

CITIZENS FOR A BETTER EASTERN SHORE

SHORELINE

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To honor our founding president

CBES Establishes Wescoat Award

By John Ordeman

As a memorial tribute to our founding president, the Board of Directors of Citizens for a Better Eastern Shore has established the Suzanne Wescoat Award for exemplary service by an elected or appointed public official to be presented at a CBES Annual Meeting. As a Supervisor and Chairman of the Board of Supervisors, Suzanne worked diligently with a dedication to what she saw to be of benefit to the community and to the well-being of the people of Northampton County. Her service was such that she would herself have been a most deserving recipient of this award.

Jeff Walker, who was a colleague of Suzanne's on the Board of Supervisors and succeeded her as Chairman, has written, "Suzanne's public service efforts to improve her community and the lives of its citizens exceeded those of anyone else in her lifetime. She was a wonderful example of a leader who believed in and lived by the expression: 'Service is the price you pay for the space you occupy.'"

Richard Tankard, who also served with Suzanne, has said, "She began her tenure on the Board as the lone voice for conservation. Her consensus-building talents changed how Northampton County views conservation." Speaking of her leadership as chairman, Richard said, "She was the social conscience of the Board. She wanted to make sure that any policy decision benefitted our most disadvantaged citizens."

Suzanne's funeral at Hungars Church on August 15, a service of thanksgiving and celebration, was attended by an estimated 400 people. In his homily, the Rev. Harry Crandall said:

"Suzanne could simply have lived 'the good life' with Jack and her family, the good life, that is, as the world believes it to be. She could have avoided the controversies and the inequities of Eastern Shore living ... but she did not. She threw herself into the cauldron of politics and made something noble out of what much of the public thinks of as dirty and self-serving.

Suzanne offered herself for elected office on the Northampton County Board of Supervisors, serving multiple terms of office. She was always prepared and always an active participant in shaping opinions – despite the pain, despite the inconvenience, despite the criticism, despite the cost to her fragile body. Suzanne understood her neighbors and was a most articulate and caring advocate for them."

Harry also acknowledged that Suzanne was "a founding leader of Citizens for a Better Eastern Shore, which among other goals provides a forum to redress grievances and champion earth-friendlier ways of dealing with the problems of our society."

Vic Schmidt, who was in on the founding of CBES, has written, "Throughout her

See "Wescoat," Cont'd on page 2



Suzanne at a CBES Pig Roast.

“Wescoat,” Cont’d from page 1

presidency and particularly when presiding at CBES meetings, I recall Suzanne exhibiting grace and an amazing ability to bring about consensus when her organization was dealing with difficult issues.”

As president of CBES, Suzanne worked with Jane Cabarrus, CBES vice-president and the president of the Northampton Chapter of the NAACP, as co-founders of the annual Martin Luther King, Jr. Day Community Unity Breakfast. “Suzanne – ‘this skinny, little rich white girl,’ as I called her – was my sister,” Jane said. “We were more alike than we were different, and we came together and worked together to make the Eastern Shore a better place for all people.”

Suzanne was the recipient of several prestigious awards in recognition of her many and varied accomplishments, among the most notable being: the DeLacy Gray Medal for Conservation, awarded by the Garden Club of Virginia; the Public Servant of the Year Award, presented by the Northampton County Chamber of Commerce; The Oak Leaf Award, for outstanding service to The Nature Conservancy; and The Randolph-Macon Woman’s College Alumnae Achievement Award.

We at CBES are proud to honor our friend and colleague through the establishment of the Suzanne Wescoat Award, which will be presented over the years to public officials who follow in her tradition of exemplary service to the Eastern Shore community.



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Multi-State Bay Cleanup Effort will Bring Jobs and Revenue to the Eastern Shore

By Ann Jennings, Virginia Executive Director, Chesapeake Bay Foundation

Ann Jennings is well-known on the Eastern Shore. In fact, she was one of two presenters at our CBES Annual Meeting in April of this year – appearing with Deputy Secretary of Agriculture and Forestry Matt Conrad. As regular ShoreLine readers will recall, the federal EPA is putting all Bay jurisdictions on a “pollution diet,” or Total Maximum Daily Load of water pollution. In early August, the Bay Foundation contacted ShoreLine saying that the Chesapeake Bay Foundation would like the opportunity to explain the effects of the “pollution diet” so that Eastern Shore residents will understand the need for it better. Since October 1 is the deadline for Virginia localities to submit their Phase II “pollution diet” plans to the state, and everyone needs to understand this complex subject better, ShoreLine agreed to present the Bay Foundation’s perspective on the topic.

Recent efforts to save the Chesapeake Bay and its rivers and streams are in jeopardy. Last winter, Virginia and the other states in the Bay region developed state-specific Watershed Implementation Plans (WIPs) to put into effect the Environmental Protection Agency’s (EPA) science-based pollution diet for the Chesapeake Bay. The effort promises to drive the restoration of water quality as well as protect and add thousands of jobs that depend on and contribute to clean water, an issue of particular concern to citizens on the Eastern Shore.

Just as this progress is under way, the Accomack County Board of Supervisors has begun a formal investigation into whether the county should try to stop the Chesapeake Bay clean-up process. The board is apparently considering joining a Pennsylvania lawsuit filed by the American Farm Bureau Federation. That decision would be a terrible mistake for the county.



Virginia can’t do it all; effective cleanup has to be a multi-state effort.

For decades, the Eastern Shore has suffered from polluted water, especially from nitrogen and phosphorus runoff, which threatens the seafood and tourism industries and our entire coastal way of life. This pollution comes from a variety of sources and locations – some local, some out of state. The Eastern Shore does not suffer alone; many other areas of Virginia and Maryland, for example, are harmed by this pollution. To end this degradation of our natural resources and way of life, citizens across the entire 64,000 square mile Bay watershed must take action to reduce pollution flowing into the streams and rivers that feed the Bay. Without this multi-state effort currently underway, the Eastern Shore – and the rest of Virginia – has little protection from this pollution and no hope of ever seeing a healthy Chesapeake.

