



WSWA Newsletter

Volume 5, Issue 1

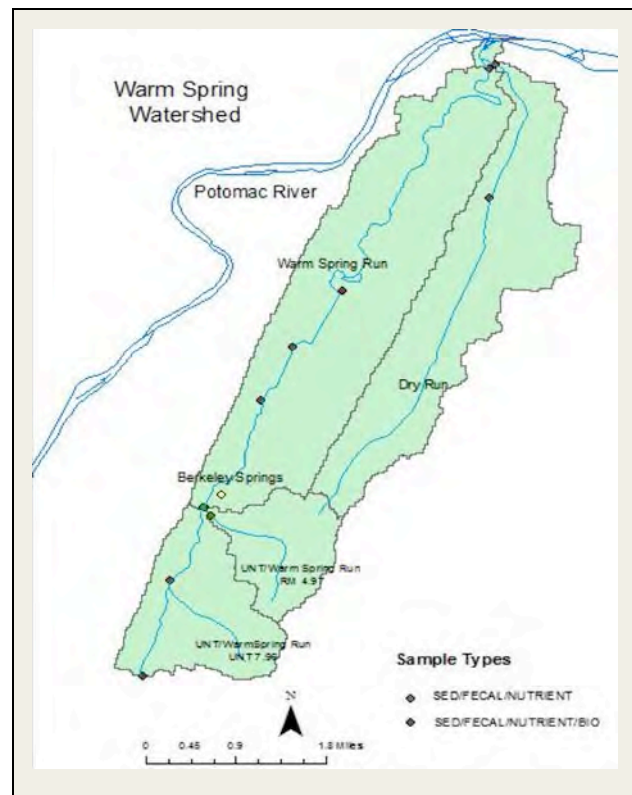
TMDL Development Status

We have not discussed total maximum daily load (TMDL) in quite awhile. Trying to remember what it is and what it does for WSR can be daunting. A public hearing by WVDEP on March 6th re-focused our attention on WSR’s TMDL and where we are in its development. According to the EPA website, TMDL is a “pollution budget and includes a calculation of the maximum amount of a pollutant that can occur in a stream and allocates the necessary reductions to one or more pollutant sources.” Section 303(d) of the Clean Water Act stipulated that all states must list their impaired streams – streams that are considered too polluted or degraded to meet water quality standards. Once a stream is added to the WV 303(d) list, a TMDL must be developed. The TMDL then serves as a planning tool for activities to help that stream achieve water quality standards again.

Warm Springs Run was declared an impaired stream in 2012, one of three Potomac Direct Drain Watersheds, and added to the WV Section 303(d) list. Once on the list, WVDEP began the TMDL development process for WSR. Steve Young of WVDEP held the first public hearing in May 2013 to kick off the development process. It is a 48-month process from selection to the 303(d) list to approval of the TMDL report by EPA.

Warm Springs Run is designated as a drinking water and contact recreational stream; it is considered impaired because it does not meet the water quality standards for those uses. Fecal coliform was the main pollutant identified in 2012 but with an unknown source.

In the interval from the first public hearing to the one a few weeks ago, WVDEP has moved steadily forward in the TMDL process. The longest stretch has been the stream monitoring and source tracking conducted between July 2013 and June 2014. Ten sites were selected along the Run and its tributaries.



The chart above, taken from WVDEP’s presentation, indicated the eight sites on the Run, plus a site on Dry Run and one on an unnamed (UNT) tributary, where data was gathered during stream monitoring.

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The health criteria for fecal coliform is established at 200 counts/100 ml as a monthly geometric norm. No more than 10% of samples in a month can exceed 400 counts/100 ml; however, the Run had a high violation rate of 44% between 2007 and 2012 and, thus, its designation as an impaired stream. During WVDEP's year of monthly sampling, Steve Young reported that the pollutants or sources of pollution were the same as they suspected back in 2013.

Concurrent with the stream monitoring activity is the development of the model. WVDEP has subcontracted out the modeling activity. The monitoring data will be fed into the model against different scenarios, which will be run until they get a combination that meets the load limits. The resulting reduction from each source is the allocation, which will be presented in the final TMDL report. The draft TMDL Report is expected in the late fall.

Activities	Dates	Completed?
Stream Selection	3/13 - 4/13	Yes
Pre-TMDL Monitoring	7/13 - 6/14	Yes
Modeling Contract	10/14 - 6/15	Yes
Allocation	7/15 - 9/16	Ongoing
Report Development	4/16 - 11/16	Ongoing
Finalization, EPA Approval	12/2016	TBD

For more information on TMDLs, go to <http://www.dep.wv.gov/WVTMDL>.

