

Change is blowing in the wind

The PA Stormwater Best Management Practices Manual was finalized in December of 2006. It has now been in existence for over 6 months. Many members of the design and engineering sector are now aware at least that Pennsylvania now has its own manual with BMP Specifications.

As usual there will be a learning curve period of time over the next six months in utilizing the manual for plan submittals. If you were an interested person who attended the Departments "training on the Manual", you realize that the training was only an "introduction" to the new manual. It was repetitively stated that the "manual itself is not regulation but a guideline". Technically, that is true. In reality it does become defacto requirements.

As a consultant, you must use the manual, with its methodology and specifications, to go through the regular NPDES Permit review process.

Alternative BMPs or control strategies not listed in the manual, or variations of BMPs included that meet water resources protection requirements may also be used. However, and it is a big however, proposals to utilize alternative BMPs or deviate from the control guidelines must demonstrate their effectiveness with the appropriate supporting analysis, calculations, tests results or other documentation.

In reality, using alternatives will increase the time frame for reviews and eventual permit issuance. The alternatives will have to be evaluated by reviewer for effectiveness. Additional documentation will be necessary. The process will be more complicated. This is intended to ensure use of the Manual in design of BMPs for projects.

Please take time to review the manual in its entirety. There are several sections that can be used independently. There are other sections that will require information that is presented in another section. Be advised to not "cherry pick" individual items from the manual without the looking at the entire picture. PADEP has an excellent Fact Sheet titled **Pennsylvania's Stormwater Best Management Practices Manual**.

The fact sheet can be located at PADEP's web site: www.depweb.state.pa.us Keyword: Stormwater. The manual can also be downloaded from this web site. Your local conservation district may have a direct link on its web site.

(continued on p.3)

Bucks County Conservation District appoints new manager

Dr. Stephanie Olexa to assume responsibilities in the Fall.

During its July 11 meeting, the Bucks County Conservation District (BCCD) Board of Directors appointed Dr. Stephanie Olexa District Manager.

Olexa, a resident of Quakertown, brings an impressive array of experience and credentials to the position, which oversees the day-to-day operations of the Doylestown-based BCCD. She will assume her new responsibilities in the Fall.

The founder and president of Benchmark Analytics in Center Valley, where she supervised almost 60 employees and was responsible for the development of strategic and implementation plans, and strategic analysis of technical and business activities, she holds an M.A. in Biochemistry and Molecular Biology (Summa Cum Laude) and a Ph.D in Biochemistry, both from Temple University.

An environmental testing laboratory, Benchmark Analytics grew into a facility with an excellent reputation for technical depth and customer service focus. Before selling the business earlier this year, Dr. Olexa used that platform to broaden her qualifications as an entrepreneur, scientist, executive, team leader and teacher.

Before founding Benchmark Analytics in 1989, she also earned an MBA in Finance/Marketing from Lehigh University.

"We are thrilled to welcome a district manager of Dr. Olexa's caliber," said BCCD Board Chairman Jeffrey Garton. "Her background and expertise, in addition to her commitment to protecting Bucks County's unique environment, will be an enormous asset."

"During the interview process, what impressed me most were the genuine qualities Dr. Olexa exhibited," noted BCCD Commissioner Director Sandra A. Miller.

Dr. Olexa's financial management qualifications also include extensive work with non-profit organizations. She has been the recipient of three patents and the author of 36 scientific publications and four book chapters.

"I believe my varied experiences can bring a depth and creativity that would have a positive impact on the BCCD and the environment," she told the interview committee.

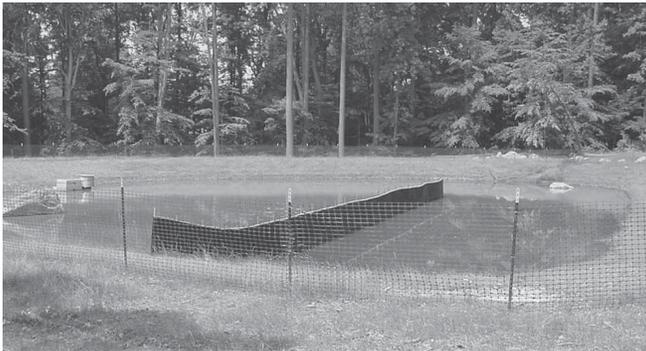
*Gretchen Schatschneider
Bucks County CD*

Super Silt Fence Baffles Revisited

Chester County and Delaware County Conservation Districts using the alternative best management practice procedure evaluated the effectiveness of Super Silt Fence as a sediment basin baffle material in 2000. Recently I was surprised by an article in the Lehigh County Conservation District Newsletter "Conservationally Speaking" by Kevin Frederick. Lehigh County Conservation District has taken the position that they will no longer accept super silt fence as an alternative design, because of poor performance and maintenance.