More than most regions in the watershed, the economy of the Eastern Shore is intrinsically linked with water quality and is poised to benefit from this watershed-wide restoration effort. Not only will the Eastern Shore benefit from a restored Chesapeake Bay, but participating in the clean-up effort, which is largely voluntary for the Eastern Shore, will result in clean water in local creeks, coves and inlets. Consider the following local benefits that will occur due to Eastern Shore efforts to restore the Bay:

Clean waterways increase property value.

Accomack County and Northampton County revenues depend heavily on local real estate taxes (which generate about 80% of local county revenues), which in turn, depend on property values. An EPA study indicated that clean water can increase the value of nearby single-family homes by up to 25 percent. A 2000 study concluded that improvements in water quality along Maryland’s western shore to levels that meet state bacteria standards could raise property values by 6 percent. High water clarity was shown to increase average housing value by 4 to 5 percent.

See “Bay Cleanup,” Cont’d on page 3

Clean water supports commercial and recreational fisheries.

Commercial and recreational fisheries are vital to the Eastern Shore economy. A 2005 Virginia Institute of Marine Science (VIMS) study estimated the total 2005 value of annual fisheries landings for Accomack County at \$13.7 million and Northampton County at \$2.9 million. Bayside fisheries are an important part of these revenues. Communities like Tangier Island are heavily dependent on the health of Bayside fisheries and have suffered significant economic setbacks from harvest restrictions due in part to poor water quality in the Bay. Combined with good fisheries management, improving water quality in the Bay will increase revenues from fishing that are vital to many of the Shore’s families and communities.



Reducing pollution will help the efforts of the Eastern Shore’s seafood industry, including oyster aquaculture.

Clean water can increase the production of clams and oysters.

Eastern Shore Bay restoration efforts will also improve water quality in local creeks and coves and allow for increased production of clams and oysters. Currently, poor water quality and high bacteria levels on the Bayside of Northampton and Accomack counties have resulted in harvest closures of a portion of 18 of 20 shellfish growing areas because of excess bacteria. It’s tough enough to make a living from the water, but when pollution causes additional obstacles, it puts a huge damper on success. Although shellfish can be grown in condemned waters, they must be relayed to clean water before being harvested, which impedes shellfish stock expansion and adds costs for the aquaculture industry. A new VIMS study found that 2010 revenue taken home by clam and oyster aquaculture was \$25M and \$5M, respectively.

The same conservation efforts needed to reduce nitrogen, phosphorus, and sediment pollution to the Bay will also reduce bacteria pollution and prevent dead zones that occur in shallow, slow-moving creeks and coves. Bay restoration efforts will also reduce sediment pollution that smothers existing oysters and clams and makes it harder for new spat to settle and grow to harvestable size. Combined with on-going successful efforts to breed disease resistant native oysters, these water quality improvements will pave the way for a significant expansion of viable oyster habitat and the economic benefits that come with the commercial and aquaculture oyster fishery.

Clean water benefits the Eastern Shore tourism industry.

Tourism is one of the Eastern Shore’s most important industries. A 2009 report prepared for the Virginia Tourism Authority found that tourists contributed \$137.5 million to the Accomack County economy, creating 1,850 jobs and \$4.4 million in local tax receipts. In Northampton County, tourists spent almost \$56.9 million, supporting 730 jobs and almost \$1.2 million in local sales tax receipts. Efforts to restore the Chesapeake Bay will support the Eastern Shore Tourism Commission strategy to promote the Eastern Shore of Virginia as an environmental beacon where family farms and historic villages co-exist with a teeming fishery, rich oyster and clam beds, and a vast wilderness of marsh and barrier islands of global ecological significance.

On-farm conservation can contribute to the long-term economic viability of farming on the Eastern Shore.

The Eastern Shore is one of the largest agricultural production regions in the state, and therefore agriculture has an important role to play in the Bay clean-up effort. No farmer wants to lose nitrogen, phosphorus, and top soil (sediment) to the Chesapeake Bay. Fertilizer is increasingly expensive, and maintaining healthy top soil is vital to crop production.

Virginia’s Bay clean-up plan proposes to rely on voluntary, agricultural cost-share programs to incentivize increased adoption of a suite of conservation practices that are popular with many farmers because they reduce input costs and promote healthy top soil and robust crop production. This list includes many practices applicable to the Eastern Shore that are already being used by many of the region’s farmers to help prevent valuable fertilizer and topsoil from washing into coves and creeks that feed into the Bay. Innovative technologies will also play a role. Farmers on the Eastern Shore and elsewhere are increasingly using advanced fertilizer application and cultivation technologies and new crop genetics that reduce the need for fertilizer and prevent soil loss. There is also a growing interest in exploring technologies that can convert poultry litter into heat, electricity, and sterilized fertilizer that is readily transported to soils in need of additional nutrients.

The Eastern Shore has more to gain from a clean Bay than just about any other community in the Chesapeake Bay watershed. Farming, fishing, and tourism – industries that rely on clean water – are the core of this economy. Citizens of the Eastern Shore need communities that live far from the shores of the Chesapeake Bay to do their part to reduce pollution. What kind of message does it send to localities that don’t directly benefit from a clean Bay if the Eastern Shore won’t support the clean-up effort?

Well-managed farms, a robust aquaculture industry, and waterways teeming with fish and shellfish will bring more jobs, a stronger economy, and more tourist dollars to the Eastern Shore, while assuring that we, our children, and grandchildren will enjoy the quality coastal life we deserve. For that result to occur, we all need to take action to reduce pollution to the Bay. This is the aim of the Bay pollution diet and the state WIPs. If one area or source sector falters, our shared objective may fail. We urge Eastern Shore residents to encourage their local Board of Supervisors members to support actions to restore the Bay.

ShoreLine Comment. *We appreciate CBF’s contribution to this discussion. We will continue to follow the management of the Bay cleanup effort and present informed comment.*



Rural America, Community Services & Medical Care

America is aging, the future is here, and we may *not* be ready

By Mary Miller

The US population is getting older, the American median age having risen to 37.2 years over the past decade, the US Census Bureau recently reported.

