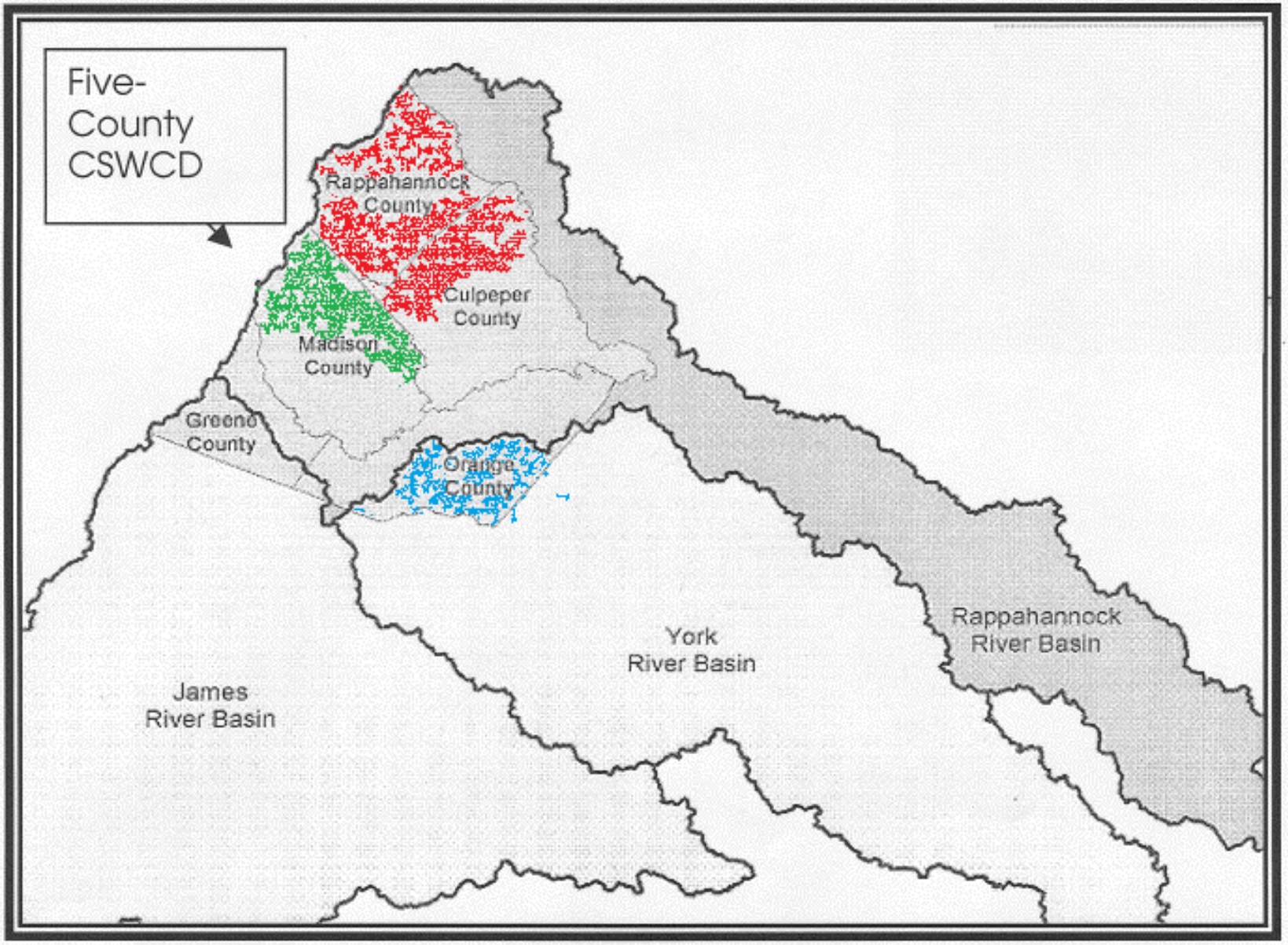
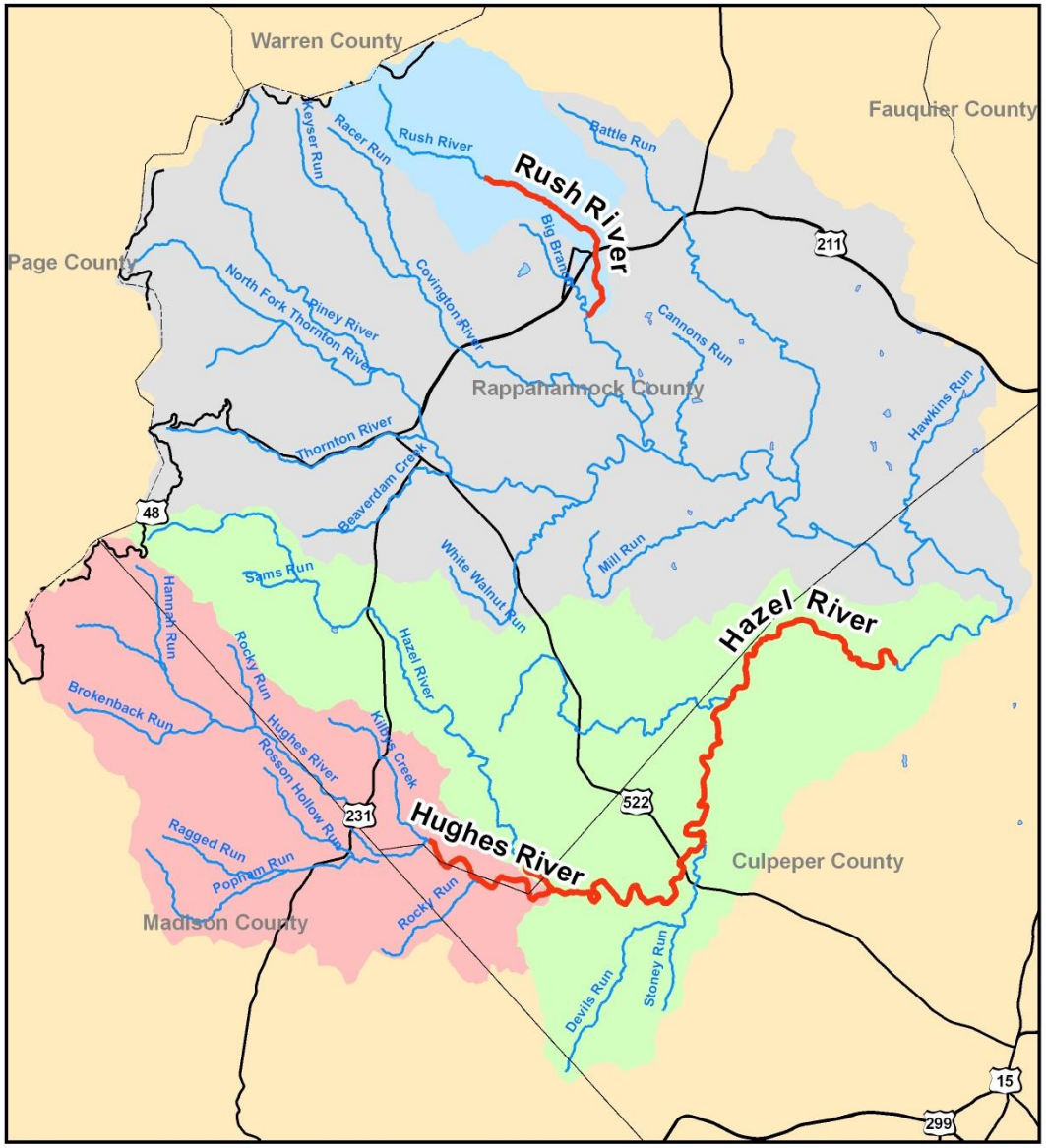
TMDL Implementation in the Culpeper District