I quickly conducted a poll of the Conservation Districts in Montgomery, Bucks, and Chester Counties. To determine whether my favorable impression of super silt fence baffles was the exception rather than the rule. All expressed satisfaction with super silt fence. Each county, however, had developed improvements over the years such as requiring four-foot pole spacing, or increasing the pole diameter to 4" for baffles over 30 inches in height. The ease of installation, and the fact that its cost is about 1/3 that of marine grade plywood, has resulted in it being used in the majority of projects.

The proposed function of a baffle is to extend the flow length in a sediment basin. A longer flow



length will allow more time for sediment to drop out of suspension. Looking back at the research conducted by Dr. Albert Jarrett of Penn State University, I found the following information: "*The researchers found that the skimmer allowed the least amount of soil, about 37 pounds, to escape from the basin, but that the addition of barriers in the bottom of the basin did not improve or degrade the skimmer's efficiency. The perforated risers allowed 70 pounds of sediment to escape the basin. The barriers did, however, significantly improve the performance of the perforated risers allowing only 54 pounds of sediment to escape*". Where, or how much, of the baffle would need to fail in order to substantially reduce this 25% efficiency improvement?

Chester, Delaware, Montgomery and Bucks County conservation districts will continue to accept super silt fence as a material to construct baffles. We do encourage engineers to design appropriate modifications for extreme applications to improve performance.

*Ed Magargee
Delaware County C.D.*

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Change... (continued from front page)

There are other major changes within this program that you will have to adapt to. Some of them but not limited are:

- New permit application forms
- Antidegradation requirements including thermal impacts of your project.
- Changes in Delegation agreements between the Department and Conservation Districts for voluntary review of Post Construct Management Plans.
- Potential requirements to have the designing engineer “certify that BMPs were installed according to plan design and are functioning properly.
- Operation and maintenance agreements for permanent BMPs.
- Expedited review procedures

Stay tuned for updates.

*Dan Greig
Chester County Conservation District*

Temporary Stabilization and Beyond

PA Code: Title 25. Environmental Protection Chapter 102.4, (6) (iv) states:

Upon completion or temporary cessation of the earth disturbance activity, or any stage thereof, the project site shall be immediately stabilized

I cannot stress enough the importance of temporary stabilization as a BMP. We make it a point to cover this topic at every pre-construction meeting. Not only does this practice limit the amount of disturbed area and soil loss, but it will also limit your chance of running into an enforcement action.

Tracking slopes – An easily implemented BMP

Let’s say that you have a steep fill area that you are constantly grading and a storm is coming and there’s no time to seed and mulch. Well, why not try slope tracking? As stated in the DEPE&S manual this is done by, “Running tracked machinery up and down the slope, leaving tread marks parallel to the contour.” This is a very simple and cost effective method for any disturbed area.

Referring back to the Erosion and Sediment Control Plan

When the time comes to temporarily or permanently stabilize the site and you’re not sure how to proceed, you can always refer to the E&S plan. This will list any soil limitations; steep slopes that should be mated and seed rates and types that can be used. As always, keep in contact with your local conservation district to help you effectively implement your Erosion and Sediment Control plan.

*Kevin Boyle
Delaware County Conservation District*

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Growing Greener and Preserved Farms a Good “Match”

The Montgomery County Conservation District was looking for a farm to demonstrate water quality Best Management Practices (BMP) that would be enthusiastically received by the owner, while also being easily observed by the public. So when one of the counties largest dairy operations was identified as having; a public dirt and gravel road (Hoffman Rd.) running directly through the middle, a first order tributary (Schlegel Run) perpendicular to the road, twenty five acres of pasture on both sides of the stream and road, and a conservation-minded owner who wanted to implement Best Management Practices (BMPs), you get the Travis Lee Moser Stream Fencing Project.

Growing Greener I funding was applied for in November 2004, and the project was completed in June 2007.

