Baxter, Mr. Mitch Tarnowski, Mr. Steve Schatz, Mr. George O'Donnell

Oyster Recovery Partnership (ORP): Mr. Ward Slacum, Ms. Emily French, Ms. Kate Cwiek, Ms. Karis King

Chesapeake Bay Foundation: Ms. Rachel Lemberg, Mr. John Surrick, Mr. Rob Beach, Mr. Tom Zopler, Ms. Jennifer Herzog

Chesapeake Bay Commission: Ms. Bevin Buchheister

Chesapeake Bay Savers: Mr. Tyler Bennett

Coastal Conservation Association (CCA): Mr. David Sikorski, Mr. Larry Jennings

Congressman Andy Harris' Office: Ms. Denise Lovelady

Phillips Wharf Environmental Center (PWEC): Ms. Carol McCollough

Delegate Hershey's Office: Ms. Erica Howard

Maryland Department of the Environment: Ms. Kathy Brohawn

Maryland Environmental Service (MES): Ms. Kate Meade, Ms. Christine Holmburg, Ms. Maggie Cavey

National Oceanographic and Atmospheric Administration: Ms. Stephanie Westby

Past Commissioner: Mr. Doug Legum

Bay Journal: Mr. Tim Wheeler

Citizen: Mr. Bob Whitcomb, Mr. Charles Denton, Mr. Lani Hummel

Handouts:

- Meeting Agenda
- July 11, 2016 Draft Meeting Summary
- Harris Creek 3-year check-in results
- Overview of Oyster Restoration Work Group
- Oyster Restoration Work Group Presentation
- Fall Survey Data Summary for Tred Avon
- Presentation - Fall Survey Data Summary for Tred Avon
- Presentation - Tred Avon Restoration Plan Overview and the 8 Acre Plan
- Presentation - Tred Avon River Oyster Sanctuary
- Don Boesch Letter

Note: Meeting agendas, handouts and approved meeting summaries will be available on the OAC webpage:

<http://dnrweb.dnr.state.md.us/fisheries/management/?com=oac&page=meetings>

Action Items from the 7/25 meeting:

- DNR will provide the Commission with the complete draft DNR 5-Year Oyster Review Report including the data appendices by July 31st or sooner if possible. **(Action Item Completed)**
- DNR will provide data on where current oyster license holders are living. **(Action Item Completed)**
- A presentation will be provided to the OAC at the August 1 OAC meeting regarding the pertinent information on the Tred Avon from the complete 5-year Report. **(Action Item Completed)**
- Secretary Belton will address questions regarding whether it would be possible to open some sanctuaries where Federal funds have paid for restoration to oyster harvest. He will also review information regarding USACE financial support for sanctuaries and what that means for future fishing opportunities. **(Action Item Completed)**
- DNR will consider whether they would be able to provide data on total oyster harvest broken down by catch per unit effort (CPUE) per NOAA Code harvest reporting area. **(Action Item Completed)**

Action Items from 7/11 meeting (not addressed as of 7/25):

- DNR will work with waterman, USACE, and NOAA to set up a field meeting in Harris Creek to investigate and solve the high spots that are causing problems to boaters in Harris Creek.

Topics for Discussion for Future Commission Meetings:

1. DNR will provide data to the Commissioners to assist with identification of where oyster sanctuaries would be unlikely to be successful so that the Commission does not spend time looking at these locations. (DNR has provided Fall Survey data, but additional discussion may be needed)
2. The problem of boats running aground in shallow water created during oyster reef restoration.
3. Potential future sources of shell for restoration projects. Mr. Mullin suggested that the Commission could work on getting several specific dredge permits for obtaining shell.
4. Recommendations that were made by the OAC in past years.
5. Land use patterns along the Chesapeake Bay shore and how land use affects oyster populations and the commercial fishing industry.
6. Economic and cultural issues related to oyster harvests and sanctuaries.
7. Preference of oyster spat for various substrates.
8. Presentation by Virginia watermen about the Virginia program.
9. Recommendations for future practices (i.e. Rotational harvesting)

10. Shucking House recommendation

MEETING SUMMARY:

Welcome and Introductions (Mark Belton, DNR Secretary)

Secretary Belton opened the meeting and the meeting attendees introduced themselves.

Meeting Summary Approval (Kelly Cox, Co-chair)

Ms. Cox asked for the approval of the July 11th, 2016 meeting summary. The summary was approved as written by the Commissioners.

