

# Conservation Committee Report

Volume 12 Issue 8

By Jack Walters, ACSL Conservation Chair

August 2010



## 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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## EPA Grant to Help Green the Port of Pittsburgh

### Diesel emissions will be significantly reduced

The U.S. Environmental Protection Agency today awarded a \$1,156,838 grant to the Port of Pittsburgh Commission to oversee extensive repowering of four marine towing vessels with new, more efficient diesel engines and generators that will reduce air pollution, improve air quality and lessen overall environmental impacts. The grant was awarded under the Diesel Emissions Reduction Act.

“Putting clean diesel engines in these hard-working marine vessels will bring

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## New Mosquito Reported In Allegheny County

### Health Department Says Asian Tiger Found, West Nile Precautions Taken

Allegheny County health officials report that the Asian tiger mosquito -- an aggressive biter that's active in daylight hours -- has been found in West Mifflin.

Channel 4 Action News' Amber Nicotra reported that this is the first time the new mosquito has been found in the county, and it carries a greater risk than others.

"Because it's an aggressive day-biter, flying around biting people during day

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cleaner, healthier air for communities along the Port's 200-miles of navigable

waterways," said EPA mid-Atlantic Regional Administrator Shawn M. Garvin. "EPA is pleased to support the Port of Pittsburgh in sustaining its operations while doing what's necessary to protect people's health and the environment.

EPA and the Port were joined by the Allegheny County Health Department, the Group Against Smog and Pollution (GASP), Clean Water Action Network, the Pennsylvania Department of Environmental Protection, and representatives from the three cooperating companies - - Campbell Transportation Company, Consol Energy and River Salvage, Inc.

"This grant, and the actions of these companies, will take the greenest, least polluting mode of surface transportation, and make it even greener. Each tow of 15 barges moves the equivalent of over 1,000 trucks. This industry is very proud of the contribution we make to reducing congestion and air pollution. Just by taking trucks off of the roads, we serve industries that could not be located here without the waterways.

Today we can be even prouder," said James McCarville, Executive Director of the Port of Pittsburgh Commission.

In addition to EPA's grant, the Pittsburgh Port Commission and three participating private companies will spend \$1.97 million for a total of more than \$3 million to repower the four vessels with cleaner burning engines. Each year, the engines will eliminate over 112 tons of nitrous oxide, 15 tons of carbon monoxide, five tons of particulate matter and two tons of hydrocarbons from the local air.

Clean diesel projects help address health issues including asthma attacks and other respiratory ailments.

The Port of Pittsburgh is the second busiest inland port in the U.S., moving 30 to 40 million tons of cargo a year worth \$6.6 billion. The Port provides an annual benefit to the region of \$873 million and provides 45,000 jobs. For more information on the Port see: <http://www.port.pittsburgh.pa.us>.

Following this morning's media event at the Port, a workshop will be held at Pennsylvania's Department of Environmental Protection's Southwest Regional office to encourage additional diesel emission reduction projects throughout the region.

Visit EPA's National Clean Diesel Campaign at <http://www.epa.gov/diesel/>.

EPA's website at Clean Ports USA at <http://www.epa.gov/cleandiesel/ports/index.htm>.

EPA's regional diesel website at <http://www.epa.gov/reg3artd/diesel/index.htm>.

For additional local information visit: the Allegheny County Partnership to Reduce Diesel Pollution at <http://pghdieselcleanup.wordpress.com/diesel-facts/>.

Note: If a link above doesn't work, please copy and paste the URL into a browser.

Source: U.S. EPA (<http://www.epa.gov/>)

**New Mosquito Reported In Allegheny County**  
**(continued)**

hours, biting at dawn and dusk, it has potential of spreading West Nile virus and other diseases," said Guillermo Cole, of the Allegheny County Health Department.

The mosquito has a distinctive black-and-white striped body, which is what gives it its name.

**Also, unlike other mosquitoes that bite mainly at dusk and dawn, the Asian tiger is out all day.**

The news comes as the county Health Department reported that other mosquitoes collected last week from Pittsburgh's West End and North Side have tested positive for West Nile virus.

"We'll be treating known breeding sites. Stormwater catch-basins will be treated to prevent mosquitoes for breeding. That's something we routinely do in certain areas of the county where there's historical West Nile activity," said Cole.

According to the Centers for Disease Control and Prevention, 80 percent of people infected with the virus have no symptoms.

Mild symptoms can occur in up to 20 percent of people infected.

In one in 150 people infected with the virus, serious symptoms of high fever, neck stiffness, numbness, coma, vision loss and paralysis can occur.

