

Severn Watershed BMP Survey

Would you care to save 100 feet of the Severn in an hour? On **Saturday March 10**, 9:30 am to Noon, we'll meet on "Exposed Soil = Pollution: In Search of the Best Construction Sites"

Rain falling on exposed soil at a construction site will pollute nearby waterways. 150 active construction sites in the Severn River watershed, without effective erosion controls, will generate severely damaging mud. Some of the larger sites are known to lack effective mud pollution control – straw mulch and grass on exposed soil.

We'll show how to assess a construction site for exposed soil compliance and team you up with others to evaluate a few sites. No entry onto a site or confrontation is needed since we'll view sites from adjoining public areas.

After informing a large site's developer of ways to protect the River by covering exposed soil, we won a dramatic improvement. With your help, we'll do the same at other sites.

Spending an hour on this survey can be crucial to protecting construction site soils, protecting about a hundred feet of downstream waters from mud pollution. Register at goo.gl/vkiwE and we'll give you the exact meeting location.

On **Saturday May 5**, 9:30 am to Noon, we'll meet for "Stormwater BMP Survey: Keeping Runoff Pollution Out of the Severn." Stormwater runoff is the largest source of Severn River pollution. While more than a third of the runoff goes to a stormwater Best Management Practice (BMP) like the ponds, a recent Watershed Audit revealed that a third of these BMPs are failing.

This survey will assess the condition

of our most effective BMPs, bioretention facilities or Rain Gardens after a half-hour presentation. We'll team you up with other survey participants and look at an actual BMP from adjoining public areas. If you wish, you may later work to educate BMP owners and nearby residents about the benefits of properly maintained BMPs..

Register for this event with Richard Klein, Rklein@ceds.org, telephone 410-654-3021.

Environmental Signage for Jonas Green Park

SRA has won a grant to design and install several signs at Jonas Green Park, which lies beneath the Arnold end of the Naval Academy Bridge (Rt. 450), to explain the environmental features of the Park.

Many of its visitors don't realize that this jewel of a park has so many environmental assets. Our grant will fund signs that explain those features and educate a broader public about their benefits. Signs in both English and Spanish will include our Hispanic residents in our education message to the public.

We began in earnest with the mid-December awarding of this grant, partnering with several other organizations. The County Department of Recreation and Parks, which manages Jonas Green, recently relocated their Trails Division headquarters there. The State Department of Natural Resources (DNR) completed the installa-

The **Severn River Association** (SRA) usually meets at 7 PM on the third Tuesday of each month at Arlington Echo Outdoor Education Center, 975 Indian Landing Rd, Millersville MD 21108, free and open to the public – nice people preserving and restoring the Severn River watershed! Exceptions, like March at Herald Harbor, are noted on the SRA web site severnriver.org

tion of a new nitrogen-reducing septic system, one of many in parks in the Critical Areas adjacent to waterways.

Anne Arundel Community College is properly documenting each feature in English and Spanish and SRA hopes to pay some students for their work. Friends of Anne Arundel Trails is coordinating this project, providing volunteers to keep the Park clean and attractive and installing rain gardens.

Interpretive signs are planned for those rain gardens, the advanced septic system, a stormwater pond, and the living shoreline. Text and graphics design is by a professional graphics artist.

Bob Whitcomb led the effort to obtain a grant from the Chesapeake Bay Trust, coordinated with the supportive groups, and welcomes your comments at

bwhitcomb2@comcast.net

Inside:

BMP Survey	1
Signage, Jonas Green Park	1
Project Clean Stream	2
President's Column	2
Operation Clearwater	3

Project Clean Stream

SRA needs volunteers **Saturday March 31, 9 am** for two cleanups we'll lead under the Alliance for the Chesapeake Bay's Project Clean Stream. Last year we filled three 40' containers with Clements Creek tires and trash, and 9400 lbs of trash from a ravine that leads to Luce Creek.

