

Severn River Association Minutes
Board of Directors Meeting June 21, 2011

The meeting was called to order at 7:07 p.m. by President Duane Wilding

Guest Speaker – Ray Clarke, P.E., Talbot County, on the topic of:

Use of Aerators for Oxygen Sanctuaries and Growing Oysters on Reef Balls in Talbot County:

Low oxygen levels are stressful to aquatic life such as crabs, oysters and fish. Extended periods of low oxygen levels can be lethal to these organisms. The oxygen levels now found in the Chesapeake Bay and its tributaries are low due to nutrient runoff which feeds algae blooms which then die off and deplete oxygen during decomposition. Since the 1960s, the volume of anoxic water (having no measurable oxygen) in the Bay has increased more than 20 times, and the volume of hypoxic water (level of oxygen too low to support most aquatic life) has increased about fourfold.

Talbot County has 600 miles of shoreline, very rural, only 18% urban, 60% agricultural, and is trying to stop the increasing occurrence of hypoxia/anoxia by reducing runoff pollution, but significant improvement is years into the future. As an interim solution, Talbot County has installed Aerators in 4 creeks (including La Trappe Creek) for evaluation as marine sanctuaries.

Each Aerator consists of a small air compressor in a 120v outlet (GFCI), exhausting into an Air Stone & Anchor assembly as shown below. The assembly uses a plastic milk carton filled with oyster shells.



Compressor with air hose



Anchor



Anchor with Air Stone

Oyster restoration is an important part of Talbot County's program for water quality improvement. One adult oyster filters 2.5 gallons of Bay water per hour, removing silt and phytoplankton. A ten-fold increase in the population of Chesapeake Bay native oysters will increase summer-average bottom

dissolved oxygen 0.3 mg/L and remove 30,000 kg/d of nitrogen. Marinetics, an oyster Aquaculture facility growing oysters commercially, has much clearer water than average.

To grow more oysters, the stones in the anchors are seeded with oyster spat from the Horne Point Lab. The Oysters propagate in floats above the aeration system, drop to bottom when they are mature. Oysters can't reproduce in silt. To date, Talbot County has planted 10 million oysters in the Miles River Oyster sanctuary near St Michaels, working with The Oyster Recovery Project and Maryland Grows Oysters, similar to what we are doing on the Severn River. 300 property owners have cages on piers similar to our project, and they are using students to build reefs with concrete Reef Balls. Reef Balls must be handled carefully – they are heavy and they get slimy if not inoculated with oyster spat quickly. If this happens, the oyster spat doesn't adhere. The reef balls are immersed in a tank at the Horne Point Lab for seeding with oyster spat. They are recording GPS coordinates of all reef balls for future study.

Another technology that is being used in Europe is to use Oxygen Injection System which heats 90% pure Liquid Oxygen and injects it on the bottom with a mixer assembly to oxidize the organic materials in the bottom sediments. They are working with nonprofit organizations to provide in-situ oxidation of organic sediments.

Longer term programs in Talbot County include:

- Residential and commercial nutrient management plans

- Converting stormwater drains to swales for better infiltration, using stormwater bag filters for trash collection.

- Retrofitting several existing stormwater management ponds.

- Biosolids facility Renewable Demonstration Project – generating electricity from wind and solar panels

Questions:

What water depths were the oysters grown in? Baskets were hung in 8' of water at about mid depth to keep oysters out of sediment.

Is this similar to a de-icing system? Not really, Modern ice eater systems pump up water from below to the surface to keep the ice from forming. The older bubbler systems were similar only in that they use an air compressor. Those systems used much higher air volumes in coarse bubbles, often running intermittently, and tended to get plugged by barnacles. This system uses a small air blower to discharge very fine bubbles through the Air Stones, to promote diffusion of the oxygen into the water.

What is the size of the Affected area? Not sure – only saw effects very locally – probably 20' to 40' circle. Good coverage for length of pier. Not as effective in deeper areas – only used in 8'-10' depths. Fish are moving into shallower water for more oxygen.

Aerators cost about \$500 each, parts are available at any discount department store.

Used students to pre-cast reef balls. Bob Whicomb mentioned that Broadneck High School has program that would be interested in this. Steve Barry stated that several places are using reef balls and he will look into whether AACo students could be used to construct oyster reefs with them. **FOLLOW-UP** – Steve reported June 23 that Oyster reef balls are not endorsed by the scientist at the Oyster Recovery Partnership who supports the MGO program, and therefore are not suggested for use in their related projects. They do not believe that they support adequate spat growth, and they are very heavy, They have been used extensively by the CBF.

