



The Land We Love

Preserving the rural heritage of the Northern Neck since 2004

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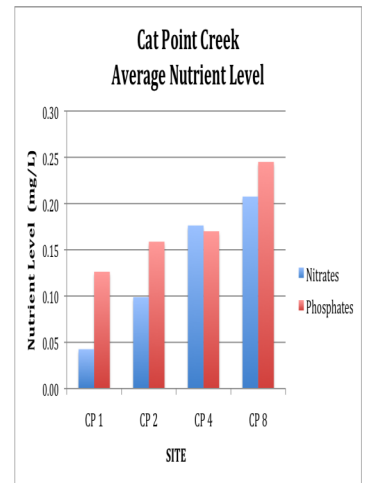
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PROTECTING THE LAND IMPROVES WATER QUALITY: OUR PARTNERSHIP WITH CHESAPEAKE BAY GOVERNOR'S SCHOOL *By: Jim Beam*

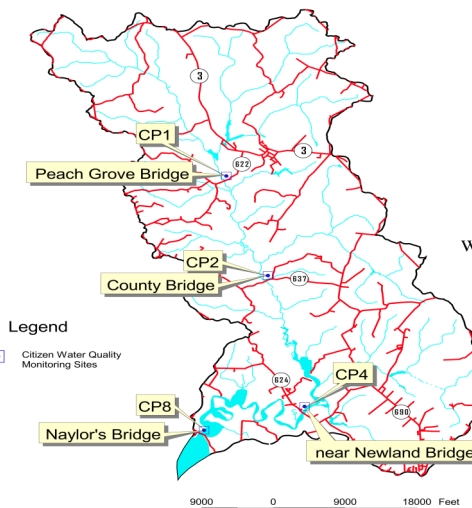
The Northern Neck Land Conservancy has identified Cat Point Creek, a 19 mile long waterway, as an area that is a vital region for conservation initiatives and preservation. We are looking to help any landowners in the region who may be interested in protecting the lands and watershed. To gather data to share with landowners about the delicate and precious ecosystem of the creek, the NNLC and the Chesapeake Bay Governor's School have formed a Water Quality Partnership to study the natural and human impacts of the Cat Point Creek watershed. Grant funds from NNLC have been used to fund water sampling equipment for the Governor's School program. At CBGS, water quality testing is incorporated into the 10th grade curriculum during Foundations of Science class. Students from Richmond, Essex, Lancaster, Westmoreland and Northumberland counties, as well as Colonial Beach attend CBGS.

Teachers Jim Beam and Bethany Smith take teams of students to monitoring sites along Cat Point Creek in Richmond and Westmoreland counties each month to test several water quality parameters including air/water temperature, pH, dissolved oxygen, nutrients salinity, turbidity/clarity, Fecal coliform bacteria, and basic stream parameters such as flow rate and water condition. Back in the classroom, students research the water quality parameters and data is graphed and analyzed. Students are able to compare sites based on location, seasonal change, effects of land use and storm events. The 4 monitoring sites, (shown on Map 1) include Peach Grove Bridge

(site CP1), County Bridge (site CP2), Newland Bridge (site CP4) and Naylor's Bridge (site CP8). Test results show a watershed with few impacts from land use. Nutrient levels, nitrates and phosphates, are both found in low levels, especially in the upper parts of the watershed (Graph 1). Water clarity is highest in the upper parts of the watershed, but is highly influenced by storm runoff during heavy rain events. Healthy Dissolved Oxygen Saturation levels range from about 80% in the slower flowing headwaters to near 90% near it's mouth. The pH levels range from slightly acidic in the headwaters to slightly basic near the mouth, as expected. All of these factors affect plant growth, fish, reptiles, as well as quality of life for all of us. Disturbing the Cat Point Creek environment with additional pollutants from thoughtless development, or improper land management, could destroy the water quality. For more information on the water quality project go to the CBGS home page (<http://www.cbgs.k12.va.us/>), the CBGS Water Quality page (<http://www.cbgs.k12.va.us/cbgs-water-quality.html>) or Water Quality Blog (<http://mail.cbgs.k12.va.us/blogs/waterquality/>)



Graph 1: Cat Point Creek The average nutrient levels (both Nitrates and Phosphates)



Map 1 Citizen Monitoring Sites (Northern Neck Planning District Commission)



CBGS students testing the water quality of Cat Point Creek

“BY HELPING TO CLARIFY THE WATER, THE OYSTER ALLOWS BAY GRASSES TO RECEIVE MORE SUNLIGHT.”

David Turney,
The Oyster Growers
Association



Oyster Gardening—
Preserving A NNK Heritage &
Protecting our Waters

GROWING OYSTERS FOR A CLEANER BAY!

