

# Conservation Committee Report

Volume 12 Issue 9

By Jack Walters, ACSL Conservation Chair

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## The Conservation Pledge

I give my pledge as an

**American to save and faithfully defend from waste, the natural resources of my country; the soil, the water, the air, the minerals, the plant life and the wildlife.**

**This is my Pledge!**

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## Pa.'s first long-term forest assessment finds sustainable management facing challenges ahead

A first-ever, federally mandated review of Pennsylvania's woodlands shows that the state is blessed with forests that are "sustainable" now, but are faced with a future that is wrought with challenges, State Forester Daniel Devlin announced this week.

"Pennsylvania is blessed with abundant forests providing many values and benefits to society, from clean air and water to wood products, biological diversity, recreational opportunities and scenic beauty," said Devlin. "However, there are many challenges to conserving these forests.

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## DEPARTMENT OF HEALTH REPORTS PENNSYLVANIA'S FIRST HUMAN CASE OF WEST NILE VIRUS OF 2010

The Department of Health reported this year's first human case of West Nile virus in Pennsylvania. The individual is a 69-year-old man from Philadelphia County.

West Nile virus is spread to people and animals by infected mosquitoes. Usually, the infection does not result in any illness. Older adults and persons with compromised immune systems are at greatest risk of becoming ill after a West Nile infection.

A severe West Nile infection can cause encephalitis, an inflammation of the brain. People with encephalitis may experience high fever, headache, neck stiff-

**Pa.'s first long-term forest assessment finds sustainable management facing challenges ahead  
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We can only be successful by working strategically and collaboratively with our partners and stakeholders.”

“Overall, Pennsylvania’s forests are ‘sustainable,’” said Devlin, citing forest-condition indicators featured in the report, “but we need to keep our ‘eye on the ball’ on certain issues to ensure this trend continues.”

Some of the concerns Devlin cited include invasive plant and insects; white-tailed deer impacts; forest loss and fragmentation; energy development; and overall forest health and tree diversity.

The state forester’s comments came with completion of a statewide forest assessment as part of a national effort toward protecting and sustaining healthy forests—an effort Devlin termed “essential steps” to safeguarding Pennsylvania forests for future generations.

DCNR’s Bureau of Forestry documented state- and privately owned forests, and formulated strategies for their long-term sustainability, as well as future management goals and initiatives. The Statewide Forest Resource Assessment and Strategy is prescribed by the U.S. Department of Agriculture’s Forest Service and is required every five years under the 2008 Farm Bill in order to ensure continued funding for Pennsylvania’s forestry programs.

“Besides meeting federal requirements, the bureau is using this process to undertake a holistic, long-term evaluation and strategic planning effort for Pennsylvania’s forests,” Devlin said. “The completion of these Farm Bill requirements is the first step of this longer-term, continuous endeavor, including updating the bureau’s strategic plan—Penn’s Woods—which was developed and adopted in 1995.”

The assessment provides an analysis of forest conditions and trends in the state, and identifies priority rural and urban forest areas and issues, Devlin said. Strategies, meanwhile, provide long-term plans for addressing needs identified in the assessments through state agency initiatives, federal investments and partner engagement.

"The Bureau of Forestry will be seeking additional stakeholder involvement in developing annual work

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**Pa.'s first long-term forest assessment finds sustainable management facing challenges ahead  
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plans to address the assessment and strategies,” Devlin said. “Our conservation partners and stakeholders were essential in shaping this document and will continue to play a role in identifying and implementing strategies and opportunities.”

The bureau’s Assessment and Strategy records compiled a wealth of information on Pennsylvania’s forests and strategies for addressing key forest sustainability issues, including forest health, forest management, climate change, communicating natural resource values, energy development, wild land fire and public safety, plant and animal habitat, and recreation and quality of life.

The process was guided by three national priorities: conserve working forest landscapes; protect forests from threats; and enhance public benefits from trees and forests. Using public input, local expertise and the best available data on forest conditions, the documents also incorporate existing forest management plans, including state wildlife action and community wildfire protection plans.

For details of the Pennsylvania Statewide Forest Resource Assessments and Strategy, visit [www.dcnr.state.pa.us/forestry/farbill/index.html](http://www.dcnr.state.pa.us/forestry/farbill/index.html).

