



CHESAPEAKE ENVIRONMENTAL PROTECTION ASSOCIATION, INC.
P.O. Box 117, Galesville, Maryland 20765

NEWSLETTER

Fall 2011

PRESIDENT'S MESSAGE

By Al Tucker, President, 2011



TMDLs must be implemented! Why we should do it has long since been documented and should be clear to everyone: water contact restrictions for fear of infections; sediment inflows wiping out fisheries; declining oyster beds; ... the list goes on and on. The time is long past for action. While several small steps

such as removing phosphates from detergents and toothpaste have been implemented, it is time for a major campaign to restrict the myriad of pollution sources emanating within the multi-state watershed of the Bay.

Changing habits is hard because the immediate incremental cost of doing nothing is far less than the cost just to mediate the processes causing degradation. But waiting to do it later only increases the future cost exponentially. The TMDL process introduces a set of measurable objectives, specifies various pollution limits within various regions of the watershed, and imposes penalties for inaction. It is considered to be an adaptive process and restrictions within a sub region of the watershed may be relaxed or increased depending on the severity of the problems in that area.

As a result, the major issues are not why or what to do, but when and how. There are many public, commercial and private interests that must agree on the way forward. Countervailing interest groups need to seek common ground with one another and find the way forward. That is the crux of the discussion CEPA hopes to focus on at the upcoming CEPA forum as we bring together scientists, regulators and business and agricultural interests.

The forum on "What A Concerned Citizen Should Know About TMDLs" will address the issues impeding the introduction of TMDLs. Implementing the limits brings to focus the choices citizens will ultimately will have to face. Those choices will impact lifestyle, economic well-being and health of current and future generations. Currently, the overall limits are being determined for individual river watersheds, where they will impact the residents living within the local watersheds. Almost all of the proposed actions will have an economic impact; either by restricting crop yields, limiting the size of developments, or imposing stormwater fees. All the major economic interests in the watershed will have to make concessions. Most of all, as consumers and taxpayers, we will have to recognize that it will cost more to implement the plans and that we will have to pay for it.

(continued on pg. 2)

CEPA PRESENTS

The Pollution Diet TMDL's: What a Concerned Citizen Should Know

Friday October 14, 7:00 PM

Schmidt Conference Center

Smithsonian Environmental Research Center
Edgewater, MD



The CEPA forum will examine EPA enforcement of Total Maximum Daily Load (TMDL) requirements for the Chesapeake watershed. Our panel will discuss issues and take questions on enforcement, jurisdiction,

monitoring, effectiveness of the states' plans, flexibility to recognize and adjust to ineffective measures, time required to realize results, and costs.

CEPA's distinguished Panel Moderator, award winning journalist, Mr. Terrence Smith, will be joined by state, local, and organization officials:

**Dr. Walter Boynton, University of Maryland
Chesapeake Biological Lab
John Rhoderick, MD Dept. of Agriculture
Dr. Richard Eskine, MD Dept. of Environment
Valerie Conolley, MD Farm Bureau Federation
Ron Bowen, AA County Dept. of Public Works
Greg Barranco, US EPA Chesapeake Bay Program**

Suggested contribution of \$10.00 to cover expenses.

(Pres. Message, continued from pg. 1)

Most of us are aware what needs to be done now: curtail the flows from urban, suburban, and agricultural sources! Remedial and preventative measures are physical steps that we can undertake. Controlling urban storm water flow, increasing the standards for clean waste water, imposing stricter controls on sediment erosion, and identifying the largest sources, are actions that require the will of the citizens to say “enough is enough”. But, even if we were able to start tomorrow, the TMDLs will not have significant impact until 2030, and the ensuing benefits will take decades longer to accrue. Many of us will not be here to assess whether or not we are making the right decisions now.

In the end, the fundamental issue impeding rational thinking about mitigating the decline of the Bay is economic. Recent polls show that the environment is not the immediate concern of citizens, but that their financial security is. The current attitude of the public not to raise taxes to support our infrastructure is akin to employing deferred maintenance as a source of funds. The more the bay deteriorates, the less income from tourism, recreation, food production, etc. it produces. Hence, it really is a de facto tax increase in disguise, because further delays just increase the costs of actions proposed by TMDLs. Convincing our leaders that investing in the Bay is the most effective action to improve our health and welfare is critical. We need to convince our elected officials that business as usual only postpones the inevitable, the time when action is necessary.

We have designed the CEPA forum to bring together these diverse interests that need to come to a consensus. We hope the forum will highlight the political and economic issues that need to be overcome and that you will bring your questions with you and join us for an enlightening discussion on October 14th.

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WEST/RHODE RIVERKEEPER’S REPORT

By Chris Trumbauer

www.westrhoderiverkeeper.org

Natural Disasters

2011 is shaping up to be quite a year for extreme weather and natural disasters. We started with a very wet and cool spring which quickly transformed into an unbearably hot summer with temperatures in the triple digits. The August 23 earthquake caused little damage, but captivated the news cycle and



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water cooler chatter for days. As I write this, Hurricane Irene is out to sea, but heading towards our area with the potential for flooding and a damaging storm surge.