Presentations:

Secretary Belton reviewed the 2014 Chesapeake Bay Agreement that was signed by New York, West Virginia, Virginia, Pennsylvania, Delaware, Washington D.C., and Maryland. The first Agreement goal includes a commitment to restore oyster populations in 10 tributaries in the Chesapeake Bay; Maryland and Virginia committed to identifying and restoring five tributaries in each State to historic oyster population levels by 2025. So far three tributaries have been selected for restoration in Maryland (Harris Creek, Little Choptank, and the Tred Avon). Restoration in Harris Creek has been completed and restoration in the Little Choptank and Tred Avon Rivers has been started.

Restoration in the Tred Avon is the current topic for discussion at this meeting. The Tred Avon project work that was planned by the USACE on 8 areas was delayed in order to provide the OAC with the opportunity to review information related to the project and to make recommendations based on the data.

- Ms. Westby gave a presentation on the status of the NOAA large scale oyster restoration projects in the three Chesapeake Bay tributaries that were selected for restoration. She explained the role of the interagency workgroups and the process for assessing whether the restoration goals for the tributaries were being met.
- Mr. Judy gave a presentation on the data from the 2015 DNR Fall Survey and other oyster population data that has been collected in the Tred Avon River. He also provided a summary of baywide oyster data to place the Tred Avon status in context with the rest of the bay.
- Ms. Sowers gave a presentation on the US Army Corps of Engineers (USACE) role in the Tred Avon Oyster Sanctuary Restoration. She discussed the plan for restoring 8 acres of oyster bottom (areas scattered throughout the Tred Avon that total 8 acres) which are currently under review by the Commission.

Discussion on recommendations for the Tred Avon Oyster Restoration Project (OAC members)

1. Mr. Eglseder noted that Ms. Westby presented data that showed that Harris Creek's Reef #18 (built with granite) has 3 times the oyster density of any other Harris Creek site. He asked why granite is not being used for the restoration plans at the Tred Avon if granite works well. He asked if there is a difference in cost of various types of material (substrate) that are used to construct oyster bars (granite vs. mixed shell)?

Ms. Sowers explained that the difference between the cost of shell and granite is small. The locations, reef configurations, and substrate to be used for the restoration project was worked out with stakeholders in spring 2015. USACE planned the reef construction to take into account concerns about the use of granite in the Tred Avon River where it had the potential to disrupt crab trotlines.

2. Mr. Schott asked if more spat were planted at the Harris Creek's Reef #18 compared to other sites and if that would explain a higher oyster density. He noted that characteristics to the site (in addition to the type of substrate used) should also be considered as factors related to its success.

Ms. Sowers explained that shell compacts and breaks down while granite does not. The Granite used in the Harris Creek's Reef #18 had a lot of spaces on and around the stones where oysters could become established, so in this case the substrate may have been a factor.

3. Mr. Fithian asked about the size of the rock placed at site #18 and about the use of a similar substrate in Tred Avon. He noted that historically, when slag or stone is packed tightly it does not allow for the oyster larvae to pass through.

Ms. Sowers clarified that the rocks used are a size that fits through a screen of 3" to 6". Stone has been used in the Tred Avon at three sites.

4. Mr. Clark asked about the adaptive management mechanism used for assessment and how it is used in the Tred Avon. He asked for clarification regarding the definition of adaptive management

Ms. Westby stated that adaptive management is learning from the past to improve on the future (i.e. Information from Harris Creek for example would be applied to the planning of future restoration projects). Ms. Sowers explained that the Tred Avon has not reached the point in time when an adaptive management approach would be applicable; the site will be monitored in 3 years and again in 6 years and the lessons learned from the monitoring would be taken into consideration at that point.

5. Mr. Goldsborough noted that oyster seed planting has continued in the Tred Avon in areas that did not require the placement of substrate for restoration. He asked if the reason for holding up the completion of substrate placement on 8 acres by the USACE in the Tred Avon was because there was a concern about substrate placement but not about oyster seeding.

Mr. Belton replied that substrate restoration work in the Tred Avon was put on hold so that the OAC would have time to look at the information from the 5-year report and make recommendations regarding restoration based on this and other data. The review and recommendations regarding restoration in the Ted Avon do not need to be limited to concerns about the substrate to be used (although only the placement of mixed shell on 8 acres was put on hold).

6. Mr. Goldsborough asked about the level of commercial oyster harvest in the Tred Avon since the sanctuary was put in place in 2010.

Mr. Judy replied that there has been an increase in harvest in the Tred Avon. Increased harvest is generally related to an increase in spat and survival.

