



Shore Conserver

Eastern Shore Soil & Water Conservation District • *promoting locally led conservation*
22545 Center Parkway • Accomac, VA 23301 • (757)787-0918

November 2009

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The Bay Act and What It Means for Accomack and Northampton Counties

The water quality of the Chesapeake Bay has been rapidly declining in the last century. In the late 19th century, the native oyster could filter (and therefore remove impurities) a volume of water equal to that of the Bay in 3 to 4 days. Today it takes almost an entire year for the present population of oysters to do this. European settlers reported that huge oyster reefs thrusting up from the Bay's bottom were a navigational threat to their ships. Oyster reefs have 50 times the surface area of a flat mud bottom and provide feeding, breeding and habitat areas thus, safe refuge for many aquatic species.



In the Bay Voyages Journal of Captain John Smith, he reported that the fish were so plentiful they tried to scoop them out of the water with a frying pan and the clarity of the water was from 12 to 32 feet compared to today's 2 to 4 feet depth. They observed large forests along the banks of the Bay which helped prevent runoff from the land. The decline of the Bay's water quality is attributed to the dwindling population of oysters and underwater grasses along with increased loads of sediments and nutrients (nitrogen and phosphates).

Concern for the life of the Bay led to the enactment of the Chesapeake Bay Preservation Act (the Bay Act) by the Virginia General Assembly in 1988. This was in response to the Chesapeake Bay Agreement

which was originally signed in 1983 by Virginia, Maryland, Pennsylvania, District of Columbia, the Chesapeake Bay Commission and the U. S. Environmental Protection Agency to protect and restore the Chesapeake Bay Ecosystem. The purpose of the Bay Act is to enhance water quality and still allow reasonable development. It is designed to improve water quality in the Chesapeake Bay and its tributaries by requiring the use of effective conservation planning and pollution prevention practices when using and developing environmentally sensitive lands.

It should be noted that many of the small towns on the Shore have their own local town Bay Acts in addition to the Bay Act enacted by the Virginia General Assembly. The Bay Act allows Accomack and Northampton to use local land use regulations to minimize the impacts of new development in areas that will affect the Bay. However Northampton County extended their regulations to the seaside several years ago and this year (2009) Accomack did the same. On the Eastern Shore, single family houses make up the vast majority of all new development, or construction; therefore, this article will focus on residential land parcels.

Lands which if improperly developed may result in substantial damage to the water quality of the Bay (and now the seaside) and its tributaries have been identified and mapped as Chesapeake Bay Preservation Areas (CBPAs). Standards, or requirements, known as "the Bay Act performance criteria" have been set which apply to the development of this property in order to prevent an increase in nonpoint pollution. Nonpoint pollution is pollution from a larger general area and cannot be pointed to as coming from a single ditch, pipe, or other specific source. CBPAs consist of two categories: Resource Protection Areas (RPA) and Resource Management Areas (RMA).

Resource Protection Areas (RPAs) are lands located on or very close to the shoreline. These are areas which have an important value to the Bay due to the ecological and biological processes they perform. These are lands so close to the water, that disturbing them could send large amounts of pollutants directly into the Bay. They include tidal shorelines, tidal wetlands, and non-tidal wetlands which are connected by surface flow to tidal wetlands or perennial streams. RPAs also include the 100-foot vegetated buffer areas as measured inland from the edges of wetlands, shores or streams. The only development allowed within RPAs is for water dependent uses as marinas and piers and the redevelopment of already existing structures. Passive recreation facilities as trails and pathways are also allowed. A Water Quality Impact Assessment (WQIA) is required for any development or redevelopment proposed within an RPA, or for modification (clearing, grading, etc.) of any portion of the 100-foot buffer. In the case of pre-recorded lots (recorded prior to 1989) which are not large enough for the construction of a principle structure (house) and necessary utilities (septic tank, drainfield, etc.)

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the property owner may be able to build within the landward 50 feet of the buffer if:

1. Encroachment into the buffer area shall be the minimum necessary for a reasonable and appropriate buildable area for the structure
2. Where possible, an area equal to the area intruding into the buffer shall be established elsewhere on the lot to maximize water quality protection
3. Encroachment into the buffer shall never exceed 50 feet in width

Resource Management Areas (RMAs) the other category of CBPAs are land types that, if improperly used or developed, have the potential for causing significant water quality degradation or might affect the functional value of RPAs. In both Accomack and Northampton County all lands that are not RPAs are RMAs. Therefore, all land and development or redevelopment in both counties occur in the Chesapeake Bay Preservation Area (CBPA) and is subject the Bay Act performance criteria. RMAs include the floodplain, isolated non-tidal wetlands, and sensitive soils (highly permeable). Growth and development are not limited in RMAs if allowed by local zoning. However, it must be accomplished using Bay Act performance criteria. These performance criteria are as follows:

Minimize Impervious Cover – impervious cover are surfaces such as concrete, roof tops, asphalt roads and driveways, and other items that prevent rain water from seeping into the ground. By reducing impervious materials, stormwater runoff will be less and there will be less nonpoint pollution of the Bay and Ocean and more movement of rainfall into our groundwater system. There are some permeable pavement materials that can be attractive and cost effective alternatives to impervious paving.

