Vol. 19, No. 2
Autumn 2010

Conservation Crier

Newsletter of the LANCASTER COUNTY CONSERVATION DISTRICT

Administrator's Corner

Two Meetings, One Year Apart – One Message!

One year ago, September 9, 2009, I was invited by the PA Department of Environmental Protection (DEP) to a meeting in Harrisburg with Environmental Protection Agency (EPA). It was at that meeting that the seriousness of Presidential Directive #13508 was brought home to me. EPA announced that inspections on farms in Lancaster County would begin by the end of the month. Inspections of local municipalities would begin within 6 months. One year later, on September 9, 2010, I was asked to address the Chesapeake Bay Commission about our efforts in Lancaster County to encourage not only farms but also urban, suburban and rural residents to meet baseline compliance. The focal point of my comments at that meeting in 2009 was the same as my focal point in 2010.

My point to EPA in 2009 was that we have the right people in the right places for the right reasons! My message to the Chesapeake Bay Commission in 2010 was the same; we have the right people in the right places for the right reasons! It is not just about the farms, or the waste water treatment plants, or the cars, or the District, or NRCS, or the leadership of those various entities. Neither is it about a few organizations, associations or alliances, or the local municipality or the township manager. It is about "our" efforts. It is about our County, it is about our streams, it is about us, "we the people".

The Herculean task to address local water quality and ultimately the Chesapeake Bay is about "our" desire, collectively by everyone, to do what is right. To EPA in 2009 I added "don't mess it up", and to the Chesapeake Bay Commission in 2010 I added "help us keep it going in the right direction".

Good news stories are now coming to light in many segments of Lancaster County that have directly or indirectly affected the local water quality. What good news story are you working on?

—Don McNutt, Administrator

Meeting Announcements

October 18 – Environmental Protection Agency (EPA) Public Meeting regarding Total Maximum Daily Loads (TMDL) • 2-4 PM @ Eden Resort

October 28 – Smart Growth Summit
7:30 AM – 2:30 PM @ Farm and Home Center
"The Chesapeake Bay and Lancaster County – Making the Connection"
Keynote Speaker – Senator Brubaker
Registration & cost at
www.coalitionforsmartgrowth.org

Erosion and Sediment Control 102

Erosion and Sediment Control 102, sound like a college intro course? It is, sort of.

On November 19, 2010, Pennsylvania's Erosion and Sediment Control regulations (Chapter 102) will be changing. The revised regulations have been in the revision process for almost five years and have been under public review through most of 2009. The changes in Chapter 102 will affect a wide range of projects, everything from farming to residential and commercial construction. Here are a few quick facts on some of the most significant changes in the new regulations:

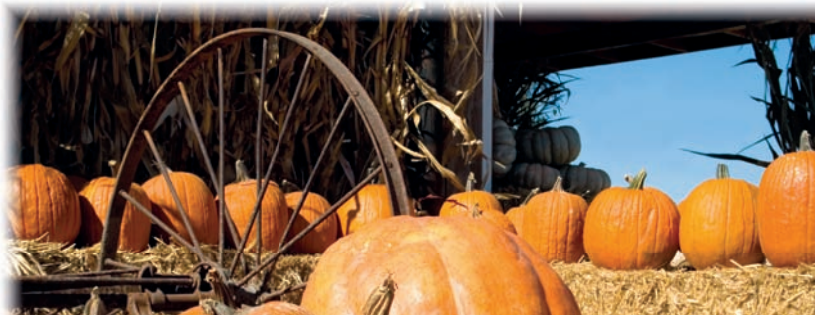
- All projects disturbing 1 acre or more will require a National Pollutant Discharge Elimination System (NPDES) permit.
- General and Individual Permits. A new fee based on disturbed area is also required and will be forwarded to PA Department of Environmental Protection (DEP).
- Riparian and Forested Riparian Buffers may be required for NPDES permitted projects in special projection watersheds.
- Chapter 102 now incorporates requirements for agricultural cover crops and management of animal heavy use areas.

County Conservation Districts and DEP will be providing additional information to the general public, contractors, developers, and consultants in the near future. If you have questions on the new regulations or your project will be affected, contact your local Conservation District or DEP Regional office.

—Rebecca Buchanan,
Erosion and Sedimentation Program Manager

Email Addresses Changing

Beginning September 23, District employees within Administration and the Erosion and Sedimentation Department will be changing their email addresses. Agriculture and Education Departments emails will remain the same. Visit the Conservation District website at www.lancasterconservation.org for updated contact information. From there, click on the "About Us" tab and the "Staff Directory" tab.