7. Mr. Brown noted that the project was halted to allow the results of the 5-year study to be considered in the decision process, giving the committee the best science available. Mr. Brown pointed out that the Committee had not yet seen the 5-year study that was set to be completed in July. In light of this, Mr. Brown asked Ms. Sowers to explain why the USACE was advertising for bids for the work that had been put on hold.

Ms. Sowers replied that in order to prepare for the end of the Federal fiscal year (September 30th), the USACE had to make the bid available for pre-solicitation planning purposes just in case the work was agreed to. The solicitation can be pulled if the work is not approved. If USACE had not done this at this time they may have lost the chance to retain the funding.

Secretary Belton stated that the 5-year report will be released to the public by July 31st and the complete report (which includes data from all of the sanctuaries) may be available to the OAC members on Friday, July 29. It was important for the Commission to start to review the data before the report was released because of the funding time constraints and the USACE August 5th deadline for the decision on whether the last 8 acres in the Tred Avon would be completed. Committee members have been emailed all of the pertinent information relating specifically to the Tred Avon from the 5-year report.

8. Mr. Harrison asked why the thickness of substrate to be placed in the Tred Avon River was reduced from 12 inches to 6 inches.

Ms. Sowers replied that based on work performed in Virginia, they have observed that with 6 inches of oyster shell there is enough vertical dimension to gain benefits. The placement of 6 inches costs less than the placement of 12 inches.

9. Mr. Harrison asked if NOAA had any pictures of how well the Florida shell was working as substrate in Harris Creek. He also asked if spat on clam shell had been documented by video in Harris Creek.

Ms. Westby said yes, there is video available online that documents the Florida shell substrate in Harris Creek but there is no video of clam shell that she knows of.

10. Mr. Harrison inquired about the Tred Avon fall survey in regards to the Harvest Bottom numbers in comparison to the sanctuary.

Mr. Judy stated that he would have to look at that information more closely to give Mr. Harrison a proper answer but stated that the information was included in the 5-year report.

11. Mr. Schmidt asked why if the rock substrate is being covered by 6-12 inches of shell, is the rock substrate material important.

Ms. Sowers replied that the rock with the spat on shell was placed haphazardly which adds to the heterogeneity (variation of surfaces) of the restored surface area. She noted that the data from the 5-year report showed that 100% of Harris Creek meets the minimum requirements: 15 oysters per square meter and oyster coverage of over 30% of the bar.

12. Mr. Blackwell asked how many oysters were planted per square meter.

Ms. Westby explained that when spat on shell from the hatchery is planted many die on the boat traveling to the placement site, during initial placement, and within the first year of placement. The number of spat on shell planted was calculated by working backward from the desired end result of 50 oysters per square meter and estimating how many would die before the first year.

13. Mr. Blackwell noted that Mr. Judy had discussed the growth of market sized oysters in the Tred Avon since the establishment of the sanctuary and asked the number of market sized oysters per square meter. He also noted that the Tred Avon appears to be growing oysters of all sizes in areas with no restoration and asked how the Tred Avon compares to the 15-50 oysters per square meter at Harris Creek that has received \$27 million worth of restoration efforts.

Mr. Judy stated that the estimate of numbers of market sized oysters per square meter has not been updated since the Patent Tong Survey was performed in 2013 therefore recent data aren't available. He referenced a chart from his presentation that illustrated that 2013 oyster density and explained that there were some sites that had 15 oysters per square meter or greater but there were also several sites that had less than 15 oysters per square meter. Mr. Judy stated that size data is included in the Fall Survey.

Ms. Sowers noted that several sites in the Tred Avon were visited in spring 2015 that did not have oyster or shell on them. Ms. Sowers stated that they are attempting to restore and expand the habitat and that there are only a few functioning reefs remaining in the Tred Avon which is a broodstock limited tributary, meaning that there is a low abundance of mature oysters.

14. Mr. Kilinski asked what areas contribute spat to the Tred Avon. He also asked what effect disease would have on the Tred Avon.

Mr. Judy stated that there is no way to exactly link a source of broodstock to a population of spat. Mr. Judy replied that based on past observations multiple years of dry weather can cause an increase in Dermo and MSX intensities. But disease rates can't be predicted, so any future impact on the Tred Avon has to be based on past performance. The Tred Avon, compared to the rest of the Chesapeake Bay, is in the mid-range for disease and mortality, unless a drought occurs. Mr. Judy advised that disease impacts could be important if dry years persist.

