

Conservation Committee Report

Volume 15 Issue 4

Jack Walters—Conservation Chairman

June—July 2013



Take Precautions against West Nile Virus

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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Recent rains and rising temperatures create the perfect conditions for mosquito breeding, and the state departments of Environmental Protection, Health and Agriculture today reminded residents to guard against mosquitoes and prevent the spread of West Nile virus.

“Last year proved to be a record season for West Nile virus in Pennsylvania,” Acting DEP Secretary Chris Abruzzo said. “More than 3,400 mosquito samples tested positive for the virus, the most our department has ever identified.”

Abruzzo was joined by Secretary of Health Michael Wolf

and Secretary of Agriculture George Greig at a press conference in Fort Hunter Park, Harrisburg. The event included demonstrations on mosquito control and surveillance, as well as

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Governor Corbett Participated in Ceremony to Return Fountain at Point State Park to Pittsburgh's Skyline

Return of Point State Park is Symbolic of Pittsburgh's Second Renaissance

Pennsylvania Governor Tom Corbett joined the people of Pittsburgh to return the Point State Park fountain to the city skyline, completing

a more than six-year, multi-million dollar renovation of the park that hosts more than 3 million visitors annually. “Today the fountain’s welcoming column of water once again soars high above Point State Park, highlighting the unique conflu-

ence of the three rivers at this historic place,” Corbett said during a public ceremony at the park. “Our investment in Point State Park is a gift from the commonwealth to the City of Pittsburgh (continued on page 6)

Take Precautions against West Nile Virus (continued)

educational information provided by subject matter experts and an individual once infected with West Nile virus.

In 2012, West Nile virus was detected in 52 counties. The first positive mosquito of 2012 was found in Berks County on May 3, the earliest incidence ever. Typically, the state's first West Nile virus-carrying mosquito is found in mid-June.

DEP has been conducting mosquito surveillance since early May. So far, two mosquito samples and one avian specimen have tested positive for the virus.

"We know West Nile virus is among us and while we don't want to discourage citizens from enjoying Pennsylvania's great outdoors, we want to ensure you are equipped with tips and information to do it safely," said Secretary of Health Michael Wolf.

Last year there were 60 human cases, including four fatalities.

Although most people do not become ill when infected with West Nile virus, all are at risk. Older adults and those with compromised immune systems are most likely to become ill and develop severe complications.

"West Nile virus is a serious concern for humans, but it can also affect our animals, especially horses and birds," said Agriculture Secretary George Greig. "Know the risks and follow the prevention tips to safeguard the health of your families and pets."

Last year, there were 51 reported veterinary cases of West Nile virus and most of them were horses. Horse owners should contact veterinarians about the vaccine for West Nile virus.

The mosquitoes that transmit the virus breed in areas with standing and stagnant water. Eliminate standing water by:

- Removing tin cans, plastic containers, ceramic pots, discarded tires or any other objects that could collect standing water.

- Drilling holes in the bottom of recycling containers left outdoors.

- Cleaning roof gutters every year.

- Turning over plastic wading pools and wheelbarrows when not in use.

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Take Precautions against West Nile Virus (continued)

Changing water in birdbaths frequently.

Aerating ornamental pools, or stocking them with fish.

Cleaning and chlorinating swimming pools, and removing standing water from pool covers.

Landscaping to eliminate standing water that collects on your property.

Treating standing water that cannot be eliminated with Bti products, which are sold at outdoor supply, home improvement and other stores. Bti is a natural product that kills mosquito larvae, but is safe for people, pets, aquatic life and plants.

Prevent mosquito bites by:

- Ensuring screens fit tightly over doors and windows.

Wearing long-sleeved shirts, long pants and socks when outdoors, particularly when mosquitoes are most active at dawn and dusk, or in areas known for having large numbers of mosquitoes.

Reducing outdoor exposure at dawn and dusk during peak mosquito periods, through October.

Using insect repellants according to the manufacturer's instructions. An effective repellant will contain DEET, picaridin or lemon eucalyptus oil. Consult with a pediatrician or family physician for questions about the use of repellant on children, as repellant is not recommended for children under the age of two months.

For more information about West Nile virus and the state's surveillance and control program, visit www.westnile.state.pa.us.

Source: PA DEP

DOE SPONSORED RESEARCH IMPROVES GAS TURBINE PERFORMANCE

An innovative airfoil manufacturing technology that promises to improve the performance of state-of-the-art gas turbines has been commercialized through research sponsored by the U.S. Department of Energy. Photo courtesy of Mikro Systems, Inc.

