CITIZENS FOR A BETTER EASTERN SHORE

SHORELINE

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Northampton County

Since 1988

Wetlands Credits, Wildlife Preservation... ...and Earth-Moving Near Exmore

By Mary Miller

wo months ago, very few Shore residents knew much about "constructed wetlands," The Virginia Aquatic Resources Trust Fund, or the selling of "mitigation credits" for wetlands destruction elsewhere due to development. Then the heavy equipment rolled in and started removing topsoil from a 26-acre farm field south of Exmore. Northampton County Supervisors knew nothing about it, nor did Planning Commission members – nor did most of the county residents who came across the extensive earth-moving project on Route 13.

For up to 3 years, the Virginia Department of Environmental Quality (DEQ),* the State Water Control Board (which issued a Virginia Pollution Discharge Elimination System permit), the U.S. Army Corps of Engineers (which published a public notice stating the project was in Northumberland County), the farm owner who sold the property, and the county office of Planning, Permitting & Enforcement (which issued a Land Disturbance Permit in addition to approving the project as a "Wildlife or marine life preservation area," allowed under Recreational Uses) – all knew about the Nature Conservancy (TNC) "mitigation credits sales" project.

But none of those with knowledge of the project felt an obligation to inform the elected or appointed officials of Northampton County.

Words Matter - Meanings Matter

The merits of wetlands development credits, wetlands construction, wildlife preservation areas, and the public good form the first of 2 main discussions worth having now. The second one is – how can the county best manage its unique topography through good Land Use strategies?

Often, localities with unique qualities, e.g., steep mountain slopes, wetlands, or river valleys, choose to manage the impacts to, and by, these qualities through zoning. But in most Zoning Ordinances, a phrase states that if a Land Use is not defined, a dictionary definition, along with the interpretation of the Zoning Administrator, produces the final decision. If there are unique, easily impacted features, however, many localities choose to carefully define some Land Uses in their zoning that make those Uses very clear and open to little interpretation.

For most of the Shore, the unique feature is water – the Atlantic Ocean and Chesapeake Bay border both counties, plus creeks and inlets, tidal and non-tidal wetlands, harbors, freshwater ponds, soggy farm fields, perennial and non-perennial streams, stormwater ditches and ponds, and agricultural irrigation ponds. Many of these are regulated by State and Federal agencies, but usually, manmade water features are defined and regulated by county zoning.

Clear, Straightforward Language

An overarching By-Right Use called "Wildlife or marine life preservation area," if not defined, might be administratively determined to be anything from a private hunting ground to a duck pond to a pit filled with groundwater for waterfowl—but if dirt excavated from the pit is then carted away and sold, the permitted crater then changes purpose and becomes a Borrow Pit, which requires a Special Use Permit.

Localities may provide separate, specific definitions for preservation of wildlife and marine life using legal or regulatory agencies' language that leave little room for interpretation. Examples:

• "Wildlife preserve" means undisturbed land used or intended to be used for the preservation of wildlife and plant life.

See Wetlands, Cont'd on page 2

Contents

Wetlands Credits, Wildlife Preservation and Earth-Moving Near Exmore1
Wetland Mitigation Project Near Exmore2
Conservation Easements vs. Conservation Zoning – What's the Difference?4
ESCC Successfully Exits Three-Year Reboot . 5
Another Big Success, Thanks to CBES Bike Tour Sponsors & Volunteers!6
Recycling Corner8
Keeping Track8
Recipe: Spirited Cherry Cookies9

Wetlands, Cont'd from p. 1

• A "marine protected area" is a defined region designated and managed for the long-term conservation of marine resources, ecosystems services, or cultural heritage. (NOAA)

Likewise, the county's current question of "constructed wetlands," and identification of other man-made water features, could be resolved by using precise legal land use definitions, some of them provided by State and Federal agencies. Examples:

- Constructed wetlands, or stormwater wetlands: Shallow depressions that receive stormwater for water quality treatment. Constructed wetlands are the final element in the roof-to-stream runoff reduction sequence. (VA DEQ)
- Constructed wetlands: Areas intentionally created to emulate the water-quality improvement function of wetlands for the primary purpose of removing pollutants from stormwater. (USDA)
- Impounded wetlands: A wetland or wetland pond that is formed or the level of which is controlled by a dike, berm, or headgate that retains or manages the flow or depth of water, including connecting channels.
- Shallow wetland impoundments: Projects that typically incorporate the use of levees and water-control

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- structures to provide shallow freshwater habitat (6 to 24 inches). (Texas Parks and Wildlife)
- Impoundment: Any lake, reservoir, pond, or other containment of surface water occupying a bed or depression in the earth's surface and having a discernible shoreline. This includes moist-soil impoundments, which are commonly designed for waterfowl.