Five-
County
CSWCD
Rappahannock
County
Culpeper
County
Madison
County
Greene
County
Orange
County
James
River Basin
York
River Basin
Rappahannock
River Basin



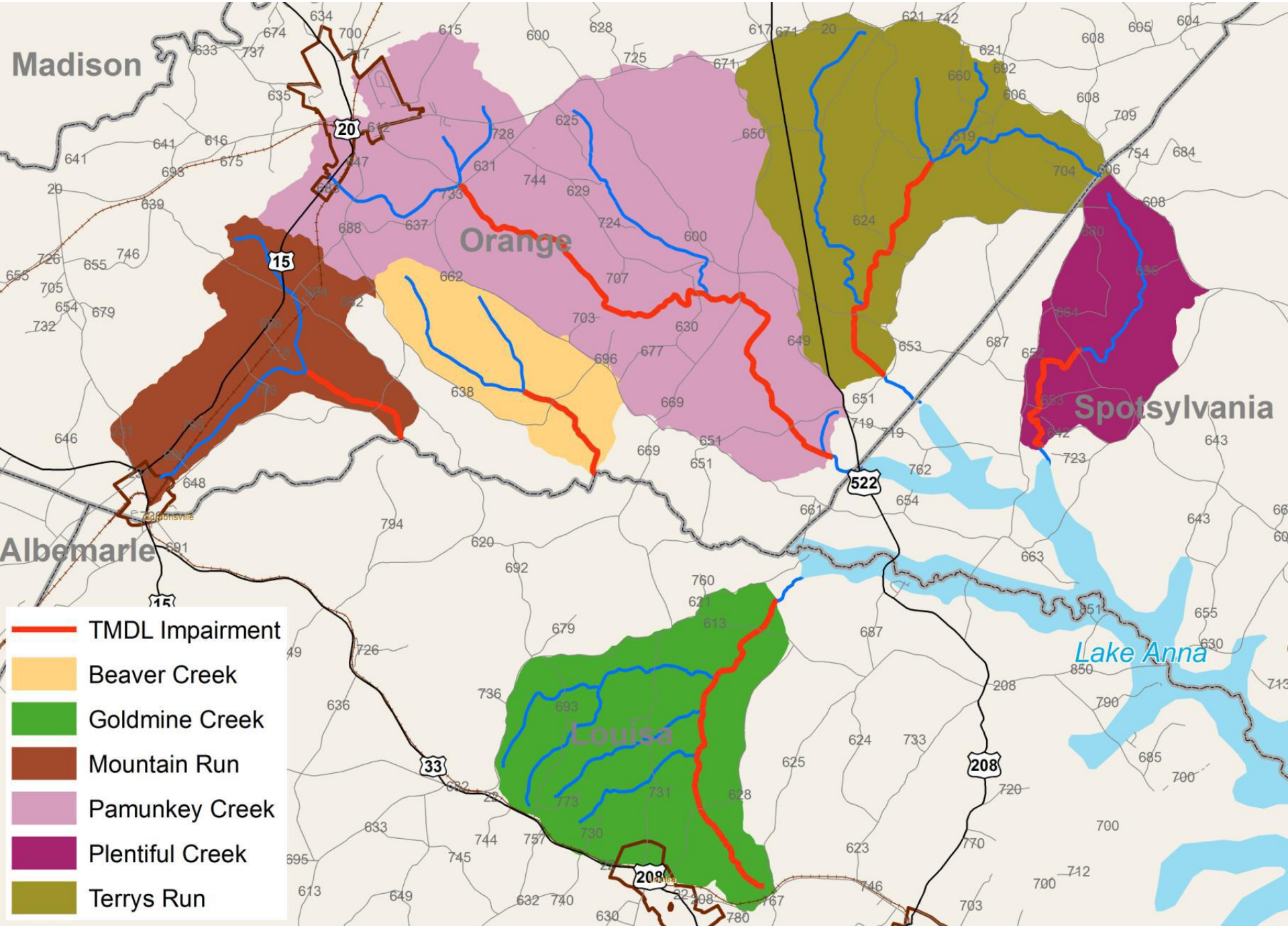
- Impaired Segments for TMDL IP Development
- Streams and Rivers
- U.S. Highway
- County Boundary
- Town Boundary
- Water
- Hughes River Watershed
- Hazel River Watershed
- Rush River Watershed
- Thornton River Watershed
- Rappahannock River Watershed

0 1 2 4

Miles

N W E S

Rappahannock
Nethers
231
Syria
Upper Robinson River
Culpeper
29
Madison
29
Madison
Little Dark Run
Oakpark
230
Pratts
Lower Robinson River
15
Orange
Stanardsville


Madison
Orange
Spotsylvania
Albemarle
Louisa
Lake Anna
TMDL Impairment
Beaver Creek
Goldmine Creek
Mountain Run
Pamunkey Creek
Plentiful Creek
Terrys Run