**FIRST HUMAN CASE OF WEST NILE VIRUS OF 2010**  
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ness, disorientation, tremors, convulsions, paralysis, and coma. Anyone with any of these symptoms should immediately contact their health care provider.

A milder form of infection is known as West Nile fever. In addition to fever, people with this form of the disease may also experience headache, body aches, skin rash, and swollen lymph glands.

There is no specific treatment for West Nile virus. For severe cases, hospitalization is needed and illness can be associated with long-term disabilities and death.

Since West Nile was first identified in Pennsylvania in 2000, the virus has been found in all areas of the state and has returned each summer. Statistics from recent years include:

2009: no human cases in Pennsylvania.

2008: 14 human cases; one death.

2007: 10 human cases; no deaths.

2006: nine human cases; two deaths.

2005: 25 human cases; two deaths.

2004: 15 human cases; two deaths.

2003: 237 human cases; nine deaths.

The department recommended these simple precautions to prevent mosquito bites, particularly for those most at risk which include the elderly and those with compromised immune systems:

Make sure screens fit tightly over doors and windows to keep mosquitoes out of your home;

When possible, reduce outdoor exposure at dawn and dusk, the times of day when the mosquitoes that transmit West Nile virus are most active, during the warmer months of the year (usually April through October);

Consider wearing long-sleeved shirts, long pants and socks when outdoors, particularly at dawn and dusk, or in areas known for having large numbers of mosquitoes;

Use insect repellents according to the manufacturer's instructions. Effective repellents contain DEET. Consult a doctor if you have concerns about the use of repellent on young children, as repellent is not recommended for children under the age of two months. Two other insect repellants, Picaridin (KBR 3023) and

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oil of lemon eucalyptus, a plant based repellent, were tested against mosquitoes and provided protection similar to repellents with low concentrations of DEET.

Pennsylvanians can also reduce the risk of West Nile virus by eliminating the places where mosquitoes breed. Here are some simple steps that can be taken around the house:

Dispose of tin cans, plastic containers, ceramic pots, discarded tires, or any object on your property that could collect standing water. Drill holes in the bottom of recycling containers left outdoors;

Have roof gutters cleaned every year, particularly if the leaves from nearby trees have a tendency to clog the drains;

Turn over plastic wading pools and wheelbarrows when not in use;

Don't let water stagnate in birdbaths;

Aerate ornamental pools or stock them with fish;

Clean and chlorinate swimming pools and remove standing water from pool covers;

Use landscaping to eliminate standing water that collects on your property; and

Standing water that cannot be eliminated should be treated with Bti products, which are sold at outdoor supply, home improvement, and other stores. Bti is a naturally occurring bacterium that kills mosquito larvae but is safe for people, pets, aquatic life and plants.

For more information about West Nile virus, including current test results for mosquitoes, birds and horses, visit [www.westnile.state.pa.us](http://www.westnile.state.pa.us) or call the Department of Health at 1-877-PA HEALTH.

Source: PA Dept. of Health

## DOE National Laboratory Breakthrough Could Enhance Use of Domestic Natural Gas, Methane Hydrate Resources

### **NETL Process, Nozzle Technology May Help Reduce Production, Transportation, and Storage Costs**

A process and related technology that could enhance the nation's ability to use natural gas and vast methane hydrate energy resources has been developed by researchers at the U.S. Department of Energy's National Energy Technology Laboratory (NETL).

The method for rapidly forming methane hydrate, along with concurrent development of specialized nozzles to facilitate the process are breakthroughs that could lead to significant reductions in the cost of storing and transporting natural gas, potentially increasing utilization of domestic resources and enhancing U.S. energy security.

Natural gas provides about one-fourth of total U.S. and global energy consumption; about a third of the world's natural gas is "stranded," or exists in remote locations where transportation costs are too great to enable utilization. Energy-rich but potentially unstable methane hydrate, a substance that looks like ice but has a different chemical structure, is present in many high pressure, low temperature ocean environments and in Arctic permafrost.