It may be time for the county to consider defining these various water/ wetland Uses and provide clarity for both the community and property owners. Some of these constructed water features may be necessary and usual in all zoning districts, and be allowed By Right – e.g., those built on-site to control stormwater runoff from development, which are already regulated. Others may need Special Use Permits and be limited as to size, depth, use, and District. Zoning changes, and scheduled Public Hearings, would go a long way to create transparency in the process and to provide accurate information for the community.

*https://www.deq.virginia.gov/water/ wetlands-streams/compensatory-mitigation



Wetland Mitigation Project Near Exmore

By Arthur Upshur, Stewardship Manager, Eastern Shore Land Trust

That's going on in the field just south of Exmore on the east side of Route 13? It's construction of a wetland, part of a larger project of restoring and preserving wetlands. Years ago, swampland was considered worthless. Draining it for fields and forests and building sites was considered an enhancement. Now we recognize that the eco-services provided by wetlands are enormous, often irreplaceable. They filter runoff, clean the water slowly flowing through them, and create buffers to manage storm water. They also are a major sequester of carbon, forming peat from all that underwater plant growth. And they provide critical habitat for a wide variety of wildlife. To save remaining wetlands, laws require that any wetland negatively impacted

by development must be offset by preserving, enhancing, or creating new wetlands to compensate for the loss. To facilitate this process, the Nature Conservancy (TNC) has taken a lead role in organizing projects to create "banks" of wetland mitigation credits that can be utilized when needed.

When developers have a project that requires wetland mitigation, they can purchase mitigation credits from the Virginia Aquatic Resources Trust Fund (VARTF), administered by TNC. The VARTF then provides approved credits that satisfy the obligation. Everything is directed by the U.S. Army Corps of Engineers (USACE) and Virginia Department of Environmental Quality (DEQ). Acreages approved for release into the

See Mitigation, Cont'd on page 3





At left, an initial phase of preparing the land for construction of the non-tidal wetland south of Exmore. At right, a constructed wetland in Accomack County at the 5-year mark. Photos: The Nature Conservancy

Mitigation, Cont'd from p. 2

bank and any use of the fund must be approved by both. The credits are purchased by a developer for \$100,000 per credit. The VARTF is a revolving fund; new payments accumulate until an acceptable project can be found and funded within the VARTF. The VARTF is a statewide program, but the fund is managed by watershed and resource type: Atlantic funding stays within the Atlantic region, Chesapeake funding stays within the Chesapeake region.

Restoration wetlands create 1 credit for each acre restored. Preservation wetlands require 10 acres to create 1 credit. TNC gets 8% of all credit payments to pay for administrative costs. The combination of a willing landowner and correct conditions to create mitigation is relatively rare; the process often takes years to complete. On the Shore, often the use of credits is VDOT road and bridge widening or new roads that have to cross wetland areas.

There have been a number of projects funded by VARTF on the Eastern Shore. There are 3 projects in the bays on the Atlantic side of Northampton that restored submerged aquatic vegetation (eelgrass) and oyster reefs. Of approximately 4.6 credits generated, 2.46 remain available for mitigation. Cubberly, near Oyster Harbor in Northampton, is a wetlands preservation project originally proposed in 2012; final plans have not yet been approved. Custis Farm, the project near Exmore, started in 2019. This wetland restoration should provide a total of 17 credits, none of which have been approved for release; most will be held for 5 years of monitoring. There is a current liability of 9 credits for Atlantic projects already paid into the fund that will be offset as soon as USACE and DEQ approve a release. The Willowdale site near the Machipongo River is a tidal wetland restoration project proposed in September 2022; still very early in development, it totals 4.5 credits.