To help reduce the mosquito population, remove anything from your property that could hold standing or stagnant water, such as basins and tires.

"(Get) rid of junk, tires, flower pots, buckets. Any water-holding containers should be removed from the premises," said Cole.

Those who spend long periods of time outdoors should also be sure to use insect repellent.

Source: The Pittsburgh Channel (<http://www.thepittsburghchannel.com/index.html>)

Secretary Chu Announces Six Projects to Convert Captured CO<sub>2</sub> Emissions  
from Industrial Sources into Useful Products

**\$106 Million Recovery Act Investment Will Reduce CO<sub>2</sub> Emissions and Mitigate Climate Change**

U.S. Energy Secretary Steven Chu announced today the selections of six projects that aim to find ways of converting captured carbon dioxide (CO<sub>2</sub>) emissions from industrial sources into useful products such as fuel, plastics, cement, and fertilizers. Funded with \$106 million from the American Recovery and Reinvestment Act –matched with \$156 million in private cost-share –today’s selections demonstrate the potential opportunity to use CO<sub>2</sub> as an inexpensive raw material that can help reduce carbon dioxide emissions while producing useful by-products that Americans can use.

"These innovative projects convert carbon pollution from a climate threat to an economic resource," said Secretary Chu. "This is part of our broad commitment to unleash the American innovation machine and build the thriving, clean energy economy of the future."

Converting captured CO<sub>2</sub> into products such as chemicals, carbonates, plastics, fuels, building materials, and other commodities is an important aspect of carbon capture and storage technology. Converting CO<sub>2</sub> into other useful forms can help reduce carbon emissions in areas where long-term storage of CO<sub>2</sub> is not practical. It is anticipated that large volumes of CO<sub>2</sub> will be available as fossil fuel-based power plants and other CO<sub>2</sub>-emitting industries are equipped with CO<sub>2</sub> emissions control technologies to comply with regulatory requirements.

The projects announced today were initially selected for a first phase funding in October 2009 as part of a \$1.4 billion effort to capture CO<sub>2</sub> from industrial sources for storage or beneficial use. Over the succeeding months, the project teams have performed experiments on innovative concepts and produced preliminary designs for pilot plants to study the feasibility of capturing and using CO<sub>2</sub> exhausted from industrial processes. The selected projects now enter a second phase in which researchers design, construct, and operate their innovations at pilot-scale and evaluate the technical and economic feasibility of applying them commercially.

The projects selected to demonstrate the beneficial use of CO<sub>2</sub> include:

**Alcoa, Inc.** (Alcoa Center, Pa.)—Alcoa’s pilot-scale process will demonstrate the high efficiency conversion of flue gas CO<sub>2</sub> into soluble bicarbonate and carbonate using an in-duct scrubber system featuring an enzyme catalyst. The bicarbonate/carbonate scrubber blow down can be sequestered as solid mineral carbonates after reacting with alkaline clay, a by-product of aluminum refining. The carbonate product can be utilized as construction fill material, soil amendments, and green fertilizer. Alcoa will demonstrate and optimize the process at their Point Comfort, Texas aluminum refining plant. (DOE Share: \$11,999,359)

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## Six Projects to Convert Captured CO<sub>2</sub> Emissions (continued)

**Novomer Inc.** (Ithaca, N.Y.)—Teaming with Albemarle Corporation and the Eastman Kodak Co., Novomer will develop a process for converting waste CO<sub>2</sub> into a number of polycarbonate products (plastics) for use in the packaging industry. Novomer's novel catalyst technology enables CO<sub>2</sub> to react with petrochemical epoxides to create a family of thermoplastic polymers that are up to 50 percent by weight CO<sub>2</sub>. The project has the potential to convert CO<sub>2</sub> from an industrial waste stream into a lasting material that can be used in the manufacture of bottles, films, laminates, coatings on food and beverage cans, and in other wood and metal surface applications. Novomer has secured site commitments in Rochester, NY, Baton Rouge, Louisiana, and Orangeburg, SC where Phase 2 work will be performed. (DOE Share: \$18,417,989)

**Touchstone Research Laboratory Ltd.** (Triadelphia, W. Va.)—This project will pilot-test an open-pond algae production technology that can capture at least 60 percent of flue gas CO<sub>2</sub> from an industrial coal-fired source to produce biofuels and other high value co-products. A novel phase change material incorporated in Touchstone's technology will cover the algae pond surface to regulate daily temperature, reduce evaporation, and control the infiltration of invasive species. Lipids extracted from harvested algae will be converted to a bio-fuel, and an anaerobic digestion process will be developed and tested for converting residual biomass into methane. The host site for the pilot project is Cedar Lane Farms in Wooster, Ohio. (DOE Share: \$6,239,542)

