

WAY E-NEWS

A coalition of stakeholders committed to being innovative leaders encouraging watershed-based planning, restoration and protection



November 14, 2011

A PUBLIC-PRIVATE PARTNERSHIP

Volume 11, Issue 22

INSIDE THIS ISSUE...

WATERSHED ALLIANCE OF YORK...2

WATERSHED EDUCATION & OUTREACH...Page 3

- Research shows health of Maryland's Chesapeake Bay is improving
- EPA required states to submit 15-year plans on reducing Bay pollution
- What To Do With 130 Million Tons Of Sediment Behind Conowingo Dam On Susquehanna
- Chesapeake Bay Program Working To Improve BMP Reporting
- Bay Advocates Concerned About PA Funds in New Farm Bill
- PA Dirt & Gravel Road Program Looking To Create Stream-Friendly Corridors
- Tropical Forests Fertilized by Nitrogen Air Pollution, Scientists Find
- Nanotubes in Environment 'Rob' Green Algae of Space and Light
- Scientists 'Unanimous' in Expectations of Serious Loss of Biological Diversity Study Shows
- BurnWise this winter!

WATERSHED FINANCIAL ASSISTANCE...Page 5

- Research Opportunities Fellowships for Undergraduate Environmental Study – Dec 12
- Student Design Competition for Sustainability – People, Prosperity & Planet – Dec 22
- Nominate a Teacher! – Dec 30
- EPA Seeks Green Chemistry Challenge Award Nominations – Dec 31
- Document Your Environment: Student Multimedia Contest – Jan 6
- PHMC Now Accepting Keystone Historic Preservation Grant Applications - Mar 1
- 11 More Reasons To Support The Refunding Of A Refocused Growing Greener

WATERSHED FACILITATION ASSISTANCE...Page 6

- Celebrate America Recycles Day by Giving Your Bags a Second Chance – Nov 15
- Senate Committees To Hold Flood Mitigation, Stormwater Hearings – Nov 15 & 16
- Webinar: Tools for Developing State N and P Pollution Reduction Strategies – Nov 30
- CitiesAlive, 9th Annual Green Roof and Wall Conference – Nov 30 & Dec 1
- "Stream Restoration: Between a Rock and a Hard Place" webcast – Dec 7
- New MS4 Workshops for 2012!

WATERSHED TECHNICAL ASSISTANCE...Page 7

- Precipitation Variability in Northeast, Southwest Linked in 1,000-Year Analysis
- Greenhouse Gas Index Continues to Climb
- ICCA 2011 Progress Report: *Federal Actions for a Climate Resilient Nation*
- Consequences of Global Climate Change: Water Quality Impacts & Ecological Impacts Online
- USDOJ Report: *Strengthening the Scientific Understanding of Climate Change on Freshwater*
- Crop sensors outperform farmers at choosing nitrogen rates
- Nitrogen Fertilizers' Impact On Lawn Soils
- PA Manure Management Manual Valuable Guide For Farmers
- NESJ Joins EPA and 16 Other Organizations to Address Water Quality Challenges
- Experts Recommend the Inclusion of Rainwater-Collection Systems in Cities
- New Reports Urges More Detailed Utility Metering to Improve Building Efficiency

WATERSHED CONTACTS

**COUNTY PLANNING – (717) 771-9870
CONSERVATION – (717) 840-7430**

- Agricultural conservation planning
- Environmentally sensitive dirt & gravel road maintenance
- Environmental stewardship and watershed protection
- Erosion & sediment control
- Stormwater complaints

24-HR EMERGENCIES – (877) 333-1904

- Chemical and oil spills from transport trucks, trains and industrial facilities

ENVIRONMENTAL – DEP-SCRO

- General Info 717-705-4700
- Director SCRO 717-705-47047
- Air Quality 717-705-4702
- Energy & Technology 717-705-4703
- Environmental Cleanup 717-705-4705
- Mining (800) 541-2050
- Radiation Protection 717-705-4704
- Waste Management 717-705-4706
- Water Supply Management 717-705-4708
- Water Management 717-705-4707
- Watershed Management 717-705-4704

FISHERIES – (800) 541-2050

- Wildlife (fish, reptiles, amphibians) nuisance problems or to report violations
- FISH KILL 1-855-347-4545

GAME & WILDLIFE – (888) 742-8001

- Wildlife (mammals or birds) to report violations or nuisance problems

ILLEGAL DUMPING

- Illegal dumping on state forest and park lands (877) 772-3673
- Illegal dumping York County 840-7687

MUNICIPAL (Phonebook Blue Pages)

- Air pollution by burning household garbage
- Dumping waste in surface waters
- Floodplain disturbances
- Municipal and residential septic/sewage problems
- Stormwater management

NOXIOUS PLANTS – (717) 772-5209

RECYCLING – (717) 845-1066

WETLANDS – (717) 249-2522

Updated 4/27/2011

WATERSHED ALLIANCE OF YORK

[Ag Land Preservation Board of York County](http://www.york-county.org/gov/AUTH/agri.htm) - www.york-county.org/gov/AUTH/agri.htm

[Brunner Island Environmental Preserve](http://www.pplpreserves.com) - www.pplpreserves.com

[Carroll Citizens for Sensible Growth](http://carrollcitizens.com/) - <http://carrollcitizens.com/>

[Codorus Creek Watershed Association](http://www.codoruscreek.net) - www.codoruscreek.net

[Codorus Endowment Implementation Committee](http://www.yccf.org) - www.yccf.org

[Codorus State Park](http://www.dcnr.state.pa.gov) - www.dcnr.state.pa.gov

[Conewago Canoe Club](http://www.conewagocanoecub.org) - www.conewagocanoecub.org

[Deer Creek Watershed Association](http://deercreekwatershed.com/) - <http://deercreekwatershed.com/>

[Farm & Natural Lands Trust of York County](http://www.farmtrust.org) - www.farmtrust.org

[Gifford Pinchot State Park](http://www.dcnr.state.pa.us/stateparks/parks/giffordpinchot.aspx) - www.dcnr.state.pa.us/stateparks/parks/giffordpinchot.aspx

[Gunpowder Valley Conservancy](http://www.gunpowderfalls.org) - www.gunpowderfalls.org

[Holtwood Environmental Preserve](http://www.pplpreserves.com) - www.pplpreserves.com

[Horn Farm Center for Agricultural Education](http://www.hornfarmcenter.org) - www.hornfarmcenter.org

[Izaak Walton League York Chapter #67](http://www.yorkchapter67iwla.org/) - www.yorkchapter67iwla.org/

[Lower Susquehanna Riverkeeper](http://www.lowersusquehannariverkeeper.org) - www.lowersusquehannariverkeeper.org

[Maryland's Upper West Shore Trib Team](http://www.dnr.state.md.us/bay/tribstrat/upper_west/up_west_shore.html) - http://www.dnr.state.md.us/bay/tribstrat/upper_west/up_west_shore.html

[Mason-Dixon Trail System](http://www.masondixontrail.org/) - <http://www.masondixontrail.org/>

[Mid-Atlantic Ecological Landscapes Partnership \[MAEscapes\]](http://www.maescapes.org) - www.maescapes.org

[Peach Bottom Concerned Citizens Group Inc.](http://www.pbccg.com) - www.pbccg.com