In the Shore's Chesapeake watershed, there are 3 sites. One is near Jacobus Creek in Northampton, a wetlands preservation project proposed in 2008 totaling about 0.5 credit, with 0.12 designated as non-tidal wetlands and 0.37 as tidal wetlands. The largest site is Level Ponds near Deep Creek in Accomack County, proposed in 2011, also a non-tidal wetland restoration. Level Ponds, a large open water pond within a much larger project, is owned by TNC; the larger property is owned by the Virginia Department of Wildlife Resources (DWR). The area totals 18.5 credits, with 11.5 used and the remaining 7 credits still available but on hold during the monitoring period. Finally, there is the Oliver project, originally proposed in 2012 near Church Neck in Northampton County, a wetlands preservation project with 1.32 credits, still pending final site approval.

In more populated areas, this industry of wetland "banking" of mitigation credits has larger and more frequent demand, and is lucrative enough for commercial firms to create wetlands to sell the credits when a project destroys some wetland area. In rural areas, there is no

commercial industry creating these banks because the use is so infrequent and unpredictable. TNC sponsors projects in rural areas of Virginia because it is better ecological practice to create a functioning wetland on a larger area and create a bank of credits than to complete lots of tiny projects for a small wetland destruction that may or may not have the quality and monitoring (replanting, etc., as necessary) that a larger wetland creation allows. Having a bank of credits also gives flexibility to developers so that siting decisions can be based on a variety of factors rather than solely by avoiding all wetlands. For example, this enabled Walmart to site close to Onley even though their site touched ½ acre of wetlands. Otherwise, this would have had to be moved away from the population center that already existed.

Much has been discussed on the value of these credits to TNC and perhaps on the assessed value of a property. For perspective, the 17 proposed credits of the Custis project could be worth \$1,700,000. TNC will get 8% of that total, once available, or \$136,000. However, the budget for the project totals over \$1,200,000, leaving only \$500,000 of possible benefit to the trust fund – if all credits are purchased. A maximum of 9 credits have already been received into the trust (TNC's 8% of this is \$72,000). But there is no guarantee when, if ever, the remaining credits will be used. It is this uncertainty and uneven timing that precludes a viable industry. For now, even if all 9 credits are used, the trust will be carrying at least a \$300,000 deficit.

The Custis project was not prime farmland. The farmer struggled with crop failure in this particular field due to flooding and water-saturated land in many areas. This site is planned to be a forested wetland similar to the existing forested wetlands to the north and south of the project. The topsoil seen stockpiled near Route 13 will remain on-site; after grading is completed, the topsoil will be used to maintain the biological and structural integrity of the wetland, standard practice in wetland restoration.

The project should not negatively impact the recharge aquifer; in fact, it should improve it. A wetland is like a giant sponge, holding rainwater and slowly releasing it, and in the process filtering impurities out of the water.

In this case, TNC worked with a consulting firm that actually purchased the land and will then transfer it to TNC once work is completed. Then, a conservation easement will be recorded and an Interagency Review Team (IRT) will govern management of the site with TNC, the property owner. The IRT will include representatives from the USACE, the EPA, U.S. Fish and Wildlife Service, USDA National Resource Conservation Service, NOAA, DEQ, Virginia Department of Conservation and Recreation, DWR, Virginia Marine Resources Commission, the Division of Forestry, and finally the Division of Historical Resources (to make sure historical sites are not forgotten).

Conservation Easements vs. Conservation ZoningWhat's the Difference?

ShoreLine Staff

Today, there are thousands of acres covered by conservation easements in both counties. This article is intended as a brief primer on what a conservation easement is, how it works, and how it differs from conservation district zoning.

What Is a Conservation Easement?

A conservation easement is a private agreement between a landowner and the public trust, usually represented by a non-profit or government representative that holds the easement. The agreement restricts the use of and guides the stewardship of a piece of land in perpetuity. Terms are agreed on by the landowner and the conservation easement-holder to reflect the attributes that the landowner treasures. The recorded easement becomes a permanent part of the deed and binds any future owner of the property. The "qualified" holder is responsible for ensuring that the easement is honored. On the Shore, easements are held by agencies and non-profits such as the Virginia Eastern Shore Land Trust; The Nature Conservancy; the Virginia Outdoors Foundation; the Eastern Shore Soil and Water Conservation District; and Ducks Unlimited. Many Eastern Shore easements are co-held by 2 entities. That is often because the easement was developed before 1 of the entities was fully qualified (it takes 5 years for a non-profit).