Washington, D.C. — An innovative airfoil manufacturing technology that promises to improve the performance of state-of-the-art gas turbines has been commercialized through research sponsored by the U.S. Department of Energy (DOE).

The technology – which is expected to contribute to cleaner, more reliable and affordable domestic energy production as well as creating new high-tech manufacturing jobs – was licensed by Siemens Energy Inc. (Orlando, Fla.) in 2011. Siemens has now opened a new facility in Charlottesville, Va., employing Mikro Systems patented Tomo-Lithographic Molding (TOMOsm) manufacturing technology to manufacture improved airfoils.

DOE Small Business Innovation Research (SBIR) grants funded the essential research and development that advanced the capabilities of TOMO technology, as well as the work that led to the technology's manufacturing readiness. The Office of Fossil Energy's National Energy Technology Laboratory (NETL) managed the SBIR grants.

Gas turbines, which are used to produce power for industrial, utility, and aerospace applications, consist sequentially of compressor, combustor, and turbine sections. Incoming air is compressed to high pressure in the compressor section, and then heated to high temperature by the combustion of fuel in the combustor section. The high-temperature, high-pressure gas is then expanded through a series of rotor-mounted airfoils in the turbine section, converting the energy of the gas into mechanical work. Improved airfoils can tolerate higher gas temperatures and/or use less cooling air, resulting in improved energy efficiency.

Mikro Systems received DOE support to apply its TOMO technology to a range of turbine components, with the goal of improving the efficiency and performance of gas turbines used in stationary power generation. The technology enables more sophisticated designs with improved cooling characteristics, which leads to higher operating temperatures and improved efficiency. In addition to enabling designs that were previously impossible to manufacture, the technology promises to reduce time-to-market for future design enhancements through reduced production lead times and more efficient manufacturing processes.

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DOE SPONSORED RESEARCH IMPROVES GAS TURBINE PERFORMANCE (CONTINUED)

Mikro Systems' growth strategy is to apply their technology to a wide range of applications, from next-generation turbines for use in integrated gasification combined cycle (IGCC) and natural gas combined cycle power plants, to smaller industrial and military aviation engines. Rolls-Royce and the U.S. Department of Defense, among others, are now funding work by Mikro Systems, with Mikro's manufacturing readiness playing a key role in initiating this work.

The technology is also contributing to Siemens Energy's ARRA-funded, NETL-managed project to develop hydrogen turbines for coal-based IGCC power generation that will improve efficiency, reduce emissions, lower costs, and allow for carbon capture and storage.

Source: U.S. Department of Energy

Governor Corbett Participated in Ceremony to Return Fountain at Point State Park to Pittsburgh's Skyline (continued)

and its visitors so they can reflect on history, enjoy nature and be reminded of the city's strength and vitality."

The fountain was turned off in April 2009. The rehabilitation adds a disappearing edge waterfall feature, new lighting, including colors for special events, all new surfaces, pumping equipment and controls, and public restroom renovations.

The central water column of the fountain continues to operate at around 150 feet. The fountain contains about 500,000 gallons of water that is recirculated.

The \$11.6 million fountain project, the first major overhaul in almost 40 years, was supported by a combination of state funds, as well as business and private donations. The state committed \$32 million in capital budget money to renovations throughout the park.

"It's been great to have outstanding partners for financial, technical and planning support, including Riverlife and the Allegheny Conference, the City of Pittsburgh, foundations and many private donors," Corbett said.

"Pittsburgh is a river city. The Point State Park fountain symbolizes our quality of life and highlights the beautiful setting of three rivers coming together," Lisa Schroeder, president and CEO of Riverlife said. "We congratulate the commonwealth on this investment and are proud to have been part of this historic public-private partnership." SET, Inc. of Lowellville, Ohio, was the general contractor for the fountain project. Right Electric, Inc. of Butler provided electrical construction; Wayne Crouse, Inc. of Pittsburgh did the mechanical construction which includes the new fountain pumps and piping; and AMB, Inc. of Pittsburgh did the plumbing.

"This renovated fountain is the crown jewel of many improvements within the park, and is in fact, the largest renovation project in our 120-park system," Corbett said. "We make these investments to protect natural areas and historic places, but also because state parks are economic engines that generate more than a billion dollars annually in nearby communities."