[Prettyboy Watershed Alliance](http://www.prettyboywatershed.org) - www.prettyboywatershed.org

Reel to Real York (R2RY): Sustainable Film Partnership of York County

[Sierra Club – Gov. Pinchot Group of PA](http://pennsylvania.sierraclub.org/pinchot/) - <http://pennsylvania.sierraclub.org/pinchot/>

[Shank's Mare Outfitters GO PLAY OUTSIDE!](http://www.shanksmare.com) - www.shanksmare.com

[Sonnewald Natural Foods](http://www.sonnewald.org/) - www.sonnewald.org/

[Spoutwood Farm Center for Sustainable Living](http://www.spoutwood.com) - www.spoutwood.com

[Sunnyside Farm CSA](http://www.sunny-side-farm.com/) - <http://www.sunny-side-farm.com/>

[Susquehanna Gateway Heritage Area](http://www.susquehannaheritage.org/) - <http://www.susquehannaheritage.org/>

[Susquehanna Greenway Partnership](http://www.susquehannagreenway.org) - www.susquehannagreenway.org

[Trout Unlimited Codorus Chapter #558](http://www.codorustu.org) - www.codorustu.org

[Trout Unlimited Muddy Creek Chapter #575](http://muddycreektu.org/) - <http://muddycreektu.org/>

[Watershed Alliance of Adams County](http://www.adamswatersheds.org/) - <http://www.adamswatersheds.org/>

[Watershed Alliance of York](http://www.watershedsyork.org) - www.watershedsyork.org

[Yellow Breeches Watershed Association](http://www.ybwa.org) - www.ybwa.org

[York-Adams Regional Smart Growth Coalition](http://www.yorkadamssmartgrowth.org) - www.yorkadamssmartgrowth.org

[York Audubon Society](http://www.yorkaudubon.org/) - <http://www.yorkaudubon.org/>

[York County Conservation District](http://www.yorkccd.org) - www.yorkccd.org

[York County Parks & Recreation](http://www.YorkCountyParks.org) - www.YorkCountyParks.org

[York County Planning Commission](http://www.ycpc.org) - www.ycpc.org

[York County Solid Waste & Refuse Authority](http://www.ycswa.org/) - www.ycswa.org/

York County TMDL Work Group



WATERSHED EDUCATION & OUTREACH

Research shows health of Maryland's Chesapeake Bay is improving

United Press International – The water quality of Maryland's Chesapeake Bay is improving through efforts to reduce the flow of fertilizers, animal waste and other pollutants, U.S. researchers said. An analysis of bay water quality records from the past 60 years show the size of mid- to late-summer oxygen-starved dead zones has been declining since the 1980s, when a concerted effort to cut nutrient pollution was initiated through the federal Chesapeake Bay Program. Read more... http://www.upi.com/Science_News/2011/11/07/Chesapeake-Bays-health-is-improving/UPI-81081320704026/

EPA required states to submit 15-year plans on reducing Bay pollution

Four of the six states in the Chesapeake Bay region, plus the District of Columbia, met the U.S. Environmental Protection Agency (EPA) deadline to submit plans on reducing pollution in the Bay, according to a report by the Washington Post. The EPA required the states to submit Watershed Implementation Plans, detailing how they would reduce nitrogen, phosphorus and sediment pollution brought into the Bay via storm runoff over the next 15 years. The plans go towards the EPA's "pollution diet" for the Bay, an effort to improve water quality and animal habitats, which could also save seafood- and recreation-related jobs in the area. Virginia, Pennsylvania, Delaware, West Virginia and the District submitted their plans on Monday. Officials from Maryland and New York said that they were still completing their plans. Although many city and state governments complained that the plans would be extremely expensive, many states said they would dedicate funds to water quality improvement. The EPA must now evaluate the plans to determine whether they are adequate. According to the report, the EPA would not yet comment on the submitted plans.

What To Do With 130 Million Tons Of Sediment Behind Conowingo Dam On Susquehanna

Chesapeake Bay Journal – Tropical Storm Lee scoured an estimated 4 million tons of sediment that had been stored behind [Conowingo Dam](#) and flushed it down the Susquehanna River and into the Bay during September flooding. But there's more than 130 million tons of sand, clay and mud still stockpiled behind the 100-foot-high structure, waiting for the next big storm to send more of it - along with the nutrients and chemical contaminants it holds - into the Bay. Figuring out what to do with the sediment buildup in the Conowingo Reservoir has perplexed scientists and managers for the last two decades. The dam traps more than half of the 3 million tons of sediment and about one-third of the 3.5 million pounds of phosphorus that reach it each year. If left alone, the U.S. Geological Survey estimates the reservoir will reach its storage capacity in 15-20 years. After that point, all of the material that reaches the dam would go downstream, unimpeded. (The scouring by Lee, according to the USGS, cleared up about two years of storage capacity in the reservoir.) In late September, the Army Corps of Engineers, Maryland Departments of Natural Resources and of the Environment, the Susquehanna River Basin Commission and The Nature Conservancy announced the launch of a three-year study to devise solutions to the problem. The \$1.4 million "Lower Susquehanna River Watershed Assessment - Phase I" will also examine sediment from three smaller hydroelectric dams upstream of Conowingo: Holtwood, Safe Harbor and York Haven. Although the looming problem has been understood for decades, it has eluded any obvious solution. The idea of simply dredging sediment from behind the dam is hugely expensive. Exelon, the company that owns Conowingo, estimated in 2009 that dredging would cost \$48 million a year just to keep pace with the rate of new sedimentation. The new study is intended to take a bigger picture approach that examines more options. Those could include ramped-up efforts to control upstream sediment sources to reduce the rate at which the reservoir fills. It might also consider beneficial uses of sediment. One of those could be a controlled release of some stored sediment. Biologists have discussed allowing some of the coarse sand trapped behind the dam - which poses less threat to Bay water quality than lighter, fine-grained particles - to be used to rebuild sand flats to provide wildlife habitat in the 10 miles of river between the dam and the Bay. Read article... <http://www.bayjournal.com/newsite/article.cfm?article=4224>

Chesapeake Bay Program Working To Improve BMP Reporting

Chesapeake Bay Journal – The Bay Program is struggling to resolve a question that has festered for more than two decades: Just how accurate is its information about the tens of thousands of nutrient reduction efforts claimed to be taking place throughout the 64,000-square-mile watershed? A growing chorus in the agricultural community strongly contends that farmers are not getting credit for all of the conservation strides they've made. Several recent reports seem to back up that claim. At the same time, even as some of the best management practices, or BMPs, go uncounted, others contend that the benefits of many nutrient control efforts are overestimated. In some cases, practices are poorly installed or managed. In other cases, buffers and stream bank fences that vanished years ago sometimes, along with the farms they were on - remain on the books, delivering phantom nutrient reductions to the Bay. The problem of accurately knowing what practices are in place and how well they are working has been raised in reports going back at least a decade. But this spring, the National Research Council hammered home the issue in a tersely worded report. "The overall accounting of BMPs in the Bay watershed cannot be viewed as accurate," it said. The urgency of addressing the problem has never been greater. Under the EPA's new Chesapeake Bay Total Maximum Daily Load, or pollution diet, states have to write detailed plans - known as watershed implementation plans, or WIPs - showing how they will meet their assigned nutrient reduction goals. In addition, they have to establish two-year milestones that detail what actions they will take, and the amount of nutrient reductions those actions will achieve, in the coming 24 months. The milestones for 2012-13 are due at the end of 2011. If states fall short of goals, they can face sanctions from the EPA. Apart from wastewater treatment plants, where nutrient discharges can be directly monitored, measuring progress toward meeting milestones and overall cleanup goals relies on reports about BMP implementation that states file with the EPA. Read article... <http://www.bayjournal.com/newsite/article.cfm?article=4217>