Similarities

- All bacteria impairments
- All dominated by forestland & agriculture
- All include at least 1 bonafide town
- All same USDA Service Center
- All local government role

Differences

- Upper Hazel – 3 counties
- Stage of implementation
- Funding history

Agriculture BMPs

- Many typical BMPs from VACS program (forestry, cropland conversion, stream fencing)
- Livestock stream exclusion practices
- 85% vs. 75% vs. 100%
- 10’ vs. 35’ buffer, LE2T

Residential BMPs

- Pump outs -- $150
- Sewage hook ups -- $4,500
- Repairs -- $3,500
- New systems -- $4,500
- Alternative systems -- $10,000

Upper Hazel

- Began in June 2009
- Earlier history – 2 grants
- 319/WQIF funding
- County role
- Private incentives – Krebser/PEC

Robinson River

- County sponsored WQIF project
- Digitizing/GIS mapping
- Septic cost share
- Stormwater BMPs
- VDH role

York River

- Implementation only in Orange at this time
- County incentives
- 2 towns involved
- Regional Commission
- Enhanced monitoring – BMP and other
- Private incentives – NFWF
- Pet waste

Ag Outreach

- Conservation dinners
- Producer meetings
- Ag Co-op functions
- Veterinary Cattle college
- Forage Council
- Relationships
- Henshaw
- Newsletters, brochures, displays, etc.
- USDA
- Virginia Farm Bureau

Residential Outreach

- Newspapers
- Brochures
- VDH
- Displays
- District newsletter
- Rappnet
- Signs & door hangers
- Contractors
- One-on-one
- Pump and haul
- Installers
- Overlap with ag
- Realtors
- Rapidan Better Housing, MESA, USDA-Rural Development
- Yard signs

Views From The Foothills

A Publication of the Culpeper Soil & Water Conservation District
Serving Culpeper, Greene, Madison, Orange & Rappahannock Counties
www.culpeper.vaswcd.org

Vol. 10, Issue 1
Winter 2010

Inside This Issue

Chesapeake Bay Watershed Initiative Program Available through NRCS

Awards Banquet Held

Stream Restoration Project Completed in Locust Dale

New Cost-Share Program for Quail Habitat

"The nation that destroys its soil destroys itself." (Franklin D. Roosevelt)

How Recent TMDL Planning Impacts Producers, Homeowners and BMP's

By Evan Blumenstein, TMDL Conservation Specialist

When a stream exceeds the expected levels of certain pollutants it becomes known as an impaired waterbody and a study must be conducted to determine all the sources and amounts of the pollutant in question. Specific sections of the Hughes, Hazel and Rush Rivers exceed allowable bacteria levels. A TMDL (Total Maximum Daily Load) which is the study of all known sources of the bacteria is conducted. This was completed several years ago. Subsequent to this an Implementation Plan is created to attempt to reduce bacteria levels to acceptable levels. This was completed nearly a year ago. It focuses primarily on agriculture and septic systems.

The creation of a TMDL Implementation Plan (IP) area can be quite beneficial to producers and homeowners. Through the TMDL-IP program, new Best Management Practices and increased cost share rates have become available in the Hazel River Watershed. The Hazel River TMDL-IP area covers parts of Rappahannock, Madison, and Culpeper counties. The shaded area in the map on page 4 shows the limits of the area.

The new features that have become available to producers because of the TMDL area are as follows:

- 35 feet setback Stream Exclusion fencing at a cost-share rate of 85% increased from 75%. Watering facilities and interior fencing are also covered under this cost-share. This practice is also eligible for a 25% Tax credit. (LE-1T practice)
- Stream exclusion fencing setback reduced to 10 feet at a 50% cost-share rate. Watering facilities and interior fencing are also covered under this cost-share. This practice is also eligible for a 25% Tax credit. (LE-2T practice)
- 50 to 60 cents extra per linear foot of stream exclusion fence
- Heavy use area paddock and grazing management plan creation at a 50% cost-share rate up to $15,000. This practice is also eligible for a 25% Tax credit. Watering facilities and interior fencing are also covered under this cost-share.