15. Mr. Fithian stated that historically there has been a shell planting program in Harris Creek and Little Choptank and these tributaries have been the most productive oyster producers in the Chesapeake Bay. Recently \$26 million has been invested in restoration and the creation of sanctuaries when the historic practices were shown to have succeeded for a fraction of the cost. Mr. Fithian asked why the successful historic practices were abandoned and replaced with practices which place concrete and stones which cause ships to run aground. Mr. Fithian stated that fresh shell is the best substrate and when shucking houses were more commonplace fresh shell was more readily available. For the last 10 years nothing has been done to the bars (i.e. no seed areas) and the current practices are moving away from practices that used to work.

Secretary Belton replied that the funds were spent to create oyster sanctuaries with different goals than public fisheries areas. The goal for the oyster sanctuaries is to create and restore the oyster populations to specific levels, and to create habitat on a large scale level.

16. Ms. Swanson noted that in the Tred Avon River there are 2.5 acres which have been completed, 16 acres which have been partly completed, and 8 acres on hold. In addition 70 acres have been seeded with oyster which is work that is ongoing. Based on the material that was sent to the OAC, the density and biomass of oysters in Tred Avon has increased, mortality has decreased and more shell is present. Also, in adjacent fishable areas there has been an increase in harvest. Ms. Swanson asked if the current task of the OAC is to decide if the 8 acre portion of the project should be completed and also asked if there was any other information which the OAC should know in order to make that decision. Ms. Swanson recommended, based on the information which has been received so far, staying the course; the information is not compelling enough to stop the project.

Secretary Belton agreed that there are many steps to the completion of the Tred Avon project. Eight acres were put on hold but there are steps beyond the restoration work on the 8 acres which are still in the planning stages. He noted that progress is being made in the other tributaries which were chosen for restoration: Harris Creek is completely done, while Little Choptank and Tred Avon are still in process of completion.

17. Mr. Schott noted that the goal of the sanctuaries is to allow for the oysters to mature

and to stay in place to provide spawning stock for the region of the Chesapeake Bay. There are hydrodynamic models available which use the best science available to determine how far larvae produced in the Choptank Complex could travel and where it could go based on major weather patterns.

Ms. Sowers noted that historical work indicates that the Tred Avon does not receive natural spat from the Chesapeake Bay. Hydrodynamic Modeling also suggests that the Tred Avon does not receive natural spat flow from the other tributaries.

18. Delegate Mautz asked if the plan for the 8-acres was changed since the plan was reconfigured and also asked what group decided on the changes; also, regarding the shallow water issue he asked who took part in planning the design of these areas.

Ms. Sowers stated that the locations for the 8 acres have not changed but other parts of the plan are in the planning phase. The tributary plan is a coordinated effort between the Department of Natural Resources (DNR), ORP, USACE, NOAA, and the scientific community who made the decisions while taking in to account feedback from outreach with residents as well as through discussions with the Coast Guard regarding boat traffic flow. If sites were identified as serious issues for navigation, the area was removed from the plan. USACE performed the outreach for the impacts of the plan, but the original plan was largely based on work which was completed by NOAA with the help of DNR (i.e. bottom mapping, population surveys).

19. Delegate Mautz asked if there was an official team which designed the plan and how much the 8-acre project will cost.

Ms. Sowers replied the Maryland Interagency Workgroup (MIW) was responsible for the 8 acre plan and about \$1 million out of approximately \$2 million in available funding is planned for this work.

20. Delegate Mautz asked if there would be another project for the remaining funds.

Ms. Sowers replied that there is \$2 million in funding for the program and construction. Along with the 8-acres there is the NEPA process to approve the rest of the restoration plans; an Environmental Assessment (EA) is being completed for approximately 60 acres and a public meeting is being held for future work. The total restoration target includes seed only areas and substrate restoration areas on 146 acres.

21. Delegate Mautz asked if, since the areas would be part of the federal restoration investments, it would be permanent sanctuary and he asked if a map would be available.

Ms. Sowers agreed that the area restored would be part of the permanent sanctuary. Ms. Sowers replied that a map of the tributary plan is available in the handout. USACE only has \$2 million in funding currently, and \$11.5 million is needed to complete the substrate work. There is also a cost share with DNR for spat; USACE is paying for the reef material.

22. Senator Hershey asked about the progress regarding the five tributaries in Virginia. He noted that Maryland has identified over 900 acres for restoration while Virginia has identified considerably less area. He asked who monitors the equitable participation between the states.