Gas hydrates retain large amounts of methane – one cubic meter of solid hydrate can produce 164 cubic meters of methane, the principal component of natural gas. Estimates indicate hydrate deposits contain more organic carbon in the form of methane than all the world's fossil fuel reservoirs combined. NETL, the laboratory of DOE's Office of Fossil Energy, has been in the forefront of investigating environmentally safe, economic ways to extract and transport methane locked in these hydrate deposits.

Conventionally, natural gas is cooled and compressed to reduce its volume for transport as either compressed natural gas (CNG) or liquefied natural gas (LNG). This increases the cost of natural gas for the end-user and is also not energy efficient; additionally, some of the gas is lost to vaporization of LNG during transport.

NETL researchers have found a way to rapidly and continuously form synthetic natural gas hydrates with just water and methane, using much less pressure and cooling than is required to liquefy it. Until now, methane hydrates were formed in a batch process that required hours or even days; NETL's process eliminates the long mixing time associated with the batch process and forms hydrates within minutes. These synthetic hydrates could represent a more energy efficient way to reduce the volume of natural gas so that it can be stored and transported.

The experiments were enhanced by NETL's patent-pending nozzle technologies which increased atomization and produced the exact mix of water and methane to economically form the synthetic hydrates.

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The researchers designed, machined, and assembled a variety of nozzles until selecting one that performed optimally, resulting in the near instantaneous and continuous formation of a snow-like synthetic hydrate.

With this technology, future operators will have an alternative method for the storage and transport of natural gas. While not as energy dense as LNG or CNG, production of methane hydrate using this method will require less refrigeration, less pressure, and less time than either LNG or CNG production.

Ultimately, NETL researchers believe the new process will significantly reduce production, transportation, and storage costs associated with current LNG and CNG processes while enhancing and making more efficient the use of natural gas from stranded resources.

Source: U.S. Department of Energy

## EPA Denies Petition Calling for Lead Ammunition Ban

The U.S. Environmental Protection Agency denied a petition calling for a ban on the production and distribution of lead hunting ammunition. EPA sent a letter to the petitioners explaining the rejection – that letter can be found here: <http://www.epa.gov/oppt/chemtest/pubs/sect21.html>

Steve Owens, EPA assistant administrator for the Office of Chemical Safety and Pollution Prevention, issued the following statement on the agency's decision:

“EPA today denied a petition submitted by several outside groups for the agency to implement a ban on the production and distribution of lead hunting ammunition. EPA reached this decision because the agency does not have the legal authority to regulate this type of product under the Toxic Substances Control Act (TSCA) – nor is the agency seeking such authority.

“This petition, which was submitted to EPA at the beginning of this month, is one of hundreds of petitions submitted to EPA by outside groups each year. This petition was filed under TSCA, which requires the agency to review and respond within 90 days.

“EPA is taking action on many fronts to address major sources of lead in our society, such as eliminating childhood exposures to lead; however, EPA was not and is not considering taking action on whether the lead content in hunting ammunition poses an undue threat to wildlife.

“As there are no similar jurisdictional issues relating to the agency's authority over fishing sinkers, EPA – as required by law – will continue formally reviewing a second part the petition related to lead fishing sinkers.

“Those wishing to comment specifically on the fishing tackle issue can do so by visiting <http://www.regulations.gov>. EPA will consider comments that are submitted by September 15.”

## Silty, salty Monongahela River at risk from pollutants

The Monongahela River is at a crossroads.

Not just at the Point, where the dark, silty Mon -- lifeblood to heavy industry -- merges with the clearer Allegheny. The Mon might be one of the country's most endangered rivers, according to scientists studying the river.

Since 2008, the river has filled each summer with levels of contaminants higher than in at least 10 years. What role the region's gas boom might play in the pollution is unknown. State environmental officials are employing stronger regulations and may ask for federal intervention to save the river from new threats and a legacy of mine pollution.

"There's been dry seasons before, and it's never affected everything as much as it has now," said Mark Stoner, a chemist with the Pittsburgh Water & Sewer Authority and chairman of RAIN, the River Alert Information Network, an alliance of about 30 water utility companies. "I have colleagues who are in RAIN that worked on the Mon, and they've not seen this in 20 years, not to these levels at all. ... This is not normal."

The problem started in late summer 2008. A pollutant that scientists call "total dissolved solids" turned the water smelly and sour for some of the 1 million people in Pennsylvania and West Virginia who get drinking water from the Monongahela basin. After decades of improvement to the river, the pollution surprised water experts from around the region.