The fountain was first dedicated by the state on Aug. 30, 1974, at the completion of the park's construction. In 2007, an extensive renovation project began with improvements including:

- **City-side Lawn**, 2007-2008: Complete renovation of the lawn area on the city-side of the park, tracery lights, walkways, benches and landscaping.
- **Woodlands**, 2009: Removal of some lawn area and replacement with 7,000 native trees, shrubs and perennials; new irrigation; and new stone edging.
- **Allegheny and Monongahela Wharfs**, 2009-2010: Demolition and reconstruction of both wharf areas and recycling of existing materials when possible; lighting along wharf edges; boat tie-ups; new promenade walkways adjacent to the newly installed native woodland beds; and rehabilitation of the overlook area with new lighting, benches, stonework and landscaping.
- **Café at the Point**, 2010-2011: Café built for park visitors with recycled building materials, green walls and interpretive elements about Point State Park and its importance in the shaping of America.
- **Fountain Electric Service**, 2011: Installation of electrical components to meet new requirements from the service provider and increase capacity for improvements to fountain.

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Governor Corbett Participated in Ceremony to Return Fountain at Point State Park to Pittsburgh's Skyline (continued)

The Department of Conservation and Natural Resources has added a full-time park manager and staff; an environmental educator; a concessionaire for food at the park; and coordinates programming at the park with the Fort Pitt Museum and Block House.

Point State Park, a National Historic Landmark, commemorates the strategic and historic heritage of the area during the French and Indian War. It's situated where the Allegheny and Monongahela rivers meet to form the Ohio River, an area highly contested between British and French armies in the 1700s.

By the 1950s, the area had deteriorated into a commercial slum. The construction of Point State Park was one of the key accomplishments of Pittsburgh's first Renaissance urban renewal initiative.

For more information about the park and its programs, visit www.dcnr.state.pa.us and choose Point State Park under "Find a Park."

Source: PA Department of Conservation and Natural Resources

EPA Strengthens Energy Star Requirements for Refrigerators and Freezers

EPA Strengthens Energy Star Requirements for Refrigerators and Freezers

Encourages “connected” features, including smart grid functionality

The U.S. Environmental Protection Agency (EPA) has revised its Energy Star requirements for residential refrigerators and freezers. The updated requirements raise the bar for energy efficiency in these products and, for the first time, encourage manufacturers of Energy Star appliances to include optional “connected” features. These features would offer consumers more ways to reduce the energy consumption of their refrigerators and freezers, help lower their utility bills, and better protect the environment and the climate.

Under the new standards, Energy Star certified refrigerators and freezers will use at least 10 percent less energy than models meeting 2014 federal minimum efficiency standards. If all refrigerators and freezers sold in the United States were to meet the updated requirements, energy cost savings would grow to more than \$890 million each year and reduce annual greenhouse gas emissions by the equivalent of those from more than one million vehicles. Additionally, by recycling an old refrigerator and replacing it with a new Energy Star certified refrigerator, consumers can save from \$150–\$1,100 on energy costs over the product’s lifetime.

“We can all do our part in meeting the challenge of climate change,” said Janet McCabe, Principal Deputy Assistant Administrator for EPA’s Office of Air and Radiation. “By choosing Energy Star appliances, families can save energy, save money, and reduce carbon pollution.”

Certain Energy Star refrigerators and freezers with connected features will provide consumers new convenience and energy-saving opportunities. These products will allow consumers to view real-time energy use, receive energy-related messages, such as an alert when the door has been left open, and manage appliance settings remotely. Refrigerators and freezers with connected functionality will also be “smart grid”-ready, meaning that with consumer permission, they will be able to respond to utility signals, including curtailing operations during more expensive peak demand times.

To earn the Energy Star label, product performance must be certified by an EPA-recognized third party, based on testing in an EPA-recognized laboratory. The updated Energy Star refrigerator and freezer specification will go into effect on September 15, 2014.

Products, homes, and buildings that earn the Energy Star label prevent greenhouse gas emissions by meeting strict energy efficiency requirements set by the U.S. EPA. In 2012 alone, Americans, with the help of Energy Star, saved \$24 billion on their utility bills and prevented greenhouse gas emissions equal to those of 50 million vehicles.