The population of Americans between the ages of 45 and 64 – the current baby boomer ages – has grown by 31.5% since 2000 to total 81.5 million people, or more than a quarter of the US population. It is the segment of the population that has seen the greatest growth since 2000, and it is this segment which will be the “older” cohort when the next Census rolls around 2020. The segment of the population that is 65 years or older also grew rapidly, by 15.1% during the 10 year period. They now number 40.3 million people, or 13% of the population. And an aging population will increase both the need and the demand for all kinds of community services – especially medical services and access to them.

How will rural communities deal with increasing demand for medical services?

Hospital emergency rooms are closing at an alarming rate, even as emergency visits are rising, according to a recent study in *The Journal of the American Medical Association*. Although the study focused on urban and suburban hospitals, it follows right along with the two decades long series of closures of hospitals, including their emergency facilities, in rural areas across the country. Although federal initiatives such as the Medicare Rural Hospital Flexibility Program (Flex Program) help states improve access to health care, including emergency and critical access care, many rural areas and their growing elderly populations are severely underserved. The situation is made worse by the uptick in Emergency Room use – increased use of ERs as primary care providers when family health insurance is lost – a problem that is further complicated by the scarcity of doctors in rural areas and the inability in some areas to find a doctor willing to take new patients or to accept state Medicaid payments.

Dr. Renee Y. Hsia, an assistant professor of emergency medicine at the University of California – San Francisco and the lead author of the study funded by the Robert Wood Johnson Foundation, concluded that, “...market forces play a larger role in the distribution and availability of care... [and] we can’t expect the market to allocate critical resources like these in an equitable way.”

The study found four characteristics that appeared to increase the risk of an Emergency Room closure: emergency rooms at commercially operated hospitals and those with low profit margins were almost twice as likely as other hospitals to close, and hospitals that serve disproportionate numbers of

Medicaid patients, and hospitals serving a large share of the poor, including the elderly poor, were 40% more likely to close.

Access to medical care – a critical component.

“Access to Quality Health Services in Rural Areas,” a recent paper published by Texas A& M Health Center School of Rural Public Health, states that “access to emergency medical services was identified as a major rural health concern among state offices of rural health,” and that “emergency medical services are a major factor in assuring access to health care” in rural areas. “Emergency Medical Services is the vital extension of emergency care from the community to the hospital emergency room. In rural areas where paid city or county services are either not in place or limited by budgetary constraints, some, or all, of the EMS task may fall upon volunteer community members who are trained and organized to provide such services. An estimated 90% of emergency medical service personnel in rural areas are volunteers.” Accomack and Northampton Counties are fortunate to have both paid emergency staff and dedicated volunteers to deliver emergency services.

It is not only access, or lack of access, to emergency care that will impact the growing older populations in rural areas. In a study recently published in *The Journal of the American Medical Association*, researchers at the Dartmouth Institute for Health Policy and Clinical Practice found that “seniors with greater access to primary care doctors are less likely than those in areas with fewer such doctors to be hospitalized for illnesses that can be managed outside a hospital, like asthma and diabetes. Those with greater access also have lower death rates,” the authors reported.

Once again, both Accomack and Northampton Counties are fortunate – Eastern Shore Rural Health, through its five clinical office sites, meets the health needs of an ever-increasing percentage of Shore residents. Their leadership and outstanding service has made the organization eligible for outside funding that has been used to upgrade, improve and extend their services. Small town doctor’s offices have also continued to serve the needs of their patients in their own home towns.

More than medical services.

“The Maturing of America,” a report undertaken by the National Association of Area Agencies on Aging, found that as recently as five years ago most communities hadn’t begun to plan for the shifts in medical services of the coming years. The proportion of people older than 65 is expected to swell from 13% of the nation’s population today to nearly 20% by 2030.

The Aging of America

Source: 2010 US Census

	Median Age	Over 65
United States	37.2 yrs	13.0%
Virginia	37.5 yrs	12.1%
Accomack	44.7 yrs	21.5%
Northampton	42.4 yrs	21.0%

“... We can’t expect the market to allocate critical [medical] resources like these in an equitable way.”
– Dr. Renee Hsia, University of California

greater access to primary care doctors are less likely than those in areas with fewer such doctors to be hospitalized for illnesses that can be managed outside a hospital, like asthma and diabetes.

Those with greater access also have lower death rates,” the authors reported.

Home-based businesses

Small business – big surprise

Assembled by ShoreLine Staff

Self-employment has increased dramatically in most rural areas over the past three decades, doubling in many rural locations, according to the Rural Policy Research Institute Center for Rural Entrepreneurship. And more and more of these small owner-operated businesses are being run from the owner's home.

More than half (51.6%) of all businesses that responded to the 2007 Survey of Business Owners (SBO) were operated primarily from someone's home, according to new data from the U.S. Census Bureau released in June. Home-based businesses do not include contractors or others who have home offices and work elsewhere on jobsites – home-based businesses are just that, businesses operated from a home. The majority of these businesses are considered "small." Of those surveyed, 93.1% of these businesses have annual revenues below \$250,000 – "small" in the eyes of the Census Bureau.

"Most businesses are started by people who dig into their own pockets for at least some of their start-up capital," said Census Bureau Deputy Director Thomas Mesenbourg. "This is true for both firms with employees and those without them. Furthermore, over one in five (20.8 %) of respondent businesses used no start-up capital at all." More than half of the survey respondents indicated that their start-up costs were less than \$5,000. Only 1.5% of the firms needing start-up capital required \$1 million or more.

Who owns these businesses?

- 49% are owned by men;
- 58% of women-owned businesses are home-based;
- 54.4% of non-minority businesses are home-based;
- 46.5% of minority-owned businesses are home-based;

Characteristics of home-based businesses reported by the US Census Bureau include:

- 75.4% have full-time paid employees;
- 58.0% have part-time paid employees;
- 28.2% of firms are family-owned;
- 50.5% are major source of income for their owners;

- 62.9% of owners worked 40 hours or more per week;
- 50.8% of owners had a college degree;
- 36.5% of owners were 55 or older;
- 29.6% of owners were 45 to 54.