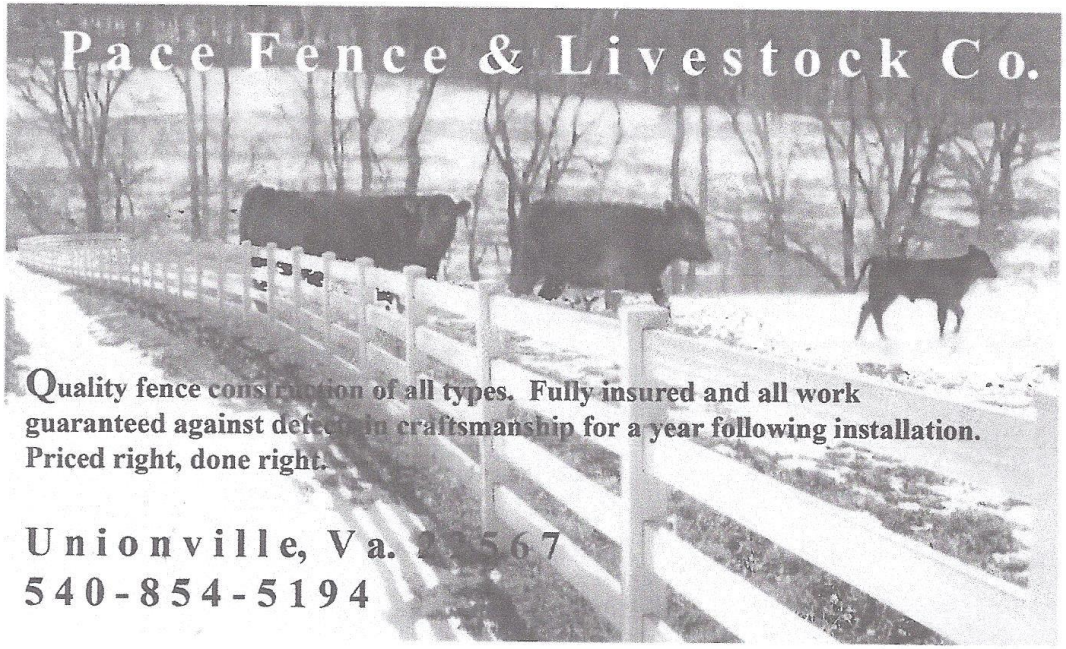
Continued on page 4

100% Cost Share Available for Livestock Stream Exclusion Fencing

By David Massie

The Virginia Agricultural Best Management Practices (BMP) Cost Share Program continues to offer a significant new incentive available to livestock producers in the Culpeper Soil and Water Conservation District. Previously, livestock stream exclusion fencing was approved for up to 75 percent cost share, but there is a powerful tool still available that reimburses producers 100% of the cost to install stream exclusion fence and the various components that are involved with a rotational grazing system. The specifics of this program include: stream exclusion fence setback from the stream 35 feet, cross fence to divide fields into more manageable units, developing springs into usable water sources, water troughs and the pipe needed to supply clean water to livestock and the drilling of wells for livestock use if no other water sources are available. For producers who have been considering fencing, now is the best chance to receive funding at the 100 percent level. The state has guaranteed to fund this practice at 100 percent until **June 30, 2015**. Producers are advised to not wait until the last minute to sign up since District staff will need time to prepare and process applications. After that time, the funding of this program will be reduced to less than 100 percent. Another new benefit of this program is that there is no maximum amount of funding you can receive for a project utilizing this funding. In previous years individual producers were limited to a certain amount, so if you have a large stream exclusion project you have been putting off, now is the right time to seek cost share funding for it. There have also been updates to our tree planting programs that significantly increase the reimbursement rates to producers for converting crop, hay, and pasture land to forest.

The District is anticipating that these programs will be very popular but as with all of the district's programs, funding is limited and supplied on a first come first served basis. If you are interested, you are encouraged to contact David Massie or Spencer Yager at the Culpeper Soil and Water Conservation District, sooner rather than later. The phone number for the district is 540-825-8591 or 540-672-1638.



Madison County Farm Bureau

September 17, 2014

Dear Producers,

The Culpeper Soil and Water Conservation District again requested the assistance of Madison County Farm Bureau to help get the word out on some significant changes to the agricultural cost-share program that they actively deliver to producers in their 5 counties; Madison included. Interest in their programs continues to be at all-time highs and the financial incentives are too. Of particular note is that the new stream fencing initiative, including water development projects that began last year and being reimbursed at full cost (based on the District's estimated cost process) is still being offered. If projects stay within the expected cost range, producers should expect little or no out of pocket expenses. The state conservation agency is offering this 100 percent funding through the District for two years, this year being the final year. After that time it is reported that the reimbursement rate will be lowered. Any producer considering installing stream fencing and cross fencing may want to consider the timing of their application for assistance.

Your Madison County Directors currently serving on the Conservation District Board and listed here encourage your consideration of the District's services, either cost share program enrollment, technical assistance or both. Directors are available for your input in support of conservation strategies for Madison County. They can be contacted through the District office or as below;

Lynn Graves 540-923-4231

Brad Jarvis 540-672-5408

We also encourage you to review the attached pages and consider if anything is of interest to you. Contact information for conservation district personnel is included for your convenience. They are available to provide you full program details and assist you with creating any project strategies of your interest.

Sincerely,

Lucky Graves

President

Office: (540) 948-3311 | Fax: (540) 948-5768
609 S. Main Street, Madison, VA 22727 | VirginiaFarmBureau.com

Celebrating 75 Years of Serving our Counties
Since 1939

Culpeper Soil & Water Conservation District

Serving Culpeper, Greene, Madison, Orange, & Rappahannock

351 Lakeside Drive
Culpeper, Va. 22701
(540) 825-8591 Culp
(540) 645-6624 fax
(540) 672-1638 Orange
(540) 672-2455 fax

Highlighted Program Changes for 2014-2015

- **SL-6** Grazing Land Management with Stream Exclusion (stream fencing and water development)
  - Now covers 100% of *estimated* cost with 35' buffer (fence, well, trough, etc…)
  - For two years, the State has agreed to fund all applications (at 100%), approved from July 1, 2013 to June 30, 2015 (FY14 & FY15)
  - Applications that don't have funding within those two years will be "rolled over" into following program years, regardless of the funding level of those years
- **LE-2** Stream Fencing with 10' Setback
  - 35' buffer and 10' setback allowed in same field
  - 100% cost share on 35' buffer stream fence only
  - 50% cost share on all other practices (10' fence, well, trough, pipe, crossing, etc.)
- **SL-6T** Grazing Land Management with Stream Exclusion for TMDL Areas
  - Same program requirements as SL-6
  - 85% (Federal Funds) & 15% (State Funds) also guaranteed 100 percent funding.
- **FR-1** Reforestation of Erodible Crop and Pastureland
  - $25-50/acre + 75% of eligible cost for planting trees (hardwoods or conifer)
- **FR-3** Woodland Buffer Filter Area
  - Planting trees in riparian areas
  - $100-$150/acres + 75% of eligible cost for planting conifers
  - $100-$250/acres + 75% of eligible cost for planting hardwoods
- **Cover Crops**
  - Still taking applications until November 1, 2014
  - October 10th cut off for harvestable cover crop and early planting date for cover crops to be killed in the spring
  - NEW RATES: $20/acre to harvest and up to $48/acre to kill
- **Nutrient Management Planning**
  - Up to $4/acre to have a NMP written for your farm
  - A great way to save money on input costs!
- **No-Till and Cropland Conversion**
  - Up to $100/acre to convert from conventional tillage to a no-till system
  - Up to $300/acre to convert cropland to permanent hay or pasture

Contact for more information on these programs, plus many more:

- **W. Spencer Yager, Conservation Specialist (Orange Office)** — **(540) 672-1638 (Office) (540) 222-9538 (Cell)**
- **David H. Massie, Conservation Specialist (Culpeper Office)** — **(540) 825-8591 (Office) (540) 905-2706 (Cell)**

Septic System Financial Assistance Available

Residents in most of Rappahannock County continue to be eligible for reimbursement of fifty percent of the expense of maintaining, repairing or replacing on-lot septic systems. The parts of county that drain to the Hughes, Hazel, Thornton, Covington and Rush Rivers, including all of Battle Run is eligible. This is essentially most of the county except a small area north of Amissville and the Flint Hill and north area. Also included in the project area are the Etlan and Nethers areas of Madison County and Culpeper County west of Reva, Griffinsburg and Monumental Mills. The goal of the program is to lessen the real or potential pollutant loads from ailing, failing or non-existent septic systems, that enter ground water or surface water in these areas. One particular pollutant, fecal coliform bacteria or E. Coli has been identified as being higher than expected by state water quality standards although other pollutants can also be involved. An additional benefit to the property owner is the assurance that their system is up to standards and functioning properly.