Lancaster Co. Conservation District

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Stream Snapshots Have a Lot to Say

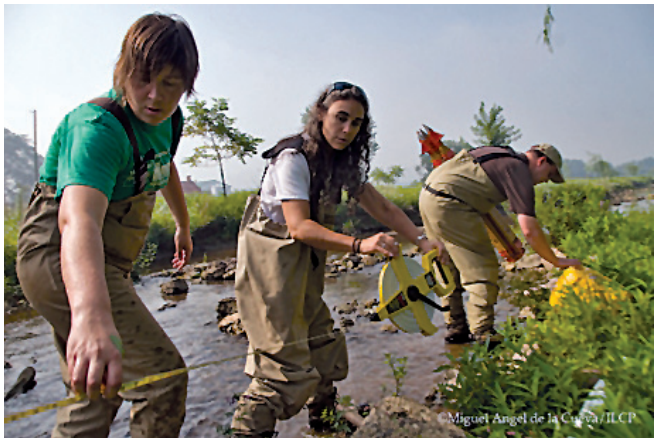
For several weeks in August 2010, the International League of Conservation Photographers (ILCP) sent seven photographers to highlight the beauty and the issues of the Chesapeake Bay Watershed. Illustrating watersheds from upstate Pennsylvania to Virginia, photographers documented agriculture, streams, the Susquehanna River, and other natural areas as well as interests with sprawl, Marcellus shale, and acid mine drainage. The photographers donated their time to help Chesapeake Bay focused organizations promote their mission. In the past, ILCP has traveled to Patagonia, Yucatan, Equatorial Guinea, Africa, and Mexico on similar trips.

The end result of their donated time for the Chesapeake Bay Foundation (CBF) was an exhibit of 30 photographs that was shared in September on Capitol Hill to provide a visual story of the Chesapeake Bay Watershed and the need for the Chesapeake Clean Water Act to help with restoration of local streams and rivers and the bay.

ILCP photographer, Miguel de la Cueva from Mexico was assigned the Pennsylvania portion of the Chesapeake Bay watershed. His prime focus was natural history, human activity, human interaction with streams and rivers, agriculture, and open landscape. Prior to meeting with Ashley Spotts, CBF Stream Buffer Specialist, Miguel spent several days traveling south along the Susquehanna River documenting how the river affects people, the ways they use it, avoid it, and spend time on it. He also spent time on the Lackawanna River and discussed issues streams are facing in the coal region of Pennsylvania with acid mine drainage and reclamation.

Ashley spent three days tour guiding Miguel through Lancaster sites where stream restoration work with trees and shrubs was completed or was in the process of completion. He was able to compare these sites to a completely confined cemented stream, and open pastures with full livestock access. He was very intrigued by the people of the county and wanted to document as much human interaction with streams as he could.

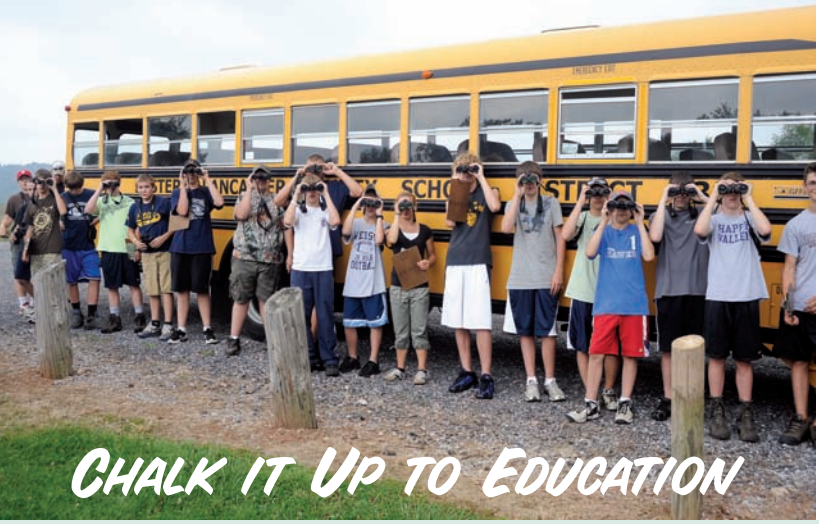
He spent some time on a tobacco farm while the landowners were harvesting the crop. Miguel and Ashley also met with Paul Nevin and two other individuals at Safe Harbor Dam. Paul led them to Big Indian and Little Indian Rocks in the Susquehanna River below Safe Harbor Dam to show Miguel the petroglyphs, rock carvings created over a thousand years ago. The group agreed it was a privilege to have seen them first hand and to have something like this in the county, a unique connection to the past.