Bay Advocates Concerned About PA Funds in New Farm Bill

HARRISBURG, Pa. - As a new national farm bill is considered in Congress, there is concern that Pennsylvania farms and municipalities could lose vital funding. The bill is reworked every five years, usually with hearings and public input, but this year, it's being rolled into the budget duties being taken on by the so-called "Super Committee." The new process could jeopardize farm bill funding for vital conservation programs, including the Chesapeake Bay Watershed Initiative (CBWI), which helps control runoff and other pollution that starts upstream and ends up in the Bay. The concern is that program might get dropped and that Pennsylvanians might not even get the opportunity to say very much to their representatives about how important that program is to them. Most farms, and cities and towns for that matter, need all the federal help they can get when it comes to Bay pollution reduction. Municipalities, townships are going to have to upgrade their wastewater treatment plants and their urban runoff, and farmers are going to have to get their fertilizer under control, and they're being asked to lay out capital to do all

those things. It appears Pennsylvania does have some factors in its favor. Republican Senator Pat Toomey sits on the Super Committee, and there are three other Capitol Hill lawmakers from Pennsylvania who are close to the issue. That's Senator Bob Casey and then Tim Holden and Glen Thompson. Presumably, they're going to be looking out for Pennsylvania's interests and going to be pushing the Super Committee to include things that are in Pennsylvania's interests. Even as it stands now the CBWI doesn't have enough funding on hand to help farmers who want to manage their runoff. He says ending the program would cripple efforts to improve water quality in Chesapeake Bay.

[Click here to view this story on the Public News Service RSS site and access an audio version of this and other stories:](http://www.publicnewsservice.org/index.php?/content/article/22866-1)
<http://www.publicnewsservice.org/index.php?/content/article/22866-1>

PA Dirt & Gravel Road Program Looking To Create Stream-Friendly Corridors

Chesapeake Bay Journal – As the Bradford County Conservation District Manager, Mike Lovegreen has the distinction of conducting a significant portion of his work along the largest county network of dirt and gravel roads in Pennsylvania. During one day on the job, Lovegreen's team noticed an excessive amount of water collecting in a roadside ditch, a situation they knew would likely send a large volume of sediment to a nearby stream. To remedy the problem, the district worked with the municipality that owned the road and an adjacent landowner to explore solutions that might use funding from the state's Dirt and Gravel Road Maintenance Program. The reluctant landowner, an outdoor enthusiast, eventually agreed to redirect water away from the road and stream, and to create a pond and wetland area on part of his cornfield. Now a cheerleader for the program, the landowner feels good about the role he played in solving a local pollution problem. He even hosts picnics and scout meetings at his private wildlife sanctuary. "Pennsylvania's [Dirt and Gravel Road Maintenance Program](#) has been positive for Bradford County, which represents a local economy that depends on these transportation corridors to support businesses like farming and forestry and to maintain a rural way of life," Lovegreen said. In rural areas like Bradford County and other parts of Pennsylvania, dirt and gravel roads serve as a preferable option to paved roads, which can be more costly to build and maintain and less resilient to heavy loads like farm equipment or logging trucks. Interspersed with Pennsylvania's unpaved roads is the largest network of streams in the United States after Alaska. Before there were roads of any kind, thick stands of trees and an array of shrubs and lush vegetation dominated Pennsylvania's landscape. These absorbed rainfall and snowmelt before gradually releasing it into streams. The result was cool, clean water. Without an adequate buffer - which is usually the case where development occurs - streams become vulnerable to high water flow, sediment and other pollutants resulting from storms and general erosion. This type of nonpoint source pollution - which is less regulated than pollution coming from a specific location - alters natural flow patterns, compromises water quality, increases the spread of nonnative plant and animal species, and threatens aquatic wildlife such as trout and other fish that require clean water and a healthy habitat for their life cycle. According to the Pennsylvania Department of Environmental Protection, nonpoint source pollution is responsible for 88 percent of all impaired stream miles in Pennsylvania. Read article... <http://www.bayjournal.com/newsite/article.cfm?article=4226>

Tropical Forests Fertilized by Nitrogen Air Pollution, Scientists Find

ScienceDaily (Nov. 3, 2011) – Scientists braved ticks and a tiger to discover how human activities have perturbed the nitrogen cycle in tropical forests. Studies at two remote Smithsonian Institution Global Earth Observatory sites in Panama and Thailand show the first evidence of long-term effects of nitrogen pollution in tropical trees. "Air pollution is fertilizing tropical forests with one of the most important nutrients for growth," said S. Joseph Wright, staff scientist at the Smithsonian Tropical Research Institute in Panama. "We compared nitrogen in leaves from dried specimens collected in 1968 with nitrogen in samples of new leaves collected in 2007. Leaf nitrogen concentration and the proportion of heavy to light nitrogen isotopes increased in the last 40 years, just as they did in another experiment when we applied fertilizer to the forest floor." Nitrogen is an element created in stars under high temperatures and pressures. Under normal conditions, it is a colorless, odorless gas that does not readily react with other substances. Air consists of more than 75% nitrogen. But nitrogen also plays a big role in life as an essential component of proteins. When nitrogen gas is zapped by lightning, or absorbed by soil bacteria called "nitrogen fixers," it is converted into other "active" forms that can be used by animals and plants. Humans fix nitrogen by the Haber process, which converts nitrogen gas into ammonia – now a principal ingredient in fertilizers. Today, nitrogen fixation by humans has approximately doubled the amount of reactive nitrogen emitted. Read more... <http://www.sciencedaily.com/releases/2011/11/111103143243.htm>

Nanotubes in Environment 'Rob' Green Algae of Space and Light

ScienceDaily (Nov. 4, 2011) – Nanoparticles such as carbon nanotubes (CNT), which are found in an ever-increasing number of products, are ending up more and more frequently in our surroundings. If and how they affect aquatic ecosystems are questions which are still unanswered. An Empa study shows that while CNTs do not have toxic effects on green algae they do inhibit its growth by depriving the plant of light and space. Carbon nanotubes (CNTs) are up to 100,000 times thinner than a human hair and as light as plastic. Despite this they have a higher tensile strength than steel, are harder than diamond and conduct electricity better than copper. These properties make CNTs a raw material with a very promising future. All over the world possible applications are being investigated, including use in solar cells, plastics, batteries, medical technology and the purification of drinking water. With the increasing industrial production of CNTs now reaching the level of hundreds of tons per year, the quantity of these particles which could be released into the environment has also risen. Certain studies have raised the possibility that CNTs lodged in the lungs might cause similar health effects as do asbestos fibers. An interdisciplinary team of scientists from Empa and the Agroscope Reckenholz-Taenikon (ART) Research Station have now begun investigating the fundamentals of how CNTs behave when they are deposited in waterways and lakes. Read more... <http://www.sciencedaily.com/releases/2011/11/111104090711.htm>

