



Resource Review

A Newsletter of the Thomas Jefferson Soil & Water Conservation District

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Thomas Jefferson Soil & Water Conservation District

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NATURAL RESOURCES

CONSERVATION SERVICE

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All programs and services are offered on a non-discriminatory basis without regard to race, color, national origin, religion, sex, age, marital status or handicap.

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Louisa Earthquake and Dam Safety

On Tuesday, August 23, 2011, at 01:51:04 p.m., a magnitude 5.8 earthquake rattled Central Virginia. The epicenter was roughly seven miles from the TJSWCD's Louisa satellite office. While most were busy trying to call to check on their family members, NRCS District Conservationist Dana Bayless realized the potential for damage to have occurred to the TJSWCD's eight P.L.-566 Watershed Control Structures in Louisa. These dams (along with two other dams in Louisa now owned by Louisa County and Louisa County Water Authority) were funded under the Federal Watershed Protection and Flood Prevention Act of 1954, Public Law 83-566 (PL-566). Two of the District's dams are within four miles of the epicenter, and all eight dams are within 17 miles of the epicenter.



Riser structure on one of the dams

The District's Raleigh Coleman placed a call to Louisa County's Department of Fire and Emergency Services as a reminder of the ten watershed structures in the County. The four TJSWCD dams along Route 15 are currently classified as *significant hazard*, while the other four dams are *low hazard*. TJSWCD and NRCS staff (including Bayless, Coleman, and Ross Norton) checked the significant hazard structures immediately after the earthquake. Over the next two days, all ten P.L. 566 dams in Louisa were inspected by TJSWCD and NRCS staff. Ken Turner, District Dam Safety Consultant with DCR, was also present to inspect the two dams in the Little River watershed.

During the post-earthquake inspections, staff looked for sloughing off of the sides of the dam, damage to the concrete risers and outlet pipes, water "piping" through the embankment, evidence of subsurface water flow, and anything unusual. One of the primary concerns is settlement within the embankment of the dam due to liquefaction or densification of the soil fill. Cracks or structural distortions in the appurtenant structures are also a major concern, since a failure of these structures could cause failure of the entire dam. Luckily, no problems were found in the local dams.

After the earthquake, inspections were required statewide for all P.L. 566 structures, so local NRCS and District staffs were busy filling out inspection reports for the dams. Inspection reports were compared with past reports to look for any significant changes, but no changes were found. Since the inspection, District staff has been out to check on the dams, and District staff will continue to monitor the dams for signs of damage from the earthquake.

Dam Break Inundation Zone studies are currently underway for the TJSWCD's eight dams. These studies will map the areas that would be inundated in the event of a catastrophic failure. The results of these studies will help the TJSWCD update the Emergency Action Plan for each of the dams.

Rivanna Farm Recognized With “Clean Farm Award”

Rivanna Farm is an example of conservation farming at its best. It is composed of a flood plain along the Rivanna River and rolling hills of pasture. In December 2010, the Thomas Jefferson Soil & Water Conservation District awarded a Clean Water Farm Award to Rivanna Farm in Albemarle County. The Virginia Department of Conservation and Recreation (DCR) subsequently awarded Rivanna Farm the Clean Water Farm Award for the entire James River Basin in the spring of 2011.

Rivanna Farm lies just to the northeast of Charlottesville, straddling the

Rivanna River. The 700-acre cattle and timber farm is the ultimate representation of the rural life found in Central Virginia. The farm has been in the Douglas family since 1986, when Mrs. Margarita Douglas left Northern Virginia for a quieter existence. A native of Sweden, Mrs. Douglas’ farming experience came from her work running her mother’s 3,700-acre timber and dairy operation. When Mrs. Douglas first came to Rivanna Farm it was being operated as a thoroughbred horse facility.