The third day he spent time at a new stream restoration site along the Mill Creek with Matt Kofroth, Lancaster County Conservation District Watershed Specialist, Ashley, and CBF intern Heidi Benard. He documented the team surveying the stream. The site was once an open pasture with limited trees and few places for fish habitat.

Miguel concluded his stay in the area by documenting Money Rocks, an impressive overlook in eastern Lancaster County in the Welsh Mountains. The area is owned by the county and is the second largest contiguous track of forested land in the county. Ashley enjoyed sharing Lancaster County through this project in hopes of increased funding to make the county watersheds even better places to live, farm, and fish.

—Ashley Spotts, Streambuffer Specialist



New Education Program Guide

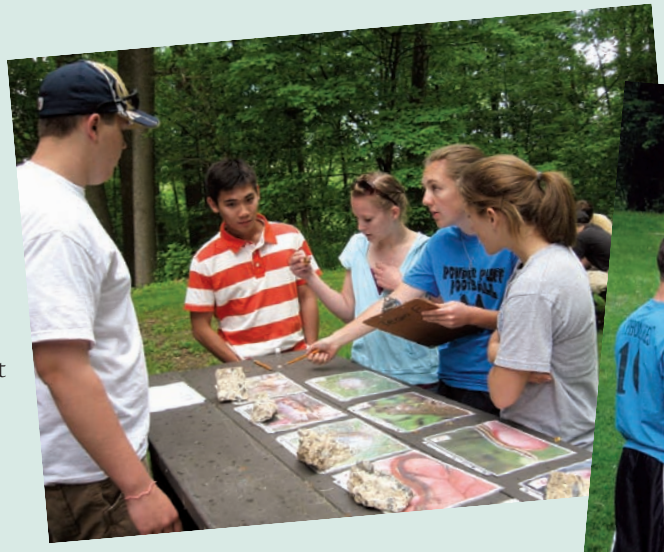
Out of your seat activities, outdoor activities, classroom activities, and hands on activities fill the NEW Education Program Guide. All aspects of the District's Education Programs are meant to address PA Environment and Ecology Standards. Many programs also touch on standards relating to history, reading, math, and writing.

Visit www.lancasterconservation.org, click 'education' tab, and then tab 'program guide'. Contact Sallie Gregory, Education Coordinator at 299-5361 x.117 for more information.

Senior High Envirothon

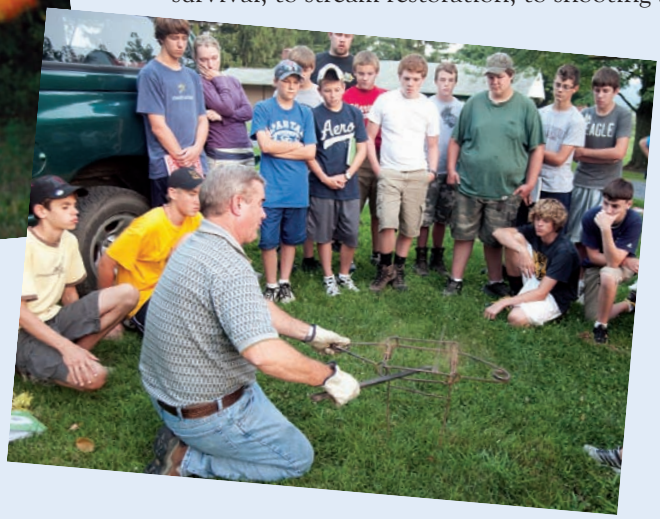
Senior High Teachers please mark your calendar, the **Lancaster County Senior High Envirothon 2011 will be held Thursday, May 5.** This contest day involves teams of high school students in many study hours ahead of time. Envirothon topics include wildlife, forestry, soils, aquatics, and a current issue topic.

Teachers if your high school has not previously competed and would like to, please contact Sallie Gregory, Education Coordinator at 299-5361 x.117 by **December 1** to insure you'll receive reference materials.



Youth Conservation School

2011 Date saver for teens ages 14-16, Lancaster County **Youth Conservation School** will be held July 24-30, 2011. Find an application at www.lancasterconservation.org starting January 2011. Don't miss 7 days with something from survival, to stream restoration, to shooting sports, to snakes.



