

Severn River Association Minutes (**Draft 2**)

Board of Directors Meeting Tuesday, February 19th, 2013

The meeting was called to order at 7:07 p.m. by Vice-President Bob Whitcomb

Guest speakers:

Steven Giordano, Field Operations Director, NOAA Chesapeake Bay Office Field Science Program
Ecosystem Sciences Group, Annapolis, MD was to speak on [NOAA's Restoration Efforts in Chesapeake Bay](#).
The presentation highlighted how NOAA is directing its resources, in collaboration with its regional partners, to habitat and living resource restoration efforts throughout the Chesapeake Bay.

The NOAA Chesapeake Bay Office has three broad areas of responsibility:

| Science | Service | Stewardship |
|---|---|--|
| Fisheries and Ecosystem Modeling | Oyster Restoration | Communication and Training |
| Buoys and Remote Coastal Observations | Interjurisdictional Fisheries Management Coordination | Systemic, School-Based Science Education |
| Habitat Characterization and Assessment | Applied Fisheries Research | Environmental Literacy Policy Coordination |

The Chesapeake Bay is America's largest estuary. It is an ancient drowned river valley, with prime habitat for many plants & animals, and is home to key commercial and recreational fisheries.

The Bay has many stressors. Bay conditions are influenced by 64,000 sq. mi. watershed with 17 million+ people in 6 states. It has a small water volume to land ratio, with multiple land-uses (forest, agriculture, urban, suburban). The most serious challenges are Stormwater Runoff, Sewage Discharges, and Silt Deposition.

The Chesapeake Bay Program Partnership is run by the Chesapeake Bay Commission and includes NOAA, The US Army Corps of Engineers, US Forest Service, National Park Service, US Geological Survey, Fish and Wildlife Service, and US EPA. The Annapolis NOAA Office also partners with Arlington Echo for many of its educational projects. The Program's goals and strategies are defined in Executive Order 13508, signed in 2009.

NOAA provided valuable guidance to cleanup efforts after Superstorm Sandy, by estimating the size of debris fields that came down the Susquehanna.

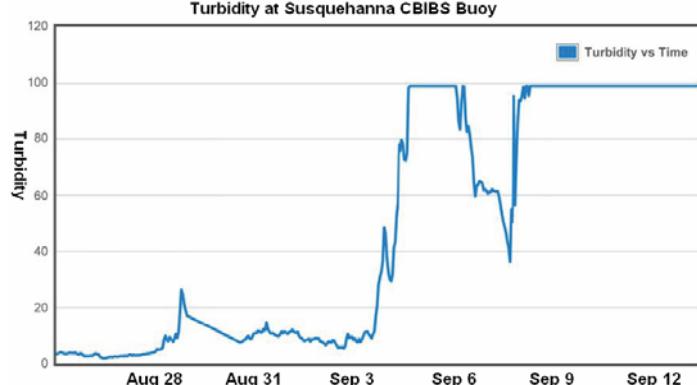
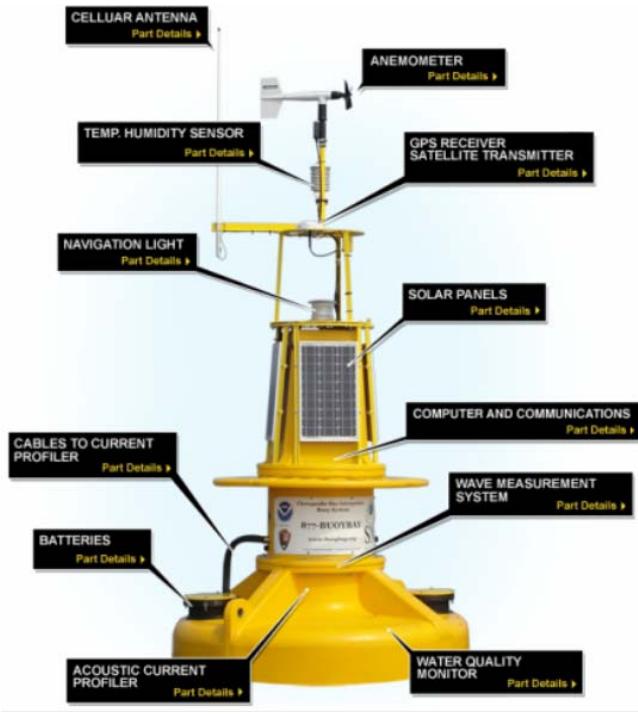
Chesapeake Bay Interpretive Buoy System CBIBS)

NOAA played a major role in designing and implementing CBIBS, and continues to be the party primarily responsible for maintaining the System electronics. Information from CBIBS is available from buoybay.noaa.gov and includes both raw data and tools for manipulating it into graphs or tables for comparisons and reports.

