

How One Stream Changed Course

The big headline in the annual Chester River Report Card involved the Chesterville Branch, which edged out every other stream tested to score highest for water quality.

But what's really compelling is the story behind the "B" grade: a best management practices initiative by Kennedyville-based Angelica Nurseries that was the key factor in the steep decline in sediment and phosphorus loads.

"I look at it as an investment in our ability to continue farming into the future," said Jim Kohl, a co-owner and production manager of the 2,100-acre nursery, the largest on the Eastern Shore. "Land just isn't generated anymore. It's here for us to maintain or destroy."

Kohl put the improvement project in place after Chester River Association alerted him that water quality monitoring in the

Chesterville Branch by the organization's volunteer Chester Testers had revealed unacceptable levels of turbidity and phosphorus.

In an interview near the impacted stream, Kohl said: "What we're in the middle of right here is a red zone." The pollution source is tied not to the nursery but to a national food corporation that ran an asparagus operation on one of the 10 former farms that comprise Angelica when the 44-year-old Kohl was a boy. "Asparagus will get you 200 pounds of nitrogen per acre. It definitely leached into the water supply and it's coming up in that stream right here."

To address the issue, Angelica added two new sediment ponds in the spring of 2008 and the company just finished installing a drip irrigation system that will cover 250 acres of the nursery.

The project was financed by a federal program called EQIP, in which the government pays 75 percent of the cost with the landowner picking up the rest. To date, Kohl says Angelica has put \$100,000 into the project. As time goes on, he said he hopes to add to the drip irrigation system, which produces "droplets of water like gentle rain."

CRA Conservation Planner Virgil Turner, saying he's pleased with Angelica's pro-active response, noted: "They are very concerned about erosion. If their top soil continues to erode, it affects their business. They want to do a good job."

Up until recently, Angelica has irrigated with a system that includes center pivots, hand-carried pipes and "traveling guns" or "cannons" that shoot out high volumes of water. As Kohl puts it, "The effect of all three is the same as a torrential downpour. It takes the top soil off and puts it somewhere and that somewhere can end up in the Chesapeake Bay, and the Chester River and its tributaries." In the nursery business, he added, center pivots are hard to get away from and hand-carried pipes are necessary when you plant on a new field because you can't rely entirely on drip irrigation.



From left, Riverkeeper Tom Leigh, Jim Kohl, and Virgil Turner

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2009 Legislative Update

The Maryland General Assembly enacted two important pieces of policy pushed by Chester River Association—one involving septic system upgrades, the other banning private wastewater treatment systems—that got a lot of attention.

“Our biggest victory this year was the septic systems upgrade bill. It had a lot of opposition but as a result of our lobbying effort and with the help of legislative leadership and a relentless Senate sponsor, we did prevail,” said Chester Riverkeeper Tom Leigh. “This is a huge score for the Bay and represents a turn in the way the General Assembly treats non-point pollution sources.”

The so-called Chesapeake Bay Nitrogen Reduction Act of 2009 requires all new homes and failing septic systems in the Critical Area to upgrade their systems to use nitrogen removal, or BNR, technology. The bill was amended from its original version, which would have required such upgrades statewide. Leigh said it is likely CRA will return in future sessions to fight for a statewide mandate.

Another key legislative win was the Private Wastewater Treatment Act of 2009, which prohibits statewide the installation of individual sewerage systems on residential land that doesn't perc. CRA advocated against the do-it-yourself plants after Elizabeth Wilson received a state permit to discharge an average of 450 gallons per day of treated domestic wastewater from a proposed residence on Whale Point Lane near Rock Hall into Bungay Creek.

Unfortunately, Leigh said, legal questions still remain as to whether the new law will retroactively apply to the Wilson project. CRA continues to fight the matter through local administrative channels.

Finally, while the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund did take a cut, the legislature left an estimated \$10 million in the fund. The monies support programs, including cover crops and septic system upgrades, which reduce nitrogen, phosphorous and sediment pollution.

INTRODUCING *Kari Wallace*



It's probably not an overstatement to call Kari Wallace a super-volunteer. She's been a Chester Tester for over two years. She sits on Chester River Association's Science and Tech Committee. And now, she's – what else? – the organization's “volunteer” Volunteer Coordinator.