The data were collected from more than 2.3 million firms. The most successful of these home-based businesses in terms of revenue earned were those providing administrative, technical, communication, professional and support services, including out-sourced work for Federal, state and local governments and the military. A particularly profitable field was specialty manufacturing. A Census Bureau press release states that "due to increases in technology and the ever-evolving internet, it is possible to run even the largest of businesses from a residence. Homeowner Associations and city ordinances seem to be more of an impediment to home-based businesses."

Not just for telecommuting anymore.

Business Week published an article on "The Rise of the Homepreneur" which discusses "Homepreneurs: A Vital Economic Force," a new report from Emergent Research. "We're seeing more and more home-based businesses that are real businesses," says Steve King who co-authored the new report with Carolyn Ockels. Highlights of the Report include:

- Home businesses employ over 13 million people.
- Nearly 6.6 million home businesses generate at least 50% of the owner's household income.
- 35% of home businesses generate \$125,000+ in revenue; 8% more than \$500,000.

"Over the last decade, many entrepreneurs have turned their homes into remote offices...and over time these home-based entrepreneurs or "homepreneurs" have become a force to be reckoned with," writes King. "What many deemed a place for hobbyists or telecommuters, the home has [now] become the affordable and sensible place to do business." And in a recent on-line article at Bloomberg by *Business Week*, reporter John Tozzi noted that home-based business owners had a median family income of \$63,648 (compared to the national median of

\$46,242 that year). "The technologies that enable more people to work at home have advanced significantly."

Both Accomack and Northampton County have zoning ordinance provisions which support the creation and operation of home-based businesses. Owner-operated businesses, based at home, have been a traditional way to do business in rural areas. So what appears to be big news to *Business Week* and the US Census Bureau is just business as usual on the Eastern Shore.



"Rural Medical," Cont'd from page 4

The report, released in June, finds a greater awareness now of the trends in the 1,400 communities surveyed. But it also notes that the recession has had devastating effects. Most communities "have been able only to 'hold the line' – maintaining policies, programs and services already established," the report said. "Thus, they have not been able to move forward to the degree needed to address the nation's current 'age wave'."

With governments reeling from slashed budgets, subsidized senior housing is harder to find (available in 63% of communities now, down from 70%), and property tax relief for seniors with limited incomes has fallen. Five years ago, 72% of local governments offered these breaks, compared with 54% now. Housing, long-term care at home and effective transportation – these cost real money, a scarce commodity for local governments today.

The Texas A & M Health Center Report reached a somewhat dispiriting conclusion for many rural areas: "Addressing the special situations and needs of rural [medical] care in legislation, policy and funding may help to eliminate some of the rural-urban disparities. However, given that some sources of these disparities, such as large geographic distances and low population density, are by their very nature, intrinsic to rurality and unmodifiable, it may never be possible to completely eliminate the rural-urban disparities." The Shore, with its dedicated medical professionals and volunteers, may be an exception to this unsettling projection.

The CBES Board of Directors

We continue our brief biographies of the CBES Board of directors. The Board currently has 22 members. We have previously introduced 19 of them, and this month we conclude this series with the final 3 members and the CBES staff.

Paul J. Driscoll. The immediate past-president of CBES, Paul Driscoll, joined the Board in 2004. He served as president from 2006 through 2009 and currently occupies an *ex-officio* seat on the Executive Committee. A graduate of Syracuse University with a degree in American Studies, Paul has been a teacher, a book editor, a management consultant and an entrepreneur. He founded an electronics manufacturing company, which he ran for 13 years. He also had a career in the US Navy, from which he retired with the rank of Command Master Chief. After retiring to the Eastern Shore, Paul worked as an executive with Bay Beyond. He and his wife Patty, who is a teacher in the Northampton Public Schools, live near Eastville.

Tamsey Ellis. A career teacher of science with a Master's Degree in biology, Tamsey Ellis now serves as an education specialist with the Eastern Shore Soil and Conservation District. She taught biology and environmental science for thirty years, part of that time at Broadwater Academy, and she also worked as a seed analyst and biologist for the Pennsylvania Department of Agriculture. While teaching in an inner-city school in Arizona, Tamsey helped to found a magnet school with a concentration on environmental science. After returning to the Eastern Shore, she was a founder and the founding president of the Eastern Shore Master Naturalist organization, and she has worked to facilitate several other environmental programs and projects both here and elsewhere. Tamsey, who joined the CBES Board in 2009, has contributed several articles to *ShoreLine*. She lives on a pond near Cape Charles in a house she built years ago with her husband and their sons.

Major Jones. Major Bond Jones is an Eastern Shore native and grew up on his parent's farm. A graduate of Northampton High School and Hampden-Sydney College, he joined the CBES Board in 2010 and has been active in working with CBES events. Major owns and operates Major Excavation, a contracting business that specializes in site preparation and working with farmers to construct ponds and other irrigation facilities. An active member of the Northampton County Chamber of Commerce, he is chair of the Chamber's event committee. He is also an avid hunter and fisherman, and is a member of the local Ducks Unlimited committee. Major lives in the Franktown area.

Denard Spady. Denard Spady, who has been the CBES Executive Director since 1995, is also an Eastern Shore native who

grew up on his family's farm, the Spady property being located at the extreme southern tip of Northampton County. He was graduated from Cape Charles High School and the College of William and Mary, and he managed his farm for approximately 25 years, from the early 1970s to the late 1990s. During that time he was active with Rotary International, serving as president of the Cape Charles club and working with one of Rotary's exchange programs. He also held several appointed positions for Northampton County including the county's Equalization Board, the Planning Commission and other *ad hoc* committees.

Since his appointment as Executive Director, Denard has worked closely with and been an invaluable advisor to five CBES presidents. He has also represented the organization on several citizen advisory groups and been particularly active as a major contributor to *ShoreLine*.

Phyllis Tyndall. Phyllis Tyndall, our Office and Events Manager, grew up on a farm in North Carolina. She has had a broad range of experience working in North Carolina and then in Florida, where she served as Executive Assistant at the Tampa Bay Wholesale Growers Association and managed events for the Association. She moved with her family to Cape Charles in 1995 and opened a bed-and-breakfast, which she ran for 12 years. She was a founding member and co-chair of the Cape Charles Holiday Sampler and Progressive Dinner Tour, and she continues to work with that event.