**Phycal, LLC** (Highland Heights, Ohio)—Phycal will complete development of an integrated system designed to produce liquid biocrude fuel from microalgae cultivated with captured CO<sub>2</sub>. The algal biocrude can be blended with other fuels for power generation or processed into a variety of renewable drop-in replacement fuels such as jet fuel and biodiesel. Phycal will design, build, and operate a CO<sub>2</sub>-to-algae-to-biofuels facility at a nominal thirty acre site in Central O'ahu (near Wahiawa and Kapolei), Hawaii. Hawaii Electric Company will qualify the biocrude for boiler use, and Tesoro will supply CO<sub>2</sub> and evaluate fuel products. (DOE Share: \$24,243,509)

**Skyonic Corporation** (Austin, Texas)—Skyonic Corporation will continue the development of SkyMine® mineralization technology—a potential replacement for existing scrubber technology. The SkyMine process transforms CO<sub>2</sub> into solid carbonate and/or bicarbonate materials while also removing sulfur oxides, nitrogen dioxide, mercury and other heavy metals from flue gas streams of industrial processes. Solid carbonates are ideal for long-term, safe aboveground storage without pipelines, subterranean injection, or concern about CO<sub>2</sub> re-release to the atmosphere. The project team plans to process CO<sub>2</sub>-laden flue gas from a Capital Aggregates, Ltd. cement manufacturing plant in San Antonio, Texas. (DOE Share: \$25,000,000)

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**Six Projects to Convert Captured CO<sub>2</sub> Emissions**  
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**Calera Corporation** (Los Gatos, Calif.)—Calera Corporation is developing a process that directly mineralizes CO<sub>2</sub> in flue gas to carbonates that can be converted into useful construction materials. An existing CO<sub>2</sub> absorption facility for the project is operational at Moss Landing, Calif., for capture and mineralization. The project team will complete the detailed design, construction, and operation of a building material production system that at smaller scales has produced carbonate-containing aggregates suitable as construction fill or partial feedstock for use at cement production facilities. The building material production system will ultimately be integrated with the absorption facility to demonstrate viable process operation at a significant scale. (DOE Share: \$19,895,553)

Source: U.S. DOE (<http://www.energy.gov/>)

## Unique AMD Treatment System Dedicated

After years of planning and many months of construction, the Abandoned Mine Drainage (AMD) Treatment System at ALT's Wingfield Pines Conservation Area was officially dedicated on June 3, 2010. Nearly 100 people attended the unveiling that began with a welcoming breakfast provided by the USC Citizens for Land Stewardship. After a few remarks by attending dignitaries, everyone moved to the area around Pond #1 to witness the official opening of the treatment system. A future conservationist, assisted by Congressman Tim Murphy, had the honor of turning the valve that started water flowing through the aeration pipe into the first of five settling ponds. After that, attendees walked through the system and enjoyed the new boardwalk that meanders through the wetlands allowing close-up views of wildlife. Students from Duquesne University set-up ecology stations highlighting the wildlife that is returning to Wingfield Pines. Gary Rigdon provided an excellent picnic lunch to round out the festivities. For more on the dedication ceremony see our page of photos. (<http://www.alleghenylandtrust.org/AMDDedicationPhotos.html>)

The AMD Treatment System filters 43 tons of iron oxide annually from one billion gallons of mine discharge. Some early sampling indicates that iron oxide is reduced from **13.9 mg/L** in Pond #1 to **0.1 mg/L** at the discharge site into Chartiers Creek. Click here (<http://www.alleghenylandtrust.org/-AMD>) for a brief description of how the system works. For more information and photos of the construction, please visit our Wingfield Pines Highlights page (<http://www.alleghenylandtrust.org/properties/wingfield/highlights/index.html>)

and Special Projects: AMD Treatment System page.