Mrs. Douglas was a fervent conservationist, and her passion for wise use of the land is still evident in the management of the farm today. She was an advocate of 100 percent land utilization, decades ahead of her time pushing for biomass practices for timber industry waste such as the burning of treetops. In the early 1990’s Mrs. Douglas placed Rivanna Farm under a permanent conservation easement with Virginia Outdoors Foundation. Mrs. Douglas was a District Director for two years, and the current cattle manager, Irvin White, is now an Associate Director with the District.



Mrs. Douglas passed away in 2010, but not without passing along her strong sense of responsibility for the land to her son, Richard Douglas, and her cattle manager, Irvin White.

Today, Rivanna Farm is managed for a cow/calf operation consisting of Angus and Angus-crosses. Roughly 120 head of cattle are a part of an innovative rotational grazing system, where the cattle happily move from one grazed pasture to the next. They graze the 247 acres of a predominantly fescue mix, moving through the Farm’s 18 pastures in the course of the year, with the only external motivation to move between fields coming from the manager on a four-wheeler and the quick encouragement of a well trained dog.

Through collaboration with the TJSWCD, a grant from the National Fish and Wildlife Foundation (NFWF), and the CREP program offered by the Natural Resource Conservation Service (NRCS), the waterways on Rivanna Farm have been completely fenced out from cattle over the past seven years. Aside from reducing algae in the pond, livestock exclusion has greatly reduced the sediment, nutrients, and bacteria entering Fosters Branch and the TMDL-listed Rivanna River.

The cattle operation is equipped with a complete watering system to compensate for the removal of the animals from natural waterways. Almost 33 acres of riparian buffer have been protected through the Douglas family’s conservation efforts, along with an additional 4.5 acres of native mast-producing hardwoods, and 5.8 acres of native warm-season grasses being planted through CREP. An additional 7 acres of native warm season grasses were planted voluntarily to improve wildlife habitat on the farm. The farm’s careful management is especially apparent in the lush vegetation on all slopes. The very limited use of herbicide, livestock exclusion and division fencing, and the alternative watering system clearly have benefitted the health of the land, but more so, it has benefitted the farm. Rivanna Farm is a productive, sustainable, healthy, environmentally-sound operation. Rivanna Farm is a prime example of good farming, and greatly deserves this recognition of a Clean Farm Award.

Rain Barrel Kits For Sale

The TJSWCD is now selling Rain Barrel Kits for \$55. Please contact Nicola McGoff or Taylor Pippins at 434-975-0224 or nicola.mcgooff@vaswcd.org to purchase a barrel kit or if you would like to have your name added to a list to receive information on future workshops. More information on our rain barrel program and rainwater harvesting can be found online at: tjswcd.org/Rain_Barrels.html

What's New In The District?

Voluntary Agriculture BMP Pilot Project

The Chesapeake Bay Total Maximum Daily Load (TMDL) is based upon a computer modeling system that calculates the amount of pollution entering the Chesapeake Bay from the various types of land-use across the state. The Bay Model is being used to create a baseline "report card" for the health of the Bay, and it is also being used to project what improvements need to be made to bring the nutrient levels in the Bay back within healthy limits. Many groups and individuals have concerns about the accuracy of the data used in the Bay Model. In particular, the agricultural community is disputing certain assumptions used to establish the baseline report. The Bay Model only takes into account conservation work that that was reported through State or Federal funding programs. Therefore, if a farmer hasn't participated in a stream fencing program, it is assumed that his streams are not fenced; if a farmer isn't receiving a payment annually for using a no-till drill, then it is assumed he is plowing up the land instead. This may lead to greater reductions to pollution required in the agricultural realm than are actually needed to achieve a healthy Chesapeake Bay. Farmers worry that these reduction requirements are likely to lead directly to regulation on agriculture.