Ms. Westby replied that Virginia has identified three tributaries and they are 10 acres away from completing their first tributary (the Lafayette River). For the Lafayette River, 90 acres need to be restored but a lot has already self-restored due to the high spat set. The Piankatank and the Lynnhaven Rivers are the remaining two tributaries which have not had acreage goals established yet. Ms. Westby replied that the Fisheries Sustainability GIT would be having the conversation regarding equity between Maryland and Virginia. She noted that the OAC member Peyton Robertson is the chair of the GIT.

Secretary Belton stated, regarding the two additional tributaries that Maryland needs to identify, that the OAC should consider tributaries which could reach restoration on their own while keeping fiscal concerns in mind.

23. Senator Hershey asked about the percentage of the bars in sanctuary and also asked if there would be an opportunity for taking bars back into the public fishery.

Mr. Belton replied that the third task that has been identified for the OAC is to look at the 51 sanctuary areas in Maryland and to make decisions regarding whether to change the status of any of the sanctuaries based on the science and the requirement that 20-30% of the bars are designated as sanctuary. Since currently 24% of oyster grounds are designated as sanctuary there is room for suggesting changes.

24. Senator Hershey asked for clarification regarding the USACE funding.

Ms. Sowers explained that the USACE has approximately \$2 million in current funding from Congress and if the funds are expended the USACE will have to go back to Congress to ask for more funding. Senator Hershey asked what Congress looks at when making their decision to appropriate funds. Secretary Belton replied that Congress looks at obligation rate and what progress has been made towards the overall restoration goals. This particular project has a Federal Executive Order (EO) which allows federal funding to be spent on restoration and an approved plan and agreement between the states and the federal partners. As long as the plan is in place and progress is made on the project, the need of Maryland competes with other needs from around the country. Ms. Sowers stated that another major factor is significance and this project has a National and Regional significance. Ms. Westby added that the USACE provides the substrate but NOAA also provides \$1 million towards the seeding costs. NOAA has been successful in obtaining discretionary funding because there has been significant progress made on the project.

25. Mr. Goldsborough made a recommendation that the state invest in a business development venture (i.e. loans, grants) to increase Maryland shucking capacity and produce its own shell (rather than buying shell from other states). Besides placing material there is also an issue with the siltation rate which the oyster bars are fighting

against; the bay bottom survey in the early 1980's showed that there was 962 acres of shell bottom in the Tred Avon River and in 2008 it was reduced to 241. Mr. Goldsborough also recommended that the Commission discuss developing recommendation for actions that would help keep the silt on the land.

26. Mr. Harrison asked for a clarification regarding the different methods used to determine the amount of oyster bottom. Mr. Harrison asked if more areas have been placed into sanctuary than is necessary because the total area identified as oyster bottom has been over estimated.

Mr. Judy replied that in the 1970's the amount of oyster bottom was determined by dragging a microphone and picking up the vibrations; in 1906 a similar method was used with chains. Now sonar is used but there is an issue of false positives. One fact which is certain is that there has been habitat loss from silt accumulating on the bottom. He noted that for the purpose of mapping the bottom, some survey methods draw a box around areas of bottom in the Bay that are similar in type, but in other methods the patches of bottom are all that are mapped. The former method over estimates the amount of habitat compared to the other method. Therefore the acres of actual oyster bottom can be much less than the acres of charted oyster bottom, depending on the methods.

27. Mr. Schmidt stated that the watermen are not opposed to the sanctuaries but they are opposed to the methods that are being used to create the sanctuaries. There are a lot of unknowns which is a major concern with the project moving forward. Sections of three of the four rivers in the Choptank Complex have been taken for sanctuary, leaving one river which is currently being overfished. Sanctuaries which have been restored with federal funds are permanently designated as off limits to oyster harvest which greatly reduces the oyster grounds for the area. Mr. Schmidt asked if the Tred Avon project could be moved to another river since harvest area concerns have not been addressed. He also asked why the first three sanctuaries were not spread farther apart.

Secretary Belton pointed out that it has been recommended that the 4th and 5th tributaries not be located near the first three. He noted that there will be five sanctuaries in Virginia to be able to glean useful information from. He also assured the Commission that most of their questions would be answered in the context of the full report.

28. Mr. Schmidt asked if there is a possibility for rotational harvesting on the sanctuaries and specifically on the Tred Avon sanctuary where restoration has been federally funded.

Secretary Belton replied that rotational harvest could be a recommendation that is made by the OAC and he agreed that this could be a win-win scenario. Regarding the Tred Avon, research needs to be conducted to determine if the River can be removed from sanctuary status as federal funds have already been used in parts of the sanctuary; the rule for use of federal funds and permanent sanctuary status will be investigated.