Total dissolved solids, or TDS, is a catchall term for different minerals that essentially turned the river into mild saltwater. It was only about 3 percent the strength of ocean water, but that's high enough to violate the state's secondary drinking water standards for taste and smell. As river flow decreased in the dry summer, high levels returned for shorter spells in 2009 and this year since late July.

Scientists at the Department of Environmental Protection, West Virginia University and Carnegie Mellon University began analyses of chemicals in the river.

Drilling for natural gas in the Marcellus shale caused more than a fifth of the pollution in 2008 because drillers diluted wastewater by dumping it into the river through sewage treatment plants, according to RAIN and the DEP. But DEP stopped most of that with new rules; gas wastewater probably doesn't cause more than 5 percent to 10 percent of pollution now, said Ron Schwartz, assistant director of the department's southwest region.

Gas drillers are adamant their expanding industry isn't responsible for the river's pollution.

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"You'd have salt trucks lined up from here probably all the way to Wyoming to make that much impact on the water," said Tony Gaudlip, the water operations manager at Range Resources Corp., which essentially discovered the Marcellus shale. The Houston, Texas-based company has offices at Southpointe.

Gaudlip blames acid mine drainage for the problem, and other scientists agree it caused most of the Mon's pollution for decades. Power plants started to screen out harmful metals from their exhaust to meet air quality standards and dump that pollution instead into the river, Schwartz said.

This spring, the DEP began the process to have the river designated as "impaired," which would allow the federal government to set standards for river polluting. The Environmental Protection Agency would commission a study to determine limits for industrial dumping of total dissolved solids in the river.

The DEP is implementing its own strengthened standards. Starting this week, gas drillers must treat wastewater to secondary drinking level standards -- solids must be fewer than 500 milligrams per liter -- before dumping it into the river. Most other industries have limits four times as high, and abandoned coal mines -- which fill with water -- are exempt, Schwartz said.

Ken Zapinski, senior vice president at the Allegheny Conference on Community Development, said targeting gas drilling wastewater is unfair and adds to the false perception that the gas industry is to blame for the Monongahela's condition.

"We hoped that further work would be done to document where the TDS is originating from," he said.

There's no scientific consensus that shale drilling isn't playing a role. The industry uses millions of gallons of water per well; a lot of that water comes from the Mon and its tributaries, which means the river has less water to dilute pollutants, Stoner and Schwartz said. In parts of the Mon, the river flow is less than half of what it usually is this time of year, and September often brings even drier conditions, according to the Army Corps of Engineers.

Some early indicators from about a year's worth of detailed readings show more evidence of salt, a sign of the shale drilling industry, said researchers at West Virginia and the University of Pittsburgh. The change in the Youghiogheny River tributary has been especially dramatic, said Paul Ziemkiewicz, director of the West Virginia Water Research Institute.

That river historically was low in TDS, mostly from calcium sulfate, the signature chemical of mine drainage, he said. But readings since January show the number doubled, primarily from salt, sodium chloride.

"Something is dumping a lot of sodium chloride in the water. Where that's coming from, I don't know. But one might suggest (gas drilling wastewater) was getting into the Yough," Ziemkiewicz said. "I think if we ... don't get a grip on fluid disposal, we could have some serious problems."

Source: By **Tim Puko**

PITTSBURGH TRIBUNE-REVIEW

Regulations That Protect Aquatic Life and Drinking Water From Natural Gas Wastewater  
Are Now in Effect and Enforceable

### Regulations Drive Industry Investment in Technologies that Treat Wastewater

New wastewater treatment standards for total dissolved solids, which will apply to gas well drilling wastewater, and that protect aquatic life and drinking water supplies are now in effect and enforceable, Environmental Protection Secretary John Hanger announced today.

The combination of this Total Dissolved Solids (TDS) Rule and the new rule requiring 150-foot buffers for Pennsylvania's approximately 20,000 miles of high-quality streams give waters in the state the strongest legal protection in history.

The new permitted limit for discharges of wastewater from gas drilling is 500 milligrams per liter of total dissolved solids and 250 mg/l for chlorides. All new and expanding facilities, which treat gas well wastewater, must now meet these discharge limits.