We'll revisit the same sites this year. Each is a steep ravine, so wear hardy boots, bring gloves, and be prepared to get down (literally) and dirty (very) as we remove polluting trash from the watershed.

The Clements Creek ravine retains trash and appliances (not too many tires are left). The Luce Creek ravine has much debris and trash so we will lead a cleanup similar to last year's effort led by folks from the Unitarian Church.

For seven years SRA has led these annual cleanups, relying on DPW to haul all the trash away. We will estimate the amount and types of trash to be removed from each site, and work with DPW to provide suitable containers. They'll haul all these items away for recycling or dumping at the County landfill, for free.

The details of this cleanup, including a rendezvous point, parking, registration, and coordination with the County Department of Public Works (DPW), are still being worked on so we will announce them to all prior volunteers via email.

Workers' registration will be at Ramshead Roadhouse, 1773 Generals Hwy for Clements Creek and at 1920 N. Lawrence Rd (off Bestgate behind the Unitarian Church) for Luce Creek.

– Bob Whitcomb
bwhitcomb2@comcast.net

President's Column

I'm writing this in early February – a time of year to start thinking about how this year's yellow perch spawn will be, when the Bald Eagles and Osprey will arrive, and how abundant the submerged aquatic vegetation (SAV) will be this year after Hurricane Irene and tropical storm Lee caused record amounts of runoff and sediment into the Severn.

The impact is apparent where Severn Run discharges into the tidal Severn, creating large “sand islands” extending several thousand feet downstream. This is one of our family's favorite walks and my wife Stevie took a video of the islands, posted at

goo.gl/B6HHh

The deposited sands are amazingly clean and intact. How much silt came in with the sand? It is a depressing question to ponder.

The “sand islands” are undeniable proof of a need for programs that improve stormwater management and restore stream channels in the Severn River watershed. And that is exactly what the SRA is doing under a joint program with the Community Environmental Defense Services (CEDS).

CEDS started by conducting a preliminary Watershed Audit in November 2011. Acting on its findings and recommendations, SRA is initiating a program to evaluate watershed stormwater management systems and construction sites. We encourage all to join us as we embark on a new SRA activity, as described on the front page article.

A 2012 priority for SRA is to increase membership and donations. We are combatting complacency about the Severn River and the general health of the watershed and our communities. We need a strong membership to

attain our core objectives. Funds are needed for restoration, education, and other stewardship projects that protect and restore the river's water quality and life.

To fulfill these objectives we must have clear goals that represent those of our community and individual members. Therefore, our March meeting is dedicated to establishing goals for 2012 and beyond. We will send out an on-line questionnaire to get input from members on SRA's goals and priorities.

SRA applied for a Chesapeake Bay Trust grant to purchase aerators that can be installed at community piers to provide “dissolved oxygen sanctuaries,” needed to provide areas for fish and crabs to migrate to during periods of anoxia (low oxygen). We installed two aerators last year that were loaned to us from Talbot County and hope to use the grant funds to purchase a few more. Admittedly, this is a band aid approach to mitigating the anoxia problem, but at least it does something while the larger problem is being addressed.

On February 4, several SRA officers, directors, and watershed stewards attended the first Annual Watershed Stewards Academy (WSA) Conference. We were invited to participate with other “funders” to discuss SRA's Stormwater Action Fund (SAF). We handed out a newly created SAF brochure and were happy to report an increased level of funding for this year. Thanks to Ann Jackson for coordinating the SAF program and to Stevie Wilding for preparing the brochure.

Please mark March 31 on your calendars for this year's stream cleanup day. See announcement at left.

– Duane Wilding

Operation Clearwater

SRA started this program in 1974 to ensure that waterfront communities were informed about possible contamination of swimming beaches by sewage or septic failures. Many waterfront communities have built pools, but there are still many who look forward to swimming in the River. But is it safe?