Oysters are filter feeders, meaning they eat by pumping large volumes of water (up to 50 gallons a day for a mature oyster) through their bodies. Organic material, sediment and other particles are trapped in the gills, and transported to the oyster's stomach. Once the oyster removes the nutrients, indigestible material is expelled as “pseudofeces” from the oyster's shell via a rapid closing of valves. By helping to clarify the water, the oyster allows bay grasses to receive more sunlight. These grasses increase oxygen levels, reduce wave action and shoreline loss, and increase habitat for aquatic life. Oyster shell dissolution is also an important contribution to maintaining a healthy pH in the Bay.

The predominant oyster on the east coast of North America is *Crassostrea virginica* aka Eastern oyster or American oyster. While these oysters have a wide variety of tastes, it is due primarily to the local conditions. Oysters can grow up to 10 inches in length and can live to approximately 20 years of age, but this is not common.

The Tidewater Oyster Gardeners Association

(TOGA) is a non-profit organization established in 1997 to promote the environmental health of the Chesapeake Bay and its tributaries through oyster cultivation and by other means, and as a way of enjoying Virginia oysters. TOGA's main goal is to educate interested citizens of all ages in oyster aquaculture methods. They accomplish this in a number of ways, such as participating in over 25 educational outreach events each year. Thousands of adults and young students have been introduced by TOGA to the benefits of growing your own oysters and, most importantly, to the awareness of the importance of helping to improve the ecology of the Bay. They teach how to evaluate potential sites for growing oysters (water quality, salinity, turbidity, etc); how to build various types of oyster floats; where and when to obtain spat (oyster seed) and supplies; and the care and maintenance of oysters at all stages. Upon recognizing that they needed “experts” to help oyster gardeners evaluate conditions at their growing location, assist in identifying predators, help locate

needed materials and supplies, and participate in outreach events, TOGA initiated a biennial Master Oyster Gardeners Course. Topics cover oyster biology, oyster reef ecology, shellfish diseases, breeding programs, hatchery operation and seed production, growing sites and structures, recognition of predators, and governmental regulations. The course is taught by faculty and staff from VIMS, personnel from the Virginia Marine Resources Commission, and representatives of the Virginia Health Department. Over 100 people have graduated and volunteer for a minimum of 50 hours of service to TOGA.

Oyster farming became the primary source of Virginia oysters several years ago. Growing your own oysters is good for the bay, they are good to eat and fun to raise. To learn more about TOGA, please visit (www.oystergardener.org), or call/write their President, Brian Wood, at 571-237-6556 or email him at awood45858@aol.com.

(Information submitted by TOGA members David Turney, Vic Spain, and Brian Wood)

**Join the NNLC
in 2013**

**With Your
Support We Can
Help Your
Neighbors
Protect Land!**

NNLC will mail out its membership drive letter soon. Please support our efforts by joining us in 2013 by sending your \$35 check payable to NNLC. In addition, several wonderful donors have pledged to match \$26,000 in donations if we receive that amount by June 30. We have \$10,000 to date. Won't you help? Every \$ you give beyond your membership, is doubled by our challengers. The NNLC is dependent upon donations to exist and without your help, we can't help landowners, so please think of us and send your tax deductible donation to:

PO Box 125, Lancaster, VA 22503.

BAY'S HEALTH SHOWING REAL PROGRESS

By: William C. Baker

This is a historic moment in time for the Chesapeake Bay and all the rivers and streams throughout its entire six-state, 64,000-square-mile watershed. In fact, this is the moment in time for the Chesapeake. Never before have the stars aligned so well for the Bay's future. While there has been some squabbling, and even lawsuits, by extremists on both sides, cooperation between individuals, businesses, and government has led to real progress. The state of the Bay is improving.

The Chesapeake Bay Foundation's State of the Bay health index, the first such Bay report card and the longest running, shows a 10 % improvement since 2008. Cooperation and sound science have overcome the narrow interests of

opposition. We can clearly see a saved Bay in our generation.

But make no mistake; the Bay is not yet saved. Our grade for the Bay, a D+, is not one my parents would ever accept. The Bay is still dangerously out of balance. Overall, our State of the Bay Report shows that five of the 13 indicators are up, seven are unchanged, and only Bay grasses are down. In the last two-year reporting period, the levels of phosphorus pollution have declined, the amount of land permanently protected in conservation has increased, blue crabs have increased, and dissolved oxygen levels have increased.