At CBES, Phyllis manages the membership database and plans and organizes our Pig Roast and our Bike Tour, as well as lesser events. She also serves as the Administrative Assistant for the Virginia Eastern Shorekeeper organization. Phyllis, her husband Barry and their daughters, Brittany and Leigh, continue to own property on the Shore, but they have recently moved to North Carolina. Barry works at *STIHL USA* in Virginia Beach, and Phyllis commutes to work at CBES.



WANTED

Empty inkjet cartridges on the loose!



Help us round up those inkjet cartridges with a print head such as the ones pictured above--turn them in to the CBES office in Eastville. You will be helping the environment, and CBES will get a little money by recycling them.



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Northampton County Day

“Northampton County Day” is being planned for Saturday, October 1 and will again focus on fitness-related activities, healthy foods and safe lifestyles while having family fun. All are welcome to this free event that begins at 10:00 AM and closes at 2:00 PM.

The “Northampton County Day” celebration is held at the Northampton High School and will be preceded by a 5K road race and a one-mile run/walk. Children’s activities will include: games, a tennis clinic, youth golf instruction, face painting and much more. Exhibitors and community organizations will provide services ranging from health screenings to wholesome learning experiences. Vendors of locally grown and healthy food are also invited to display and sell their products.

“Northampton County Day” is coordinated by the Northampton County Education Foundation, a nonprofit organization working to mobilize the community resources necessary to promote student performance and excellence in teaching in Northampton County public schools. “The event was conceived to enrich and celebrate the relationship between our public schools and the families they serve,” said Bill Payne, a foundation board member.

For more information or to reserve exhibitor or vendor space call Bill Payne at 331-4044.



ShoreLine by email

We can deliver *ShoreLine* to your email address at the same time we send paper copies to other members, *if* you request email delivery. Simply send your request for email delivery to: shoreline@cbes.org

Islands from the Sky

Art inspires. Science & history educate.
What happens when they all combine?

Islands from the Sky is an art and education exhibit created by artist Mary Edna Fraser and scientist Dr. Orrin Pilkey of Duke University on display at the Barrier Islands Center (BIC) in Machipongo from September 22 to November 3. Pilkey and Fraser will make presentations at the opening of the exhibit on Thursday, September 22, at 6PM. The presentations will be at the Northampton Middle School auditorium. An opening reception



will follow immediately at the nearby Barrier Islands Center. Suggested donation for the presentations is \$6, students are free.

The work of Fraser has been exhibited at the Smithsonian National Air and Space Museum, Duke University, the National Academy of Sciences and the National Science Foundation. Pilkey has coauthored and edited 36 books including *The Beaches are Moving: The Drowning of America’s Shoreline*. His literary work has featured in publications such as *New York Times Magazine*, *Esquire*, *Smithsonian* and *National Geographic*.

In association with the exhibit, celebrated local decoy carver and hunting guide Grayson Chesser will offer historical insights about Virginia’s Barrier Islands on Thursday, October 6 at 7 PM at the BIC.

The *Islands from the Sky* exhibit was made possible with the generous support of Verizon Foundation, Bank of America, Virginia Foundation for the Humanities and The Nature Conservancy’s Virginia Coast Reserve. For more information, please visit the Barrier Islands Center’s website at www.barrierislands.com or call 678-5550.



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CBES Membership 2011

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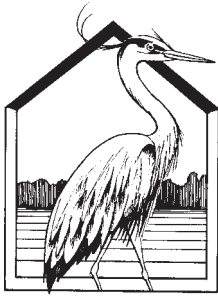
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- * _____ Life Membership (includes *ShoreLine*) \$ 200
- * _____ Optional Additional Contribution of \$ _____
- * _____ *ShoreLine* subscription without CBES membership \$ 20
- * _____ Gift subscription to *ShoreLine* for a friend (write name and address on reverse) \$ 20

For our membership records, tell us how many there are in your home 16 years or older: _____



CITIZENS FOR A BETTER EASTERN SHORE

SHORE FACTS

TM

September 2011

Solar Power for the Homeowner

By Sue Mastyl

Sue Mastyl and her husband Bill live in Harborton. Sue joined the CBES Board of Directors in April, 2011, and has written several articles for ShoreLine. When we learned that the Mastyls had installed a solar hot water system and photovoltaic panels for power generation, ShoreLine asked Sue to write a ShoreFacts describing solar power for homeowners.

Alternative energy projects – both wind and solar – have been discussed on an industrial scale in both Accomack and Northampton counties. While these projects may or may not come to fruition, the individual homeowner can start generating green energy today. The technology is readily available, and the costs are coming down every day. And I can speak from personal experience that, for solar energy, it is affordable for many and can cover the complete energy needs for a household. Although we're only one specific case, there are a lot of lessons that can be drawn from our experience.

My husband Bill and I took the plunge and installed whole-house solar (solar hot water and photovoltaic panels) in March, 2010. Solar energy makes sense for a number of reasons, including the rising cost of electricity, and perhaps more importantly, the environmental impact of our energy use. In the year and a half since the system was installed, we've saved over 8 tons of CO₂ from going into the atmosphere.

The Costs of Electricity – Economic and Environmental.

Equating electricity usage with cost can be a difficult concept to grasp – we turn on the lights, run the refrigerator, adjust the thermostat, and all these little actions can determine whether we have a monthly bill of \$100 or \$300. One exercise to bring this home is to think of a single 100-watt light bulb, which consumes 100 watts in one hour, or 0.1 kilowatt-hours (kWh). If this single light bulb is left on for 24 hours a day for 365 days a year, it will consume 876 kWh. At 13 cents a kWh (which is what our total cost is currently on the Shore), this equates to \$113.88 over the course of a year. Of course, other appliances use far more energy – a dryer uses 5,000 watts, or 5 kWh, a hot water heater uses 4,500 watts, or 4.5 kWh, and a 9,000-BTU room air conditioner uses 1,050 watts, or 1.05 kWh. As electricity costs rise, which they're expected to, our bills will only increase. In addition, a lot of the latest technology actually uses more electricity, and many of these devices use electricity even when they're turned off. In fact, some adapter plugs use as much power when the appliance is turned off as the appliance itself.