In response to this concern, the state of Virginia set aside funding to try to determine if there is a significant amount of voluntary conservation work being applied. Six Conservation Districts were selected across the state to participate in a year-long pilot project working to identify and catalog voluntarily-installed best management practices (BMPs). The TJSWCD is one of these Districts. Since August, the TJSWCD has been doing outreach in the agricultural community to find such practices. The TJSWCD has hired Albemarle County native Mercer Garnett as the new Agricultural Outreach Technician. Mercer's primary function is getting out in all the TJSWCD counties and finding voluntary practices. The TJSWCD wants to help get farmers credit for all the good work they are doing. The project should result in a better Bay Model and perhaps lessen the chance of regulation. If you or a friend or neighbor has done conservation work on the farm without the help of government funds, please give Mercer a call at (434) 989-8594.

Recent Events

Central Virginia Cattlemen Association

Every year the Central Virginia Cattlemen Association (CVCA) hosts its annual Education Field Day and Sale at Tucker Livestock in Radiant, VA. TJSWCD staff attended the event and provided educational materials on conservation practices and programs available within the State. The keynote speaker was Katie Frazier from the Virginia Agribusiness Council, who spoke about the impact of environmental regulations associated with the Chesapeake Bay. Founded in 1998, the CVCA is comprised of 240 producers with over 24,000 brood cows. The purpose of the CVCA is to promote and improve livestock production, education, and the marketing of beef cattle. With farmers coming in from across state lines to purchase livestock, 1,500 head of calves were sold and the day was declared a success.

Old Farm Day

The TJSWCD presented an exhibit at the 16th Annual Fluvanna County Old Farm Day. Old Farm Day is held every year in early October at Pleasant Grove in Palmyra. Old Farm Day began as an idea of the Fluvanna Historical Society's Museum Committee to showcase antique farm equipment and old farming techniques with displays and demonstrations. Over the years, Old Farm Day has expanded to become Fluvanna County's premier community event held on the first Saturday of each October. As many as 7,000 people have attended in years past, and each year the events and attractions grow. The Old Farm Day Committee of the Fluvanna Historical Society now works year-round to plan and coordinate this much anticipated annual event.

Real Forestry for Realtors

Virginia Tech and the TJSWCD co-hosted a one day workshop on August 11, 2011, for realtors in the Charlottesville area. The purpose of this event was to teach realtors the value of forested landscapes, commercially and ecologically, so as to enable them to market rural land sales in a better light. With approximately 50 participants, the workshop was a huge success. The District looks forward to continuing this cooperation with Virginia Tech and furthering its efforts to reach into the private sector for similar education opportunities in the future.

Partner Reports

Rivanna Regional Stormwater Education Partnership (RRSEP)

The RRSEP is a stormwater education partnership in which the partners manage municipal stormwater systems that convey runoff to local streams and rivers after it rains. One of the requirements for their permit is that they educate the public about the many ways they can help reduce the various kinds of water pollution that enter our waterways. The Thomas Jefferson SWCD organizes and chairs RRSEP meetings, and plays an important role in planning and carrying out education initiatives. A source of pollution that does not receive much attention is cigarette litter. When cigarette butts are discarded on streets or sidewalks, they are washed down storm drains when it rains. Although each butt is small, the volume is enormous. 4.5 trillion butts are discarded annually, and each butt contains carcinogens and toxins the filter has removed from the smoke for the smoker's benefit. Filters are made of cellulose acetate, which persists in the environment for years. Washed into streams, cigarette butts leach pollutants into the water and can be mistaken for food by wildlife. Two teams of RRSEP volunteers spent an hour on Charlottesville's Downtown Mall collecting cigarette butts in July of 2010. Enough butts were collected to fill a clear plastic cylinder that is now on display in a storefront window on the Mall. The display includes a poster with facts and figures about the issue. In addition, posters about the cigarette litter issue were placed on 27 Charlottesville public buses.