Composting Livestock Fatalities

Disposing of livestock mortalities is becoming a hot topic these days. Mortality is a part of nature and unfortunately the old adage, "if you're going to have livestock, then you're going to have deadstock" rings all too true. The question now becomes, "What do I do with my deadstock?" The PA Domestic Animal Act requires that all carcasses must be properly disposed of within 48 hours of death. There are four legal options for disposing of dead animals: rendering, burial, incineration and composting.

Rendering has become increasingly less available as concerns with disease transmission continue to rise. Rendering is convenient and requires minimal labor, but tends to be expensive and has bio-security concerns. In fact, Valley Proteins will no longer pick up dead livestock in certain areas.

Burial is still a viable option, but is labor intensive and increasing attention to ground water quality issues makes site selection key. Incineration is also still a viable option, especially for smaller animals, but can be expensive, create odors and effect air quality. Incineration is not the same as open air burning, which is not a legal way of disposing dead livestock.

Mortality composting is becoming more popular since rendering company availability is decreasing. Composting is convenient, affordable and requires minimal labor. An added advantage is that compost can be used as a soil amendment to reduce nutrient inputs. Composting can be completed using products that are typically abundant on most farms.

Composting of dead animals is a two-stage process that includes a primary and secondary composting stage. The primary stage is defined as a large mass (the animal carcass) that has a low Carbon to Nitrogen (C:N) ratio with a high moisture content surrounded by the carbon amendment (sawdust, wood chips, straw, bedded pack manure or corn stover) with a high C:N ratio with moderate moisture levels. Proper moisture levels for composting should be approximately 50%. There is a general 2x2 rule to follow when constructing piles. This means that there is 2 feet of carbon material above and below the carcass. Temperatures should rise to 140-150° F and be maintained there for several weeks to ensure complete kill of pathogens is achieved. Piles should not be turned during this stage until the flesh of the carcass is completely decomposed, which can take up to several months. At this point the pile is turned and the secondary stage begins to allow for further composting (typically 10 days to several months depending on carcass size). The pile is then mixed and placed in a storage area for a minimum of 30 days to cure. The compost is ready for land application following 30 days of curing. Bone fragments of large animals may still remain, though they are usually brittle and pose no health risks or threat to equipment tires during land application. Total composting time for all stages ranges from 56 days for a 10-pound carcass to 245 days for a 1000-pound carcass.

There are several options for animal mortality facilities. One option is bin composting which includes at least 3 bins (one being filled, one for primary composting and one for secondary composting) as well as a storage area for curing. These typically have concrete floors and walls and are roofed to exclude rainwater. Bin depth should be approximately 5 feet. A second design is a static windrow or pile. These are typically on concrete, or other stabilized surface, and may or may not be roofed. Windrows should be 5-7 feet in height. Sizing is important when constructing roofed facilities. Animal weights, daily mortality rates and length of time to allow all composting stages to reach completion should be considered during planning. Also, site choice is key as the site should be selected to protect ground and surface water quality, maintain air quality and be socially acceptable.

The Natural Resources Conservation Service offers both technical and financial assistance for constructing animal mortality facilities. Contact your local NRCS representative to obtain further information, 299-5361 x.3.

—Mark Myers, NRCS Soil Conservationist

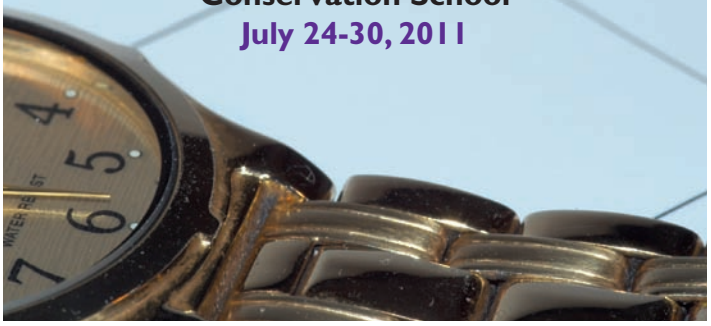
COVER CROP FIELD DAY
at Steve Groff Farm
October 28, 2011