This project has had to adapt to stay viable. After installing the main BMPs of two agricultural stream crossings and 3600 feet of stream fencing, our main project partner, Tree Vitalize - AQUA PA, provided funding for three hundred large trees and shrubs to be planted in the established riparian buffer. Within one week of planting, the trees were subjected to 8 to 11 inches of rain over one weekend. Our largest trees were 10 feet tall, and flood debris was strung on the trees at half that height. Although there was some damage, disaster was diverted. Having this experience under my belt, I knew I did not want to encourage the inundation of the floodplain with the installation of check dams, as was originally proposed in the grant. Travis Moser and I considered the ongoing maintenance of the high tensile fence and debris clean up that would be connected with this forced flooding. Our decision was to amend the grant.



Riparian buffer after historic June 2006 flooding

We would now propose to install a watering system in the pasture to keep the cows from congregating at the crossings. The amendment was proposed and granted, only to find out that the preserved farm was going to be put up for sale. Because the farm is permanently preserved we were confident in continuing on with the BMP implementation with the understanding that the next owner would also have to agree to maintain the BMPs for the project life or pay back some or all of the project costs. We now had to concentrate on BMPs that would compliment any agricultural operation, not just a dairy farm.



Cows using stream crossing

Once the cows were sold there was going to be no need for a grazing plan, nutrient management plan or watering system, so the grant would have to be amended once again. This time I concentrated on the run-off from the dirt and gravel road that had pushed its sediment through the pasture and into the stream. This amendment would propose the repair of a breached sediment retention basin and convey road runoff with an added 300 feet of grassed water way. In addition, we decided to build what I termed a sediment retention berm — a stone filter berm to filter the sediment out of the water before allowing it to flow into the stream. The amendment was again approved and the project finally completed with one week to spare.



Waterway conveying in to reclaimed sediment retention basin

(continued)

Good "Match" (continued)

Schlegel Run meanders through Douglass Township, as it collects run off from a dozen permanently preserved farms before emptying in to the Swamp Creek. It is this concentration of preserved farms that lends this small watershed the increased ability to protect and improve water quality for aquatic life and the 1.5 million people who depend on the Schuylkill watershed for potable water. This increased ability to protect and improve water quality is made possible by landowners and farmers who implement BMPs.

The Travis Lee Moser Stream project demonstrates the use of structural and non-structural BMPs on a preserved farm. Funding for this project was provided by the Department of Environmental Protection and Tree Vitalize.

*Gustave C. Meyer IV
Montgomery County CD*



*Gus Meyer, Agriculture Conservation Tech. (right) and
Travis Lee Moser - Spring Valley Farm*

Land Development, Greener, Sooner

Our world is transformed every day by the development around us – for better or worse. More often than not, clear cutting or selective cutting our forests to make way for development is a harsh reality, but the effects of tree cutting can be minimized.

Increasingly tough municipal tree ordinances, combined with opportunities to utilize new PA Stormwater BMPs, have caused developers to be more creative in their landscape design – particularly with trees. Re-using or preserving trees with in a site has proven to be a win-win situation. Not only do such practices preserve and enhance a community’s environment, developers are realizing that they can dramatically improve on their bottom-line. On-site tree transplanting can significantly reduce costs associated with tree replacement ordinances and managing stormwater runoff. Saving and re-using mature trees can also increase a project’s marketability. Various studies show that home values and retail spending increase with proximity to mature trees.

On site tree transplanting has traditionally been overlooked for one reason – tree spades are typically not designed to maneuver rough terrain and wooded areas. Allan A. Myers, a local contractor, spent two years working with Swedish truck manufacturer Volvo and German tree spade manufacturer Optimal to come up with a solution. The result is a one-of-a-kind piece of equipment that promises to carry the torch for tree transplanting and sustainable site development.



The prototype for this new generation of tree spades is designed to handle tough terrain and heavily wooded sites to harvest trees up to 10 inches in diameter, move them out of the way of construction, and re-use them on the same site. The chassis, which “hinges” in the middle, provides new levels of maneuverability around trees and other obstacles to reach targeted specimens. All-wheel drive allows the machine to operate on wet or uneven ground that would limit or prevent the mobility of other large tree spades. And the spade blades have the unique ability to fold back upon themselves when in the full-open position, providing a lower profile, minimizing the need from pruning or branch tie-back before harvesting. For more information and a short video, visit <http://www.americaninfrastructure.com/greendev/index.html>

*Seth Myers
Allan A. Myers*

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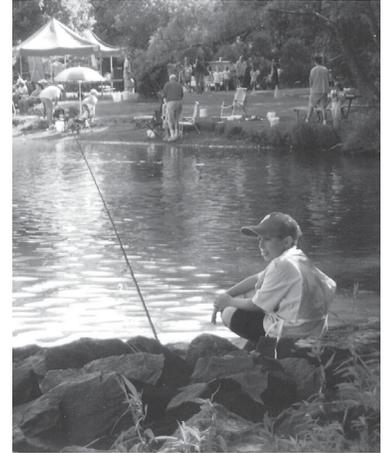
Bucks County's Fourth Annual Wal-Mart Kids All American Fishing Derby

It was a beautiful Father's Day morning at Lake Galena in Peace Valley Park, Doylestown PA when 80 children between the ages of 5 and 15 came with their parents to fish for the Wal-Mart Kids All American Fishing Derby. This competition is quickly becoming a Father's Day tradition, now in its fourth year, with many kids competing in all four derbies.