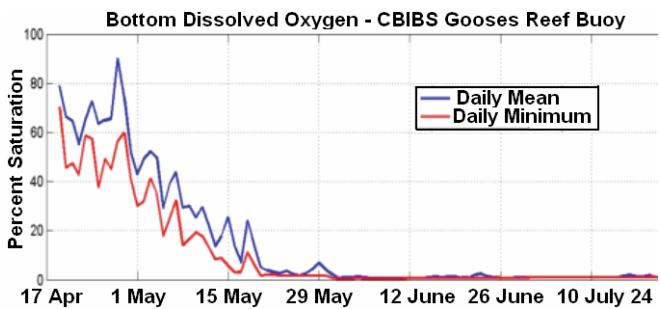
The Chesapeake Bay Watershed got over 30" of rainfall

from August 26 – September 9, 2011. In early September, high water required Conowingo dam to open its floodgates. One result is shown in the graph at the right – record turbidity levels. Data was recorded every 5 minutes for the full depth of the water column. Oxygen also plummeted giving a large dead zone. Some debris rafts were hundreds of acres large, with car parts, LPG tanks, etc. Sediment smothered many oyster beds.

CBIBS data is often used for news stories. The two graphs below appeared in the July 24th 2011



Washington Post, as part of a story about the alarming growth of “Dead Zones” in the bay.



The wind and water temperature data is used to determine safety requirements for USCG & USCG Auxiliary crews, and the National Weather Service calibrates and develops marine weather forecasts using buoy data.

Another Executive Order CBIBS Goal is to expand the NOAA buoy system to improve water quality monitoring and assess new sensors for monitoring emerging contaminants, primarily to support habitat evaluation and management. Pharmaceuticals are a new major problem for which sensors need to be developed. Nitrate and phosphate concentrations would also be valuable, but the presently available sensors are not reliable and need frequent recalibration. The Susquehanna buoys do have Nutrient sensors as this is considered to be the major source for the Bay. The goal is to expand the buoy system, but budget problems may instead kill the system.

Bob Whitcomb asked if similar data buoys are deployed elsewhere? Yes, but not as extensive. Some are in the open ocean, some in other waterways. This is most sophisticated system with the best communication. The Florida Keys have more buoys but data collection is not as thorough.