Conservation Scientists 'Unanimous' in Expectations of Serious Loss of Biological Diversity, Study Shows

ScienceDaily (Nov. 8, 2011) – The number of species recognized as endangered is ever increasing and a new study by a University of York academic, published in *Conservation Biology*, reveals the unanimity among conservation scientists of expectations of a major loss of biological diversity. The survey also shows a growing acceptance of controversial strategies such as 'triage' – a decision to prioritize resources and not to intervene to save some highly threatened species. Read article... <http://www.sciencedaily.com/releases/2011/11/111108195128.htm>

Holtwood Boat Ramps Remain Closed Due to Flood Damage – Nov 15

Duck Hunters Encouraged to Use Safe Harbor or Conowingo Launches. Because of damage caused by recent severe flooding, and continued higher than normal river flows, the Pequea and York Furnace boat ramps operated by PPL Holtwood will not be open for the start of duck hunting season in south central Pennsylvania on Nov. 15. As much as PPL supports and encourages public recreation at the Holtwood hydroelectric project, we have made the decision to keep the boat ramps closed because river conditions have not allowed our workers to safely make repairs to strobe warning lights and other equipment in place for public safety. We know this is an inconvenience to duck hunters who use Lake Aldred. We hope to reopen the boat ramps at some point before the season ends in January, depending on river conditions and our ability to repair or replace what has been damaged. Boat ramps at Lake Clarke and the Conowingo pool are open for duck hunters. Updates on the status of the Pequea and York Furnace boat ramps will be available at www.pplholtwood.com, or from the Lower Susquehanna River Hotline at 1-800-692-6328.

BurnWise this winter!

Help reduce wood smoke pollution. Burn only dry seasoned wood, and upgrade to an efficient wood-burning appliance. If you're thinking of purchasing a new stove, see how to qualify for a federal tax credit through December 31, 2011. Get more details at <http://www.epa.gov/burnwise/funding.html>



WATERSHED FINANCIAL ASSISTANCE

Fall 2012 EPA Greater Research Opportunities (GRO) Fellowships for Undergraduate Environmental Study – Dec 12

The U.S. Environmental Protection Agency (EPA), as part of its Greater Research Opportunities (GRO) Fellowships program, is offering Greater Research Opportunities (GRO) undergraduate fellowships for bachelor level students in environmental fields of study. Subject to availability of funding, and other applicable considerations, the Agency plans to award approximately 40 new fellowships by July 30, 2012. Eligible students will receive support for their junior and senior years of undergraduate study and for an internship at an EPA facility during the summer of their junior year. The fellowship provides up to \$19,700 per academic year of support and \$9,500 of support for a three-month summer internship. Applications are due December 12, 2011.

9th Annual P3 Awards: A National Student Design Competition for Sustainability Focusing on People, Prosperity and the Planet – Dec 22

The U.S. Environmental Protection Agency (EPA), as part of the P3-People, Prosperity and the Planet Award Program, is seeking applications proposing to research, develop, and design solutions to real world challenges involving the overall sustainability of human society. The P3 competition highlights the use of scientific principles in creating innovative projects focused on sustainability. The P3 Awards program was developed to foster progress toward sustainability by achieving the mutual goals of economic prosperity, protection of the planet, and improved quality of life for its people— people, prosperity, and the planet the three pillars of sustainability. The EPA offers the P3 competition in order to respond to the technical needs of the world while moving towards the goal of sustainability. **Applications are due December 22, 2011.**

Nominate a Teacher! – Dec 30

The 2011 Presidential Innovation Award for Environmental Educators recognizes outstanding K-12 teachers who employ innovative approaches to environmental education. Two teachers from each EPA region will be selected to receive the award. Nominations are due December 30. http://yosemite.epa.gov/opa/advpress.nsf/names/hq_2011-10-14_Enviro_Ed_Awards

EPA Seeks Green Chemistry Challenge Award Nominations – Dec 31

The U.S. Environmental Protection Agency is now accepting nominations for the Presidential [Green Chemistry Challenge Awards](#). Nominations are due to the agency by December 31. Green chemistry is the design of chemical products and processes that reduce both the use and generation of chemicals that are hazardous to the environment and people's health. The 2012 Presidential Green Chemistry Challenge Awards mark the 17th year of the program. This year, EPA is encouraging nominations for technologies that will reduce or eliminate chemicals that present serious health risks to children, such as diisocyanates, phthalates, bisphenol A, certain flame retardants, formaldehyde, lead and mercury. Throughout the first 16 years, EPA received more than 1,400 nominations and presented awards to 82 entrants. Winning technologies alone are responsible for reducing the use or generation of more than 199 million pounds of hazardous chemicals, saving 21 billion gallons of water, and eliminating 57 million pounds of carbon dioxide releases to the air. More information on how to submit entries is available on EPA's [Green Chemistry](#) webpage.

Document Your Environment: Student Multimedia Contest – Jan 6

Students are invited to create a multimedia representation inspired by a Documerica environmental photo. Document your environment and express your point of view. Snap a photo, write a poem, design a graphic, or create a multimedia video to share how you see the state of the environment today. In the 1970s, The Environmental Protection Agency hired freelance photographers to capture environmental issues and challenges in the United States. Forty years later, we are still concerned with how we treat the world we live in. The National Archives invites students ages 13 and up to seek inspiration from one of these photos and start creating the next generation of Documerica records. The original Documerica photos can now be found at the National Archives, which has digitized more than 15,000 of these photos, many of which are [available on Flickr](#) and in our [online catalog](#). Today, the National Archives and the EPA have continued this spirit of capturing the environment and life through their recent project, [State of the Environment](#). Students are invited to create a multimedia representation of a Documerica photo for this contest. Any Documerica photo found at the National Archives can be used as an inspiration. All entries must include the ARC identifier or NARA identifier of one Documerica photo in the submission information to be considered a valid entry. There are three categories of submissions: graphic art, videos, and poetry will be judged in **three age divisions of 13-15, 16-18, and 18+ students** (to include college and graduate students). All entries must be the original work of the student, and student ages 13-18 must have the consent of a legal guardian. Winners in the 18+ age group will be asked to provide enrollment verification from their school, college, or university.

- **Graphic Art:** This category covers any type of graphic art, including scans of paintings, photos, cartoons, photo mash-ups, etc. All entries must be sent as .jpgs, and high resolution (300 dpi) copies must be available.
- **Video:** This category can include documentary-like videos and more artistic approaches to the contest. All entries must be less than two minutes in length. Videos must be uploaded to YouTube and entered into the contest with a link to the video. Helpful links for YouTube: [How to Upload to YouTube](#)
[YouTube video formats](#)
- **Poetry:** Any form of poetry is accepted in this category, but there is a 300 word limit to each entry. Poems must be submitted in either a PDF or Word doc format.