All of this shows a Bay fighting for survival, and the fact that the dissolved oxygen levels have actually

improved during a period of high storm events may be a strong indication that the Bay's legendary resilience is returning. Ironically, we worry that the good news, albeit modest, may breed a certain level of complacency among the public and even our elected officials. This would be a huge mistake, as the gains have been modest, incremental, and the system is still fragile. If we have learned anything over the years at the Chesapeake Bay Foundation, it is the fact that the Bay is a study in contrasts, even contradictions.

Consider the one down indicator in our report card — underwater grasses. Upper Bay grasses on the Susquehanna Flats tripled over the past 20 years but declined in the last two-year reporting period. Grass beds in the

Severn River are abundant, but much of Virginia grasses decreased, a victim of high water temperatures.

Going forward, here is what we all want from the Chesapeake Bay and its rivers: clean and safe water, abundant seafood, and healthy habitat. Over the centuries, all three have been thrown out of balance. Now, thanks to good science informing good policy, supported and implemented by a broad base of cooperation, each is starting to show signs of improvement. All of us who value the Chesapeake and are determined to see a better future for our children and grandchildren must let our voices be heard.

William C. Baker is president of the Chesapeake Bay Foundation. This article was previously published in The Gazette of Business & Politics

A MESSAGE FROM THE NNLC PRESIDENT

Webster's Dictionary shows the following definitions —

Land – rural or farming regions; to return to the land

Conservancy – an organization dedicated to the protection of natural resources and historical properties.

We believe Webster's was surely defining The Northern Neck Land Conservancy as we look at our mission—to preserve the rural heritage of the Northern Neck by protecting its lands, water, economies and culture for future generations.

The NNLC has many activities it will be pursuing in 2013 and we hope

you will join us in our efforts and public outreach. The work we do is contingent upon the support we receive from landowners and neighbors such as yourself. We depend upon you to get the word out about our mission, our services, and the importance of preserving our unique and pristine Northern Neck region.

As you plan your 2013 calendar, please be on the lookout for NNLC exhibits at the Master Gardener Seminar (March 23), Lancaster County Court Day Festival (April 13), King George Market (June 1), Heathsville Market (July 20), Warsaw Market (Aug. 10), Kinsale Day (Sept.

21), and RRVNWR "Go Wild" (Oct. 13). We will also have several Landowner Outreach events on the details of the conservation easement process.

Our popular and annual Boots & BBQ will be Sunday, September 22 in Richmond County on the Rappahannock River at Naylor's Beach from 1-4 pm. If you can help with any of these activities, please call or email us. We also hope that you will join the NNLC with a \$35 household membership. Plus, we have a challenge of \$26,000 that we are looking to match by June. Any donation you can give will be matched, so we actually will receive \$2 for your \$1 donation! Please help us to continue our work and help to preserve this land we love!

Special Points of Interest

- THE NNLC IN PARTNERSHIP WITH THE GARDEN CLUB OF THE NORTHERN NECK HAVE CREATED RESTAURANT PLACEMATS ABOUT CAT POINT CREEK. LOOK FOR THEM IN YOUR LOCAL EATERY SOON!
- THE NORTHERN NECK LICENSE PLATE HELPS SUPPORT NNLC. PLEASE GET YOURS TODAY AND SUPPORT CONSERVATION EFFORTS ON THE NECK. GO TO WWW.DMV.STATE.VA.US TO PURCHASE YOUR PLATE!



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NORTHERN NECK
LAND CONSERVANCY

ISEA: A NNK Master Gardeners Shoreline Evaluation Program

I-SEA is a community service, to help homeowners prevent and/or resolve shoreline erosion by providing site specific information. Using tools developed by the College of William & Mary's Virginia Institute of Marine Science (VIMS) and the Center for Coastal Resources Management (CCRM), and for a \$50 fee, I-SEA volunteers from the Northern Neck Master Gardeners will:



- Conduct an on-site evaluation of upland and shoreline property
- Collect a soil sample and provide a Northern Neck Soil and Water Conservation District Nutrient Management Plan
- Analyze your situation and provide written recommendations in response to homeowners concerns
- Provide a Homeowner's Guide for Shoreline Management

For more information, or a consult, contact Virginia Cooperative Extension, Heathsville office - (804) 580-5694 or the Lancaster office (804) 462-5780.

ARE YOU CONNECTED??? STAY IN TOUCH!! We Love Hearing From You

After this print edition, we will be using Constant Contact to send out electronic newsletters to our members in 2013. If you have changed your email address in the past two years, please let us know so that you can be connected to us. Email us at nnlandconservancy@gmail.com. We promise not to share your email address and we will only be sending you occasional newsletters and announcements about upcoming events. You can also keep up with what we do on our Facebook page too, so look us up, and give us some feedback.

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