Why Do Conservation Easements on the Eastern Shore?

The most common reason is the desire of a landowner to ensure their family legacy on a piece of property. They want their family land to be unchanged, continuing to maintain the conservation benefits they treasure, such as working farm and forest land, wildlife habitat, and clean water. Each easement is slightly different, reflecting the values of the landowner and conservation benefits specific to the property. The easement might specify that a special forest never be timbered. Most owners want the land to stay unchanged, undeveloped, and undivided as working land in agriculture or timber, and as habitat for wildlife.

What Are the Tax Implications of Conservation Easements?

Typically, any restriction on the use of land lowers its market value. For example, if land cannot be divided or is limited to 1 residence, the property is often worth much less than if it could be developed. With a conservation easement, a qualified appraiser estimates what the land would be worth both without and with the easement. Any reduction in value is considered a donation to the public and the owners are allowed a federal income tax deduction for that donation. In Virginia, you also receive and can sell state tax credits generated by the donation of an easement. This allows people who cannot use the state tax credits against their state tax burden to realize a cash value for them.

Land in conservation easements in Virginia receives the lowest property tax offered in a local tax jurisdiction. In Northampton County, that is usually the tax values of Ag/Forest Districts. In Accomack County, it is usually the Land Use Value or the Ag/Forest District value. Most of the time, lands proposed for a conservation easement already receive the lowest assessed rate, so local property taxes are not often changed by a conservation easement.

What If an Owner Violates the Terms of Their Easement?

Conservation easements are monitored to ensure the terms are upheld. The best practice is for the holder to monitor them at least annually. For example, land trusts accredited through the Land Trust Alliance must monitor each property at least once per year. Also, if a landowner proposes a new use on the property such as new buildings, the easement usually requires some notification and consultation with the easement holder. If the new use is permitted by the easement and does not harm conservation benefits, the project will be approved.

A recent example was on a conserved property where the owner was proposing a use as a wedding venue. Outdoor weddings were not prohibited under the easement's terms. The question was whether the business use would damage conservation values of the property by damaging vegetative cover or soil by excessive vehicle use. In this instance, the holder did express concern to the landowner that the use might damage the conservation benefits. The holder may require additional monitoring visits to evaluate the impact on conservation values on the property, and may request corrective action.

The principal tool for compliance with an easement is working with the landowner to stop the practice in violation of the easement and creating a plan to mitigate any damage. Rarely, a holder will petition a court to intervene and enforce the easement by bringing a lawsuit against the owner. Since many of the easement terms also mirror local regulations such as a 100-foot buffer requirement, the holder often works with county officials to create a mitigation plan when an easement violation also violates county rules such as the Chesapeake Bay Preservation Act.

What Is the Conservation Zoning District?

Many people, from current and prospective landowners to county officials, are confused about the differences between conservation easements (which are private contracts between the easement-holder and the landowner) and land that is zoned Conservation by county ordinance. The Northampton County Zoning Ordinance (2019) states the intent of the Conservation District as follows:

See Conservation, Cont'd on p. 9

ESCC Successfully Exits Three-Year Reboot

Submitted by James M. Shaeffer, PhD

President, Eastern Shore Community College

What a difference 3 years makes for Your Eastern Shore Community College. On an annual basis, the Virginia Community College System (VCCS) assesses each of the 23 community colleges on 4 sustainability factors: a minimum service region population of 100,000, a minimum number of 500 full-time equivalent enrollments (FTEs) in academic programs, operating costs no greater than 125% of the VCCS average for all colleges, and the trend of issuing credentials in workforce programs. In 2018, Eastern Shore Community College (ESCC) failed to meet established thresholds for all 4 sustainability factors, triggering a detailed assessment.

Following that assessment, in January 2019, the State Board for Community Colleges approved a 3-year reboot plan to establish ESCC as a strong, sustainable college that would more effectively and efficiently serve the educational and training needs of the Eastern Shore of Virginia. It included the condition that, "At the conclusion of the reboot period in July 2022, the college will be reassessed using the established thresholds in VCCS Policy. The results will either signal the viability of the college, or the State Board will seek an additional detailed assessment to determine whether the college should be consolidated with another Virginia community college."