29. Mr. Blackwell asked what the consequences would be if the restoration project was completed. Would the areas be sanctuaries in perpetuity were oyster harvest could not

take place? He also asked what the consequences would be of not completing the 8-acres.

Secretary Belton replied that Maryland has an obligation to develop 5 sanctuaries as outlined in the Chesapeake Bay Agreement. If the Tred Avon tributary is not restored than a new third tributary will need to be selected.

30. Mr. Schott called attention to the letter from Mr. Boesch (attached to this meeting summary). In this letter Mr. Boesch presents reasons why he believes that there is no evidence to not stay on course with restoring the remaining 8 acres. Mr. Schott pointed out that it is too early to conclude that there has been success with the Tred Avon project that has already been built because it takes time for a restoration project to be successful.
31. Ms. Swanson noted that the Chesapeake Bay Commission (CBC) works on appropriations at the federal level with Congressional Delegates so she is very familiar with the consequences associated with using federal funding for restoration projects. She explained that the Congressional Delegation takes into account the interests of the states and stakeholders. She has observed that disinterest in the federal project by the state and stakeholder (or recommendation to reprogram funds) may result in the Congressional Delegation becoming hesitant to distribute more funds to a particular project. She warned the Commission that the USACE oyster funds are in a delicate balance and it should not be assumed that the funds for the Tred Avon can be used elsewhere if the project does not move forward. Congress no longer has earmarks and it is now harder to get funding and the project would have to regain the respect of the Congressional Delegation in order for funds to be put back into the project if the 8 acres are not completed.
32. Mr. Mullin stated that he is opposed to the large sized granite stones that the USACE has used as substrate because trotlines and drift nets get caught on them.
33. Mr. Brown stated that he is opposed to the 8 acres and shallow water projects that are planned for the Tred Avon River in their current format and he is concerned that Maryland has completed more sanctuary work than Virginia has completed. He recommended that the whole restoration project be re-evaluated and the current OAC make its own plan.

Secretary Belton stated that the commitment that was made by Maryland when they signed the Chesapeake Bay Agreement cannot be changed by the OAC. Regarding the current plan, watermen and citizens from the local area were able to provide input for the placement, including the substrate in the Tred Avon. As the OAC moves forward it is fully expected that the commercial watermen will be heavily involved in planning in the future. It is correct that rotational harvest will not be allowed in sanctuaries which have been restored using federal money, however recommendations for allowing rotational harvest in the remaining sanctuaries is encouraged.

34. Mr. Fithian noted that sediment on oyster bottom is a problem and that commercial watermen are looking for a solution (i.e. cleaning the shells off and raising the beds up). He stated that there is not a lack of fossil shell and that he is opposed to the use of stone as substrate as it is replacing the proper substrate which has been around for millions of years.
35. Mr. Goldsborough stated that he believes that rotational harvest is a good way to manage the public fishery but not sanctuaries. Rotational harvesting will not replace all of the ecological benefits of a sanctuary. Mr. Goldsborough suggested considering rotational harvesting as well as planting seed.
36. Ms. Cox asked how the bars are split (i.e. are the 8 acres all in the sanctuary). Ms. Sowers replied that the sanctuary is everything on the inside of the indicated line.
37. Mr. Eglseder noted that the expenditure of federal oyster restoration funds will result in the sanctuaries being set aside as sanctuaries in perpetuity. He asked at what point (at what level of federal funding expended) in restoration process does this occur? Mr. Eglseder pointed out that if the sanctuaries are already permanent; there is no reason for the Commission to object to using the federal funds to restore the final 8 acres. This would allow the Commission to develop recommendations on ways to use the remaining federal funds more productively. One question which is currently being investigated is an option to reimburse the federal funds so that Maryland could return the area to the public fisheries designation; an attorney is investigating the legalities. Mr. Blackwell asked about the extent of the areas which would be designated sanctuaries in perpetuity; does this area include the entire area of the Tred Avon where reefs have been constructed, or would the sanctuary include only on the specific areas which received the federal funding. Secretary Belton replied that the attorney is also investigating the answer to this question.

Public Comment

Mr. Legum noted that the recent influx of federal and state funding for oyster plantings and substrate improvement has resulted in successful oyster restoration. He stated that there is no reason to not use available federal funds to continue this work. Mr. Legum agreed with Mr. Fithian's idea of encouraging the establishment of shucking houses in Maryland to provide fresh shell for substrate.