Partners in the event are, The Bucks County Conservation District, the Bucks County Department of Parks and Recreation, the Doylestown Department of Parks and Recreation, the Warminster, and Warwick Departments of Parks and Recreation. Our "Scale-Master" each year is Steve Ruane from FishNTales Guide Service of Doylestown.

This year's derby had a dramatic finish when 5-year-old Jessica Jara hauled a 19-inch small mouth bass out of the lake seconds after the 10-minute bell sounded.

A special thank you to Starbucks of Doylestown for donating coffee for our event, and the Bucks County Chapter of Trout Unlimited for donating \$300 in prizes for the kids!



The winners are as follows:

Age 5-7

1st Place: Jessica Jara. 19 in. 3 lbs. 7 oz.

2nd Place Devan Green, 8 in. 2 oz.

3rd Place Trent Mathers, 7 3/8 in and 2 oz.

Age 8-11

1st Place Dylan Cross, 8 1/4 in, 3 oz.

2nd Place Shawn Dutil, 7 7/8 in 2 oz

3rd Place Danielle Hall, 7 1/8 in and 2 oz.

Ages 11-13

1st Place Korbin Cotelasse, 8 1/2 in. 3 oz

2nd Place Aimee Doh 7 3/4 in, 3 oz

and Willie Hall, 7 3/4 in. 3 oz

3rd Place Toni Villani, 7 3/4 in 2 oz.

Age 14-15

1st Place Kirsten Villani 13 7/8 in 11b 5oz

2nd Place Josh Cappe, 6 1/4 in 2 oz.

3rd Place Josh Rillera Jr., 5 3/8 in, 1 ozv

Gretchen Schatschneider

PALMS Eastern Regional Director

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Bucks County presents Conservation Awards

Conservation Leadership School scholarship

Bucks County Conservation District awarded two students scholarships to the Conservation Leadership School this year:

Cassandra Dee, a student in the Upper Bucks Vo-tech schools Agriscience program from Quakertown, and **Kathleen Fox**, a student of William Tennent High School in Warminster and a recent participant in the Bucks County Envirothon. Both girls will attend this summer's Penn State University Conservation Leadership School on a full scholarship.

Conservation Individual of the Year

Gail Hill, Assistant Naturalist of Peace Valley Nature Center in Doylestown, was awarded the **2007 Conservation Individual of the Year** award at the June 20th Bucks County Commissioners Meeting.

Each year the **Bucks County Conservation District** recognizes outstanding citizens and organizations. Rosemarie Montgomery and Angelque Auger, both of Central Bucks School District, nominated Gail for her outstanding work with students enrolled in the collaborative Career Academy. Students from Central Bucks' three high schools have the opportunity to study the environment under the guidance of Gail in the 750-acre outdoor classroom at the nature center. Gail also provides a high level of expertise when she works with 5th and 6th grade students supplementing the Ecology and Clean Streams curriculum.



Bucks County Commissioners present Conservation Award to Gail Hill

Elected Official Recognition Award

David Steil, a State Representative from Lower Makefield was honored with the Elected Official Recognition Award for his work in preserving farmland and open space in Bucks County.

Conservation Farmers of the Year

Richard and Randy Labs will receive the Conservation Farmers of the Year award at the Middletown Grange Fair in August

Richard and Randy are a father and son farming approximately 350 acres of corn, soybeans and hay in Bedminster, Bucks County.

Over the years, they have installed conservation practices to curb soil erosion and prevent sediment and nutrient-laden runoff from reaching streams. Much of this was done on rented land at their own expense and labor, or with some assistance from USDA.

They have installed over 3900 ft of terraces, 1.6 acres of grassed waterways, 2560 ft of subsurface drainage, 280 ft of underground outlet, two structures for water control and 4300 ft of field borders. Their plans to continue to install conservation practices call for the installation of yet more terraces and waterways.

*Gretchen Schatschneider
Bucks County C.D.*

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