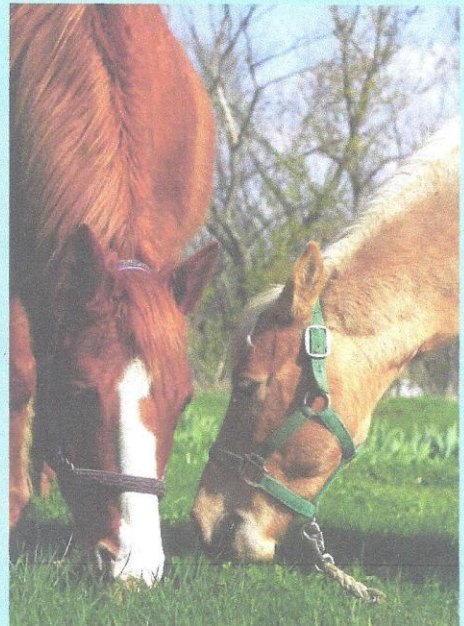
Program participants are eligible for several different payments depending on the actual needs of their system. Reimbursement payments are typically fifty percent although can go as high as seventy-five percent for individuals that qualify for low income status. In extreme situations one hundred percent financial assistance may be identified through partnerships with other funding sources. Maximum payments to property owners under average income levels are $150 maximum towards a pump out and inspection; $3,500 maximum towards a repair; $4,000 maximum towards a conventional system or $4,500 if a pump is required to move the liquids to the drain field; and $10,000 maximum towards an alternative engineered system. Pump outs and inspections are encouraged and if further repairs are indicated the owner is still eligible for the repair payments. Applications are required and need to be approved prior to the work being done or funding can be declined. Free assistance with initial assessments of individual system needs is available from the District. Reimbursement payments are made promptly once the work has been completed. Participation is entirely voluntary and assistance from the District is free of charge.

Funding for the project has been very popular with residents and approximately $300,000 has previously been allocated to projects. The state funded project which was originally secured by the Rappahannock County Board of Supervisors and administered with the assistance of Culpeper Soil and Water Conservation District originally began in 2007 as part of a larger water quality improvement initiative sponsored by the Supervisors. It expanded into adjacent Madison and Culpeper in 2009 under a multi-year grant secured by the District. Funding is available on a first come, first serve basis. Free assistance with initial assessments of individual system needs is available from the District. Information on the program , if your address is in the eligible areas or how to tell if your system may need help , is available from the District by calling 540-948-7531 or 540-825-8591.

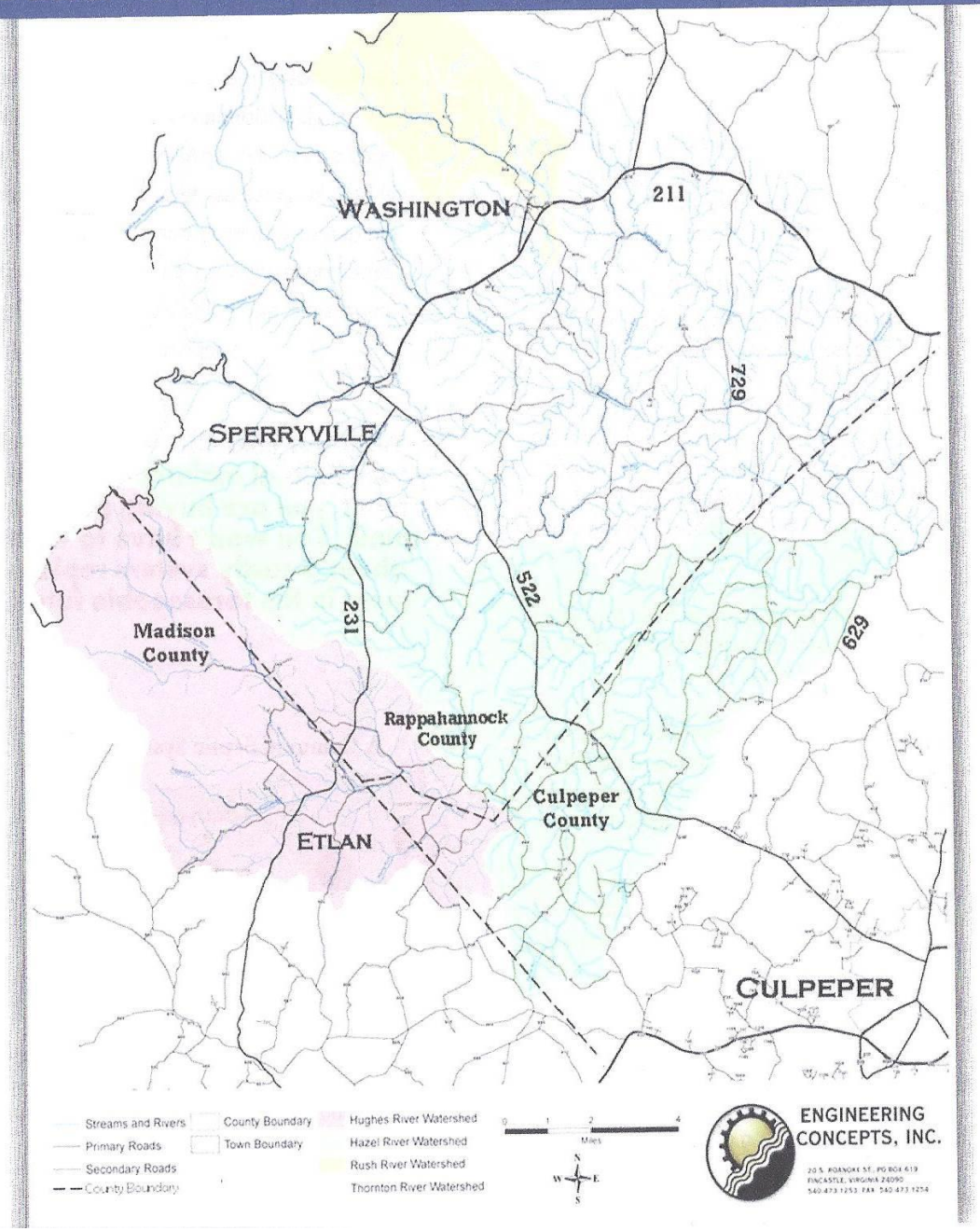
CULPEPER SOIL AND WATER
CONSERVATION DISTRICT
Best Management Practice
STREAM PROTECTION
Funded By
THE UPPER
HAZEL RIVER TMDL

Extending grazing and reducing stored feed needs

Don Ball
Ed Ballard
Mark Kennedy
Garry Lacefield
Dan Undersander



The Hazel River Watershed



FINANCIAL ASSISTANCE TO HELP YOU MAINTAIN YOUR SEPTIC SYSTEM

CULPEPER SOIL AND WATER CONSERVATION DISTRICT

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

HAVING SEPTIC SYSTEM PROBLEMS?