Each of these events had an effect on our environment in some way – great or small. For those of us who study the Chesapeake Bay and its tributaries, we know that weather contributes to the health of our waterways. A rainy year will likely bring more pollution to our waters, in the form of stormwater runoff. It can also affect the populations of aquatic life such as oysters, which need a certain level of salinity in the water in order to reproduce. The combination of heavy rains and high heat caused the fourth largest ‘dead zone’ on record this summer – just when we thought the dead zone was retreating. A particularly hot year can also damage beds of underwater grasses, and sustain persistent algae blooms which thrive in warmer water. Perhaps most alarming were reports of people contracting a deadly bacteria called *Vibrio* that can develop under certain conditions.

But regardless of the annual fluctuations of weather patterns and extreme events, the underlying threats to healthy waterways remain constant. As our population continues to grow, and we add new pollution loads to our sewer system and wastewater treatment plants, more nitrogen and phosphorus pollution is discharged into our rivers and streams. Modern technology allows us to greatly reduce the amount of pollution, but our sewer plants must be upgraded and we lack the funding to complete these upgrades.

Each and every time it rains, stormwater runoff delivers pollution to our waterways. Rainwater flows from our rooftops, driveways, roads, parking lots and other hard surfaces into the nearest drain or ditch, carrying contaminants from oil and sediment, trash, and animal waste into local waters. Our newer communities utilize modern stormwater management techniques, which allow the rainwater to soak into the ground rather than become runoff. But most of our older communities were built long before this was the norm, and need to be “retrofitted” through restoration projects to achieve a much higher degree of pollution control.

Another significant contributor of pollution in our area comes from septic systems. Even though many of our communities are on public sewer service, large pockets still remain on septic. A household on a properly functioning septic system can contribute 10 times more nutrient pollution to our waters than the same household on public sewer. Failing systems are even worse, and may contribute harmful bacteria as well. There are currently no pollution standards, inspection or maintenance requirements for septic systems in our county.

To address the pollution from the Three S’s (Sewer, Stormwater, and Septic), the environmental community is organizing a grass-roots effort to promote our Clean Water, Healthy Families campaign. Last year was a huge disappointment for the environment in the Maryland General Assembly. We are organizing now to make it clear to our State Elected Officials that we expect them to act to protect

our waterways and our communities. We are asking for legislation to increase funding for the Bay Restoration Fund (the so-called “flush fee” which funds wastewater treatment plant upgrades and septic-to-sewer conversions); to establish a dedicated funding source for critical stormwater management projects; to require a treatment standard for all wastewater treatment systems (including septic systems); and to discourage sprawling growth in inappropriate areas. You can find more information about this campaign at www.cleanwaterhealthyfamilies.org.

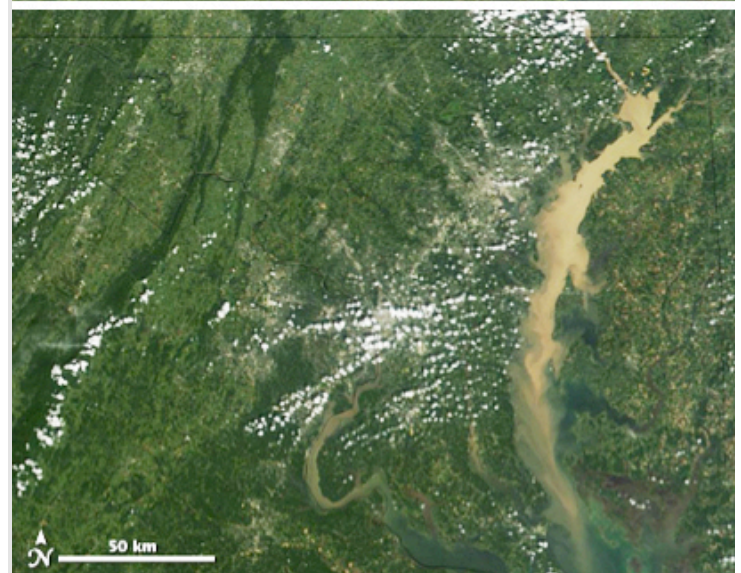
While earthquakes and hurricanes consume most of our attention, pollution continues to enter our waters every day from slow, yet consistent, sources. Hurricanes and earthquakes are often measured in terms of the millions (or billions) of dollars of damage they caused. The Chesapeake Bay has recently been estimated to have a nearly \$1 trillion economic value. What is the cost to us all of allowing its health to decline? We are always on guard against “natural disasters,” but let us remember that another true disaster would be failing to act now to preserve our greatest resource. Please help us by joining the Clean Water, Healthy Families campaign. Go to the website and sign our petition!