In response to the reboot, the following statistics document our status. The September 2022 assessment found that ESCC's service population of about 42,000 does not meet the 100,000 threshold; it is unlikely that we will ever realize that given the population of the Shore. Secondly, while ESCC has increased academic enrollment by 12% since the start the reboot in 2019, we still hover at around 400 FTEs. The last time ESCC exceeded 500 FTEs was during the Great Recession, and it's difficult to determine if the Shore's population can sustain an additional 100 enrollments to ensure we can meet that benchmark.

Since 2019, we have stabilized ESCC's budget by increasing revenue and decreasing expenditures. Because of certain fixed costs that are scaled over a relatively low enrollment base, it is perhaps unlikely that ESCC can get under the 125% average cost of the other community colleges. However, after several years of deficit, the college has run a budget surplus the last 3 years and forecasts one again this year.

Prior to the reboot, ESCC's workforce services saw declines in the number of industry credentials achieved, and the unit not only failed to cover costs but actually contributed to ESCC's budget deficit. Since 2019, ESCC has been rebuilding workforce programs. At the end of the last fiscal year, ESCC workforce enrollment had grown by 52%, and thus far this year, our enrollment is up another 30%.

As a comprehensive community college, we have concentrated on increasing our offerings in academic, workforce, adult education, and continuing education programs. For example, ESCC has added classes in drone operation, dental assisting, and phlebotomy. Additionally we have strengthened partnerships at NASA Wallops and with Eastern Shore Rural Health and Riverside Shore Memorial Hospital. We now serve a total headcount of about 1,400 enrolled students each year.

On September 12, 2022, I received a letter from VCCS Chancellor Sharon Morrissey, informing ESCC that "the results of sustainability analysis presented to the State Board for Community Colleges at the May 2022 meeting showed evidence of progress in addressing the challenges identified. Since the May 2022 board meeting, data have validated that the college is currently meeting one of the four thresholds. As such, I am lifting the reboot status of the college" (bold lettering added by the Chancellor).

Reaching this momentous goal of having the reboot status lifted is the result of tremendous hard work by Your Eastern Shore Community College's faculty and staff. We also benefitted from the support and partnerships with the Eastern Shore community. About 30% of academic enrollment comes from dual enrollment. We offer dual enrollment opportunities in Accomack's high schools, Northampton High School, and Broadwater Academy, through a mix of classes offered on ESCC's campus, at the high schools, and online.

We owe a great deal of thanks to the businesses, industries, and healthcare agencies for supporting our students with educational and internship experiences. In addition, we've been overwhelmed by the generosity of our ESCC benefactors. Thanks to your support we've increased the number of students served with ESCC Foundation scholarships from 68 in 2019 to 282 in 2022, a 315% increase.

In 2020, ESCC's hard-working staff and faculty embraced the college's new YES! culture. YES! stands for Your Eastern Shore because the college belongs to all of us in this community. ESCC identifies YES! as its culture of hospitality, transparency, accountability, and inclusion. This has guided us through the "reboot" and positions us to be the Eastern Shore's educational center for generations to come, realizing our vision of being "the national model of a community college serving a rural area through diverse programming that leads to better lives and a better Shore."

Dr. James M. Shaeffer has served as President of Eastern Shore Community College since July 2019. He is a resident of Belle Haven, Virginia..



Another Big Success, Thanks to CBES Bike Tour Sponsors & Volunteers!

The 29th Between the Waters Bike Tour, originating in the serene, seaside town of Wachapreague, saw the return to full registration (1,200) as well as the popular back-to-the-barn Oyster Roast. The largest Shore ecotourism event is fueled by volunteer passion and the power of generous sponsors. These include those who share their homeplaces and businesses for registration, lunch, and rest spots, and those who provide services/products at reduced rates. It all comes together for a first-rate Bike Tour that supports our community and CBES tour mission, *Pedal to Protect Virginia's Eastern Shore*.

We are grateful for this true Shore Team led by Bike Tour Coordinator Extraordinaire – Mary Ehmann. Beloved by our cyclists, volunteers, and CBES, the only thing that outshines her skills is her dedication. Thank you, Mary!

And Thank You...

