

Severn River Association Minutes

Board of Directors Meeting Tuesday, August 16, 2011

The meeting was called to order at 7:13 p.m. by Past President Bob Whitcomb

Presentation by Mike Robinson for Pierre Henkart – Update on Severn River Keeper Water monitoring program

Salinity this year has been at a record low – readings at the Rte 50 bridge were only 2 psu (1 psu is about 1 part per thousand; salt water is 35 psu). Surface salinity was a uniform 3 psu for the whole length of the river. High flow rates from the Susquehanna River are probably responsible.

Anoxia continues to be a problem. Recent studies have demonstrated the existence of Anoxia Pycnocline Barriers. A pycnocline barrier is a layer of changing density, esp. a thin layer of ocean water with a density that increases rapidly with depth. Anoxia Pycnocline Barriers occur when the layers don't mix, resulting in more constant, less seasonal variations in anoxia and salinity. Most fish need at least 5mg/L of dissolved oxygen to thrive, 2-5mg/L is stressful, less than 2 is poor. Oysters, similar to clams, require at least 1 mg/L (stressful), and need 2-3 mg/L to thrive. The Army Corps of Engineers requires at least 5 mg/L for an area to be designated an oyster sanctuary.

Paradoxically, anoxic conditions make fish appear more plentiful in the area, because the fish are forced to the surface where the oxygen concentration is highest. This is good for fishermen but bad for the fish as it inhibits reproduction while making the fish easier to catch.

DNR does not use the same sensor as the Army Corps of Engineers. Round bay was anoxic below a depth of 3 meters at the end of July and early August, even though the ACE sensor showed higher oxygen levels.

Asquith Creek is a unique dead zone with little mixing. In general, waters further up river are more anoxic.

Chesapeake Bay Program data shows the Severn having generally acceptable oxygen levels, but the Severn RiverKeeper data shows oxygen levels 10 times lower. The South RiverKeeper has found similar disparities in oxygen data. The CBP data indicates the South River is better than the Severn, but the RiverKeepers' data shows the opposite. The CBP data is "extrapolated" (from the ACE buoy and estimated currents) while the RiverKeepers' data is actual. NOAA Annapolis buoy shows surface Dissolved Oxygen frequently less than 5mg/L.

Thanks – NF+AC volunteers w/SRK.

We need to keep pressure on the Chesapeake Bay Foundation to keep the Dissolved Oxygen issue a priority.

The University of Maryland is starting a study of Hydrogen Sulfide levels in the rivers.

Ken Hatch pointed out that the laws banning DDT stemmed from a lawsuit alleging that its use was denying bird watchers their civil rights. That trend is continuing, that birdwatchers & hunters are "injured parties".

Presentation by Dr. Peter Bergstrom (NOAA) – Dissolved Oxygen Patterns in the Magothy River.

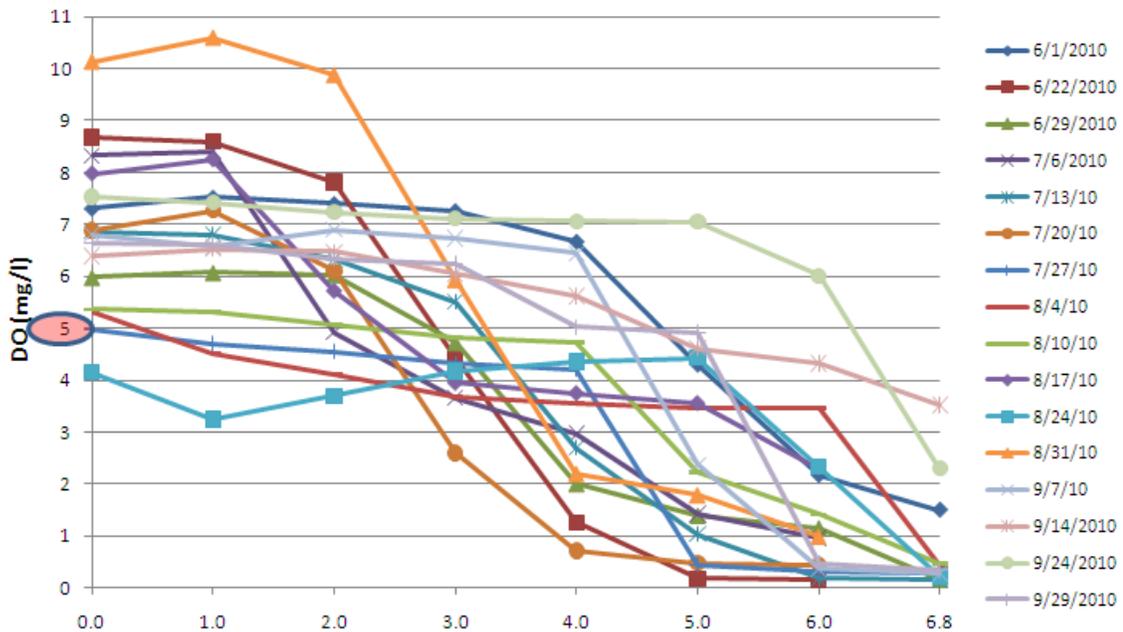
The Magothy River Association volunteers measure water quality at varying depths & schedules:

Dick Carey monitors the main stem by boat weekly with profiles, mostly the oyster reefs on the lower river, and has data from 2002 to the present. This is the data most comparable to Severn data.

From 1992-96, Dr. Bergstrom led a group that sampled 14-15 sites in the mainstem by boat, once a month, surface & bottom. He presently works with the Mill Creek / Dividing Creek group, monitoring 10 creek sites from piers, twice a month, surface & bottom.

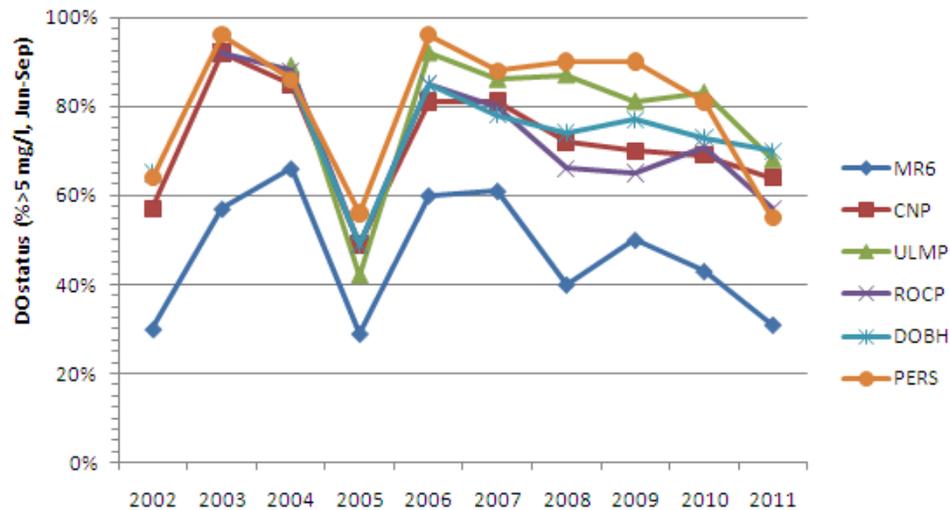


WT6.1 DO profiles, 2010



Magothy mainstem DO status

2011 through 8-11



The Magothy is not as anoxic as the Severn.

June-Sept is the critical period, but more volunteers are available in July and August, so the weighted averages look bad since these two months are the worst part of the 4-month critical period. They need weekly samples due to variability. The Mid-river monitoring site is the same site the state monitors (MDE). MR6/WT6.1 is the State monitoring buoy and always has the lowest readings. Dark false mussels helped water quality in 2003-4, but not long-term. This gives hope that raising oysters may result in longer-term improvements in water quality.

The Magothy, South River and West River have low oxygen at the headwaters, with a fairly steady increase as you get nearer the Bay. The Severn has a mid-river (Round Bay) dead zone and the Rhode River is similar. Both have high-flowing headwaters (Severn Run and Muddy Creek), and more normal gradients at smaller tributaries. Perhaps the higher flow washes organic matter (and low DO) downriver. DO sampling in upper Magothy creeks, farther upstream than any of the Severn sites, reveals low DO at surface (as well as bottom).

Dr. Bergstrom has organized SAV transect surveys on both rivers every year since 2007, sampling once a year in July or August. Volunteers sample 4 transects per river, each about 200 feet long, perpendicular to the shore, in areas that had persistent SAV beds. Both the Magothy and Severn Rivers had a dramatic decrease in volume of SAVs in 2009, but have been stable since then. Species diversity was down this year—mostly widgeongrass in the Severn and sago pondweed in the Magothy, with less redhead.

The VIMS (Virginia Institute of Marine Science) SAV survey website now has an interactive map (<http://web.vims.edu/bio/sav/maps.html>) with graphic images of SAV coverage from 1971 to the present. Grasses are most plentiful in areas with poor clarity & anoxia. The Magothy has some new grasses, but the Severn is still much better. Dr. Sally Hornor suggested that nutrients may explain this phenomenon – algae die and remove Oxygen, but also fertilize SAVs. Diebacks are worst in areas with sewers, areas with septic systems (such as the south shore of the Severn) support more SAV.