Here is the link to the presentation in May 2013 and on March 6, 2016:

<http://www.dep.wv.gov/WWE/watershed/TMDL/grpc/Documents/C3%20PDD%20and%20Gauley/Warm%20Spring%20Run%20final%20intro.pptx>

Pet Owners for Clean Streams

In an attempt to address the high levels of coliform bacteria in Warm Springs Run, WSWA will be starting a program to reduce dog waste from getting into the Run. We hope to be installing a number of "Doggie Waste Stations" at strategic points along the Run. These waste stations will include an information sign, a baggie dispenser, and a disposal container. We will also be working with local businesses to help sponsor this project, raise public awareness, and encourage the use of these stations.

The most obvious sites in need include:

- next to the McDonald's parking lot
- near the High School ball fields
- Berkeley Springs State Park
- The walking track by the Board of Education building.

We would appreciate your ideas for any other sites. Suggestions should be submitted to WSWA for consideration as soon as possible so we know how many stations to purchase. Contact Jeff Iliff at pfjjeff@gmail.com with your suggestions.

2016 Annual Meeting 4/20/2016

Our annual meeting is scheduled for **Wednesday, April 20, at 7:00PM**, at the Morgan County Board of Education Headquarters (247 Harrison Avenue, Berkeley Springs). Our speaker is Dr. Marie Majarov who will make a presentation on the plight of the Monarch butterfly and our native pollinators, what is being done to help and how recent “numbers” look compared to past years. The presentation will precede the annual meeting.

A short business meeting will be held to highlight the achievements of 2015 and to present our plans for 2016. Board members up for re-election are: Kate Lehman, Betty Harmison and Rebecca MacLeod. Refreshments will be served.

Membership and Dues: Dues run the calendar year and are now due. If you want to be able to vote at the annual meeting, you must be a member in good standing and that means your dues are up to date. You can pay online or send a check to Andy Swaim at PO Box 757, B.S., WV 25411. Dues are still \$10 per person.

Volunteer of the Year – Michael Brooks is our web master who works diligently to maintain the WSWA website and keep it up-to-date. He is also the newest member of the Board of Directors and serves as Secretary.

Guest Speaker - Dr. Majarov is a Virginia Master Naturalist, a freelance photographer and writer. Marie is a frequent contributor to *Virginia Wildlife Magazine*, where her articles include such topics as monarch butterflies, honeybees, bluebirds, box turtles, macro-invertebrates, and native pollinators. Marie has also published articles on the Abram Creek wetlands, and Redbud Run. Her photography and writing have won numerous awards.

Monarch butterflies are in trouble. Over the past few decades, the population of these magnificent creatures has decreased significantly. The monarch message Marie will share highlights what is happening to other pollinator species, critical because pollinators are a “keystone species.” Their loss would be analogous to removing the keystone in an arch...our environment would collapse!

Extinction is a very real possibility for many of our native pollinators. Marie will talk about some of the species we are losing and introduce attendees to a myriad of native pollinators; you might be surprised at their numbers!

Bringing back monarchs and protecting our other native pollinator species will take concerned people acting together to create backyard and landscape habitats that are friendly to monarchs and other pollinator species throughout their lifecycle. Native plants play a significant role in pollinator ecology. Examples you can use to provide critical habitat for eggs, nectar, and shelter will be illustrated in this talk.

Rail Trail Hike: Assessing the Trail

By Tim Rowland

In early March, four members of the Warm Springs Watershed Association (Michael Brooks, Bob Wurster and Tim & Beth Rowland) assessed the condition of the proposed North Berkeley Rail Trail, a route that parallels Warm Springs Run from the Berkeley Springs rail station to the sand mine. The hike (including several small side explorations, assessments, pokings and proddings) covered 3.26 miles round trip and took just over two hours. Although the trail is mostly passable and in



- Photo by Michael Brooks

relatively good shape, there are several challenges.

The old rail bed crosses the run at the north end of the rail-station parking lot, but the bridge is gone, requiring a dicy rock hop or a calf-deep wade — or a calf-deep wade after a failed rock hop — and a better option might be to cross over the run on Williams Street to Harrison Avenue and connect back on the trail behind the Berkeley Bottling plant.

The beginning stages of the trail in particular are in need of trash pickup as it parallels James Street to Jimstown Road. Hikers could also start at Jimstown Road and avoid the more “urban” section of the trail.