Financial Assistance is Available to Help Maintain Your Septic System

Who is Eligible?
Homeowners in Madison County Who Live in the Robinson River Watershed

Septic "Do"s

Have system inspected every 1-3 years by a professional

- Practice water conservation
- Use water saving shower heads and repair leaking toilets
- Learn about your system- its age, capacity, and location and size of drain field

Have septic tank pumped out on a regular basis

Septic "Don't"s

Never pour fats, oils, oil-based paint, paint thinners, insecticides, or toxics of any kind down the drain

Never flush non-degradable items such as diapers, sanitary napkins, cigarettes, cat litter, or paper towels

Water from roof drains should not be discharged near the drain field, as this could cause it to become overloaded

Avoid planting water-loving trees or shrubs near the drain field; roots can damage the pipes

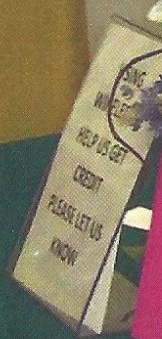
The Robinson River Watershed

Septic System Information

3 Parts:

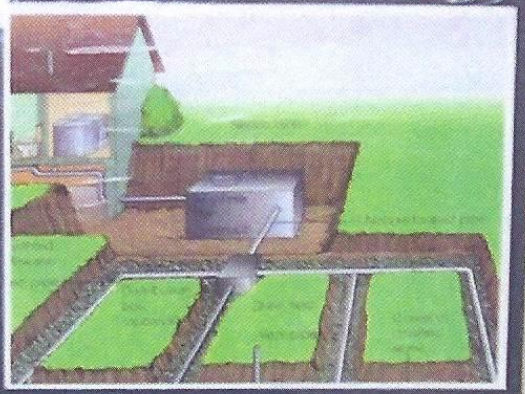
Septic Tank
Distribution Box
Drain Field

Signs of a Malfunctioning System



DCR

The Upper York River Watershed



FUNDING AVAILABLE!
TO: PUMP, REPAIR, OR
EVEN REPLACE YOUR
SEPTIC SYSTEM
This funding is available through State and Federal water quality improvement grants
MORE INFO: 825-8591
DCR

Septic System Health Care

By Henny Calloway, CSWCD Conservation Specialist

The Commonwealth of Virginia and Culpeper SWCD are currently offering a grant-based cost share program for significant portions of Rappahannock, Culpeper, Madison and Orange Counties. Homeowners that live in the eligible watershed areas of the Upper Hazel or Upper York watersheds are eligible for the assistance for the maintenance, repair or replacement of septic systems. Residents are eligible for reimbursement of 50% of the expense of maintaining, repairing or replacing on-site septic systems (the reimbursement may be as high as 75% depending on income). For the Upper Hazel watershed, all of Rappahannock County that drains to the Hughes, Hazel, Thornton, Covington and Rush Rivers, including all of Battle Run is eligible. This is essentially most of the county except a small area north of Amissville and the Flint Hill and north area. The Etlan and Nethers areas of Madison County and Culpeper County west of Reva, Griffinsburg and Monumental Mills are also included. For the Upper York watershed, nearly all of Orange County south of Route 20 and east of US 15, except for very small areas along the county border with Spotsylvania and Louisa Counties, is in the eligible area.

It is important for homeowners to understand their septic systems. A typical septic system consists of three main parts: the septic tank, the distribution box and the drainfield. Septic system problems may be identified by gurgling noises when fluids leave the home and the slow draining of sinks, toilets and/or the bathtubs, for example. Also, wet spots and strange odors above your septic system components may be a symptom of septic system malfunction as this is usually due to sewage seeping above the ground.

To evaluate a septic system problem the homeowner may want to consider a few factors. If only one fixture is not draining, the problem may be in that line only. If liquids are not leaving the house the problem could be in several areas. If the septic tank is opened and the liquids are at the tank inlet level, the problem may be at the inlet or between the home and the inlet. If the liquid is above the tank inlet level, the problem may be at the tank outlet or further after your tank. Correcting problems quickly will help to ensure that your family and the environment will not be harmed by the presence of raw sewage in your environment.