Tropical Storm Lee Dumps Sediment into Bay

NASA Photos of the Chesapeake Bay before Hurricane Irene and Tropical Storm Lee and then afterwards show how much sediment was dumped into the Bay. The photos are shown in *Satnews Daily* of September 16, 2011 (<http://www.satnews.com/cgi-bin/story.cgi?number=709608574>)

Water poured from the Susquehanna River into Chesapeake Bay at a near-record rate on September 9, 2011, after the remnants of Tropical Storm Lee doused the watershed with heavy rain. The ensuing floods swept up debris, garbage, sewage, farm runoff, and mud and carried all of it down rivers and streams into *Chesapeake Bay*. This was in addition to sediment that had accumulated behind Conowingo Dam and was scoured out by the record flows. Since records began in 1967, only two other events have carried more fresh water into the Bay: *Tropical Storm Agnes* in 1972 and a snowmelt event in 1996. The muddy influx covers much of the top half of the Bay in an image (3rd) taken by NASA’s *Terra* satellite on September 13. The top image shows the Bay in its normal condition on August 23, and the center image shows the Bay on August 30 after Hurricane Irene passed through. The image series illustrates that rain from the Tropical Storm Lee had a far greater impact on the bay than Hurricane Irene. In the middle image from just after Irene, some sediment clogs the Bay, turning water that is ordinarily black in satellite imagery to brown and green. After Lee, however, the Bay is a muddy tan from the thick sediment that clouds the water.

The mud and debris are bad for the Bay for many reasons. The mud smothers marine life like oysters and damages grasses and other habitat on the Bay floor. The incoming fresh water replaces the brackish water that many ecosystems require. When rain from Tropical Storm Agnes flooded the Bay in 1972, the entire biological community was disrupted, and oysters and soft-shell clams were particularly hard hit. The flooding from Lee was somewhat less severe than Agnes, so the impact may not be quite as extreme.



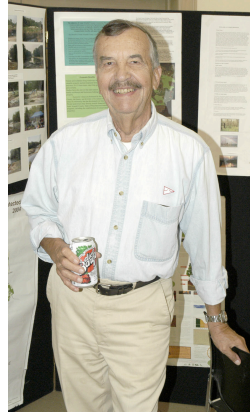
NASA images courtesy the MODIS Rapid Response Team at NASA GSFC.

In addition to the mud, the flood waters carry dissolved fertilizers and other pollutants that can feed large phytoplankton blooms. When the blooms die, the phytoplankton sink and decay. As microorganisms consume the plankton, they also consume much of the oxygen in the deeper portions of the Bay. In many of these areas (dead zones), oxygen levels are so low that aquatic life cannot survive. These develop every summer in the Bay. In 2011, the *Maryland Department of Natural Resources* recorded low oxygen levels in 30 to 40 percent of the Maryland portion of the Bay—a much larger dead zone than average. Hurricane Irene stirred the water, thereby dissipating the dead zone somewhat, but the run-off from Lee is expected to trigger more dead zones. About the only positive is that the extreme runoff occurred in early September when the cooler water mixes more easily and pushes oxygen into the dead zones.

CEPA has advocated that a plan be developed to deal with the sediment accumulating behind Conowingo dam before

storms such as TS Lee scour out the sediment and dump it into the Bay. Suggestions have been made regarding what to do with the sediment, including filling old mines and manufacturing building blocks from it. First we need a comprehensive study and plan supported by all the state and federal agencies involved.

**PROFILE OF A TRUSTEE
Lee Greenbaum**



Leon Jack Greenbaum, Jr. was born in Baltimore in 1923. He got his BS from Loyola College and his MS from the University of Maryland. In 1962, he earned a PhD in physiology from the U. of Maryland's School of Medicine.

He had an unusual 30-year career with the Navy, serving during WWII and the Korean War as a Naval aviator. In 1963, he qualified as a Naval diver, and worked in diving and submarine research at the USN

Experimental Diving Unit, and as Chief of Diving Research, Naval Medical Research Inst. He retired in 1971 as a Captain.

He worked at the National Institutes of Health, where he was responsible for scientific review of grants in the areas of stroke, head and spinal cord injury, MS, and Parkinson's Disease. He is the author of about 30 scientific publications, co-authored two texts on diving and submarine medicine, and was editor of three texts on diving and undersea warfare.

He and his wife Betty live on Whitmarsh Creek off the Rhode River. He organized the Carr's Wharf Community Association and served as its first president. He was appointed to the Small Area Planning Committee for Edgewater/Mayo. He joined CEPA in 1999, and served as President from 2005 to 2007.

He has been an avid sailor for many years. He organized and was Commodore of the Chesapeake Tartan 30 Association. He organized the Annapolis Naval Sailing Association and served as its first Commodore. He was Cruising One Design Chairman of the Chesapeake Bay Yacht Racing Association.

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