( [http://www.alleghenylandtrust.org/special\\_projects/amd/index.html](http://www.alleghenylandtrust.org/special_projects/amd/index.html))

Even more information can be found in these media reports:

the Wingfield Pines segment (<http://www.wqed.org/ondemand/onq.php?id=790>) of WQED's *What's in the Water* series featuring the AMD Treatment System

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**Unique AMD Treatment System Dedicated**  
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a Pittsburgh Post-Gazette article (June 3, 2010)

(<http://www.post-gazette.com/pg/10154/1062781-455.stm>)describing the AMD Treatment System and dedication ceremony

article on The Allegheny Front website, Artful Water Remediation System Opens to Public  
(<http://www.alleghenyfront.org/story.html?storyid=201006071517570.394383>)

Source: Allegheny Land Trust

## **\$450,000 in grants goes to states for white-nose syndrome work**

Twenty-three states are receiving a total of \$450,000 in grants for white-nose syndrome projects. State natural resource agencies will use the funds for surveillance and monitoring of caves and mines where bats hibernate, preparing state response plans, and other related projects.

### Quote:

“These grants help our state partners, who are on the front lines of the battle against white-nose syndrome, do essential work,” according to the U.S. Fish and Wildlife Service’s National White-Nose Syndrome Coordinator Jeremy Coleman. “White-nose syndrome has spread rapidly, requiring state and federal agencies to direct significant resources toward work on this deadly disease.”

### Funding source:

The funding for state grants comes from a \$1.9 million congressional appropriation for white-nose work. One million dollars of the appropriation will be allotted to research grants, and \$450,000 will support U.S. Fish and Wildlife Service coordination and management of the response to white-nose syndrome.

### Background:

White-nose syndrome is a disease of unknown origin that has killed more than a million bats in the Northeast in four years. First seen in early 2006 on hibernating bats in a cave west of Albany, N.Y., it has been confirmed in 11 states and two Canadian provinces. It is considered likely in two more states. Despite a concerted effort by more than 50 agencies and organizations, no means of stopping WNS has yet been discovered.

Photos, additional background, current information, map: [http://www.fws.gov/northeast/white\\_nose.html](http://www.fws.gov/northeast/white_nose.html)

List of states and grant amounts below.

The U.S. Fish and Wildlife Service works with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. We are both a leader and a trusted partner in fish and wildlife conservation, known for our scientific excellence, stewardship of lands and natural resources, dedicated professionals, and commitment to public service. For more information about our work and the people who make it happen, visit <http://www.fws.gov>.

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\$450,000 in grants goes to states for white-nose syndrome work  
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States receiving WNS grants, May 2010

Notes: Many of the states did not receive the full amount requested and may be unable to fund all the needs identified in their grant applications. "Surveillance" refers to looking for white-nose syndrome in bats. "Monitoring" refers to recording bat population numbers and locations.

Pennsylvania      \$32,039      monitoring, investigate disease containment

Source: U.S. Fish & Wildlife Service

## WPC's School Grounds Greening Initiative Celebrates Another Successful Year

The Western Pennsylvania Conservancy's (WPC) School Grounds Greening Initiative recently wrapped up its second year of on-the-ground work with the Pittsburgh Public Schools.

The School Grounds Greening Initiative's goal is to add sustainable, low-maintenance plants, trees and greenspaces to all 66 Pittsburgh Public Schools by the end of 2011. Made possible through a \$1.5 million grant from the Grable Foundation, the program has already completed 28 projects at schools that serve some 11,000 students. By the completion of the project, WPC will have reached approximately 29,000 students and close to 5,000 staff, as well as parents and community members of the surrounding neighborhoods.

WPC utilizes sustainable landscape improvements (i.e. trees, shrubs, perennials) and constructs green spaces such as outdoor classrooms, sitting areas and natural play spaces. Studies show that bringing nature into the learning process encourages physical exercise, improves concentration, spurs creativity, instills a sense of peace and can reduce bullying, stimulate positive social interactions and enhance self-control. Community-wide effects can include increased school involvement and support from nearby community members, and a greener, healthier local environment.

Among the program's 2010 highlights is the groundbreaking for a sensory garden that focuses on bringing the advantages of school greening to disabled students. The first of its kind in the Pittsburgh Public School district, WPC partnered with Pittsburgh Public Schools, the Grable Foundation and the Edith L. Trees Charitable Trust to make it possible. The garden is located at the Pittsburgh Pioneer Education Center, a special education facility in the Brookline neighborhood that provides a range of services to students who have physical, mental and multiple disabilities. The primary focus of this garden is to utilize plants that stimulate children through touch, scent, sound, color and texture as they enjoy the outdoor spaces created in the garden.

"There has been an increasing body of research that has shown the profound developmental, psychological and behavioral benefits of healthy and regular interaction with nature," says David Wilson, WPC's School Grounds Greening Project Coordinator.

Source: [The Western Pennsylvania Conservancy \(http://www.paconserve.org/\)](http://www.paconserve.org/)

## DEP Boosts Rebates for Non-Electric Home Heating Equipment

Rebates up to \$1,000 Available, Made Possible through Federal Recovery Act

Pennsylvania residents now have even larger incentives to upgrade their non-electric residential heating systems to help them conserve energy and save money.