The environmental impact of our electricity use is extensive. The major sources of electricity in Virginia include coal, nuclear, combustion turbines (natural gas and diesel) and wind and landfill energy. Power plants account for 40% of greenhouse gas emissions in this country. In addition to greenhouse

gases, coal-fired power plants are a major source of mercury contamination in our atmosphere and in the Chesapeake Bay, which becomes concentrated in the fish we eat. Nitrogen oxide from power plant emissions settles into the Bay, leading to algal blooms and dead zones with little to no oxygen. Coal mining itself results in early death and increased illness for up to 10,000 people a year in the Appalachian region with health costs of approximately \$42 billion a year. Mountaintop removal from coal mining results in degradation of streams and aquatic habitat, loss of riparian and forest habitat and the wholesale elimination of jobs and entire communities. And air pollution, including the sulfur dioxide and particulates emitted from coal-fired power plants, is a major cause of asthma attacks, affecting 20 million people a year.

Nuclear power is controversial for a number of reasons. Although these plants do not contribute to greenhouse gases, the accidents at Three Mile Island, Chernobyl and most recently Fukushima Daiichi point to how dangerous they can be. Through 2010 there were 99 accidents worldwide at nuclear power plants. The disposal of radioactive waste is a problem that has yet to be solved. Nuclear power plants also require large volumes of water for cooling; together with fossil fuel power plants, they account for over 185 billion gallons of water a day in the US. The Salem Nuclear Generating Station in Delaware Bay uses 3 billion gallons of water a day.

Combustion with petroleum fuels (natural gas and diesel) to generate electricity increases greenhouse gas emissions and contributes to our overall dependence on fossil fuels. As we reach or surpass peak oil production, we will be searching for these fuels in more dangerous places with an increased risk of disasters such as the Exxon Valdez and the Deepwater Horizon spill in the Gulf of Mexico. And we will be using more controversial and environmentally destructive methods, such as hydraulic fracturing, or "fracking," to extract natural gas, and extraction of oil from the tar sands in Alberta's arboreal forest (where many of our songbirds breed).

Although these issues can seem overwhelming, an individual homeowner can have an impact. Construction and daily operation of buildings uses 40% of the planet's raw materials, and account for 38% of US global warming pollution. The average US household produces 150 pounds of CO₂ a day (5 times the global average). One kWh of electricity produces

2 - ShoreFacts

1.5 pounds of CO₂, so every kWh we save will reduce our carbon footprint.

The Advantages of Solar Power.

Solar power is a viable alternative to other forms of electricity, with zero emissions and zero greenhouse gases. Solar energy is free and 100% renewable. And there is plenty of sunshine here in Virginia, with as much solar energy here as in Florida and eastern Texas (roughly 5.0 kWh/m²/day, compared with 4.0 in the Northeast and 6.5 or more in the Southwest). Solar panels are silent with no moving parts and little requirement for maintenance. And solar power is growing, with one million rooftop solar systems estimated for 2010 out of the 100-million-plus homes in the US, eliminating CO₂ emissions equivalent to taking 850,000 cars off the road.

According to the trade group Solar Energy Industries Association (SEIA), residential photovoltaic systems have steadily increased in the last decade from 22 megawatts (MW) installed in 2000 to 481 MW installed in 2009 with a cumulative capacity of 2,108 MW by 2009. In Virginia, Dominion Virginia Power saw an increase from 146 customers with solar photovoltaic systems in 2009 to 355 customers in 2010, although still just a tiny fraction of the 2.4 million electric customers in the Commonwealth. Virginia is 26th in the nation in total photovoltaic capacity, with 2.8 MW in 2010 (0.13% of the 2,152.5 MW in the U.S.), up from 0.8 MW in 2009. Virginia did see an uptick in rooftop systems in 2009, thanks to \$15 million in federal stimulus money to encourage installation of renewable energy systems, with rebates of \$2,000 per kWh installed for photovoltaics and \$1,000 per kWh installed for solar hot water. According to Ken Jurman at the Virginia Department of Mines, Minerals and Energy, which administered the fund, approximately 1,100 projects were approved for the rebates.

Incentives and Obstacles.

In other parts of the state and around the country, some homeowners have had extra hurdles to overcome in installing their solar systems, including onerous and sometimes expensive permitting processes and restrictions from homeowners associations. To our knowledge, those obstacles do not exist here in Accomack and Northampton counties.

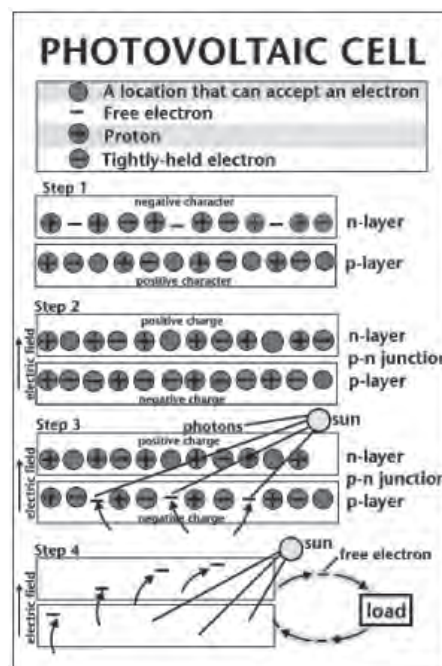
One obstacle does remain – the lack of financial incentives. Although the biggest incentive remains – a 30% federal tax credit through 2016 – Virginia does not currently have additional rebate or tax credit programs, unlike other states such as Maryland and Delaware. There are county-specific programs in Virginia, but none in Accomack or Northampton counties. One incentive is often overlooked – in addition to free electricity after the initial pay-back period – the addition of solar panels will increase the value of the home. Although the real estate and appraisal community has been slow to recognize this, the Appraisal Institute has stated that “A solar electric system increases home value by \$20,000 for each \$1,000 in annual reduced operating costs.” In addition, homeowners qualify for solar renewable energy credits (SRECs), which provide additional ongoing income to the homeowner on a quarterly basis. These are credits that some utilities must acquire to offset the “dirty” energy they produce in order

to meet individual state requirements for renewable energy production. Since these are traded on the open market and are regulated differently in different states, the value fluctuates; currently, we’re getting roughly \$50 per kW of capacity per quarter for our photovoltaic system.