SponsorsBay Sponsors

Current Reflections – Fine Arts Gallery
Full Measure Oyster Company
Pender & Coward, Attorneys and Counsellors At Law
Tankard Nurseries
The Town of Wachapreague, Little City By The Sea

Lighthouse Sponsors

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Cherrystone Aqua-Farms
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Eastern Shore Signs
Island House Restaurant
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Friends of the Bike Tour

Vincent Bochicchio, Bo's Bike Repair Chatham Vineyards Lewin & Carr Inc., Realtors Willie C. Randall, Financial Advisor with Edward Jones



Early morning at Wachapreague, sunny volunteers Kathy Durmick and Sandy Fogg help cyclists fuel up. Photo: Watts Photography

She Makes Us Look So Good

Why do cyclists and others clamor for our Bike Tour Apparel and Event T-shirts? Because of the amazing talents of Shore Artist, Bethany Simpson. Whimsical, colorful, and beautiful are her paintings depicting Eastern Shore backdrops. A working artist's life is never easy, but Bethany refuses to take any proceeds from raffle sales. She is a true gem. Find her on Facebook at Bethany Simpson, Artist or buy her work at Lemon Tree Gallery in Cape Charles.

We Got By With a Little – or a Lot – of Help From Our Friends

Baking Up the Sweets: Karen Jolly Davis, Eleanor Gordon, Laurie Jones, Mary Miller, Sarah Morgan, Donna Phillips, and Ann Snyder

Connecting Us: Eastern Shore of Virginia Broadband Authority

Music to Our Ears: Ellen Grimes, Alex Holt & Peg Volk and The Corn Funk Revue [Melinda McPeek, Scott Wade, Chris Chandler, Peg Volk, Lynne Rogers, & Ellen Grimes]

Seafood Delights: The Great Machipongo Clam Shack

They Kindly Shared Their Spaces

Broadway Baptist Church, Onancock Current Reflections-Fine Arts Gallery, Bob and Judy Bilicki Eastern Shore Rail Museum, Parksley Eastern Shore Yacht & Country Club, Chris Stodghill George N McMath Park, Onley Herbert Powell Memorial Park, Wachapreague Island House Restaurant, Wachapreague Edwin and Nancy Long Cindy and Michael McCauley The Nature Conservancy - Wachapreague, Alex Rich Kathy Neipold-Bilicki Karen Terwilliger Town of Onley Town of Parkslev Town of Wachapreague Mike Trunzo Wachapreague Volunteer Fire Department, Sean Fate & Team Jeff Walker

See Bike Tour, Cont'd on p. 7

Bike Tour Volunteers

Lynn Allison Deborah Alsko Joe Althoff Jack Baird Sandra Beerends Vincent Bochicchio John Boddie Patricia Bragg Nancy Campbell Norman Colpitts Suzanne Conrow Bettina Dembek Debbie Derluth John Dewees Kathy Durmick Steven Ehmann Peter Fisher Joanne Fitchett Sandy Fogg Sally Goessel Eleanor Gordon Jim Granger Kim Granger Penney Holland Leigh Holmes Fred Janci Ellen Johnson Laurie Jones John Kolos Linda Lancaster Larry LeMasters Beth Lohr George Mapp Jean Mariner Bill Mastyl Sue Mastyl Annie McConnell Marcia McConnell Barbara Mulligan Cathi Murphy Barbara O'Hare Meriwether Payne Jennifer Peirson Lee Peirson Mike Peirson Metty Pellicer Marina Pierce Bill Revnolds Jeanne Reynolds Sue Rice Kimberly Richbourg Tom Richbourg **Brooke Rogers** Bruce Rubin Marie Silverstrim Michele Sorenson **Deb Torquson** Arthur Upshur Carol Upshur **Bob Watkinson** Tomeka Watkinson Sharon Whitman

And YAY to our high school volunteers from Nandua & Northampton High Schools!

Phillipa Wilcox Sally Williams



Rest stop volunteers Kim and Jim Granger pose with BTW cyclists at George McMath Park. Photo: Jim Granger

Route Markers

Meriwether Payne Sue Rice

Friday Fun Ride

Bettina Dembek
Sue Rice, Fun Ride Coordinator

Bike Repair

Bo's Bike Repair, Vincent Bochicchio Salisbury Cycle and Fitness, Buz Carragher

Official BTW Bike Tour Photographer

Cecil Watts, Watts Photography

Support & Gear (SAG) Crew

Vincent Bochicchio John Boddie John Kolos

Oyster Roast Donors

Full Measure Oyster Company, LLC The Ugly Oyster Man J.C. Walker Brothers Inc. Wescoat Nurseries