Minimize Land Disturbance – This will reduce the erosion rate of the land.

Preserve Existing Vegetation – this is the easiest least expensive way to protect the water quality. Plants will slow down the speed of the stormwater moving towards the Bay. This slowing down of the water moving across the land reduces the rate of erosion. It also reduces the amount of runoff and sediment pollutants entering the water

ways by catching (or trapping) the soil particles before they can enter the water ways, especially during construction. Eastern Shore native plants are especially good for this. They are suited to our climate and require less care and maintenance – including less fertilizer and pesticides. Also they are needed by the thousands of migratory birds that use the lower Eastern Shore to rest and feed and build up fat reserves to continue their migration.

Septic Tank Pump Out is required for all septic systems at least once every 5 years

Reserve Septic Tank Drainfield is required for all new development.

Plan Development Review for Disturbed Areas over 2500 square feet which shows the parcel area and dimensions, location of all existing and proposed impervious surfaces, drainage patterns, existing vegetation – including trees or stands of trees and the limits of proposed clearing and grading along with any water features wetlands and RPAs. If constructing a new house, making additions to existing houses or building accessory structures such as decks, garages, patios, etc; check with your local government to see if a plan of development review is required. Contact the local Planning Department before removing vegetation from the building site or even if you want to cut down any trees on the site.

No Net Increase in Stormwater Pollution Loadings for New Development and a 10 % Reduction of These in Redevelopment - this insures that runoff from development and redevelopment does not increase the amount of pollution reaching waterways. Much of this can be achieved by the use of Best Management Practices (BMPs)

Best Management Practices are required for all new developments and should be used by every one. These include:

1. **Vegetated Buffers** – The 100-foot vegetated buffer along the Bay, its tributaries and the seaside will reduce the runoff and help control soil erosion and nutrient pollution. Forest buffers are the most efficient barrier as the leaf litter provides a porous layer that traps sediments and absorbs nutrients which are taken up by the tree roots. Also the rate of flow is slowed and this reduces

soil erosion. Other plants including warm season grasses and native plant also provide effective buffer zones. Buffers can reduce runoff by 50% over that of grass lawns.

2. **Grassed Swales** – instead of curb and gutter drainage systems swales are shallower and wider than drainage ditches and are usually covered with tall warm season grasses. They should not have a slope greater than 5%. They hold the stormwater temporarily and allow it to infiltrate into the soil.

Much of this information was gathered from the *Chesapeake Bay Preservation Act Handbook for the Eastern Shore of Virginia* at www.shorekeeper.org/downloads/DBPA_easternshore_handbook.pdf. For more information contact the Dept. of Conservation and Recreation, (804)-786-7951 or the Accomack-Northampton Planning District Commission, Accomac, VA, at (757)787-5726.■



Fascination at Farm Field Day



Over 600 Accomack County third graders had an exciting outside day learning about operations that occur on a farm. They learned that meat comes from animals and not the grocery store. They discovered that we have to take care of our fertile vegetable soils and plants

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Watershed Walk 2009

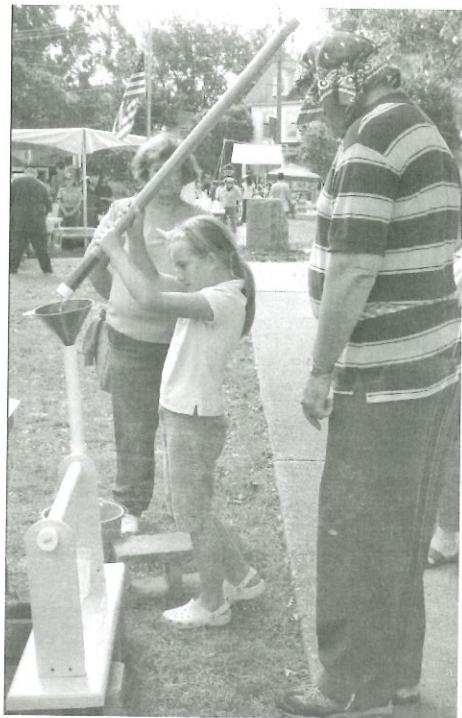
The Watershed Walk was an educational, fun-filled event of discovery and hands-on activities for children and adults alike. It was held in partnership with the Onancock Harborfest on September 12th at the Town Park and was funded through a donation from the Eastern Shore Resource and Conservation Development Office.

Sponsored by the Environmental Education Council (EE Council) through the Eastern Shore Soil and Water Conservation District, the Watershed Walk had 18 exhibitors from across the region which included Eastern Shore Master Naturalists, Chincoteague National Wildlife Reserve, the Marine Science Consortium, the Stranding Center of the Virginia Science Museum, and Virginia Department of Game and Inland Fisheries.