A gate just north of Jimstown Road indicates the ground is the property of the sand mine and trespassing is not allowed, but a public right-of-way exists on the railbed itself. Aside from a log or two across the trail, the WSWA hikers found it to be mostly cleared of brush and briars and enjoyable and easy to hike. It will be prettier with the arrival of spring wildflowers, but one benefit to hiking before the leaves have popped out is that lots of interesting old industrial flotsam and jetsam (from the railroad and earlier sand mining operations) are visible.

The trail passes through some steep cliffs and clearcut timbering before it comes to another stream crossing a little more than a mile from the train station. Here too, the bridge is gone, and a sizable tree has fallen across the trail making for a considerable tangle of blowdown. But those who can push through can easily cross War, Springs Run on a tree that’s fallen across the stream.



- Photo by Tim Rowland

High on the bank on the west side of the run at this point is a curious shape that appears to be a large, pewter tent or a giant’s medieval helmet. It is in

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fact, the damaged dome of the old Morgan County Courthouse, which burned a decade ago. It probably won't be visible from the trail much longer as the leaves come out, but it can be seen across the carnival grounds south of the sand mine.



For those interested in an attractive, wetlands stroll, the rail trail from Jimstown Road to the stream crossing is a nice option. The round trip could probably be comfortably completed in less than an hour, and with the onset of spring will be rife with wildflowers, frogs, birds and interesting plant life — and by the look of it, some berry picking later in the year. Getting the trail into shape for more civilized hiking and biking will take some effort and is still obviously a ways off, but until that happens the trail can be enjoyed as is.



WSWA News of Note

Streetscape update – Board member Larry Lower reports that bids for Streetscape and Fairfax Street reconstruction were opened on March 8th and a contract was awarded to the successful contractor on March 18th. A pre-construction meeting with the contractor is scheduled for April 1st to work out all the details on sequence and schedule, among other things. He anticipates a construction start the second week in April, but the exact date is still to be determined.

Tree Planting, April 23rd – Join us as we plant 24 more trees at First United Methodist's Big Blue Building at 440 Fearnow Road. A Pruning and Mulching Workshop will follow the tree planting and will be taught by Tree Board member, Lance Strait.

Biological Control of Purple Loosestrife - In the mid-1980s, biologists began conducting a search for biological control agents of purple loosestrife. Testing began in Europe and was completed in North America from 1987 to 1991.

Following a rigorous testing and evaluation process, the US government gave permission for 4 species of beetles to be introduced into Minnesota wetlands. This included 2 leaf-feeding beetles, one root-boring weevil, and one flower-feeding weevil. *Galerucella pusilla* and *G. calmariensis*, the leaf-eating beetles, seriously affect growth and seed production by feeding on leaves and new shoot growth. *Hylobius transversovittatus*, the root-boring weevil, deposits its eggs in the lower stem of plants. Once hatched, the larvae feed on the root tissues, destroying the plant's nutrient source for leaf development, which in turn leads to the complete destruction of mature plants. *Nanophyes marmoratus*, the flower-feeding weevil, severely reduces seed production of purple loosestrife.

Biological control, when effective, will reduce the impact of loosestrife on wetland flora and fauna. The plant will not be eradicated, but abundance should be significantly reduced so that it is a small component of the plant community, not a dominant one.

WSWA Calendar

- April 6 Make-It-Shine at 9:00 am in Greenway Cemetery
- April 20 Annual Meeting at 7:00 pm Board of Education
- April 23 Tree Planting at 440 Fearnow Road
- May 6-7 Booth at Master Gardener Plant Fair
- May 25 May Board of Directors meeting, 6:00 pm
- June 22 June Board of Directors meeting, 6:00 pm

Please join us!

The Board of Directors generally meets every 4th Wednesday of the month at 6:00pm at the Extension Office. All members are urged to attend and participate.

WSWA Officers and Board Members

President: Kate Lehman 304-279-0717.....goldfairy39@gmail.com
 Vice President: Betty Harmison.....304-258-1088
 Secretary: Michael Brooks.....jm.brooks1@gmail.com
 Treasurer: Andy Swaim.....39anteros@gmail.com
 Norman Dean.....deannorm@frontier.com
 Jeff Iliff.....pfpjeff@gmail.com
 Larry Lower.....larrylower@yahoo.com
 Rebecca MacLeod.....pendle35@gmail.com
 Tim Rowland.....mountain.rat@me.com
 Bob Wurster.....wursterb@gmail.com

Michael Brooks (Web Master).....jm.brooks1@gmail.com
 Susan Jones (Newsletter Editor).....wvbagend@frontier.com