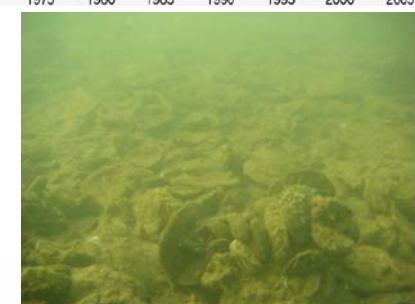
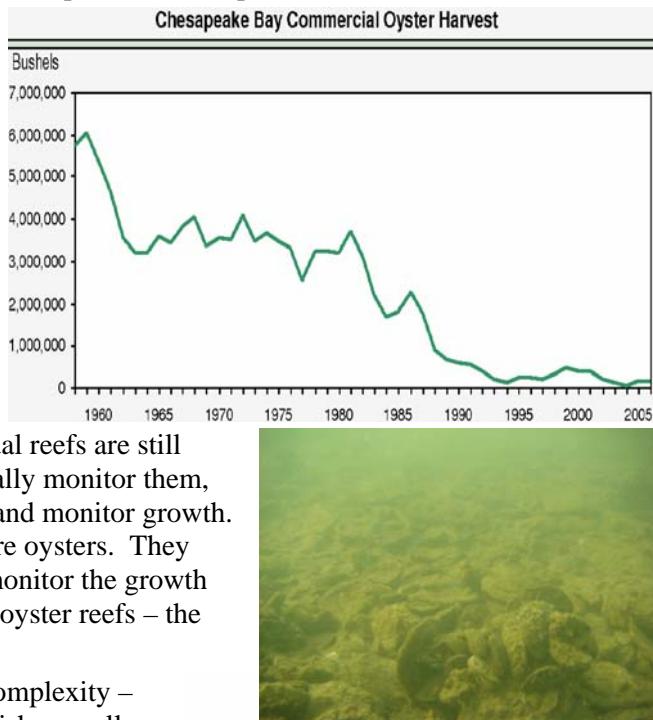
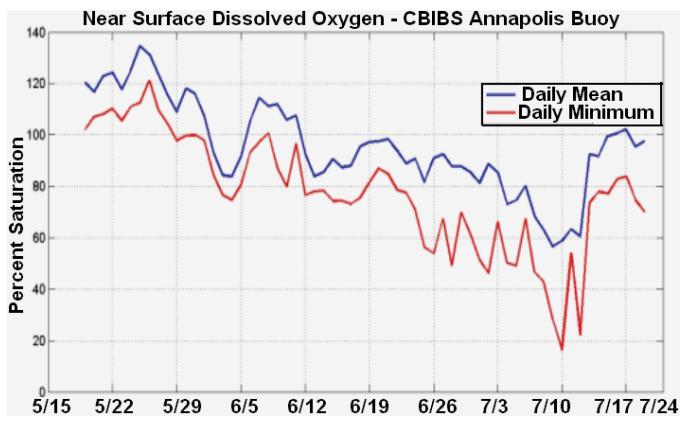
Pierre Henkart asked if data is collected over the full depth of the water column? Yes, at least at the top and bottom and some in between, but modem failure has sometimes prevented complete data collection.

Oyster Restoration is a crucial part of habitat restoration. There is no bay-wide count of the oyster population - they rely on the commercial catch to indicate the population. Those counts have been plummeting since 1960.

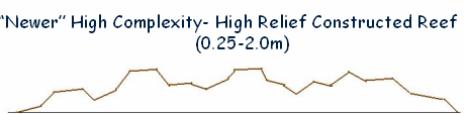
The Goal of the Executive Order is to Restore native oyster habitat and populations in 20 out of 35-40 candidate tributaries by 2025. There are currently no tributaries with fully restored oysters populations, but several with successful living oyster reef habitat. Those restoration goals are not likely to be met with current funding. To make that funding as effective as possible requires research to measure what works best. Only subtidal reefs are still populated. Because visibility is generally too poor to visually monitor them, NOAA is using side-scan multi-beam sonars to map reefs and monitor growth. Mapping is also needed to avoid smothering oysters in more oysters. They can measure sediment to $\frac{1}{2}$ cm, and can detect oysters to monitor the growth of a reef.. This has shown that sediment is smothering the oyster reefs – the sedimentation rate exceeds the reef growth rate.

An important factor in the success of an oyster reef is its complexity – its lack of flatness. Complex habitats are much better for fish as well. NOAA is using their sonar to measure complexity changes over time, and correlate this with sedimentation, oxygen concentration, fish population, and oyster population. Tributary selection therefore depends somewhat on sedimentation controls.

Oyster reefs grow best in locations with a firm bottom and the right blend of temperature and salinity. NOAA field science and analysis show that there are 600 acres of restorable bottom in Harris Creek, a tributary of the Choptank River, which forms the eastern shore of



Traditional Three-Dimensional Constructed Reef (0.5-2.0m)



Tilghman Island. This area is a Maryland-designated oyster sanctuary and has the highest chance of successful large-scale restoration. In 2011, the Oyster Recovery Partnership planted 81.5 million spat onto 33 acres of shell bottom. This year, the U.S. Army Corps of Engineers' Baltimore District will build 22 acres of new reefs on non-shell bottom, which will be seeded by the Oyster Recovery with NOAA funding. Similar restoration efforts are under way in the Little Choptank River, just south of the Choptank, and in the Lafayette River, a tributary of the Elizabeth River near Norfolk, Virginia.

Oysters are important for filtration & habitat creation as well as for commercial. NOAA and the US Army Corps of Engineers support water quality improvement, not commercial harvesting. The increased Rockfish population does not mean the Bay is healthy, since about 80% of them are still infected by Mycobacteriosis.