A new program in Virginia may offer additional financial assistance for the homeowner. A bill was passed this past March to establish the Voluntary Solar Resource Development Fund, which will be funded through voluntary contributions via utility bills as well as federal grants, and will provide a low-interest loan program to fund qualified solar energy projects from July 2012 to July 2016. This will be administered by the Virginia Department of Mines, Minerals and Energy.

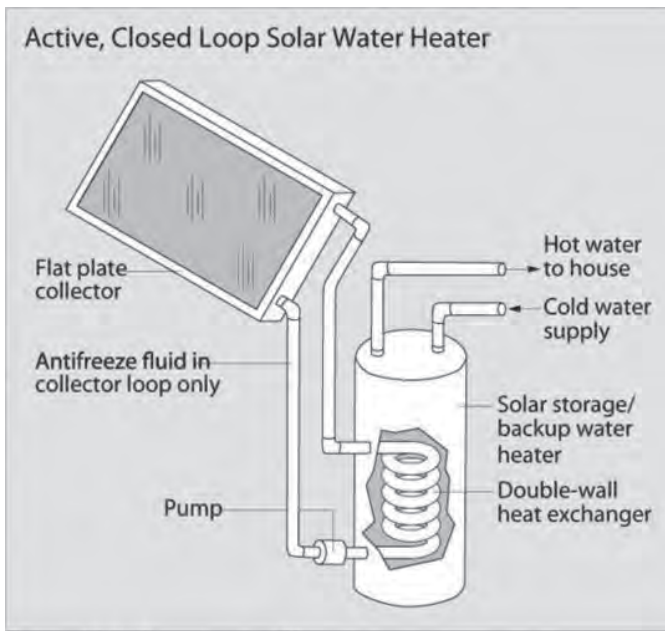
How Solar Energy Works.

Solar power is provided through two means – photovoltaic panels and solar hot water. With a photovoltaic cell (see diagram below), photons from the sunlight strike the surface, dislodging electrons. The manufacturing process makes the front surface more receptive to free electrons, which leave holes when they’re dislodged. The resulting imbalance of charge between the back and front surfaces creates a voltage potential, producing power. This power is DC (direct current) electricity; a power inverter converts this to AC (alternating current).



Source: National Energy Education Development Project. Solar Basics, U.S. Energy Information Administration, www.eia.doe.gov.

Solar hot water uses indirect circulation to provide hot water. A non-freezing heat transfer fluid (similar to antifreeze) is circulated by pumps through the collector roof panels and into a heat exchanger in a storage/backup water tank; this then heats the water in the tank, which flows into the home (see diagram on page 3).



Source: U.S. Department of Energy, www.energysavers.gov.

Getting Started.

As a homeowner, where do you start? The first step is conservation; it's frequently said that "the cheapest BTU (or kWh) is the one you don't have to generate." For many homeowners, it may be worth the investment in a home energy audit to determine which improvements will be likely to produce the biggest savings. Getting the electricity usage down as far as possible will mean that a smaller (less expensive) system will be required. This includes:

- An energy-efficient envelope – double (or triple) pane windows and doors with low E filters, storm doors, maximum insulation (at least R19 in the walls, R30 in the attic and crawlspace), caulking and weather-stripping to seal all leaks;
- Use of passive solar design where possible – siting of the house (for new construction) to allow maximum heating in winter and cooling in summer, opening and closing shades and drapes to keep heat out in the summer and let it in during the winter, use of materials such as tile to absorb heat in winter, use of shade trees to cool the exterior in summer;
- Energy-efficient appliances and heating/cooling systems.

There are also simple lifestyle changes that can have a big impact. For example, using a dryer in the summer means using electricity or another power source twice – once to run the dryer and once to run the air conditioner to remove the heat generated from the dryer. Hanging your clothes out eliminates both of these (and they smell nicer, too). Turning off appliances when not in use (and unplugging them or turning off a power strip to eliminate the power drain further) and using a programmable thermostat are two additional easy changes. According to the Department of Energy, using a programmable thermostat can save up to \$180 a year. Keeping the thermostat a degree or two cooler in winter and warmer in summer can add up to huge savings. Many websites, including A&N Electric's website (www.anec.com) and the Department of Energy website (www.energysavers.gov) and (www.energy.gov), provide useful tips to lower your energy usage.

The Details of a Solar System.

Once you've lowered your energy usage, you can assess the size system required for solar power. In our case, we had an average electricity usage of 9,149 kWh per year. This is comparable to the national average of 10,656 kWh per year, although it's worth noting that our house is essentially 100% electric, while some regions of the country use other fuels for heating and hot water. For us, this equated to a system with 4.1 kW of photovoltaic panels (18 panels with 230 watts each), and a solar hot water system consisting of 2 panels and an 80-gallon tank. These panels easily fit on the roof of our 2,000-square foot home, with room to spare (see photo below). The additional equipment was minimal, and is located in our garage – the DC to AC inverter and a shutoff switch next to our main electrical panel for the photovoltaic system, and the 80-gallon tank with an expansion tank and piping into our existing hot water heater for the solar hot water. In fact, the solar hot water typically gets up to 140 to 165°F and has to be stepped down to 140°F for our domestic hot water. There are no batteries needed because we're not operating off the grid. We're set up with a net metering system, an electric meter that can run in both directions – forward when we're drawing power from the grid and reverse when we're generating power back into the grid. In essence, the entire grid is our storage battery. This also means that we can "balance" the system – although we may generate more power than we need in the summer, with plenty of sunshine and long hours of daylight, it's balanced by the need for more power and fewer hours of sunshine in the winter. Net metering is also used for homeowners with wind power; according to A&N Electric, there are currently nine net metering customers on the Shore (five solar and four wind).