"DEP's proposal of these new limits has already driven industry investment in new technologies to treat this wastewater which is high in TDS," Hanger said. "We are proving that if we hold the environmental bar high, the industry can and will rise to meet Pennsylvania's expectations."

Hanger added that since DEP proposed these new rules, some businesses have moved to treat gas well wastewater for recycling by the natural gas industry rather than discharging it to Pennsylvania waterways.

Using a watershed-based approach, the new regulations will also govern other discharges of TDS. This approach will ensure that the level of TDS in streams in the state will not reach levels that will negatively impact downstream users such as drinking water suppliers.

Pennsylvania's streams receive total dissolved solids from a variety of wastewater sources. Primary sources of these pollutants are stormwater runoff and discharges from coal mines and other industrial activities.

Wastewater from certain industrial operations is high in chlorides (salt) and sulfates, which affect the taste and odor of drinking water and, in high concentrations, can damage or destroy aquatic life.

Drinking water treatment facilities are not equipped to treat these contaminants and rely on normally low levels of chlorides and sulfates in surface waters used for drinking water supplies.

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Regulations That Protect Aquatic Life and Drinking Water From Natural Gas Wastewater  
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The new rules underwent the regulatory process that included public input; review by the Environmental Quality Board; regulatory review by the Independent Regulatory Review Commission; legislative review through the House and Senate Standing Energy and Environmental Resources Committees; and finally, review by the state Attorney General for form and legality.

The final rules became effective and enforceable upon publication in the Aug. 21 issue of the Pennsylvania Bulletin. The full text of the rule can be found at [www.Pabulletin.com](http://www.Pabulletin.com), page 4835.

For more information, visit [www.depweb.state.pa.us](http://www.depweb.state.pa.us) or call 412-442-4000.

Source: PA DEP

## Agriculture Secretary: Pennsylvania Eggs Meet High Safety Standards

Pennsylvania eggs certified under a voluntary best production practices program meet some of the nation's highest safety standards, Agriculture Secretary Russell C. Redding said today.

Under the Pennsylvania Egg Quality Assurance Program, or PEQAP, producers implement management and monitoring practices designed to reduce the risk of Salmonella Enteritidis contamination of eggs.

“With a nationwide egg recall raising renewed concerns about safety, I urge consumers to seek out eggs produced in Pennsylvania,” said Redding. “By purchasing eggs produced under the Pennsylvania Egg Quality Assurance Program, consumers can be assured that the eggs meet high safety standards while supporting Pennsylvania farmers and the state's economy.”

PEQAP helps ensure that basic food safety preventative measures are used, including cleaning and disinfecting between flocks, environmental monitoring of production facilities and maintaining an acceptable biosecurity program. Eggs must be refrigerated throughout production and distribution.

In place for more than 15 years as a successful preventive measure, PEQAP was the model upon which the federal Food and Drug Administration's new egg rule was based. The rule, published in July, requires preventive measures during the production, storage and transportation of the nation's egg supply.

“Thanks to the efforts of Pennsylvania's egg producers, the success of Pennsylvania's egg quality program in preventing salmonella contamination has led to national efforts to ensure consumer confidence in egg production and consumption,” said Redding.

To ensure you're using Pennsylvania-produced eggs, look for the PA Preferred logo, which is a gold checkmark in a blue keystone. PA Preferred is the Department of Agriculture's branding program that helps consumers easily identify locally sourced products. PA Preferred companies can be found at [www.papreferred.com](http://www.papreferred.com).

All PA Preferred eggs must be produced under Pennsylvania Egg Quality Assurance program guidelines.

Consumers should practice proper food safety handling practices when using eggs, including keeping eggs and food containing eggs refrigerated, never eating raw or undercooked eggs, and sanitizing hands when preparing eggs.

Valued at \$487.5 million, Pennsylvania's egg industry—the fourth-largest in the nation—plays a major role in the state's economy. Pennsylvania is home to 21.5 million hens producing 6.2 billion eggs each year.

For more information about the Pennsylvania Egg Quality Assurance Program, visit [www.agriculture.state.pa.us](http://www.agriculture.state.pa.us) and search “PEQAP.”

Source: PA Department of Agriculture