Questions:

Gene Milgram asked how the Chesapeake Bay restoration efforts compare to NY harbor? NY has been barren longer due to overfishing and pollution, so present NY restoration efforts are smaller because the habitat is not as good – the bottom is too soft. The CB efforts have had better success.

Pierre Henkart asked if there is any meaningful disease monitoring?

DNR is monitoring, and the situation seems to be improving.

Salinity greater than 14 encourages Dermo. Pierre asked why the Severn had high levels of Dermo. That was true in the past, but is less of a problem now.

Severn River Oyster Reefs (right) have tried several different substrates including Oysters, clams, slag and granite. Slag does not seem to be harming the environment – the oxidation gets encased quickly. Unfortunately, Slag reefs are not attaching oysters or anything else, so they are ineffective. Some oysters in the Severn are doing well, but others are not, and NOAA is trying to figure out why.

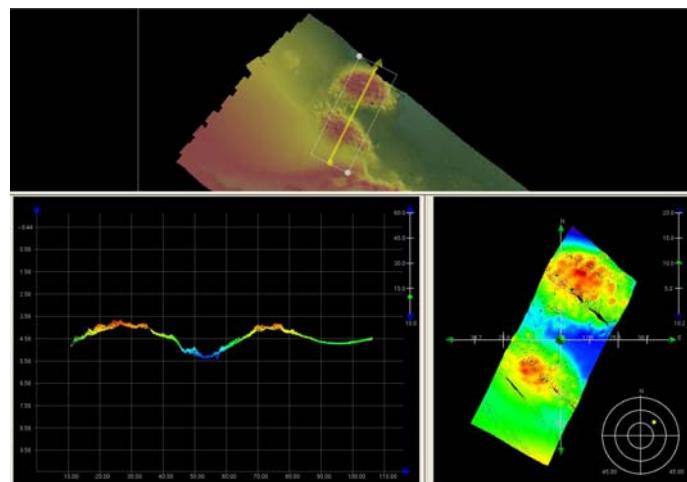
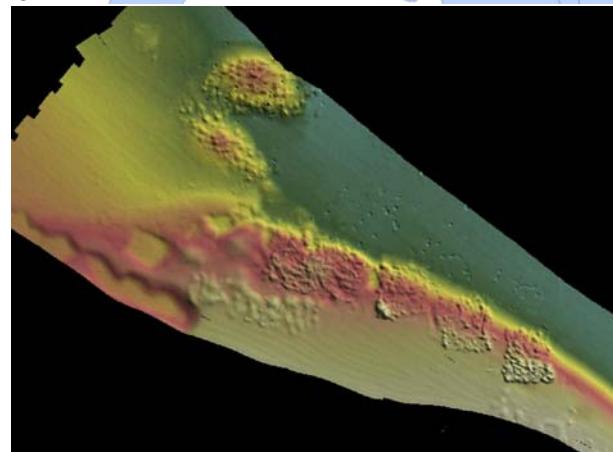
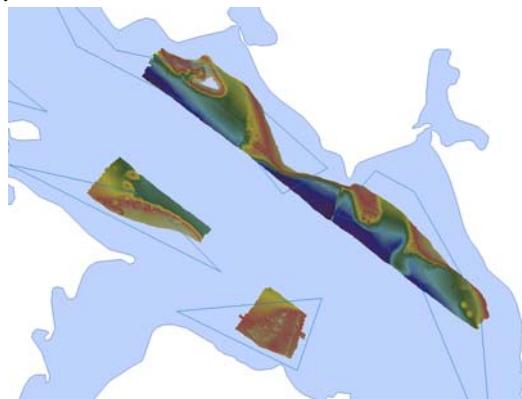
The Severn River reefs are safe, but are not reproducing. They have produced no natural spat in over 10 years. This appears to be because of stressors such as sedimentation, waves, and boat traffic.

Questions:

Charlotte Lubbert asked if NOAA has any sonar slides of the SRA oyster reef? The two slides to the right are both the Weems Creek Oyster Reef. NOAA is Remonitoring it now to check growth rates on different substrates on the same reef. Clams don't survive because the water is too acidic. Even oyster shells dissolve, though not as quickly. Report should be out next year

Pierre Henkart asked why the Dissolved Oxygen readings reported by NOAA often disagreed with his data by large factors – up to 1000? DNR's reported data used modeled data in past, not direct readings– interpolation is dangerous. They did not have enough data points, so they estimated by extrapolating from sensors outside the river. DNR was originally skeptical, but now accepts the reliability of buoy data. Mike Robinson suggested that no data is better than wrong data. Agreed, but NOAA has no authority in the Bay generally – they can only provide data & suggest how to use it. Each Buoy costs ~ \$125,000.