“I can coordinate,” says the 26-year-old research and development chemist

whose photographic memory and sharp organizational skills give her impressive reach. “And I love problem-solving. That's my main thing—developing new ideas and new concepts.”

Since April, Wallace has helped organize volunteer coverage at CRA events like Swim For Life, where she recruited four kayakers who served in the swimmer support effort. She also enlisted volunteers to man the CRA membership booth at the Tea Party festival. (While her volunteers were working the CRA booth, Wallace was across the way dishing out French fries at the Chestertown Fire Department's fundraising booth.) At the moment, her goal is to build up the volunteer Chester Tester program.

Perhaps it's not surprising that Wallace has an affinity for the river association. Her great-grandfather was a crabber and her grandfather is a charter boat captain here. Born and raised in Chestertown, Wallace grew up fishing and boating on a river that remains her playground.

Notably, Wallace—who has a bachelor's degree in chemistry from Frostburg State University—works for LaMotte Co., a longtime corporate partner of CRA. The firm, which sells and manufactures equipment for testing water, soil and air, provides Chester Testers with their monitoring equipment and encourages employees to volunteer for the program.

Wallace has always been something of a volunteer. She's been a member of the Chestertown Fire Department's auxiliary for years. Her dad is a firefighter there. In college, she sold Bingo cards on game nights for the local fire hall. Most recently, she organized a team of eight people to participate in Relay for Life, which benefits the American Cancer Society. She's also put together bake sales, Tupperware parties and T-shirt sales to raise money for Relay for Life.

“I guess I can't say I have one special cause because I like them all,” says Wallace. “I think overall people's impulse is generous, at least I hope so.”

Interested in becoming a CRA volunteer? Contact Kari Wallace at kwallace@lamotte.com.

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Going forward, however, Kohl said Angelica is going to get rid of its six cannons, two of them quite soon. It will also mean a savings in labor costs to the nursery. It takes two men an hour and a half to set up a single cannon—and that's something that happens twice a day during summer.

The family-owned Angelica has deep roots in the watershed. In 1956, in search of favorable soil types and a milder climate, founder Thomas Kohl bought 300 acres of farmland in Kent County, transferring his nursery operation here from its original digs in Angelica, Pennsylvania. Three generations of Kohls have served the nursery, home to a wide variety of woody ornamentals, broad- and narrow-leaved evergreens and deciduous shrubs. Its top producers are yews, arborvitae and blue holly. Kohl declined to discuss annual revenues but

he said that in a typical year, the company employs up to 235 workers, spending more than \$6 million annually on labor. At the moment, Angelica employs 85.

CRA's Turner, whose contact with Angelica dates back to founder Thomas Kohl, said the nursery has been a longtime steward of the land. As examples, he said the firm's oldest sediment pond has been collecting silt for 40 years and that the nurserymen have built at least 100 miles of grass waterways on the property. Additionally, Angelica has used contour planting to prevent water run-off.

“They do whatever they can to be conservative,” Turner added. “They're good citizens of the watershed.”

—Ellen Uzelac

Front & Center *with Russ Brinsfield*



Calling sprawl development “the overarching big issue” facing the Eastern Shore, keynote speaker Russ Brinsfield at CRA’s annual meeting said the Shore counties are looking at a population hike of 160,000 people over the next 25 years with a corresponding loss of 250,000 acres.

“Can you imagine an Eastern Shore that looks like that? We’ll never get that land back,” Brinsfield, a third-generation farmer who heads the Harry R. Hughes Center for Agro-Ecology, told 70 people who attended the event at the Centreville Senior Center in June.

To fend off sprawl, Brinsfield said Eastern Shore residents need to do a better job of “accentuating the positive” by promoting the direct economic impact associated with rural landscapes. Billions of dollars in revenues, he added, are tied to agriculture, forestry and tourism.

Moreover, Brinsfield, the mayor of Vienna, said economic and environmental opportunities to keep land rural lie in creative solutions such as nutrient trading and carbon sequestration.

“How can you and CRA help?” Brinsfield asked the crowd. His answer: by working with Eastern Shore Land Conservancy’s updated 2010 goals.