Click here to learn how to enter... <http://documerica.challenge.gov/>

PHMC Now Accepting Keystone Historic Preservation Grant Applications - Mar 1

The PA Historical and Museum Commission is now accepting applications for [Keystone Historic Preservation Project and Construction Grants](#). Applications are due March 1. The grants support projects that identify, preserve, promote and protect historic and archaeological resources in Pennsylvania for both the benefit of the public and community revitalization. The grants receive funding from the Keystone Recreation, Park and Conservation Fund. Two types of grants – project and construction – are available for historic resources in Pennsylvania listed, or eligible for listing, in the National Register of Historic Places. Applicants may apply for only one type of grant. Project grants are available to nonprofit organizations and local governments for planning and development initiatives that enhance historic preservation in communities. Project grant applications may include municipal planning initiatives focusing on historic resources or may be used to meet building- or project-specific planning goals. Construction grants are available for rehabilitation, preservation and restoration activities for historic resources that are publicly accessible. Grants will be awarded through a competitive selection process and are contingent on availability of funds. Applicants are required to use the web-based electronic grant application process (eGrant). For grant program guidelines and eGrant application instructions, visit [PHMC online](#). Keystone Historic Preservation Grants are available in amounts between \$5,000 and \$25,000 and require a 50/50 cash match. For more information, contact Karen Arnold by sending email to: kaarnold@pa.gov or telephone at 717-783-9927.

11 More Reasons To Support The Refunding Of A Refocused Growing Greener

The [Renew Growing Greener Coalition](#) Friday published a list of 11 more reasons to support the refunding of a refocused Growing Greener Program–

1. Keep our drinking water clean
2. Protect the air we breathe
3. Preserve our working farms and food supply
4. Enhance our local and regional economies and the Commonwealth tourism industry
5. Help local communities control flooding
6. Enhance our large conservation landscapes like our heritage areas and major greenway corridors
7. Reverse the scars left by coal mining and reclaim abandoned minelands
8. Enhance state and local outdoor recreational opportunities
9. Turn brownfields into useable spaces primed for economic development and growth
10. Beautify our downtowns and urban areas
11. Protect and preserve the Commonwealth's wildlife habitat

"Growing Greener from its inception has benefited MuddyCreek Trout Unlimited in our efforts to restore severely eroded reaches of our home watershed in York County. Our organization; MCTU independently and through partnerships with local municipalities and sponsoring watershed groups were fortunate enough to garner over \$885,000 in grant monies to restore over 2.2 miles of our watershed. These "full floodplain" restorations have succeeded in creating more and immediate flood storage as well as the "lock up" of millions of tons of Legacy Sediments so damaging to the Chesapeake Bay Ecosystem. "For these reasons we feel that Growing Greener has been a huge success and we would like to see it continue. Our organization could never have made these strides toward coldwater conservation were not for this program." – Maurice Chioda, Past President, Muddy Creek Trout Unlimited #575



WATERSHED FACILITATION ASSISTANCE

Celebrate America Recycles Day by Giving Your Bags a Second Chance – Nov 15

York, PA – *A Bag's Life* is a public educational campaign that unites non-profits, business, community and government organizations to raise awareness and make it easier for more people to reduce, reuse and recycle plastic bags. A Bag's Life website, abagslife.com, includes an app with locations where people can drop off bags and other household product wraps for recycling. *Did you know?*

- Recycled plastic from bags and wraps can be made into other products like outdoor decking, park benches and new bags.
- Dry cleaning, newspaper and bread bags, as well as plastic wraps used on products like paper towels and bottled water, can also be dropped off at many retailers for recycling. Visit www.abagslife.com to find a retailer near you that recycles plastic bags and wraps.
- Plastic bags and wraps require a different type of recycling than plastic bottles and containers. That's why it's important to bring them back to the store for recycling, instead of placing these in your community curbside container.
- Today more than 12,000 grocery and retail stores across the country (e.g., stores like Target and Lowe's) collect plastic bags and wraps for recycling.

Don't treat your plastic bags like trash. Give them a second life and recycle them on Tuesday, November 15, 2011, from 4 pm to 6 pm at Weis Markets at 2056 Springwood Road, York, PA 17403. Stop by and drop off your plastic bags and wraps for recycling and receive stickers, info or a handy magnet to remind you that it's easy to recycle bags and wraps – you just have to remember to bring them back when heading to the store. Giveaways and children activity books are available while supplies last. The event is in celebration of America Recycles day and is sponsored by Keep York County Beautiful and A Bag's Life. In addition to generating interest in plastic bag recycling, event organizers want the public to know why plastic bags and wraps aren't usually recycled in municipal curbside programs. America Recycles Day is program of Keep America Beautiful and the only nationally recognized day dedicated to promoting and celebrating recycling in the United States. Every year on

or around November 15 (America Recycles Day), millions turn out to thousands of local events held throughout the country to celebrate and learn more about recycling programs. For more information, visit www.americarecyclesday.org. Contact: Tom Smith, Keep York County Beautiful, by e-mail Tls35@psu.edu or telephone 717-840-2375.

Senate Committees To Hold Flood Mitigation, Stormwater Hearings – Nov 15 & 16

The Senate [Environmental Resources & Energy](#) and [Senate Republican Policy](#) Committees are scheduled to hold two days of hearings on issues related to flood mitigation through stormwater management on November 15 and 16 in Harrisburg. [The agenda](#) for November 15 includes: Dr. Robert Traver, Department of Civil and Environmental Engineering, Villanova University, Michele Adams, Meliora Environmental Design, Paula Conolly, Philadelphia Water Department, Elizabeth Treadway, AMEC Environmental and Infrastructure, Cory Rathman and Mark Gutshall, Lancaster County Clean Water Consortium, Tom McGlynn, Winola Industrial, Factoryville, Pa. [The agenda](#) for November 16 includes: Kelly Heffner, DEP Deputy Secretary for Water Management, John Forr and Tom Hughes, PA Emergency Management Agency, Amy Guise, U.S. Army Corps of Engineers and a local government panel with Gene Dziak and Judy Mead, Wyoming County, MaryAnn Warren, PA Association of Conservation Districts and Jerry Walls, retired Director of the Lycoming County Planning Commission. The hearings will be held in the Senate Majority Caucus Room at the Capitol beginning at 9:00 a.m. Sen. Mary Jo White (R-Venango) serves as Majority Chair of the Senate Environmental Resources and Energy Committee and Sen. John Yudichak (D-Luzerne) serves as Minority Chair. Sen. Ted Erickson (R-Delaware) serves as Chair of the Senate Republican Policy Committee.

Nitrogen and Phosphorus Webinar Series: Tools for Developing State Nitrogen and Phosphorus Pollution Reduction Strategies – Nov 30

Wednesday, November 30, 2011 1:00pm-3:00pm EST - This webinar will help states and others understand key tools they can use to combat this serious and growing environmental problem. Over the last 50 years, the amount of nitrogen (N) and phosphorus (P) pollution entering our nation's waters has escalated dramatically. For example, 30 percent of U.S. streams have high levels of N and P pollution. Also, reported drinking water violations for nitrates have doubled in the last eight years. The webinar will highlight tools that states can use to develop state N and P pollution reduction strategies. The webinar will demonstrate EPA's new N and P Pollution Data Access Tool (NPDA) that is designed to help states develop N and P reduction strategies. The webinar will also demonstrate the new, interactive SPARROW Decision Support System (DSS), designed by U.S. Geological Survey. The DSS can be used by water managers, researchers, and the general public to map long-term average water-quality conditions and source contributions by stream reach and catchment, as well as track N and P transport to downstream receiving waters, such as reservoirs and estuaries.