The good news is that bacteriological water quality in the Severn has actually improved in the last decade. Maybe all those rain gardens and stormwater conveyances are truly having an effect!

I have been the scientific director of this program since 1989. My research background is aquatic microbial ecology so this has been a rewarding educational opportunity. Over the years I've chatted with many residents about their concerns for water quality.

goo.gl/OIZ8t shows that stormwater is the primary source of fecal bacteria when we get more than a half inch of rain. The other key sources are septic field failures and waterfowl.

Students sample beach water every Wednesday morning from May to August at participating communities. At AACC we process samples with filters fine enough to trap bacteria, then place the filters on media that grow *Enterococcus*. We count the *enterococci* that have grown and calculate the number that were present the previous day. Results are posted by Thursday afternoon so residents will know if their beaches are swim-safe.

Enterococci themselves are not generally pathogenic (disease agents) but their native habitat is the intestinal tract of warm-blooded animals like birds and mammals. They cannot reproduce or survive well in nature so their presence

implies recent fecal contamination.

As shallow waters warm in summer, *enterococci* and pathogenic microorganisms may survive and reproduce. A special concern in periods of rapid algal growth relates to phytoplankton and sea lettuce.

Algae “leak” or excrete sugars while photosynthesizing, providing excellent sources of energy for bacteria. Picture warm water in August, filled with algae and their secretions, at just about the same salinity as our blood – a perfect environment for fecal bacteria!

Severn River watershed areas with sea lettuce often attract Canada geese to graze on the algae and leave their waste behind in the shallow water. I recommend that residents recruit kids to rake and remove sea lettuce.

Another source of fecal bacteria is failing septic systems on water lots that once had summer cottages but now have large year-round houses that over-stress septic fields. In a major rain drainage fields can become saturated and allow waste to flow into the river.

High *enterococci* counts may appear after a rain, but the source is not really stormwater but rather waste from those fields. Proper maintenance can prevent this problem but a better solution is to install a nitrogen-reducing system. Funds for this purpose may exist, as described on the AA County Health Dept. web site goo.gl/PZMDT, with priority going to houses with failing systems in the Critical Area.

The most common health impacts of swimming in contaminated water are gastrointestinal illness, vomiting, cramps and diarrhea, or infected cut, ear or eye. People with



a hardy immune system can better cope with such impacts.

Some bacteria, not specifically associated with fecal waste are found in natural waters especially during hot periods. They can cause “flesh-eating” infections that enter through a cut. The most notorious are *Vibrio vulnificus* and *Staphylococcus* and *Streptococcus* species. These pathogens also use sugars produced by algae. We can't test for all of these pathogens so it's a good plan to stay out of the water if you have a cut or a weak immune system.

I've heard many anecdotes about sickness from swimming. In 2011, we posted a questionnaire on the SRA website to gather data about such illnesses. Although I got responses from other local rivers, none came from Severn swimmers so I'll try the questionnaire again in 2012. Please encourage anyone who gets sick after swimming to send in a report. Reports can be anonymous, I just need the type of illness, and date and location of water contact. The Operation Clearwater application is at goo.gl/tFO9l

– Sally Hornor

THE SEVERN RIVER ASSOCIATION
P.O. BOX 146
ANNAPOLIS, MD 21404



Join the Severn River Association, memberships/donations tax deductible. SRA is a 501(c)(3) tax-exempt organization.

(circle membership category right)	Person	Organization
Regular	\$ 25	\$ 55
Patron	\$ 50	\$ 125
Benefactor	\$ 125	\$ 200

Use the Click and Join Checkout button on the SRA website at severnriver.org or send this form & check to:

The Severn River Association, P.O. Box 146, Annapolis, MD 21404-0146

Name:

Mailing address:

Telephone number(s):
(specify home/work/cell)

E-mail address(es):

Your Community or Organization if any:

For Community Association members, please provide the name of your Representative who will sit on the SRA Board of Directors, with their phone, address, and email):