Our house with solar panels installed – two panels for solar hot water on the left, and 18 photovoltaic panels on the right. For scale, the house is 52 feet long (20 feet for the garage, 32 feet for the house).

Although it may seem obvious, the main issue in choosing a solar system is the site. A south-facing, unobstructed roof is ideal, although other options are also possible, such as an orientation to the southeast or southwest, or a ground

installation. In our case, we were lucky to discover that we're only 5 degrees off true south, with no trees or other obstructions to block the sun. The size and condition of the roof are also factors. Although the standards often quoted suggest that 100 square feet of roof surface is required for each 1 kW of photovoltaic panels, the wattage per panel is increasing constantly, and many different options are available, including solar shingles. Our roof has 1,300 square feet on the south side, so there was more than enough room for the panels. The condition of the roof is also a consideration; since the panels will have to be removed and replaced if and when the roof is replaced, it would make sense to install a new system on a fairly new roof.

Two frequently asked questions concern maintenance and insurance. With no moving parts, maintenance is not an issue, and the system is warranted for 25 years. Standard homeowners insurance covers the panels (with no increase in premium or special riders needed), although the standard deductions and exceptions for wind damage would apply.

The Bottom Line.

After a full year of operation (March 1, 2009 to March 1, 2010), we assessed our results. So how did we do for a year? We had a couple of cold months in January and February, and so we used more electricity for heating than we generated, and we had to pay a \$4.06 minimum charge each month even when we generated more than we used. However, our total electric bill for the first year was almost completely offset by our first SREC payment, leaving us with a net bill for the year of just over \$50.00. We were able to qualify for the Virginia rebates (generated by the federal stimulus money mentioned above) for both photovoltaic and solar hot water, in addition to the 30% federal tax credit. With these real-time numbers, we expect to have the system paid off in less than 8 years. If we had not had the Virginia rebates available, the payback period would be approximately 11 ½ years. Although this may seem to be a long payback to some, I still plan on being here in 8 or 11 years, and from that point forward my electricity will be free. And, of course, if electricity rates rise, the payback period will be that much shorter. The bottom line is that a modern home with a modern lifestyle can be completely powered by solar power with a reasonable payback period.

The real issue for most people remains the initial capital outlay. The good news is that costs for these systems are decreasing every day and are probably 10% to 20% less today than they were when we installed our system a year and a half ago. For those on a tighter budget, solar hot water is an excellent option to get into the game. Solar hot water qualifies for the 30% federal tax credit as well as the SRECs, which in our case were given in one lump sum to cover the next 10 years. A system typically costs \$6,000 to \$7,000; after the tax credit and SRECs, the net is under \$3,000. Since hot water typically represents one-third of a home's energy use, this represents a great opportunity to eliminate a considerable cost and environ-

mental footprint for a modest outlay. And solar hot water can be used to provide heat for a hot water baseboard system or radiant floor heating system; there are at least three homeowners on the Shore with solar hot water for heating.

Photovoltaic systems are more expensive, and typically range from \$15,000 up to \$50,000, depending on the size of the system. The panels obviously represent the largest portion of the cost, and currently range from \$6.00 to \$7.00 per watt. As these costs come down (and they're coming down every day), the costs of the installed systems will come down as well. As with any investment of this size, an assessment of your specific site and usage will be needed to determine the cost of a system. Any reputable installer will provide a system design and estimate free of charge.

There are also creative options being offered in some states (and hopefully soon in Virginia), such as leasing arrangements in which the leasing company pays for the equipment and installation, and the homeowner takes advantage of reduced electricity rates (and in some cases SRECs). It will be important to follow this issue, and support any initiatives or legislation to encourage increased adoption of solar power, which will further reduce the costs for everyone.

For us, we were fortunate to be able to make the investment (at a time when this was by far the best investment around) in solar power, as well as take advantage of the Virginia rebates, to reduce our environmental footprint and eliminate our energy costs as we move into retirement. Definitely a win-win.

Sources and additional information:

- By Reducing Monthly Ownership Costs, Solar Panels Increase Home Value. www.getsolar.com
- Database of State Incentives for Renewables and Efficiencies (DSIRE). www.dsire.org
- National Resources Defense Council: Renewable Energy for America: Harvesting the Benefits of Homegrown, Renewable Energy. www.nrdc.org
- Peter Miller: Saving Energy: It Starts at Home. *National Geographic*, March 2009.
- Power Scorecard™: www.powerscorecard.org
- Solar Energy Industries Association. US Solar Industry: Year in Review 2009. April 15, 2010. www.seia.org
- Solar in Virginia: Finding Renewable Energy and Other Green Information for Virginia. www.SolarinVirginia.com
- Solar Services, Inc., Virginia Beach. solserv@solarservices.com; 757-427-6300
- SolSystems SRECs and Solar Financing Solutions www.solsystemscompany.com
- U.S. Department of Energy: Energy Efficiency & Renewable Energy. Solar Energy Technologies Program. www.eere.energy.gov/solar
- US Energy Information Administration: www.eia.doe.gov



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Community Calendar - September 2011

Note: Please verify times and places prior to attending meetings.

CBES and Other Activities		Northampton County		Accomack County	
Sept 8	Shorekeeper Meeting 1 PM, CBES Office	Sept	Board of Zoning Appeals Time and Place TBA	Sept 7	Board of Zoning Appeals 10 AM, Sup. Chamber
Sept 13	CBES Exec. Committee 5 PM, CBES Office	Sept 6	Planning Commission 7 PM, Machipongo	Sept 15	Wetlands Board 10 AM, Sup. Chambers
Sept 20	CBES Board Meeting 7 PM, Eastville	Sept 13	Board of Supervisors 7 PM, Machipongo	Sept 20	School Board 7 PM, BOS Chambers
Sept 20	ES Groundwater Committee 10 AM, Accomac	Sept 21	Wetlands Board Time and Place TBA	Sept 21	Board of Supervisors 6 PM, Metompkin ES
Sept	UVA LTER Seminar No seminar this month	Sept 27	BOS Work Session 7 PM, Machipongo	Sept 27	Planning Commission 7 PM, Metompkin ES
		Sept 27	School Board 6 PM, Machipongo		

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