CitiesAlive. 9th Annual Green Roof and Wall Conference – Nov 30 & Dec 1

takes place November 30th to December 3rd in Philadelphia. The largest gathering of green roof and wall professionals in North America, this conference offers a number of excellent opportunities to network and socialize! Admission to all of the events listed below is included with a full delegate pass. Join the green roof and wall community and network with the leaders in this field at:

- Cocktail Receptions on Trade Show Floor (6:15pm – 8:30pm on Wednesday, November 30th & 6pm – 7pm on Thursday, December 1st);
- Lunch on the Trade Show Floor (noon – 1pm on Thursday, December 1st);
- Local Host Committee Reception (7:30pm – 10pm on Thursday, December 1st at the Pennsylvania Academy of the Fine Arts);
- After Party (10pm – late at TBA);
- Awards of Excellence Luncheon (noon to 2pm on Friday, December 2nd);
- Closing Plenary & Networking (4:30pm – 7pm).

View the full *CitiesAlive* program [here](#).

To receive a \$159 rate for single or double occupancy at the Sheraton Philadelphia Downtown, the Conference hotel, call 1-800-325-3535 by Tuesday, November 15th and say you are attending *CitiesAlive*. Don't miss this opportunity!

"Stream Restoration: Between a Rock and a Hard Place" webcast – Dec 7

The Center for Watershed Protection is pleased to announce the sixth and final offering in our 2011 webcast series. Attendees can now save time, travel expenses and, perhaps most importantly, carbon emissions, by attending our training workshops via the Web. This webcast will focus on Stream Restoration. Join speakers from CWP and as well as other guest speakers as they share their experiences and lessons learned. Stream restoration has exploded into a multibillion dollar industry worldwide because of regulatory drivers (e.g., no-net loss regulations, TMDLs, etc.) and general public interest, with goals that vary by region. Stream restoration practices include a large group of techniques used to enhance the appearance, structure, or function of urban streams. These practices and design are constantly evolving and can range from simple stream cleanups and basic stream repairs to extremely sophisticated stream restoration techniques. Stream restoration has often failed when the goals and objectives were not clearly articulated to the designer or when the design lacked clear performance standards that could be used to measure success in meeting goals and objectives. Another issue is when the cause of stream impairment is misdiagnosed. It is important to understand that stream restoration is only one part of watershed restoration and to be successful, stream restoration efforts must support watershed management goals, and vice versa. Examining practices within the watershed context helps to focus limited resources on the subwatersheds or project reaches with the best repair potential and to use proper design features. This webcast will help the watershed manager to address these issues, including:

- An overview on what stream restoration is and how it fits into watershed restoration framework.
- A stream functions pyramid approach to set goals and objectives, establish parameters for measuring stream function, determining assessment methods, determining restoration sites and methods.
- Specific examples of how the stream function pyramid can work to meet hydraulic and geomorphic goals and physiochemical goals.

CWP'S WATERSHED & STORMWATER MANAGEMENT WEBCAST SERIES: **Stream Restoration: Between A Rock and a Hard Place.**

Wednesday, December 7th, 2011. Eastern: 12:00 pm - 2:00. Cost: \$149. To register click [here](http://www.cwp.org/our-work/training/webcasts.html) <http://www.cwp.org/our-work/training/webcasts.html>. Registration closes 12/2/11. Space is limited, so register today to secure your spot!

DCNR Sets Grant Workshops, Stormwater Management Webinars

The Department of Conservation and Natural Resources' Bureau of Recreation and Conservation is offering a workshop and web-based seminar to prepare applicants for the next round of its [Community Conservation Partnership Grants Program](#). Also, the first of a new seminar series will address efficient stormwater management. The 2012 grant application round opens January 11 and closes April 4. The process will rely exclusively on an electronic application process, known as DCNR e-Grants, which will offer more efficient service to applicants while streamlining applications and eliminating once-voluminous paperwork. In addition to the grant training opportunities, DCNR also will conduct the first of several web-based seminars, or webinars, as part of its newly initiated training series on "Green and Sustainable Practices," said Dunn, who oversees the Bureau of Recreation and Conservation. With an eye toward continued streamlining of its 2012 grant application process, DCNR again will offer a new series of free public workshops designed to facilitate participation in the Community Conservation Partnerships Program, popularly known as "C2P2." Dates and meeting places of these six statewide workshops in February and March will be announced at a later date. DCNR's C2P2 grants provide funding for the planning, construction, and acquisition of public parks, trails, and conservation areas. Applications require submission of documents and forms that often take significant lead time to prepare. The series will offer:

- **November 16 Workshop: "Obtaining Resources for Public Parks, Conservation Areas, and Trail Systems."** Held in conjunction with the Pennsylvania Recreation and Parks Society's (PRPS) fall membership meeting, the session will be offered from 1:30 p.m. to 3:30 p.m. November 16, at Stuart Community Center, 415 Franklin St., Carlisle, Pa.;
- **December 8 Webinar: "City of Lancaster's Green Infrastructure Plan/Stormwater Best Management Practices."** Offered from 10 a.m. to 11:30 a.m. December 8, the session will take a close look at Lancaster where the city's combined sanitary/storm sewer system allows polluted water to flow into the Conestoga River and Chesapeake Bay.

Pre-registration is required for all sessions. To register, go to DCNR's [online reservations](#) webpage. Once registered, a confirmation email containing further instructions will be forthcoming. For additional information, contact Linda Manning by sending email to: linmanning@pa.gov or call 717-783-4736.

New MS4 Workshops for 2012!

The National Stormwater Center is very excited to announce our new MS4 Workshops for 2012! Developed specifically for MS4 employees, these one-hour online workshops are the perfect introduction or refresher to help prepare for your EPA and/or State audit. The attached announcement explains more and contains our full schedule for 2012. You may also find this information on our website at <http://www.npdes.com/>! Priced at only \$29/person, register today for all four sessions offered at different times throughout the year! We encourage attendees to share photographs, stories and experiences throughout these interactive sessions. If you would like to send photographs for group discussion during the session, please send them to info@npdes.com and be sure to include the Session # in the email. Photographs should be sent at least two weeks prior to the session date. We can be reached at 1-888-397-9414, via the web at www.npdes.com or email us at info@npdes.com.