Mr. Newberry stated that the Tred Avon project should not be considered until the full 5-year report is released. Mr. Newberry expressed concern that boats have run aground on the restored reefs in Harris Creek and that \$26 million has been spent on the project. If Harris Creek fails (i.e. disease impacts) it is highly likely that all three tributaries will fail. Success of the Harris Creek project has yet to be seen. Mr. Newberry also expressed concern that the Ted Avon project is being pushed forward for the sake of obtaining more Federal funds. Mr. Newberry noted that the approach to oyster restoration that was used in the past (the seed and shell approach) worked and he asked why this old practice cannot be continued using the remaining money. Mr. Newberry urged the OAC to err on the side of caution.

Next Meeting

Ms. Cox stated that because the OAC could not come to a decision regarding the Tred Avon project, a meeting will be held on August 1st.

Ms. Sowers asked what additional information the Committee would require in order to make a decision.

Has the restoration that has already been completed in Harris Creek been successful?

1. Mr. Schmidt indicated that he would like to see that oyster populations are growing and reproducing on their own in Harris Creek. Secretary Belton pointed out that although the Harris Creek substrate placement is complete; the 6-year monitoring period is not complete so this information will not be available. Mr. Schmidt replied that at least the 3-year monitoring should be complete.

What Can the Federal Restoration Funding be Spent On?

2. Mr. Schmidt asked if the federal funds could be used for a different project in Maryland. Will there be funding available to reseed in the future if the sanctuaries are not successful and not self-sustaining? Ms. Sowers stated that planning for a new restoration project takes 3-4 years, and an additional 3-4 more years would be required to set up the funding. The science led to the decision of where the sanctuaries should be placed.
3. Senator Hershey asked for clarification regarding what the federal funds associated with the current USACE oyster restoration project can be spent on. Ms. Sowers replied that the federal funding is specifically for ecosystem restoration. If the Tred Avon project is not completed the funds would most likely be shifted to Virginia restoration. If the Tred Avon work is completed then the remaining funds will be spent on further habitat to be restored in Maryland.
4. Mr. Eglseder asked if federal money must be expended specifically on the 8 acres. Ms. Sowers replied that any sites within the sanctuary can be restored using the federal funding. Mr. Sowers stated that the completion of the substrate placement work is contingent on NEPA work for the shallower area, which is currently pending public review and comment as well as DNR approval. If those obstacles are overcome the money could be spent in other places besides the 8-acres.

How Will the Navigation Problems in Harris Creek be Addressed?

5. Senator Hershey asked if there was Federal funding available for the boat grounding issues that have occurred in Harris Creek. Ms. Sowers stated that the federal money that USACE receives is for habitat restoration only. Senator Hershey asked who could assure that there would be for money to address the grounding issue. Ms. Sowers stated that it would be the contractors who constructed the reef. Secretary Belton stated that the claims are sent to the contractor. Mr. O'Donnell stated that so far there have been 12 claims filed by 11 people; five have been settled with several more recommended to be settled, two were dismissed due to lack of information, and one was found to not be

caused by the stone placed in that area. Senator Hershey asked if there was a proactive solution. Senator Hersey expressed apprehension regarding the grounding situation. Ms. Sowers stated that adjusted heights and surveys are in the works as well as site visits to identify the problem areas.

Ms. Sowers assured the Commission that the Tred Avon reefs will not be as shallow as the Harris Creek reefs. In planning the configuration of the Tred Avon project the USACE reached out to the community for input on navigation and put in place safe guards to assure that the Tred Avon project will avoid creating any issues.


The next OAC meeting will be held on August 1st, 2016 at 6pm at the MD DNR Tawes State Office Building.

The meetings will focus on the Tred Avon River. The Committee will develop recommendations on whether or not to request that the USACE continue restoration work. An additional meeting will be held before August 5th if necessary in order to finalize the Committee recommendations.

Mr. Goldsborough suggested that DNR provide a presentation to the OAC with the pertinent information regarding the Tred Avon from the complete 5-year Report.

July 24, 2016

TO: Scott Eglseder and Kelley Cox, Co-Chairs Oyster Advisory Commission

FROM: Donald F. Boesch 

SUBJECT: Commission recommendation on oyster restoration in the Tred Avon River Sanctuary

Because of a pre-existing commitment that requires me to be out-of-state, I am unable to attend tomorrow evening's meeting of the Oyster Advisory Commission on this topic. In my next-best effort to fulfill my obligation as a Commissioner, I have reviewed all materials distributed in advance of the meeting and herein offer my perspectives on the matter. I request that you take these into consideration in your attempt to form the consensus of the Commission. Please feel free to share my perspectives as appropriate.