How do you inoculate the Reef Balls with Spat? It is done in tanks at Horne Point before placement of the Reef Balls.

Test Run on the Severn: Talbot County will loan the SRA 2 aerators to put at Severn River piers. If they prove successful, the SRA may start a program to encourage widespread use. Dr. Sally Hornor can monitor Oxygen content to assess their effectiveness as part of Operation Clearwater sampling or alternatively Pierre Henkart could do it if they can be located near his monitoring stations.

Treasurer's Report – Treasurer Lynne Rockenbauch reported Checking Acct Balance \$35,167.46, Investment account \$36,350.70, , total \$71,518.16K. Annual Meeting \$8,380 income, \$300 contributions, \$190 from sales of CDs & “Gems of the Severn” books, \$10,585.39 expenses, \$1715.39 net loss, about \$3300, under the \$5,000 budget.

Old Business:

Land Use Committee Report –

Scott Peterson proposed development of Priest Point – Executive Committee voted to support RA change subject to signed conservation easement agreement, now being reviewed by our lawyer & his. Dinny White moved to support change subject to execution of easement documents, Bob Whitcomb seconded. **DISCUSSION** - Land Use Committee met with 14 neighbors & reps of communities nearby. Most now support change. SRLT also met on property, they are attracted & felt there is a good likelihood they will take easement. Working on easement now. Motion Passed.

Have not yet met with Chris Trumbauer – still reviewing. Committee can't agree on specific positions – different philosophies of development. One school of thought is we should object to all changes from residential to commercial – there are many and all raise serious stormwater management concerns as well as traffic concerns. Most are near the intersection of Bestgate Road and General's Highway, which is already one of the worst intersections in AA County, i.e. a very high accident rate. Most changes are approved by Planning & Zoning, Amendments are not approved by P&Z.

Mike Robinson made a motion to send an email to all communities expressing concern over the number of proposed changes from Residential to Commercial. Motion passed.

A complete list of all proposed zoning changes was distributed, with a request for individual Board members to contact their County Councilman to voice opinions on each change.

Plum Creek Phragmites Removal Project – Mike Robinson is looking for volunteers in late September. Contact Mike if you can help.

Community News: Stevie Wilding. – Watchdog article in *Capital* 6/6 – can't enforce tree removal in Critical Area. Moved to send letter to AACo & Critical Area Commission objecting to lack of enforcement. Seconded by John Wright. Passed.

New Business:

Operation Clearwater Illness Reporting Form. Dr. Sally Hornor explained the purpose of the new form requesting information on water-related illnesses. South & West/Rhode Riverkeepers are doing similar reporting. Pet illnesses are not requested yet, but will be accepted if reported, as a bellwether for human illnesses. Other riverkeepers are asking for pet illnesses.

Oyster Planting – Bob Whitcomb reported that the 6/4 planting was very successful. Most communities showed up – some are doing their own planting later in June. Tom Guay is putting together a summary of the planting activities. The Oyster Committee is developing a plan to monitor our reef – details to be presented at a later meeting.

Watershed Implementation Plan – An SRA committee met with Ron Bowen & Ginger Ellis to discuss AA County's Plan. They will present the Plan to the SRA at a future meeting. They have identified

impaired streams (most streams in the County are impaired). There is a 1 Billion Dollar backlog of restoration to fix the degraded stream channels and associated stormwater problems.

Grant Applications - Reading file has letters of support from SRA for several communities seeking Chesapeake Bay Trust grants. The SRA is also helping two properties at Horne Point in Eastport with CBT grants. SRA will be sponsoring them. Bob Whitcomb will be submitting grant applications to the Chesapeake Bay Trust for putting up signage in Jonas Green Park about stormwater management, native plants & Living Shorelines, and re-do & extend beach protection there.

The Watershed Academy is accepting new applications. This is a partnership between Arlington Echo & AACo Department of Public Works to train Master Watershed Stewards. Similar programs are now starting in Montgomery and other counties.

Lisa Bender moved to look into mass emailings with a clickable link to forward comments to your elected representative. Seconded. Jennifer Troy offers this service. Lisa to contact Kurt Riegel to ask if this can be done from our web site and if feasible first before spending money. Individual pressure more effective, but mass responses do help. Motion passed.

Previous Meeting minutes were accepted without comment.

Meeting Adjourned at 9:18pm.

Next Meeting: July 19 – Speaker to be announced.