WATERSHED TECHNICAL ASSISTANCE

Precipitation Variability in Northeast, Southwest Linked in 1,000-Year Analysis

ScienceDaily (Nov. 8, 2011) — An analysis of precipitation data collected from a lakebed in New York and a Rhode Island estuary has provided a link between the variability of precipitation in the Northeast with that of the Southwest. The results validate climate models that predict an increasing number of extreme weather events. The research was published in the online edition of the *Proceedings of the National Academy of Sciences* on Oct. 19. Former URI graduate student J. Bradford Hubeny, currently an assistant professor of geological sciences at Salem State University, and John King, a professor in the University of Rhode Island's Graduate School of Oceanography, reconstructed the precipitation record from Green Lake in Fayetteville, N.Y., and the Pettaquamscutt River estuary in Narragansett, R.I. They found that the moisture patterns at these sites were similar and correlated with the Pacific/North American pattern, a large-scale weather pattern that circulates from the North Pacific Ocean across North America. The scientists noted that while their research found a strong connection between the climate in the Northeast and Southwest, that doesn't necessarily mean that both regions will experience the same conditions. Hubeny and King reconstructed the precipitation record by examining the thickness of annual sediment layers called varves, somewhat like tree rings, which relate to the amount of precipitation in a given year. The strength of going back 1,000 years is that we can look at the natural variability in the precipitation record. What we can see from the last 150 to 200 years are changes in the natural pattern that could represent human impact on climate. At first glance, precipitation variability might seem random, and to some extent it is. But there are also global patterns that are predictable. The more we can understand these patterns, the more we can help to quantify climate models and cycles. According to the scientists, the objective of studies such as this is to provide improved predictive capabilities of future climate. The strong relationship this study provides between the meteorological record and the geological record will help make climate forecasts more accurate. They've confirmed the recent trend toward a more meridional circulation pattern, which increases the frequency of flooding and decreases the frequency of droughts in the Northeast," King said. The unusual weather is going to become more usual. The good news is that we probably won't have mega-droughts like they're experiencing in other parts of the country, but we will be in for more extreme weather events.

Greenhouse Gas Index Continues to Climb

ScienceDaily (Nov. 9, 2011) — NOAA's updated Annual Greenhouse Gas Index (AGGI), which measures the direct climate influence of many greenhouse gases such as carbon dioxide and methane, shows a continued steady upward trend that began with the Industrial Revolution of the 1880s. Started in 2004, the AGGI reached 1.29 in 2010. That means the combined heating effect of long-lived greenhouse gases added to the atmosphere by human activities has increased by 29 percent since 1990, the "index" year used as a baseline for comparison. This is slightly higher than the 2009 AGGI, which was 1.27, when the combined heating effect of those additional greenhouse gases was 27 percent higher than in 1990. Read article... <http://www.sciencedaily.com/releases/2011/11/111109143007.htm>

ICCA Task Force Releases 2011 Progress Report: Federal Actions for a Climate Resilient Nation

The Interagency Climate Change Adaptation Task Force has released a report outlining the federal government's progress in expanding and

strengthening U.S. capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provides an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as freshwater, and providing accessible climate information and tools to help decision-makers manage climate risks. This report follows the Task Force's October 2010 Progress Report to the President that recommended that the federal government strengthen the Nation's capacity to better understand and manage climate-related risks. To read the press release, visit: <http://www.whitehouse.gov/blog/2011/10/28/taking-action-protect-our-nation-climate-change-impacts>. To view the 2011 Progress Report, visit: http://www.whitehouse.gov/sites/default/files/microsites/ceq/2011_adaptation_progress_report.pdf.

Consequences of Global Climate Change: Water Quality Impacts, Ecological Impacts & Nonlinear Responses Meeting Online

EPA's National Center for Environmental Research, Science to Achieve Results (STAR) grantees gathered on September 20-22, 2011 to discuss and present the objectives, approaches, and plans for their new research projects. A quantitative investigation was taken up by researchers on how climate change, climate variability and land use change: (1) influences the establishment, abundance and distribution of invasive species; (2) interacts with invasive species to create feedbacks that increase their success; (3) interacts with invasive species to cause threshold responses in natural and managed systems; or (4) affects the chemical, biological and mechanical management of invasive species. The challenge to assemble modeling systems capable of capturing important linkages between regional climate drivers and terrestrial hydrologic systems and to apply these modeling systems to improve the overall understanding of the sensitivity of key water quality of aquatic ecosystem management targets to the types of climate changes anticipated over the next several decades was the basis of several investigators research. The presentations are now online and can be viewed at: http://epa.gov/ncer/events/news/2011/09_20_11_calendar.html.

USDOJ Releases Report: Strengthening the Scientific Understanding of Climate Change Impacts on Freshwater Resources of the U.S.

This report assesses the status of scientific information available to help understand the impacts of climate change and other stressors on U.S. freshwater resources and calls for modernization of systems to help monitor and sustain water supplies. The report also reviews the state of existing science and identifies strategies for improving systems to collect climate-related data and water monitoring information. The improvements are intended to help water managers predict, respond and adapt to the effects of climate change on the nation's freshwater supplies so that they can help ensure adequate water quantity and quality. The report was prepared by a federal interagency panel led by the U.S. Geological Survey and in conjunction with the Council on Environmental Quality, the Office of Science and Technology Policy, and the National Oceanic and Atmospheric Administration. To view the full report, visit: <http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=260567>.

Crop sensors outperform farmers at choosing nitrogen rates

Agronomy Journal via Crop Science Society of America - Crop sensors can select nitrogen rates for corn that outperform those chosen by farmers, according to more than 50 on-farm demonstration projects conducted in Missouri from 2004 to 2008. Compared to producers' nitrogen rates, sensor-selected rates increased yield by almost two bushels per acre, on average, while reducing by 25 percent the amount of excess nitrogen that was applied to fields but not removed in grain. Read article... <https://www.crops.org/story/2011/nov/tue/crop-sensors-outdo-farmers-at-choosing-nitrogen-rates>

Nitrogen Fertilizers' Impact On Lawn Soils

ScienceDaily (Nov. 6, 2011) — Nitrogen fertilizers from farm fields often end up in aquatic ecosystems, resulting in water quality problems, such as toxic algae and underwater 'dead zones'. There are concerns that fertilizers used on lawns may also contribute to these problems. All of the lawns in the United States cover an area almost as large as Florida, making turfgrass our largest 'crop' and lawn fertilizer use a legitimate issue. In a study funded by the National Science Foundation Ecosystem Studies and Long Term Ecological Research programs, researchers from Cornell University and the Cary Institute of Ecosystem Studies have utilized recent technological advances to measure gaseous nitrogen emissions in home lawns. In the past, scientists have conducted nitrogen input-output studies on lawns to determine how much nitrogen is taken up by vegetation or deposited in soils, and how much is lost. These studies have rarely provided any accurate data, and the 'missing' nitrogen has usually been attributed to denitrification, a process that removes nitrogen from soils by converting nitrate into nitrogen gas. High soil moisture, low soil oxygen, and sufficient nitrogen availability are all factors that lead to denitrification, which occurs mostly in small areas during brief time periods. This makes it hard to pinpoint peak activity, and measure the process outside of the lab. Additionally, because there is so much nitrogen gas in our atmosphere, it has been difficult for researchers to detect the nitrogen gas produced by denitrification. In this study, researchers overcame these challenges to measure rates of denitrification from residential lawns in Baltimore, MD. They found that denitrification is an important pathway for removing excess nitrogen from lawns. Nitrogen removals by denitrification were equivalent to 15% of annual fertilizer inputs to the study lawns. The majority of this nitrogen removal occurred over a small time period when soil conditions were favorable to high rates of denitrification. While small amounts of nitrogen were transported to groundwater and streams, the majority of fertilizer nitrogen inputs were retained in lawn soils. The results from this study are encouraging, but much more work needs to be done to apply the results to a wider range of soil, climatic, and lawn management conditions. While most of the nitrogen losses from denitrification were in the form of nitrogen gas, the results suggest the possibility of significant losses as nitrous oxide, a greenhouse gas more potent than carbon dioxide. Continuing excessive fertilizer applications will likely saturate soil storage capacity, resulting in the harmful transfer of nitrogen to surface and ground water. The complete results from this study can be found in the November/December issue of *Journal of Environmental Quality*.