Restoration of the remaining acres in the Tred Avon River Sanctuary should proceed as planned. As I understand the task before the Commission on Monday night, it is to recommend whether to complete the remaining eight acres of 24 acres¹ of oyster reef restoration in the Tred Avon River sanctuary as specified in the Tributary Plan,² terminate these activities, or modify them. The question of whether the sanctuary itself should be decommissioned or reduced in extent is not before the Commission at this time, but might be considered under the third task assigned to the Commission after we receive the 5-year Oyster Management Review from the Department of Natural Resources.

I see no evidence in the materials provided the Commission that would suggest that the completion of the planned restoration activities should be terminated or modified beyond those modifications already included by the Corps of Engineers (e.g., greater use of shell substrate in lieu of stone). According to the Tributary Plan, the effectiveness of the restoration projects in the Tred Avon are to be judged based on "oyster metrics success goals," agreed to by federal and state sponsors. These are based on four parameters related to: the structure, population density, total population, and number of age classes of restored reefs. The existing substrate and spat placement was completed only in 2015 and is planned to be monitored at three and six years after these activities occur, with the first monitoring to occur in 2018. Leaving aside indications of high densities of oysters surviving at other restoration sites, it is simply too early to conclude whether the restoration in the Tred Avon has been successful or unsuccessful because it has not yet been monitored. Furthermore, I am aware of no information presented to the Commission by DNR or any other sources supporting any modification of the *Tred Avon River Oyster Restoration Tributary Plan*, such as selection of different sites for completion of the remaining eight acres.

At the same time, there are significant risks that funds required to complete the planned restoration might not be available if there are further delays. Funds previously allocated to complete the project have been reprogrammed to support oyster restoration projects in Virginia. Although Ms. Sowers from the Corps indicated that the Baltimore District has identified existing funds that could be allocated for completion of the remaining eight acres, there are no guarantees that these funds would remain available in restoration activities remain suspended.

Judging the success of the Tred Avon River Sanctuary must await evaluation of the broader effects of oyster reef restoration within the sanctuary. The appendix of *Oyster Management Review on the Tred Avon River Sanctuary*³ presents information on oyster bottom habitat and population characteristics in the Tred Avon River. Although the methods differ, surveys over 1974–1983 and in 2008 suggest that oyster reef habitat had greatly declined (962 acres versus 241 acres, respectively) prior to the designation of the river as a sanctuary in 2010. Absent some form of active restoration, this trend is unlikely to be reversed. However, as discussed above, the effect of the restoration activities undertaken on the extent of suitable habitat cannot yet be judged. Fall Survey data indicate that the abundance of oysters did not change during the five years after sanctuary designation compared to the 20 years before, but that the abundance of larger "market-sized" oysters increased. The results of statistical tests were not presented, but the mean and standard error statistics suggest that this increase is statistically significant, while the decline of small-sized oysters is not. Spat set has been highly variable, with the last substantial set in 1997.

Overall, the data presented in the appendix show no indication that the sanctuary has failed to achieve the intended objectives. The extent of oyster habitat had declined prior to the designation of the sanctuary, over a period during which the river was open to the public fishery. Recruitment, as reflected by spat set, has been very low, very likely insufficient to support a sustainable fishery, particularly given the decline in habitat—this is reflected in low harvest levels from the Tred Avon, even before the designation of the sanctuary. As spat-on-shell were planted in 2015, those oysters were not mature in time to contribute to the spat set that year. Nonetheless, the number of larger oysters increased as a result of growth and survival of the smaller oysters, potentially as a result of low intensity of infection by the dermo disease and limited harvest mortality. Increasing the survival and growth of large oysters that disproportionately contribute to larval recruitment is one of the primary objectives of oyster sanctuaries.

The oyster population of the Tred Avon River has long been in trouble, with diminishing habitat, little recruitment and few large, fecund adults. The Tred Avon River restoration program has the potential for relieving all three of these limiting factors, but, as discussed earlier, it is too early to judge whether it has been successful, even with regard to the site-specific, oyster metrics success goals, much less with regard to the broader populations within the river and beyond. Until these outcomes are resolved, the success of the Tred Avon River sanctuary cannot be fully judged.

¹ 2015 *Oyster Restoration Implementation Update: Progress in the Choptank Complex (Harris Creek, Little*

² Maryland Interagency Oyster Restoration Workgroup of the Sustainable Fisheries Goal Implementation Team. 2015. *Tred Avon River Oyster Restoration Tributary Plan: A Blue Print for Sanctuary Restoration*.

³ *Oyster Management Review: 2010-2015. Appendix A. Section 45: Tred Avon River Sanctuary*.