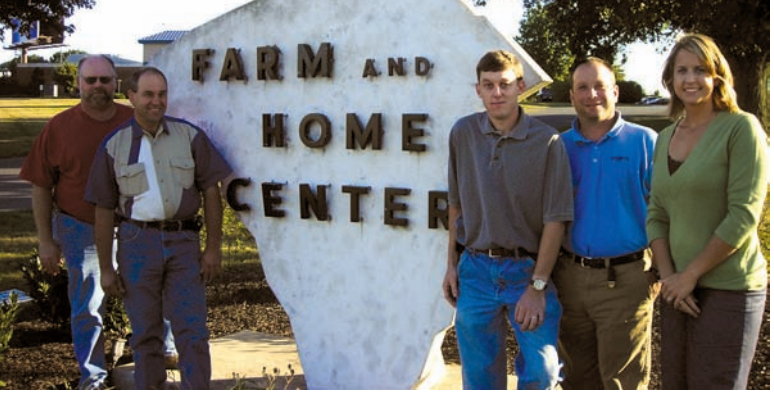
2011 Date Savers

Tree Sale Pick Up
April 20, 2011

Senior High Envirothon
May 5, 2011

Conservation School
July 24-30, 2011





(l to r) Dale Kriner, Bob Livingston, Mark Myers, Steve Ludwig and Jill Whitcomb.

Say Hello

Burrell Whitworth, NRCS Soil Conservationist, retired on July 2, 2010. He traded in his NRCS cap for a fishing hat and fishing rod following 36 years of dedicated service to the agency, 6 of which were in the Lancaster Field Office. Heather Grove replaced Brad Michael as NRCS District Conservationist after his transfer to Fulton County to be closer to his family farm in West Virginia.

Jill Whitcomb is the newest staff member of the Conservation District, starting February 22, 2010. She is serving as a Grants Coordinator and Nutrient Management Technician. She has a B.S. in Biology from Lebanon Valley College and is currently working toward her Master's degree in Environmental Pollution Control from Penn State Harrisburg. Jill is a native of York County and in the past has worked for Agri Analysis, Inc. in Leola. In her free time she enjoys running, gardening, and spending time with family.

Mark Myers, NRCS Soil Conservationist, joined the Lancaster Ag team on March 1, 2010. Mark, a native of East Donegal Township, is finally returning to his home county after 8 years of service with NRCS in Dauphin, Lebanon, Franklin and Cumberland Counties. He is a 2002 graduate of The Penn State University with a B.S. degree in Agroecosystems Science, and a minor in Agronomy. In his spare time Mark enjoys spending time with his wife Melinda and dog Maggie, doing yard work and gardening, skiing and WWII and Civil War reenacting.

Dale Kriner is a new Soil Conservationist covering all of Lancaster County. He is a 1994 graduate of Penn State (after a long academic career) with a B.S. in Agronomy. He had been managing an educational farm for Montgomery County before starting with NRCS. Dale grew up on a farm in Clearfield County where his family raised corn, oats, hay and cattle. When he is not working, he enjoys hunting, reading, camping with his family, and Lionel trains.

Bob Livingston is a new Soil Conservationist in the NRCS Lancaster field office, starting April 11, 2010. An Animal Production graduate from Penn State, he developed his interest in conservation while implementing best management practices in consultation with NRCS during a 20 year stint as manager of South Branch Farms, a registered Angus operation in York County. Bob also worked as a livestock nutritionist in Lancaster County for 2 years prior to starting with NRCS. In his spare time, Bob supplies cheap labor for his wife Darlene's Dorset flock, daughter Morgan's Angus herd, and son Garrett's Duroc herd on their small farm near Spring Grove.

Steve Ludwig joined the NRCS team May 10, 2010 as a Soil Conservation Technician for the Lancaster field office. Steve is a 1995 graduate of The Penn State University with a B.S. degree in Turf grass Science, a B.S. degree in Landscape Contracting, and a minor in Horticulture. He spent 14 years as a Golf Course Superintendent maintaining golf courses in Adams County. In his spare time he enjoys spending time with his family, construction and remodeling projects around the home, skiing and rock-crawling.

"Well" Known Facts

- Over 3 million (25%) Pennsylvanian residents use private wells for their water supply.
- Pennsylvania and Alaska are some of the few states that do not have regulations for private wells.
- Over 20,000 new wells are drilled every year.
- The average well is over 25 years old.
- The average well depth is around 170 feet.
- About 50% of wells owners will never get their well water tested.
- Many wells (15% - 50%) will fail at least one safe drinking water standard.
- The most common contaminants in private wells are bacteria, nitrogen, lead, and arsenic.
- Most well contaminants are odorless and colorless. Symptoms of contaminants may not be observed for years.
- Construction of the well is directly correlated with the occurrence of contaminants.