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EPA Strengthens Energy Star Requirements for Refrigerators and Freezers (continued)

To date, more than 1.4 million new homes and 20,000 facilities, including offices, schools, hospitals, and industrial plants have earned the Energy Star label. Learn more:

www.energystar.gov

More information on the updated Energy Star refrigerators and freezers specification:

<https://www.energystar.gov/products/specs/node/125>

Source: The U.S. Environmental Protection Agency (EPA)

EPA Warns Against Use of Refrigerant Substitutes That Pose Fire and Explosion Risk

The U.S. Environmental Protection Agency (EPA) is warning homeowners, propane manufacturers and sellers, home improvement contractors and air conditioning technicians of potential safety hazards related to the use of propane or other unapproved refrigerants in home air conditioning systems.

EPA is currently investigating instances where propane has been marketed and used as a substitute for HCFC-22 (R-22), a refrigerant that is widely used in home air conditioning systems.

Home air conditioning systems are not designed to handle propane or other similar flammable refrigerants. The use of these substances poses a potential fire or explosion hazard for homeowners and service technicians.

EPA is aware of incidents that have occurred both overseas and in the U.S. where individuals have been injured as a result of the use of propane and other unapproved refrigerants in air conditioning systems. We are investigating and will take enforcement actions where appropriate. Other names for these unapproved refrigerants include R-290, 22a, 22-A, R-22a, HC-22a, and CARE 40.

At this time, EPA has not approved the use of propane refrigerant or other hydrocarbon refrigerants in any type of air conditioner. Homeowners and technicians are strongly recommended to limit use of propane or other hydrocarbons to only those appliances specifically designed for these substances and that are properly marked to alert technicians that the equipment contains a flammable substance. EPA has approved the use of propane as a substitute refrigerant for R-22 in industrial process refrigeration systems and in new, stand-alone retail food refrigerators and freezers that are specifically designed to use flammable hydrocarbon refrigerants.

R-22 is being phased out of production and importation under the Montreal Protocol, an environmental treaty ratified by every country in the world designed to reduce and eventually eliminate the use of ozone depleting substances. EPA's Significant New Alternatives Policy (SNAP) Program has already listed numerous refrigerants with improved environmental, health and safety profiles and continues to evaluate other refrigerants that can be used to replace R-22 and other ozone-depleting substances.

More information about the EPA's SNAP program: <http://www.epa.gov/ozone/snap/>

More information about R-22a and alternatives for air conditioning:

<http://www.epa.gov/ozone/snap/r22a.html>

Source: The U.S. Environmental Protection Agency (EPA)

Mercury in the Environment: Legacy levels can persist for decades

Most of us are aware of the high levels of mercury found in fish. But where does this mercury come from?

Humans have been using mercury since before the Industrial Revolution, but it is currently being emitted by coal-fired power plants and artisanal gold mining. And according to researchers at Harvard University, significant reductions in mercury emissions will be necessary because of the element's persistence in surface reservoirs from past pollution.

Mercury particles then end up getting released into the air which end up raining down into water bodies and absorbed into the soil. Eventually these microbes in aquatic ecosystems convert mercury into methylmercury which accumulated in fish and consequently can cause health effects for those who consume these fish products.

"It's easier said than done, but we're advocating for aggressive reductions, and sooner rather than later," says Helen Amos, a Ph.D. candidate in Earth and Planetary Sciences at the Harvard Graduate School of Arts and Sciences and lead author of the study, published in the journal *Global Biogeochemical Cycles*.

Their model reveals that most of the mercury emitted to the environment ends up in the ocean within a few decades and remains there for centuries to millennia.

While mercury is naturally released during volcanic eruptions, humans are the main culprit to the pollution.

"Ideally, mercury released by human activities would quickly be sequestered in the environment, but instead what we see is a huge quantity of it bouncing from one reservoir to the next," explains senior author Elsie M. Sunderland, who is the Mark & Catherine Winkler Assistant Professor of Aquatic Science at the Harvard School of Public Health. "This means it continues cycling throughout the environment and persists for much longer timescales than most people realize, which has implications for long-term biological exposures."

"Today, more than half of mercury emissions come from Asia, but historically the U.S. and Europe were major emitters," says second senior author Daniel J. Jacob, Vasco McCoy Family Professor of Atmospheric Chemistry and Environmental Engineering at Harvard SEAS. "We find that half of mercury pollution in the present surface ocean comes from emissions prior to 1950, and as a result the contribution from the U.S. and Europe is comparable to that from Asia."

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Mercury in the Environment: Legacy levels can persist for decades (continued)

Sunderland notes: "Our study reinforces the need for immediate and stringent emissions controls globally, to the extent technologically possible, to avoid future human health risks. Already, the costs of methylmercury exposure in Europe and the United States have been estimated at upwards of \$15 billion."