Chris Martin asked why Ph (DO?) data was not used by DNR? The format was incompatible. Also NOAA lacked good data in many areas. Newer instruments getting cheaper and smaller – they were ~ \$200,000, but now are now ~ \$45-50k. They still need frequent maintenance, which is expensive.



Pierre Henkart asked what is the critical Ph for Oysters? Meters tend to be inaccurate, so can't give good answer. Hydrolab better than most, but still inaccurate.

Gene Milgram asked why drinking water reports do not include the Ph of the water? They have data, but don't publish it for unknown reasons. The levels were generally good in AACo.

Kurt Riegel asked if there is any hope that oysters will breed more resistant species? Yes – disease resistance in wild oysters is increasing.

Other NOAA Activities:

The James River in Virginia is one of the last confirmed holdouts for the CBs population of endangered Atlantic Sturgeon. NOAA has been studying their habitat requirements and is now helping to restore a spawning area.

NOAA is also studying the effects of fishing gear losses on wildlife. ~ 25 million crabs per year die in lost traps. Most states use biodegradable traps.

A hydrographic survey produces 10gb of data per day, and takes 3 days to analyze. NOAAs fleet is moored at the Smithsonian Environmental Research Center in Edgewater, MD, and the buoys and boats are maintained at the Ecosystem Observations Lab in the David Taylor Naval Research Center in Annapolis, MD

Maryland recently established the first-ever graduation requirement for environmental literacy, requiring state certification of their environmental education programs, including teacher training, student experiences, and school wide greening initiatives. We have been supporting this effort through the Bay Watershed Education and Training Program (B-WET) and environmental education grants since 2002, with over \$19M to organizations throughout the watershed to support over 300,000 students in grades K-12. NOAA recently established the Environmental Science Training Center to train environmental educators. This training center provides up-to-date science education to the environmental education professionals that often serve on the front line for Meaningful Watershed Educational Experience (MWEE) delivery to both students and teachers, and can convey the newest findings in topics such as climate change, keystone species, habitat suitability, and other scientific research areas in the Bay.

Business Meeting:

Minutes of the January Board Meeting were Approved without comment:

Treasurer's Report – Treasurer Lynne Rockenbauch reported balances of \$31,883.12 in the checking account and \$46,203.79 in CDs for a total of \$78,086.91, a net gain of \$3488.68 in 2012.

Old Business:

- No BMP report – Dick Spencer is at AACo Council meeting now (testifying on the Critical Area Bill), Duane Wilding is also testifying for SRA. The Council is also discussing the Stormwater Utility Fee. We are still waiting for a response from Chris Soldano – he is probably waiting on the SUF.
- Nature Hikes – Mike Robinson – hikes planned for March and June. Notice for March is out – meet at 10:00 at Veteran's Highway where it crosses Severn Run. Parking area is the first left southbound.
- Jonas Green signs – review is done except for identifying one photograph of a dragonfly. Bob vom Saal will give Sally Hornor contact info of a friend who is a retired Field Biologist. The unveiling will be well publicized and good for the SRA's image. State still owns property, but it is used + managed by AACo.
- Project Clean Stream 4/6. AACo + MD approvals have been slow and painful. Luce Creek is set, other possibilities include B&A Trail near Boulter's Way (Tom Guay goes there often, didn't see much trash; Charlotte Lubbert said Fatimah Hassan has replaced Kate as site leader; Park people very cooperative) and Odenton. Need more info & contacts for releases. Luce Creek (Maureen Burt) – churches fully cooperating. Annapolis Friends will provide lunch, but the cost is more than they expected – can we help out? Bob Whitcomb said we need to look for corporate sponsors. Chris Martin (Crownsville) said it

looks like **Boulter's Way?** will take 20 people 2-3 hrs. Bob Whitcomb will coordinate with the Alliance for the Chesapeake Bay – they provide signage, insurance and publicity.