Among those goals:

- Implement economic development plans that support resource-based industry.
- Direct 80 percent of new growth to existing towns and growth areas.
- Set a maximum annual residential growth rate.

Additionally, Brinsfield favors establishing 15- to 20-foot riparian buffers at all streams, tributaries and surface waters, as well as encouraging farmers to plant native grasses like switchgrass in buffers.

“We need to search our souls and figure out how to direct growth to existing growth areas and protect the equity the farmer has in his farm,” Brinsfield noted. “We’ve got to be smarter about targeting our funding, both geographically and programmatically, to make sure we’re getting the biggest bang for the buck with our limited resources.”



Five founding CRA board members were honored at the annual meeting for their longtime commitment to the 23-year-old organization. Pictured, from left, are Marilee Schumann, Andrew McCown, Tyler Campbell, Loring Hawes and Ed Nielsen.

Photo courtesy of governor’s office



Gov. Martin O’Malley stopped by CRA’s membership booth during the Tea Party festival in Chestertown in May. Ten new members signed up at the event. Pictured with the governor are Vic Pfeiffer, a CRA member, and Marcy Ramsey, who sits on the organization’s board.

In other business:

- Chester Riverkeeper Tom Leigh presented highlights from the 2008 Chester River Report Card. Notably, he said, 75 percent of streams sampled in 2008 scored higher than 2007 and 11 of the streams received a B- or better, which means that most of the creek health indicators and targets were met. The highest score went to the Chesterville Branch, where significant improvements in the headwaters—largely due to voluntary remediation efforts by Agelica Nurseries—resulted in decreased sediment and phosphorus loads. By comparison, the Riley’s Mill Branch, which flows from Worton, scored lowest of all the streams, mainly because of the phosphorous load coming from an industrial source upstream.
- Leigh presented the 2009 Chester Riverkeeper Award to Maryland Del. Maggie McIntosh, who chairs the House of Delegates’ Environmental Matters Committee. Leigh praised McIntosh, a lawmaker since 1992, for her sponsorship in the 2009 legislature of the “Standing Bill,” which grants citizens and non-profits the right to proceed in state court “where flagrant violations of our basic environmental protections occur.” With the passage of the bill, Maryland joins 44 other states with similar legislation. McIntosh also was instrumental in the passage of the Private Wastewater Treatment Act of 2009, a CRA-initiated bill that prohibits statewide individual sewerage systems for residential use on land that doesn’t perc.



Parting Thoughts Farewell to a Friend

If Chester River Association staff has an institutional memory, it's Brent Walls. Our Watershed Coordinator has served under all three Riverkeepers and over the past five years, he has put an imprint of his own on the organization. When I call him our filing cabinet, I do so with the utmost regard.

In early September, Brent left the Chester River for another waterway: the Potomac. As the Upper Potomac Watershed Manager, Brent will advocate for a stretch of river that's five times as large as the Chester. Like the Chester, the Potomac has pollution issues and is in need of remediation. It's in good hands with Brent.

When Brent was first hired here he had one overarching responsibility: to manage our volunteer Chester Testers and to do some additional monitoring of the river himself. During his tenure, he's grown the Chester Testers from a force of 20 to roughly 50. He developed the first Watershed Snapshot and, more recently, he has produced the annual Chester River Report Card, an analysis of water quality based on CRA's monitoring.

As a result of the ambitious monitoring effort that Brent has largely overseen, CRA has been able to identify specific sources of pollution—and gone after them. Angelica Nurseries, whose success story is detailed elsewhere in this newsletter, is one of them. The chemicals manufacturer Velsicol Corp, now called Genovique, is another.

Over the past two years, Brent and I began a new initiative: seasonal tidal monitoring for dissolved oxygen, turbidity, salinity and percent dissolved oxygen saturation from the Riverkeeper's boat. The data have given us an even clearer picture of what we're up against: low quality dead zones in the lower Chester, algae and turbidity problems in the upper Chester, and a variable mix of these issues in the middle portions of the river. While this particular monitoring doesn't point to sources of pollution, it adds to our understanding.

As Brent moves on to another river and another role, he leaves a lot behind and for that we thank him. Good luck, friend.

- Tom Leigh, Chester **RIVERKEEPER**[®]
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