Read more at [Harvard University](#).

Source: From: Allison Winter, ENN

Automobile Production Sets New Record in 2012

World auto production set yet another record in 2012 and may rise even higher during 2013. According to London-based IHS Automotive, passenger-car production rose from 62.6 million in 2011 to 66.7 million in 2012, and it may reach 68.3 million in 2013. When cars are combined with light trucks, total light vehicle production rose from 76.9 million in 2011 to 81.5 million in 2012 and is projected to total 83.3 million in 2013.

Just four countries—China, the United States, Japan, and Germany—produced 53 percent of all light vehicles worldwide, and the top 10 accounted for 76 percent. At 18.2 million vehicles, China produced almost as many as the next two countries—the United States and Japan—combined. Germany's and South Korea's production is declining slightly, while that of India, Brazil, Mexico, Canada, and Thailand is rising.

These trends may be good news for the automobile industry, which now sells a third more vehicles than just three years ago. But the same trends magnify environmental challenges. Automobiles are major contributors to air pollution and greenhouse gas emissions. Fuel efficiency standards are compelling manufacturers to produce cleaner cars that emit less carbon per kilometer driven. As of 2012, Japan, the European Union (EU), and India have the lowest limits, at between 128 and 138 grams of carbon dioxide per kilometer (g CO₂/km), whereas allowable emissions are in the range of 198—205 grams in Australia, Mexico, and the United States (for light-duty vehicles).

The standards now on the drawing boards are intended to bring average per-vehicle emissions down to 95 grams in the EU and 105 grams in Japan (both by 2020), to 93 grams for U.S. cars and 109 grams for U.S. light-duty vehicles (by 2025), and to 153 grams in South Korea (by 2015). India and China are studying limits for 2020 of 113 and 117 grams, respectively, and Mexico is considering 173 grams for 2016.

Alternative vehicle propulsion technologies are slowly becoming more prominent, driven by a desire to reduce dependence on petroleum and the need to reduce air pollutants and greenhouse gas emissions. Alternatives include so-called hybrid vehicles that use both a conventional internal combustion engine and an electric motor, as well as a variety of electric vehicles (EVs), such as plug-in hybrid electric vehicles (PHEVs), battery electric vehicles (BEVs), and fuel cell electric vehicles.

The cumulative number of hybrid vehicles sold worldwide as of early 2013 was about 6.3 million. Between late 1997 and March 2013, Toyota—the leading hybrid manufacturer—sold nearly 5.13 million hybrids worldwide, or 81 percent of the global total.

Continue reading at [Worldwatch Institute](#).

From: Michael Renner and Maaz Gardez, Worldwatch Institute

DEP Alerts Crystal Spring Vended Water Customers in Berks and Lancaster Counties of Drinking Water Violations

Clarification: As stated in the seventh paragraph of this news release, the violations occurred at Crystal Spring Vended Water, **not** Crystal Springs Bottled Water Company. They are different companies and are unaffiliated with one another.

The Department of Environmental Protection today notified the public that Crystal Spring, a Berks County water vendor, is selling drinking water that has not been monitored for contaminants and poses a potential health risk to those who consume it.

Since December 2012, Crystal Spring Vended Water has not completed monitoring, testing and reporting requirements for contaminants.

The contaminants that the owner did not test for and their associated timeframes for testing are:

Asbestos, one sample between January and December 2012;
Synthetic organic chemicals; one sample between January and March 2013; and
Bacteria, one sample every month for February, March, April and May 2013.

The Safe Drinking Water Act mandates that all contaminant testing results must be reported to DEP. This ensures that the treatment system is operating properly and that the well source on the Crystal Spring property has not become contaminated.

The department has been seeking compliance from Crystal Spring Vended Water since 2012. DEP will continue its efforts to bring this supplier into compliance with the Safe Drinking Water Act.

When purchasing drinking water, customers should only use compliant, regulated sources of public water.

Located along Route 272 in Adamstown, Berks County, Crystal Spring Vended Water is a privately-owned water fill-up station at which customers can refill their containers; bottled water services are not provided by this vendor.

For more information, call 610-916-0100. To view the public notice, visit www.dep.state.pa.us, click on Regional Resources, South-central Region and then click Community Information.

Editor's Note: Public Notice of this advisory was posted at the Crystal Spring Vended Water location.

Source: PA DEP