

## Prince William Soil and Water Conservation District

13061 Fitzwater Dr.  
Nokesville, VA 20181  
(703) 594-3621

[pwsacd@pwsacd.org](mailto:pwsacd@pwsacd.org)  
[www.pwsacd.org](http://www.pwsacd.org)

### OUR MISSION...

*The mission of the Price William Soil & Water Conservation District is to provide leadership in the conservation of soil, water, and related resources to all Prince William County citizens, through technical assistance information and education.*

### Board of Directors:

Chairman: Steve Danziger,  
Vice-Chairman: Matt Brooks,  
Treasurer: Alex Lucas,  
Secretary: Paige Thacker,  
Director: vacant

### District Staff:

District Manager/Cons. Spec.:  
Kate Norris,  
Cons. Specialist/E&S Consultant:  
Beata Coss,  
Education Specialist:  
Linda Johnston,  
Conservation Specialist:  
Nicole Ethier,  
Administrative Assistant:  
Jeannie Heflin,  
Education/outreach Specialist Joan  
Patterson,  
NRCS District Conservationist: Rex  
Rexrode

# PRINCE WILLIAM AT BAY

Volume 33, Issue 1

## Where Does the Stormwater Go?

By Nicole Ethier



When it rains, snows, or sleet, where does the runoff water from roads, roofs, and driveways go? It might surprise you that this water does not go into a water treatment plant, unlike water from your toilets, sinks, and showers. In fact, this water flows right to stormwater management ponds, streams, and eventually into the Chesapeake Bay.

Most roadways contain a **storm drainage system** that collects the runoff water that is not absorbed into the ground. A storm drainage system is defined by Fairfax County as "A network of structures, channels, and underground pipes that carry stormwater (rain water) to ponds, lakes, streams, and rivers." These storm drainage systems can be found alongside sidewalks and in peoples' yards. The water in these systems will either be routed or piped into a stormwater management pond or it will make its way to Prince William's 1,000 mile network of streams and channels. These streams and channels make their way to larger water sources, such as the Occoquan River and the Potomac River. Eventually, the runoff water will be dumped into the Chesapeake Bay.

The issue with this system is that water isn't the only thing that gets dumped into the bay. Water carries along with it sediments and nutrients from fertilizers, emissions from automobiles, and human trash and debris



such as grass clippings, fast food trash, and cigarette butts. Soil particles from construction sites also travel to storm drainage systems. These soil particles tend to have pollutants attached to them. All of these factors negatively affect the water quality and wildlife associated with the Chesapeake Bay.

To help with this problem, make sure you properly dispose of your trash, grass clippings, pet waste, engine oil, paint, household chemicals and other waste products. Do not dump anything into a storm drainage network. If you have a storm drainage network on your property, make sure it is kept relatively clean from debris and soil particles. For further information, you can visit the following websites:

<http://www.pwconserve.org/issues/jan2003stormwater.html>,  
<http://www.fairfaxcounty.gov/dpwes/utilities/stormdrains.htm>

# HORSE FARM LAND MANAGEMENT SEMINAR

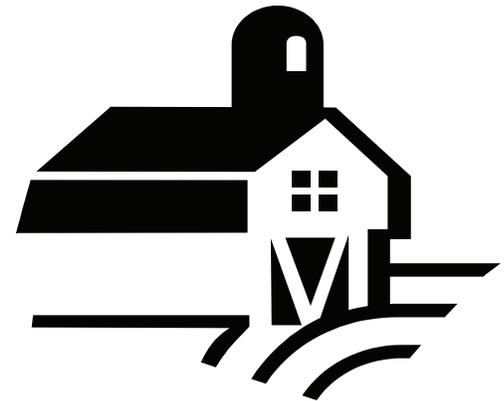
WEDNESDAY, MARCH 21ST AT WETLANDS STUDIES & SOLUTIONS INC. - 5300 WELLINGTON  
BRANCH ROAD, SUITE 100, GAINESVILLE, VA 20155

9:30 A.M. — 3:30 P.M.