Martin Johnson with RRSEP cigarette display

Changes at StreamWatch

After eight years of operating as a community program that was dependent on its partners for governance and fiscal management, StreamWatch became an independent 501(c)3 non-profit in July 2010. StreamWatch extends deep appreciation to the TJSWCD for acting as a fiscal agent through the years, and for supporting StreamWatch during its transition to non-profit status. StreamWatch continues to work closely with its community partners to strengthen the long-term monitoring program and develop future projects. In May 2011, John Murphy stepped down from the position of StreamWatch Executive Director, and Rose Brown became the Director. Rose had been the StreamWatch Program Manager since 2007, and served as a volunteer monitor from 2005 - 2007. Rose and the StreamWatch Board of Directors are currently working to improve and expand the StreamWatch database so that partners, planners, decision makers, and community members can access the data quickly and easily. In January 2011, StreamWatch's office was relocated to the downtown mall. You can find StreamWatch at 108-5th Street SE, Suite 211, Charlottesville, VA 22902. If you wish to receive updates about StreamWatch's work and reports, you can sign up for the announcements mailing list at <http://streamwatch.org/contact>, or call (434) 962-3527.

NRCS Update

The Natural Resources Conservation Service (NRCS) began its new fiscal year on October 1, 2011. The Environmental Quality Incentives Program (EQIP) provides technical and financial assistance to address natural resource concerns. Administered by the NRCS, EQIP was reauthorized in the 2008 Farm Bill and awards cost share assistance to projects which provide significant environmental benefit. NRCS develops an EQIP plan of operation and contract with each producer that addresses resource concerns such as animals in confinement, grazing lands, cropland, forestland, groundwater conservation, organic farming initiatives, and pilot projects such as a Seasonal High Tunnel Initiative. Eligible farmers and ranchers may apply for EQIP program benefits at any time. Application ranking periods are established to allow evaluation of projects and awarding of contracts based upon an environmental score for each application that achieves the natural resource benefits identified by local, state, and national priorities. For more information, contact the Louisa USDA Service Center at (540) 967-0233 ext. 3.

Geotextile Fabric For Sale

The TJSWCD is now selling non-woven geo-textile filter fabric for use in water troughs and stream crossings. The fabric is available by the square foot. If you are interested in more details please contact Taylor Pippins at 434-975-0224.

TMDL Listings Move Forward in the District

A TMDL (Total Minimum Daily Load) is a determination of the amount of pollution that can be allowed in a waterway without violating water quality standards. The Commonwealth of Virginia has determined that every waterway should be healthy enough to support one or more of five designated uses: aquatic life, fish consumption, shellfish consumption, swimming, and drinking water. If DEQ (the Virginia Department of Environmental Quality) finds that a waterway fails to support one or more of its designated uses, a TMDL study is conducted to determine the sources of the offending pollutant and recommend ways to reduce levels of the pollutant to the point where the waterway can once again support its designated uses. Once a TMDL study has determined sources of pollution, a TMDL Implementation Plan is prepared to lay out the best management practices that should be employed to reduce water pollution to acceptable levels. Public participation is considered an important part of the TMDL process, and public meetings are held at various times during the process. Within the TJSWCD, several streams are at various points in the TMDL process.

In the City of Charlottesville, four streams (**Moore's Creek, Lodge Creek, Meadow Creek and Schenks Branch**) that do not meet the standard for supporting aquatic life have been combined to be addressed within one TMDL report and plan. The TMDL study, conducted through Virginia Tech's Department of Biological Systems Engineering, determined that a high sediment load was the primary source of the impairment. Sediment may come from construction sites, agricultural lands, or streambank erosion, and may be the result of high volumes of runoff associated with large amounts impervious surfaces. The final TMDL report, scheduled to be available in draft form by the end of 2011, will detail the sources of sediment and the sediment loads that can be attributed to each source. Once the TMDL report is finalized and approved, an implementation plan to reduce the sediment loads will be developed.