Exhibitors had interactive displays which highlighted the wonders and historical culture of the Chesapeake Bay and the Eastern Shore. Visitors learned how unique the Eastern Shore is and why it is so valuable to wildlife. They learned what a watershed is and located their watershed address on an Eastern Shore map. They calculated what it would cost them to take a shower, cook a meal, flush the toilet, or wash a load of clothes if water were the same cost as a gallon of gas. They observed live crabs and learned the difference be-

tween fiddlers, hermits, calicos and our famous blue crabs and could even make their own horseshoe crab. They also watched a cluster of oysters in a small aquarium clean up muddy water from the Chesapeake Bay and observed the local art of decoy carving.

Not only did this educational event help local children get a head start at school by focusing on the Science Standards of Learning (SOL's) for grades 3-6, it provided plenty of fun for everyone. It incorporated a pirate theme with treasure maps to guide visitors to the different activities. Most of the exhibitors were dressed as 17th century pirates and included the pirate theme in their displays. Along the path, children were able to pick up a "gold coin" at each event they visited and then use these coins at the loft of the Keeper of the Treasure as proof of successfully navigating the Watershed Walk. There they could choose between a plush sea turtle or a pirate hat as a reward for taking this journey. Also hanging out at the Keeper of the Treasure's loft was the band "Three Sheets to the Wind". This trio supplied toe-tapping, instrumental and vocal music consisting of sea shanties and other water related tunes for the enjoyment of all. The Watershed Walk was so successful and visitors so numerous, that all the exhibitors re-



"Pirate" John Chubb, of the Citizens for a Better Eastern Shore (CBES), helps participants discover what happens to rainwater.

mained one hour longer than planned. The EE Council and ESSWCD greatly appreciate the support of the Onancock Harborfest Committee, "Three Sheets to the Wind" trio and the efforts of all the individuals and organizations involved in the planning and presentation of this event.



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...Farm Field Day

help take up nutrients and prevent flooding.

Farm Field Day is sponsored by the Virginia Cooperative Extension Office. Several partner agencies such as ANEC, Master Gardeners, and the Department of Forestry gave presentations. These included sessions on electricity, fire safety, forestry, farming in colonial times, local crops and other aspect of rural life in a farming community. The Eastern Shore SWCD did a presentation focused on several of the Standards of Learning concepts for third graders. It was based on how soil is formed and what local farmers do to protect it.

One of the highlights of the day was observing a crop duster applying a water mist to a crop of beans in demonstration of modern day pesticide application. Duncan Farms was a great setting for this event. Bruce and Ned Holland who own Duncan Farms, have hosted this event for over twelve years. We extend our appreciation for their dedication to the youth of the Eastern Shore.

NRCS's New Soil Conservationist

The District welcomes Derek Hancock to NRCS as their new Soil Conservationist. NRCS is co-located with the District at the USDA Service Center in Accomac, VA. Derek is originally from southwest Virginia just outside of Christiansburg. Derek studied agriculture and ecology at Ferrum College receiving his bachelors degree in Science.

Derek is an avid outdoorsman and enjoys traveling, which he has incorporated into his interest in the outdoors through fishing and hunting trips.



Derek Hancock, NRCS's New Soil Conservationist

NRCS Has a Program for You



Does your land look like this? Need help? Need help with phragmites, a buffer, waste storage facility, irrigation equipment upgrade, windbreak or not sure what you need, but you know you need a solution? NRCS can help. They have many programs to help with sedimentation concerns, wa-

ter quality and quantity issues, forestry and wildlife needs, and flooding problems. In addition to providing you with the most current technical assistance to meet your resource needs, they also have financial assistance programs which help absorb the cost of installation of solutions on your land. The new Farm Bill passed in 2008 brought a variety of changes and additions to the financial assistance programs and can potentially have a great positive impact on the Shore. There are now easement programs, land rental programs or set asides as well as conservation implementation programs and any one or more can meet your needs and help your budget. The federal fiscal year started October 1st so the sign-up for 2010 has begun. Be sure to talk with Tina Jerome, Bob Smith or Derek Hancock at (757)787-0918 x3 and find out how NRCS can help.



Pictured above: A waste storage facility.
Left: Richard Ayers of DCR, Natural Heritage Division examines a stand of invasive phragmites.



Have a Safe and
Happy Thanksgiving!

The Shore Conserver is published quarterly by the Eastern Shore SWCD to provide information to land users. The District customarily meets monthly on the second Wednesday of the month at 5:00pm at the USDA Service Center in Accomac, VA. The public is welcome to attend. To be added to the mailing list, please contact the District office at 757-787-0918 x119.

All programs and services of the Eastern Shore Soil and Water Conservation District and the Natural Resources Conservation Service are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status or handicap.

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