FEATURING GUEST SPEAKER ALAYNE BLICKLE OF “HORSES FOR CLEAN WATER” AND EQUUS  
MAGAZINE

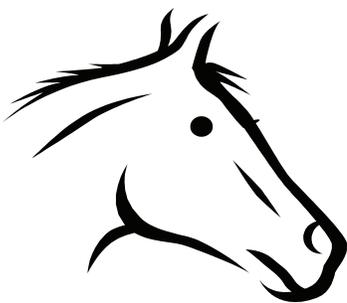
## TOPICS:

- PASTURE MANAGEMENT/GROWING GREAT GRASS
- NATURAL WAYS TO CONTROL MUD, DUST, BUGS, ODORS, & WEEDS
- EQUIPMENT FOR SMALL ACREAGE FARMS



## PRE-REGISTRATION REQUIRED BY MARCH 14TH

- \$20 FEE INCLUDES CONTINENTAL BREAKFAST, LUNCH, RAFFLE PRIZES, AND HANDOUTS
- REGISTRATION FORM AVAILABLE AT [WWW.PWSWCD.ORG](http://WWW.PWSWCD.ORG) UNDER “HORSE OWNERS”
- REGISTRATION FORMS ALSO AVAILABLE FROM PRINCE WILLIAM SOIL & WATER CONSERVATION DISTRICT (703) 594-3621
- COMPLETED FORMS AND CHECKS MADE PAYABLE TO PWSWCD SHOULD BE MAILED TO PWSWCD, ATTN: HORSE SEMINAR, 13061 FITZWATER DRIVE, NOKESVILLE, VA 20181



*ATTENDEES WILL ALSO HAVE THE OPPORTUNITY TO MEET DR. C.A. SHEA PORR, VIRGINIA COOPERATIVE EXTENSION'S NEW EQUINE AGENT. DR. PORR IS BASED AT THE MIDDLEBURG AGRICULTURAL RESEARCH AND EXTENSION CENTER. SHE CAN BE REACHED AT (540) 687-3521 EXT. 27.*

# Green Roofs

Many of you may have heard about **green roofs** and may have even seen a roof covered with vegetation somewhere, but have you ever wondered about their purpose? Here is some information about green roofs.

Green roofs, also known as vegetated roof covers, eco-roofs or nature roofs are multi-beneficial structural components that help to mitigate the effects of urbanization on water quality by filtering, absorbing or detaining rainfall. They are constructed of a lightweight soil media, underlain by a drainage layer, and a high quality impermeable membrane that protects the building structure. The soil is planted with a specialized mix of plants that can thrive in the harsh, dry, high temperature conditions of the roof and tolerate short periods of inundation from storm events.

Historically, engineered green roofs originated in northern Europe, where sod roofs and walls have been utilized as construction materials for hundreds of years. The development of contemporary approaches to green roof technology began in the urban areas of Germany over 30 years ago. Because of ongoing water quality degradation and a limited existing infrastructure for the control of stormwater in these areas, few alternatives were available for improved stormwater management designs. Environmental and economic considerations helped spur the development of green roof systems that could provide the necessary stormwater treatment on-site. Companies have developed a numerical saturate-unsaturated flow simulation model that investigates the variables influencing the effectiveness of green roofs.

Green roofs provide stormwater management benefits by:

- Utilizing the biological, physical, and chemical processes found in the plant and soil complex to prevent airborne pollutants from entering the storm drain system.
- Reducing the runoff volume and peak discharge rate by holding back and slowing down the water that would otherwise flow quickly into the storm drain system.

## **Green roofs are not only aesthetically pleasing, but they also:**

- Reduce city “heat island” effect
- Reduce CO<sub>2</sub> impact
- Reduce summer air conditioning cost
- Reduce winter heat demand
- Potentially lengthen roof life 2 to 3 times
- Treat nitrogen pollution in rain
- Negate acid rain effect
- Help reduce volume and peak rates of stormwater



Sources: [http://www.lid-stormwater.net/greenroofs/greenroofs\\_home.htm](http://www.lid-stormwater.net/greenroofs/greenroofs_home.htm)

Also please check the EPA website about green roofs: [www.epa.gov/heat island/strategies/greenroofs.html](http://www.epa.gov/heat island/strategies/greenroofs.html)



Please Welcome our New Employee

**JOAN PATTERSON**, Education and Outreach Specialist

Joan joined Prince William Soil and Water Conservation District in January of 2007 as an Education and Outreach Specialist. In this position she is responsible for developing and implementing educational programs for teachers, school children, youth groups and citizens. She also promotes District programs such as Adopt-A-Stream and Natural Resources Conservation Week. Joan brings to this position her extensive experience as a volunteer on National Wildlife Refuges. While living in Oregon she worked toward conserving, restoring and maintaining an urban refuge outside of Portland. The support organization she led conducted education and outreach programs for children, the community, and government entities. Joan along with her husband, Phil, and their daughters, Maggie and Kenna, live in the Independent Hill area and are busy restoring native habitats on their suburban lot.

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The Prince William Soil and Water Conservation District programs and employment are open to all, regardless of race, color, religion, sex, age, veteran status, national origin, disability, or political affiliation.

If you would like to be removed from the newsletter mailing list or would prefer to receive it by e-mail, please call 703-594-3621.

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