For more information on ***Well Water Supply and Testing*** *contact your County Conservation District or the local Penn State Extension Office.*

—Kent Himelright, Erosion Control Technician

On-farm Energy: One Agricultural Community Moving Forward

Our global economic community is indisputably dependent on fossil fuels. The social, economic and environmental concerns associated with this fact have been echoed by every president since Richard Nixon. However, after 40 years of energy policy and politics, virtually all parts of the modern food system are still dependent on fossil fuels, and the cost of food is indirectly linked to the cost of oil. Any farmer, rancher, or food processer understands the financial necessity of keeping fuel costs down; however; the cost of fossil fuel is externally set and constantly fluctuating. This oil-fed reality has placed us at an abrupt crossroads. Whether we are acting as producers, consumers, or processors in the agricultural community we find our health and livelihood dependent on an unstable resource, and when access to that resource is compromised, food scarcities and a severe restructuring of American agriculture are certainly possible. We're faced with human and environmental challenges requiring action, innovation, and one very complex question: How does our agricultural community walk nourished into the future?

Energy efficiency and independence. Clean and renewable energy. Whole-systems energy planning. On-farm energy. These are the buzz words of the day, the strength of their meaning diluted to sound-bites. However, these concepts may be part of a promising future for the agricultural community and should certainly be part of the discussion as we move forward. As significant members of the agricultural community, many producers in Lancaster County have begun the steps toward increased energy efficiency and on-farm energy production.

On-farm energy has as many definitions as there are farms in the world. The technologies vary in type and dimension and should be chosen specifically to meet the goals of the operation. Technologies can be obvious (solar, wind, bio-fuels) or not-so-obvious (methane digesters, micro-hydroelectric, or on-farm pyrolysis units.) However, the technologies or mixture of technologies chosen should be appropriate to the scale and resources of the operation and should always include management strategies to increase energy efficiency. For this reason, anyone interested in on-farm energy should start with a farm energy audit that catalogues and evaluates current energy uses, inefficiencies, and un-tapped resources. With the information from the audit, the next step is to create an action plan and chose the technologies and efficiency measures that work best with the operation.

The Farm Bill of 2008 ushered in a new wave of federal programs encouraging on-farm, renewable energy and efficiency measures. As part of the current Farm Bill, the Natural Resource Conservation Service offers cost incentives for a farm energy audit. (Contact the Lancaster Field Office for details.) Additional federal dollars coupled with state tax credits and grants have encouraged many Lancaster County farmers to install on-farm energy production technologies. Primarily farmers in the area have installed methane digesters and solar.

Every farm has room to improve energy efficiency, but after a farm energy audit, a small operation may find it economically impractical to install on-farm energy production technologies. However, Lancaster County is currently exploring the feasibility of localized energy production in the form of a regional biodigester. It may offer an opportunity for small producers with excess manure to supplement their income with the sale of their manure. The digester would purchase raw material (i.e. manure, etc.) from agricultural facilities, food processors, local industries, and municipal treatment facilities and sell locally produced energy and fertilizer back to the citizens of Lancaster County. The idea for the regional biodigester is in its infancy and may still prove nonviable, but if viable, it would offer Lancaster County an opportunity to harness the power of local, renewable resources.

On-farm energy is one small component toward independence of fossil fuel. To fully minimize the impact of fossil fuels on our food system, many other diversified social and economic strategies must be employed. However, if you are a farmer interested in on-farm energy production, energy efficiency, or farm energy audits you may contact the Conservation District for more information, 299-5361 x.5.

—Kate Bresaw, *Ag Conservation Technician*

8th Annual Lancaster/Lebanon County Watershed Forum

SAVE THE DATE, **Saturday, October 30 (9 AM-Noon) for the Annual Lancaster/Lebanon County Watershed Forum.** This annual event brings watershed volunteers, municipalities, residents, water authorities, students, and teachers together from both counties to share ideas and learn about ways they can become better watershed stewards. This year's Forum will take place in Lancaster County at the Acorn Farms Reception & Conference Center near the intersection of Routes 283 & 772. Forum discussion topics include invasive species management, conservation planning, and fish habitat improvements along with a host of other topics. Brochures and more information on this year's Forum will be distributed in October. Continue to check the Lancaster County Watershed Website (www.lancasterwatersheds.org) for registration information.

—*Matt Kofroth, Watershed Specialist*