In addition to the sediment impairment in **Moore's Creek**, other sections of that waterway, within both Albemarle County and the City of Charlottesville, are bacterially impaired. The implementation plan for that TMDL was completed and approved several years ago. Funding sources have recently become available, and we hope implementation may begin soon. A local partnership (consisting of the TJSWCD, Rivanna River Basin Commission, Rivanna Regional Stormwater Education Partnership, Thomas Jefferson Planning District Commission, City of Charlottesville, and Albemarle County) has applied for funding to implement projects to reduce bacterial impairment from septic system malfunctions, livestock, and pet waste.

In Nelson County, TMDL studies are underway for **Taylor Creek**, which has a benthic impairment (aquatic life, sediment), and for the **North Fork, South Fork, and main stem of the Rockfish**, which are all bacterially impaired. Virginia Tech's Biological Services Engineering Department is working on the TMDL study and report. **Goldmine Creek** in Louisa County (part of the Upper York River TMDL) has a completed implementation plan for a bacterial impairment. The TJSWCD is partnering with the Culpeper SWCD and Tri-County/City SWCD to apply for funding to address livestock and septic system sources of potential bacterial impairment. The **North Creek** watershed in Fluvanna County is completing the final phase of its TMDL development. The watershed was listed in 2008, and is considered impaired for benthic life. The Benthic TMDL report has been put together by the Louis Berger Group, Inc. The report states that while dissolved oxygen, nutrients, pH, sediment, and toxics could all have a negative impact on the benthic community in the creek, it is most likely nutrient levels, more specifically, nitrogen levels, that is the "most probable stressor."

To learn more about the TMDL process please visit the DEQ website (www.deq.state.va.us/tmdl/homepage.html). If you have any questions regarding the District TMDLs discussed above please contact our office 434-975-0224 and we will do our best to discuss all aspects of the TMDLs.

Hardware River Project Update

The TJSWCD is actively recruiting participants who would like to implement conservation practices within the Hardware River Watershed, from fencing streams to repairing failing septic systems. The Hardware River Project is more flexible than State or Federal programs, as it offers flexible buffer widths and does not require fencing of all bodies of water in each field. More information can be found at tjswcd.org/HardwareRiverProject.html.

The TJSWCD and DEQ will be hosting an E. coli/coliscan sampling workshop in early spring 2012. If you are interested in becoming a sampling volunteer in the Hardware River and in receiving this training please email Emily.Nelson @vaswcd.org or call the office 434-975-0224.

Upcoming Events

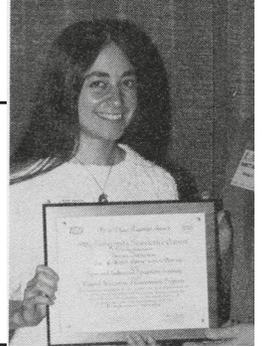
DIRECTOR ELECTIONS

TJSWCD Board members will be elected November 8, 2011 as part of the General Election. Citizens will vote for two Directors in each locality. The Director position for Albemarle County is contested by three candidates: Lonnie Murray, Steven Meeks, and Dave Norford. In Charlottesville, Rich Collins and John Conover are running uncontested. Also uncontested, James Kean and Brian Wagner are running in Louisa County, Rob Parrish and Tom Prately are running in Fluvanna County, and David Collins and Paul Davis are running in Nelson County. Please come out to vote.

ENVIROTHON 2012....TEAMS NEEDED!!!

Envirothon is a natural sciences nationwide competition for teams of 5 high school aged students. TJSWCD is currently registering local teams to compete at Walnut Creek on March 23, 2012. Training events begin in November. For more information please check out our website www.tjswcd.org/Envirothon.html or call and ask for Nicola McGoff or Emily Nelson (434-975-0224).

Alyson Sappington (District Manager) will be celebrating 25 years with the District this fall. She started out with a BS in Agricultural Economic from Rutgers University, and continued to complete a MS in Natural Resource Economics from Virginia Tech. She joined the District in 1986 as the sole staff member. During her 25 years of service she has grown the District to one that employs eight staff members. Some of her varied duties over the years have included fending off aggressive turkeys during a field visit and tending to the mechanical repairs of the District's straw mulcher.



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