"Year in & year out, the volunteers who work the event are really friendly, making the ride that much more enjoyable." Tim, Suffolk VA

"Absolutely fabulous ride – everyone I encountered, from check-in staff to rest area volunteers, were so incredibly friendly and helpful. I brought four friends to this ride this year and hope to bring more next year!" Sharon, Chesterfield VA

Oyster Roast Volunteers Nan Arpino

Norman Colpitts Melody Cooper **Chad Davis** Karen Jolly Davis Mary Floyd Eleanor Gordon Cody Gritz Donna Lawson Wendy Martin George Mapp Chris Morgan Sarah Morgan Bill Mytnik **Eunice Payne** Meriwether Payne Brooke Rogers Mimi Sadler Arthur Upshur Carol Upshur Tom Ward Camden Whitehead

"My favorite part of the ride is how local residents open up their properties for us at the stops." Karen, Forest VA



Volunteers Sarah Morgan and Mary Floyd dole out The Great Machipongo Clam Shack Crab Dip along with smiles. Staff photo

RECYCLING CORNER

By Sue Mastyl

What to Do With All Those Batteries?

As we think about toys and electronics for holiday gifts, and in our everyday lives, it's important to know how to properly dispose of used batteries. As we last reported in August 2020, single-use, household alkaline batteries are not accepted in the recycling bin or in the Regional Household Hazardous Waste Collection Facility in Painter, and should be disposed of with regular household trash.

Each of the 7 convenience centers in Accomack County accepts lead acid batteries and used car batteries in a separate container; rechargeable batteries, along with cell phones, are collected by the attendants.

So, since we can't recycle all those alkaline AAs and AAAs, should we think about switching to rechargeable? The answer seems to be yes.

The impact of alkaline batteries is not benign –

- Americans purchase almost 4 billion alkaline batteries (47 per household) each year; about 8 million are tossed in the trash every day, potentially leaching chemicals into groundwater.
- Although they technically can be recycled to recover manganese, steel, and zinc, it's too costly and difficult.
- Although the EPA does not consider alkaline batteries as hazardous waste, California and the European Union do.

Rechargeable batteries, either nickel-metal hydride (NiMH) or lithium-ion, offer several advantages –

- Rechargeable batteries pay for themselves (including the charging station) within 4 to 6 uses, and can be recharged hundreds of times (NiMH) or more than 1,000 times (lithium-ion).
- NiMH batteries are chemically sealed to prevent damage due to battery leakage.

Experts do recommend that alkaline batteries continue to be used for certain settings, including smoke alarms, low-power devices, and emergency supplies.

Sources:

Bishop T. The unsustainable impact of alkaline batteries. Pale Blue Earth, April 23, 2020. https://paleblueearth.com/blogs/news/the-unsustainable-impact-of-alkaline-batteries

Witman S. Are rechargeable batteries better than alkaline? Most of the time. The New York Times Wirecutter. June 6, 2019. https://www.nytimes.com/wirecutter/blog/are-rechargeable-batteries-better-than-alkaline/

Keeping Track

The Greatest Bird Flight Ever

Some things in nature are almost beyond comprehension.

A 4-month-old bartailed godwit recently broke the world record for the longest nonstop flight. The shorebird flew 8,425 miles – from Alaska to Tasmania – in 11 days.



A mature bar-tailed godwit. Photo: Wikimedia Commons.

For centuries, no one thought birds could pull it off. Given that the journey is across the open ocean, there are no coastlines to follow – they must navigate by the sun and the stars, and possibly by the earth's magnetic field. They migrate in flocks.

Adult godwits are a little over a foot long, with a wingspan of about 2½ feet. They weigh anywhere from about a half pound to a little over a pound.

A lightweight satellite tracking device enabled researchers to monitor the flight, providing location, altitude, and wing-beat frequency. Godwits cannot glide – they must flap continuously, which uses up a lot of energy. Nor can they land at sea to rest or feed.

Researchers have recently discovered that they take advantage of favorable wind currents. There is concern that a changing climate may alter seasonal winds and render these sea flights impossible.

Hampton Roads Sanitation District – Minimal Impact on Groundwater

During their November 15 meeting, the Eastern Shore of Virginia Ground Water Committee discussed the impact of the new sewer project, by the Hampton Roads Sanitation District (HRSD), on our groundwater resources.