PA Manure Management Manual Valuable Guide For Farmers

The [Chesapeake Bay Foundation](#) commends the Department of Environmental Protection for the October 29th release of newly revised guidelines for managing, storing, and spreading manure on farm operations. The release of the "[Manure Management Plan Guidance](#)" is the result of two years of deliberate and thorough negotiations and discussions between DEP, livestock producers, environmentalists, and others, with a goal of developing clear direction for all Pennsylvania farms that produce livestock or use manure on their crops. "The guide enables farmers to keep the manure nutrients on the fields, where they are needed, and out of local waterways," explained Kelly O'Neill, CBF's Agricultural Policy Specialist in Pennsylvania, and participant in the revision process. "At the same time, it does not create onerous requirements for farmers facing tight financial circumstances." Since 1977, farms have been required to prevent manure runoff to streams

and other water bodies from land application, spillage, storage overflow or leakage, and barnyard runoff. However, the requirements were vague, and often not fully understood or explained to farmers. Through the new guidelines every farm that produces or uses manure will be required to develop a written Manure Management Plan to be kept on-site, with records of manure applications and other on-farm practices. The Manure Management Plan Guidance: requires manure application setbacks from streams or other water bodies; defines the maximum winter manure application practices and rates; prescribes best management practices for barnyards, feedlots, and other animal concentration areas, as well as for temporary manure stockpiles; and additional practices, to prevent manure runoff to water bodies. "Penn Ag Industries Association applauds the efforts of DEP to revamp the manual into a farmer friendly, useful tool which, when implemented, will bring all Commonwealth farms into compliance with protecting our natural resources for future generations," stated Jennifer Reed-Henry, Chair of DEP's Agricultural Advisory Board and Assistant Vice President of Penn Ag Industries Association. In addition to providing the overall scope and guidance for on-site manure management, DEP has also provided a straightforward workbook to assist farmers in developing their plans. "The workbook is a long-overdue tool that guides farmers through the steps of developing a customized plan, and how to carry it out." said O'Neill. The Manure Management Manual, with instructions, rate charts, and a workbook [is available online](#). (Note: This document may be temporarily unavailable online due to an upgrade of [DEP's eLibrary system](#).)

NEESC Helps Renew Wastewater Partnership – Joins EPA and 16 Other Organizations to Address Water Quality Challenges

In 2005, the National Environmental Services Center (NEESC) and the U.S. Environmental Protection Agency (EPA), along with six other national organizations, launched an initiative to promote decentralized wastewater treatment system (septic system) technology and through its proper operation and maintenance reduce pollution in the nation's waterways. This was done by the Memorandum of Understanding (MOU) Partners for Decentralized Wastewater Management Program, which was renewed and expanded in 2008 and again at a November 9, 2011 signing ceremony in Washington D.C. According to EPA, about 20 percent of U.S. residences depend on septic systems to treat four billion gallons of sewage each day. Between 10 and 20 percent of these systems are not working properly at any time and may not be adequately treating sewage. Obviously, this pollution poses environmental and human health hazards, but it is a problem that is difficult to monitor or regulate. The renewed MOU seeks to join EPA, state and local governments, nonprofit organizations, and industry groups in an effort to encourage proper onsite wastewater management. Joining the original eight members and the six who joined in 2008 are the Centers for Disease Control and Prevention and NSF International. Learn more about the MOU partnership by visiting EPA's Office of Water website at: http://cfpub.epa.gov/owm/septic/septic.cfm?page_id=263&sort=name&view=doctype_results&document_type_id=2

Experts Recommend the Inclusion of Rainwater-Collection Systems in Cities

ScienceDaily (Oct. 24, 2011) — Plain, sloping roofs can collect up to 50% more rainwater than flat roofs with gravel. This water is also of higher quality. These are the conclusions of a study conducted by researchers from Autonomous University of Barcelona (UAB, Spain) which suggests the incorporation of systems to collect rainwater in urban planning. The water collected can be used to water streets and gardens, wash floors or vehicles and fill cisterns. Ramon Farreny, co-author of different projects developed by the UAB, said "It is important to consider the collection of rainwater when planning and designing cities, as this is an alternative water source with many different uses, it can even be used to save drinking water." One such project, published in the journal *Water Research*, indicates that roofs "are the first choice for collecting rainwater in urban areas, but not all roofs function in the same way and it is necessary to select the most appropriate ones." The results show that plain, sloping roofs, such as those made of metal or plastic, make it possible to collect up to 50% more rainwater than flat, rough ones. The information was obtained between 2008 and 2010 using four types of roofs on the university campus: three sloping roofs (tiled with metal and polycarbonate sheets) and one flat gravel roof. Read more.. <http://www.sciencedaily.com/releases/2011/10/111024084328.htm>

New Reports Urge More Detailed Utility Metering to Improve Building Efficiency

ScienceDaily (Nov. 9, 2011) — A new interagency report recommends systematic consideration of new metering technologies, called submetering, that can yield up-to-date, finely grained snapshots of energy and water usage in commercial and residential buildings to guide efficiency improvements and capture the advantages of a modernized electric power grid. Commercial and residential buildings consume vast amounts of energy, water, and material resources. In fact, U.S. buildings account for more than 40 percent of total U.S. energy consumption, including 72 percent of electricity use. If current trends continue, buildings worldwide will be the largest consumer of global energy by 2025. By 2050, buildings are likely to use as much energy as the transportation and industrial sectors combined. Submetering is the use of metering devices to measure actual energy or water consumption at points downstream from the primary utility meter on a campus or building. Submetering allows building owners to monitor energy or water usage for individual tenants, departments, pieces of equipment or other loads to account for their specific usage. Submetering technologies enable building owners to optimize design and retrofit strategies to energy and water management procedures more efficient and effective. While the return on investment (ROI) for submeters depends on specific energy-efficiency strategies that may vary by climate, building type, and other factors, "numerous case studies provide evidence that the ROI can be significant," concludes the report, *Submetering of Building Energy and Water Usage: Analysis and Recommendations of the Subcommittee on Buildings Technology Research and Development*. Installing submetering technology also makes possible the use of more advanced conservation technologies in the future, the report notes. The report is a product of the Buildings Technology Research and Development Subcommittee of the National Science and Technology Council (NSTC), a cabinet-level council that is the principal means within the executive branch to coordinate science and technology policy across the diverse entities that make up the federal research and development enterprise. The NSTC report provides an overview of the key elements of submetering and associated energy management systems to foster understanding of associated benefits and complexities. It documents the current state of submetering and provides relevant case studies and preliminary findings relating to submetering system costs and ROI. The report also addresses gaps, challenges and barriers to widespread acceptance along with descriptive candidate areas where additional development or progress is required. It also surveys policy options for changing current buildings-sector practices. The 74-page report can be downloaded from: www.bfrl.nist.gov/buildingtechnology/documents/SubmeteringEnergyWaterUsageOct2011.pdf. For more details, see the Nov. 8, 2011 announcement, "Government Issues Building Energy and Water Submetering Report" at www.nist.gov/el/submetering.cfm.