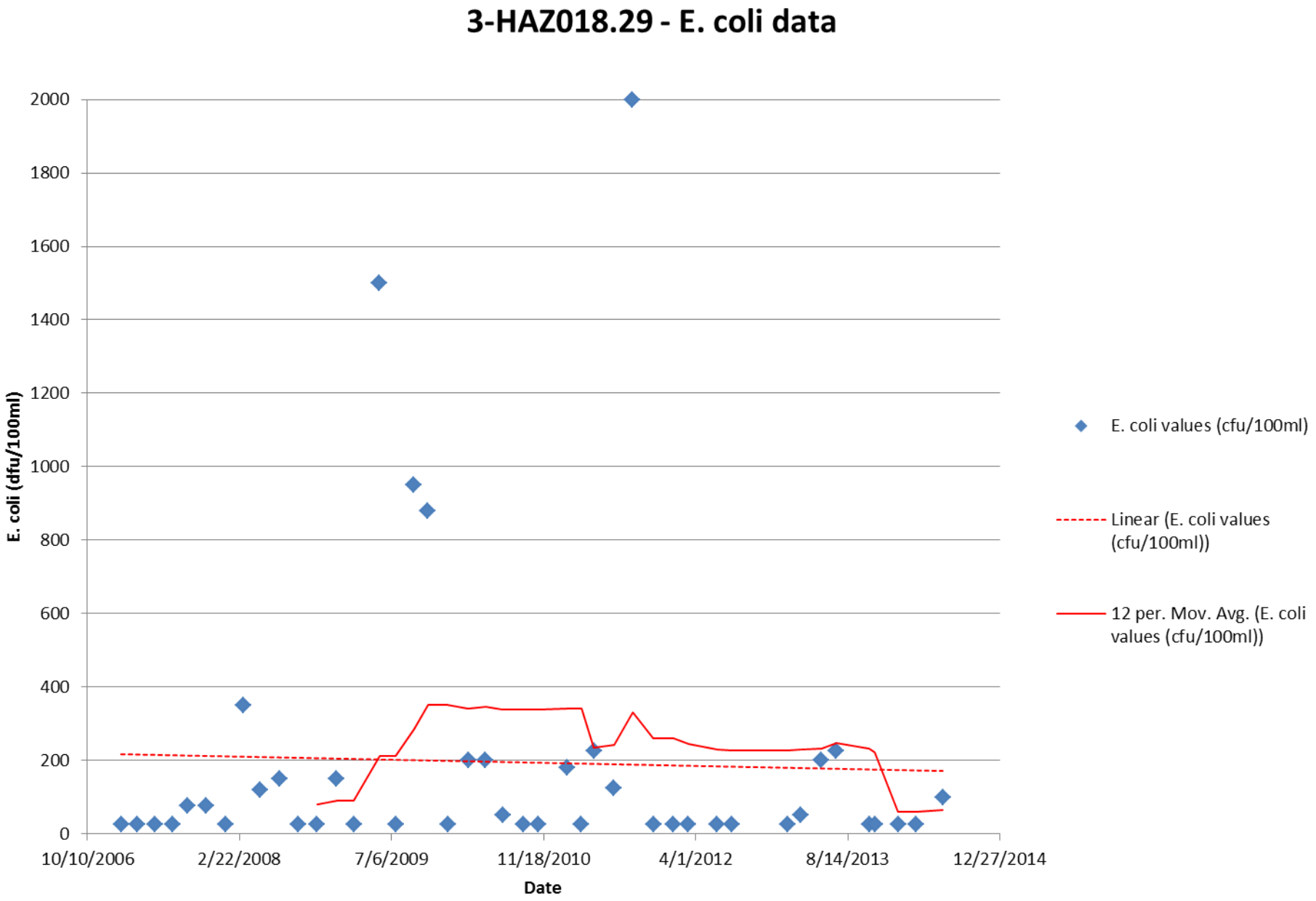
Septic system failures are caused by many factors. For example, the tank outlet tees may become clogged from solids causing sewage backup into the home. Grease, paint and large amounts of cleaning solution flushed down the drain and thus added to the septic system can kill essential bacteria that break down sewage solids. Also, cigarette butts, disposable diapers, plastic and trash should never enter a septic system. A garbage disposal should not be installed unless the drainfield has been designed for it. One of the major causes of drainfield failure is the lack of regular pumping maintenance. The Virginia Department of Health recommends that septic tanks be pumped every 3-5 years to help prevent excessive buildup of solids in the tank. The frequency that it actually needs to be pumped depends on the size of the tank and the number of people in the household.

Another frequent cause of system malfunction is the presence of tree roots in one or more components of the septic system. Protecting your drainfield is another way to ensure that your septic system continues to operate efficiently. Water-loving shrubs and trees should not be planted near the drainfield because root damage may occur. It is a good idea to check with an arborist to determine the appropriate distance away from your septic system to plant your trees and shrubs. Also, heavy machinery and equipment should not be parked on or driven over your septic system because their weight causes soil compaction, which will reduce the soil's ability to receive and treat wastewater, and because system components such as the septic tank and distribution box are not designed to support the weight of a vehicle larger than a riding mower. Water being added to a drainfield faster than it can percolate down through the soil can also result in failure. This could be caused by a leaking faucet or toilet, or by having a downspout, gutter, basement drain, or foundation drain from the house empty onto the drainfield.

If you take care of your septic system, you will protect the health of your family and neighbors as well as the water that humans, wildlife, aquatic life and the environment are extremely dependent upon. The Upper Hazel River and Upper York River grant-based cost-share programs are funded by the Commonwealth, and homeowners in these watersheds are eligible. The program is entirely voluntary. Its purpose is to improve water quality in and downstream from these areas. An application is required prior to commencement of septic cost share projects. Upon completion of maintenance, repair, replacement installation the homeowner will be reimbursed promptly. The Conservation District can help with a free assessment. For more information call 540-948-7531 or 540-825-8591.