The question has been raised as to whether pumping wastewater from Nassawadox and Exmore to the Onancock water treatment plant, with subsequent discharge of the treated water to Onancock Creek, would "potentially reduce land-based wastewater discharges (through septic fields, mass drain fields, and land application) ... with potential impacts to the groundwater resource on the Shore," noted Britt McMillan, Ground Water Consultant to the Committee.

With current land-based discharges in these 2 towns, most of the water is drawn from the deeper Yorktown-

See Keeping Track, Cont'd on p. 9

Keeping Track, Cont'd from p. 8

Eastover aquifer, but is returned to the shallower Columbia aquifer or to runoff to surface water and tidal creeks. "This lessens the sustainable benefit," McMillan noted. He added that it will be "very unlikely to see any measurable effect [to the aquifer] from connecting these systems."

For a sense of scale, the Onancock plant has a total capacity of 750,000 gallons a day (GPD); until now, only 250,000 GPD of that capacity has been used. Exmore's wastewater discharge is 40,000 GPD.

The other potential impact from the HRSD project – increased groundwater use from development encouraged by the project – was also addressed. McMillan pointed out that any sizable development (more than 300,000 gallons a month, or a subdivision of 30 or more lots) would need to be permitted through the Department of Environmental Quality, which closely monitors groundwater usage on the Shore through permits and modeling. "New withdrawals that do not meet the criteria in the regulations (in particular the 80% drawdown criterion) will not be issued a permit," he added.



Conservation, Cont'd from page 4

- To protect the resources of the Atlantic (Seaside) coastal area, the Barrier Islands, tidal marshes, and intercoastal waters between the islands and the mainland from any actions that would degrade the environment of those areas and threaten them as nursery and habitat for marine life, waterfowl, and other forms of wildlife;
- To help ensure the viability of the seafood industry, which is dependent upon these fragile and environmentally important coastal areas;
- To protect limited areas in the Chesapeake Bay coastal area that may be identified as important nursery and habitat for marine life and waterfowl;
- To protect limited upland coastal areas identified as unique or unusual enough to warrant preservation because of geology, habitat, or contribution to water quality.

Much of the land designated as Conservation on the current Northampton County Zoning Map is adjacent to either the Chesapeake Bay or the various Seaside bays between the mainland and the barrier islands. Accomack County doesn't have a specific Conservation District, but refers to "conservation lots" within Rural Residential & Village Development District zones.

Conservation easements are private agreements; Conservation zoning can be a part of a county's designation of any land within its boundaries. As such, county ordinances include Uses and locations for land in the Conservation zoning district, but do not enforce conservation easements nor dictate their terms.



Spirited Cherry Cookies

Always fun to have some sweet, fruit-filled cookies for the holidays. Even more fun when the fruit has some extra spirited flavor. The flavor comes from the cherries having a nice warm bath in bourbon or rum. Dried cherries are perfect for this – but if all you can find are big jars of maraschino cherries, those will work fine too. This is everyone's basic chocolate chip cookie recipe, with cherries instead of chocolate. The extract flavorings ramp up the cherry flavor. Of course, you can toss in some chocolate chips too – the cookies will be stuffed with good tastes.

- 2 cups cherries, dried as is, or soft cherries, drained, roughly chopped, and patted dry
- ½ cup bourbon or rum
- 1 cup butter, room temperature
- ³/₄ cup light brown sugar
- ³/₄ cup white sugar
- 2 eggs
- 2 tsp almond extract
- 1 tsp vanilla
- 2 ½ cups flour
- 1 tsp baking soda

In a small saucepan, heat cherries and bourbon or rum to a very low simmer for about 10 minutes; let stand while you make cookie batter.

- Heat oven to 375°F.
- Stir flour with baking soda and salt; set aside.
- Using a hand or stand mixer, beat butter with sugar and brown sugar at medium speed until creamy and lightened in color.
- Add eggs, vanilla, and almond extract, one at a time. Mix on low speed until incorporated.
- Gradually blend dry mixture into creamed mixture. Stir in fruit and chocolate chips, if using.
- Drop by tablespoons onto ungreased cookie sheets.
- Bake for 9 to 11 minutes or until cookies are golden.

— Mary Miller

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