- Stormwater Action Fund – Ann Jackson – Sally Hornor reported that the fund received three project applications in 2012 – Winchester, Severna Park & MD Therapeutic Riding). One is now funded and currently applying for a grant for construction. Ellen Moyer is also working on a project in Back Creek. The 2nd annual AACo Watershed meeting is on Mar 2nd and may produce more project applications.
- The LOG – Kurt Riegel – no response yet to call for articles. Deadline just before Mike's Hike.

- Fundraising letter – Lee Meadows is preparing a test mailing to 5,000 homes (of 42,000 homes in the watershed). Culling 3,000 names from GIS & tax rolls. Need another month to finish mailing list. He planned to send 2 mailings, one for individuals and one for communities and organizations, but the group felt they should be combined because separate targeted mailings have caused confusion in the past. The letter will also have more donation categories, up to \$1,000. The Clean Water Group is having a meeting in DC to set priorities for lobbying Congress. The Chester River Keeper has also asked for support for an amendment to HB 561 limiting fertilizer application in the Critical Area. The amendment would remove the 100-yr flood plain from the definition of the Critical Area. We may agree, in return for increasing the buffer from 10 to 25 yards. Fort Meade has 1 square mile of flood plain, so the amendment seems risky. Pesticides are another issue. Lee will distribute material to the full Board for review, not just to the Executive Committee.
- Tom Guay – Report on the Environmental Summit he attended – pesticides are the main issue – he will try to create a report and email it to the Board. A Green Roofs contractor had a very interesting presentation – the politicians present just interrupted with no contributions. The Summit's agenda is different from ours, only the stormwater Fee is a common interest. The local League of Conservation Voters thinks we need to be mostly defensive to prevent rollbacks of last year's progress. Farmers' request to soften the septic bill was turned down by the House Environmental Matters Committee.
- Annual Meeting – seeking input on speaker & date & place – talk to John Wright with suggestions. We must decide next month.
- Nominating Committee – Charlotte Lubbert declined appointment. Bob vom Saal accepted appointment. Lisa Bender may help but needs to further consider before accepting appointment.

New Business:

- Community News – Kurt Riegel – Annapolis Mayor's office is meeting today with Gerald Winegrad, Parris Glendenning, and other prominent Smart Growth advocates, asking Annapolis to reconsider Crystal Spring – both the project & the process. The Mayor supports the development, but 2 members of the South River Federation Board are against it. 36 acres of trees will be destroyed. Kurt has walked the property and it is an amazing area whose loss would be tragic. The SRA didn't sign the letter opposing the development, but he hopes we can later. The meeting lasted about 2 hrs. The Mayor now has a better appreciation of the environmental impact. Erik Michelson will address an SRA meeting soon to give his reasons for supporting the project. Glenn Adama and one former president of SRF and Bob Gallagher signed the letter. Walter Jacobs said that Scott Mobley of the Annapolis Neck Peninsula Federation also signed the letter opposing the development.
- The SAV (Submerged Aquatic Vegetation) acreage held steady at 72 acres this year in the Severn. When the River was healthy it had 500 acres of SAV.
- Charlotte Lubbert – The Chesapeake Bay Maritime Museum in St Michaels is hosting 4 talks about Oysters. The first will be 2/24, with a panel discussion including Tom Horton. The other presentations will be 3/3, 3/10 & 3/17. Call the Maritime Museum for more information.
- The Severn River Dredge spoil from the barges went to Arden and was unloaded at Jumpers Hole Road. The last 2 projects were funded from the Waterways Improvement Fund. Saltworks Creek sedimentation may slow down due to the restoration project upstream, but the Severn Run seems to be a lost cause.
- Steve Barry will retire on 4/1/2013 from his post as head of the Arlington Echo Outdoor Education Center. He will also resign his position as a director of SRA at that time. We will miss him and wish him the best.

Meeting Adjourned at 9:00 PM.

Next Meeting: will be on **Tuesday March 19, 2013**, at Arlington Echo, with a presentation by Colleen Ruhter, Master Watershed Steward, on USNA Stormwater Management Successes and Initiatives on the Severn River (Past and Present), followed by the Crystal Springs development with a talk by Erik Michelson on South River Federation's support of the project.

Respectfully submitted,

Bob vom Saal