Mike Robinson mentioned that floating islands do help. Dr. Hornor stated that this is because they turn Nitrogen into methane. They interfere with navigation, but are better than bulkheads near shore.

Lisa Bender (Carrolton Manor) asked if Aerators in creeks would put more oxygen into the river. Dr.

Bergstrom replied that Asquith Creek had tried it with some success, but the impact was very local and not noticeable in the main river. More modern aerators use stone sheets to make microbubbles which are much more effective. Bob Whitcomb has installed one of the two sample aerators loaned to the SRA by Talbot County at the June SRA meeting; Steve Barry has not yet installed the other one. Don Morris-Jones pointed out that fish like aerators. No data yet but hope to have some soon.

Business Meeting:

Minutes of Last Meeting – Approved.

Treasurer's Report – Treasurer Lynne Rockenbauch reported Checking Acct Balance as of July 1 is \$35,487.04 (including \$3180.00 in Winchester restricted donations), Investment account \$37,366.60, total \$72,853.64. (no change from last time)

Old Business:

- Letter to County on Critical Area Violations – Stevie Wilding – No report.
- Community and Member Notification “Red Alert” – Lisa Bender – No report.
- Aerators – status of units on Loan – see last discussion item in Presentations above.
- Phragmites Removal in Plum Creek – Mike Robinson. Date is 10/1. Need 20-30 people. Have permit & equipment. Good learning experience. Motion by MR to budget \$100 for Herbicides &c, seconded by Dr. Sally Hornor. Passed.
- Land Use – Zoning Update – Dinny White: Dinny W – contacted the Broadneck Federation – Pat Lynch & Ann Fligsten have identified 7-8 properties in District 5 that are especially egregious. The Federation would like us to vigorously oppose case 1314 Orchard Beach Rd – R1 to M, 0.78 acres. Jerry Parks has upgraded electrical service to the site from 200a to 800a. Last night's AACo Council meeting was bad – District 7 upzoning opponents are contemplating a lawsuit similar to the one over districts 4 and 1 now being pursued – CCA has asked for judicial review. District 6 is also contemplating legal action. There is growing animosity toward the process and the council. Leadership and education are needed – County Executive Leopold has asked for line item veto suggestions. We should ask for about 6. The General's Highway Council is sending letters to councilmen asking them to uphold the veto of the wedding chapel. Lack of feedback from the SRA Board to the Committee is frustrating. Lynne Rockenbauch suggested that a position is easier to digest than raw data. The District 6 letter did have an impact, but not much. The Land Use committee had internal disagreements over how much to oppose – try to appear reasonable vs opposing all upzoning. The General's Highway Council split it up, reviewed each, then met & wrote position. GSPC had each rep sign agree/disagree on each item on their list.
- Priest Point agreement finalized and signed – need \$150 to record lien. Motion by Bob vS, passed.
- Duane Wilding - Severn School Fundraiser has date for 1 mi fun run Sun 11/6. Keith Behr (not present) is the coordinator at Severn School.
- Oyster Committee – Bob Whitcomb – Annapolis Maritime Museum dropped out – hope to replace with Lake Ogleton – individuals want to help but no coordinator. Ken Hatch – may spread out to others. One other has dropped out & returned cages. Some others also want to drop out. Volunteers wearing out. Dr. Pierre Henkart said our sanctuary is not anoxic, oysters should be safe. Dick Carey is providing education on documenting life of oysters. Dr. Peter Bergstrom is testing automated monitors to get whole column of data. Naval Academy tried to do this but the sensors were damaged by a storm.
- Audit Committee – Bob Whitcomb and John Wright have the records and have started the audit.

New Business:

- SAF Application from OSPIA – Betsy Love – the construction grant from CBF for the previous project was denied, and OSPIA is resubmitting. The first rain garden was overwhelmed by a major storm because the full project was not done – it is now stabilized. Committee approved, EC has reviewed. \$1,000 requested – total cost is much higher as required by our rules. Duane W moved to approve the design grant, Bob vS seconded. The group doing it is doing a lot for follow-through & community education & volunteerism. Motion passed.
- Rain Barrel art contest – John Wright – judging was postponed due to school calendar, but has been rescheduled for a date soon, before our next meeting.
- Community News – (opportunity for Community Reps to share happenings in their community) – none
- Other Business – Steve Barry mentioned that Ron Bowen (AACo DPW) estimates \$1.5 B needed to fix the stormwater management problems in AA Co watersheds. There was no other new business.
- Announcements – none

Meeting Adjourned at 9:15pm.

Next Meeting: September 20 – Speaker: County Councilman Chris Trumbauer – Discussion of Comprehensive Zoning Plan legislative amendments.