Upper Hazel Results

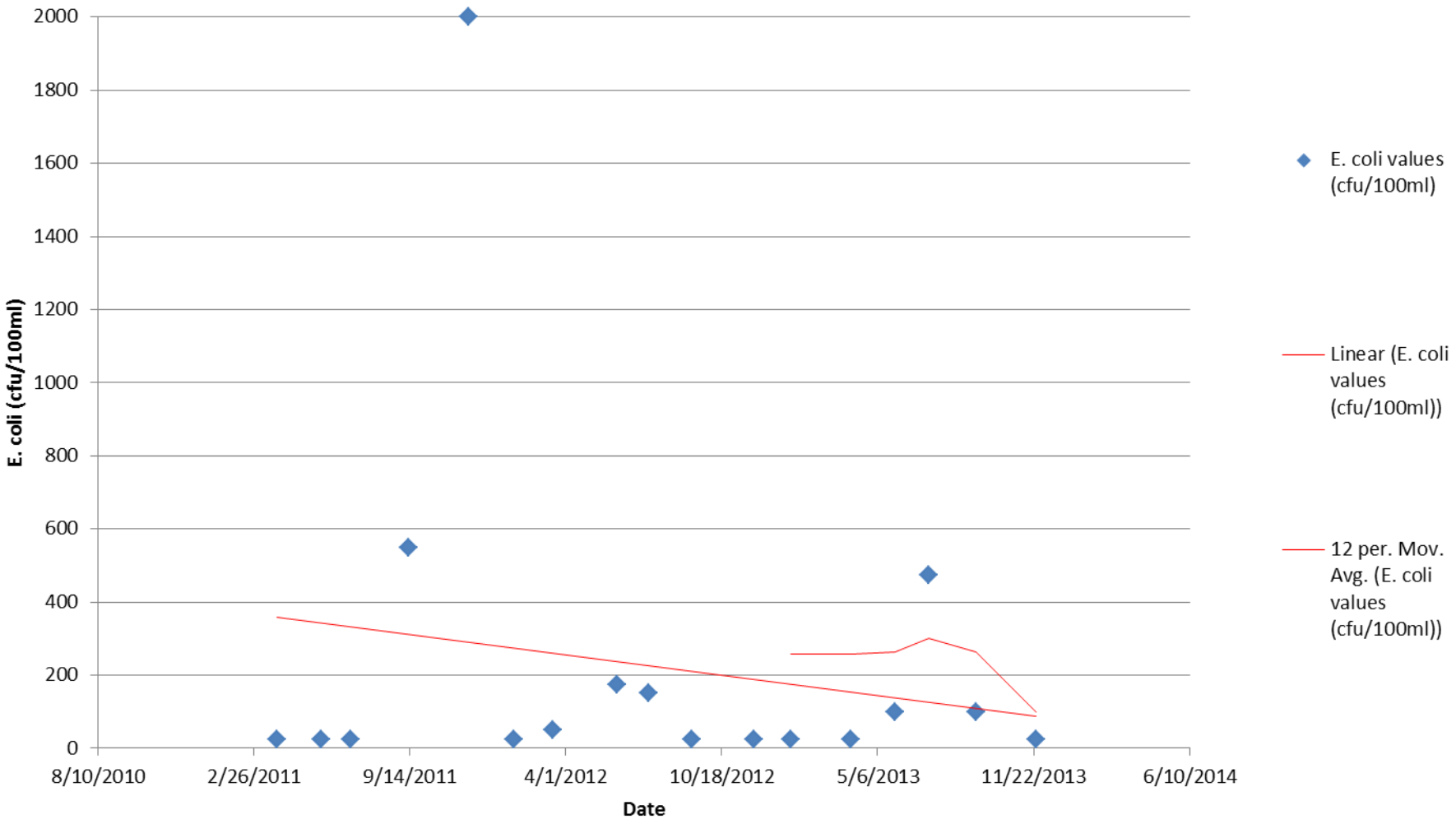
- **44.5** miles of streambank protected
- **~4,500** animals fenced out
- **127** septic pump outs
- **49** septic repairs
- **31** new systems


3-HAZ018.29 - E. coli data
2000
1800
1600
1400
1200
1000
800
600
400
200
0
E. coli (dfu/100ml)
10/10/2006
2/22/2008
7/6/2009
11/18/2010
4/1/2012
8/14/2013
12/27/2014
Date
E. coli values (cfu/100ml)
Linear (E. coli values (cfu/100ml))
12 per. Mov. Avg. (E. coli values (cfu/100ml))

Upper York River Results

- **52.1** miles of streambank protected
- **~4,000** animals fenced out
- **54** septic pump outs
- **5** repairs
- **12** new systems

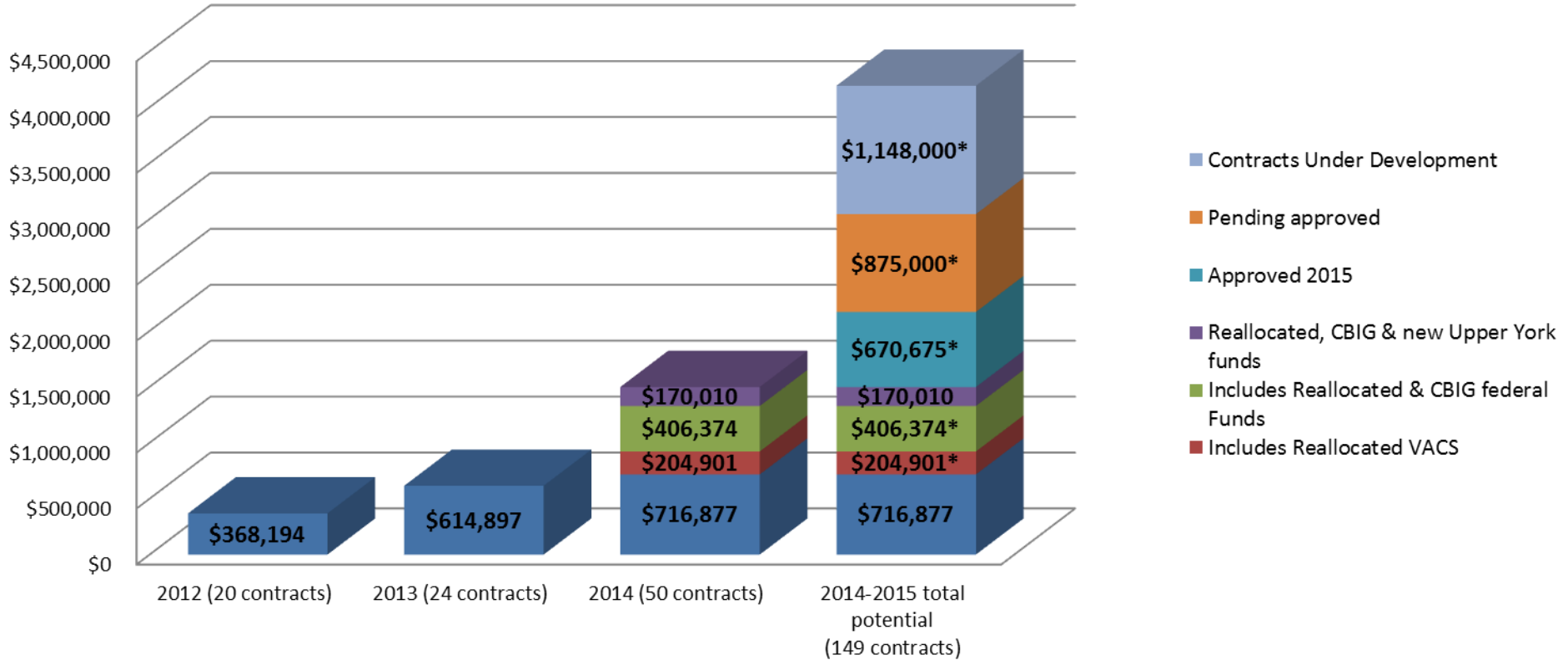
8-MTN000.96 - E. coli data



Robinson River Results

- **29.7** miles of streambank protected
- **~2,100** animals fenced out
- **175** septic pump outs
- **14** repairs
- **8** new systems (2 alternative)

Pending SL-6?

Culpeper SWCD SL-6 Trends as of 01/27/2015

*No program administrative support (graph does not include allocation for other BMPs)