The Pennsylvania Home Heating Equipment Rebate Program now offers rebates ranging from \$250 to \$1,000 to replace eligible non-electric residential furnaces, hot water heaters and boilers fueled by home heating oil, natural gas or propane with more efficient ENERGY STAR-rated units.

Previously, rebates had ranged from \$100 to \$500. Only equipment purchased on or after Aug. 2 will be eligible for the higher rebates.

The \$11 million program is being funded through the American Recovery and Reinvestment Act.

“Since the program opened in April, we have received positive feedback from consumers and industry contacts, and observed similar programs in other states,” said Department of Environmental Protection Secretary John Hanger. “After closely analyzing the program's performance in our economy, we are increasing the dollar value of the rebates, in some cases doubling the amount depending on the type of the equipment and its energy efficiency rating.”

Nearly 3,900 Pennsylvania residents have received rebates after taking steps to make their homes more energy efficient. Heating and water heating account for nearly half of a typical home's total energy bill. Replacing this equipment can save almost 50 percent of a home's heating bill.

“Making home energy upgrades requires consumers to make serious financial commitments,” said Hanger. “However, through reduced energy use, these investments can dramatically lower home heating bills in the years to come. By increasing the incentives, we hope to encourage even more residents to invest in their homes and their financial futures.”

Pennsylvania residents may reserve a rebate online at [www.paheatingrebates.com](http://www.paheatingrebates.com). Those without Internet access can call 1-877-592-2061.

Once a reservation is made, consumers will have 30 days to submit the necessary documentation of purchase and installation. Rebates checks will then be mailed directly to the consumer. Rebates will be issued until program funds are depleted. A rebate can be combined with federal tax credits, a non-electric utility rebate, and/or a manufacturer's rebate.

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**DEP Boosts Rebates for Non-Electric Home Heating Equipment****(continued)**

“Although we’ve experienced a very warm summer, the next heating season is quickly approaching,” said Hanger. “Now is an ideal time for homeowners to take advantage of these increased incentives and consider making energy- and money-saving upgrades to their homes’ systems.”

To learn more about how the federal Recovery Act and related investments are helping Pennsylvanians, visit [www.recovery.pa.gov](http://www.recovery.pa.gov).

Source: PA DEP

DEP Says Specialized Natural Gas Emergency Responders Locating in PA,  
Improving Response Times

Recent Industry Accidents Underscore Need for Quicker Response, Severance Tax to Offset Additional Costs to Taxpayers, Communities

Recent high-profile accidents at natural gas wells in Pennsylvania have prompted the Department of Environmental Protection to arrange emergency response services with a leading company that is opening a new operation in the state, DEP Secretary John Hanger announced today.

CUDD Well Control will locate a new facility in Canton Township, Bradford County, which means a highly specialized, well-equipped emergency response crew will be approximately five hours from any natural gas well in Pennsylvania.

By comparison, it took 16 hours for out-of-state crews to address a June 3 blowout in Clearfield County and 11 hours to extinguish a July 23 fire in Allegheny County. In both cases, well operators had to wait for response crews to fly in from Texas.

“CUDD Well Control’s presence in our state will ensure fast and expert response to emergency situations at well sites,” said Hanger. “Recent accidents in our state have shown that the natural gas industry lacks the training and equipment to respond quickly to accidents. This creates a tremendous danger to the public and the environment.

“When an accident occurs, we cannot wait 10 or more hours for a crew to fly in from halfway across the country. Pennsylvanians must be confident that highly trained emergency services are available nearby to respond to a gas well emergency as quickly possible.”

The director of Pennsylvania’s Emergency Management Agency, Robert P. French, echoed Hanger’s comments, saying CUDD’s decision to locate in Pennsylvania brings much-needed expertise to the state.

“Our priorities during a well emergency are the safety and security of the first responders and the public, as well as the environment and property,” said French. “In certain well incidents, specialized equipment and technical advice is needed and this arrangement with CUDD Well Control will certainly enhance our ability to mitigate an incident in Pennsylvania.”

CUDD’s new operation will give Pennsylvania 16 specially trained well-control responders and a senior well-control responder in the state at all times. Senior responders can provide an initial assessment of emergency situations, advise local first responders, and coordinate emergency response measures with other well control specialists.

Equipment at CUDD’s new Bradford County facility also will include:

A 2,000-gallon-per-minute pump;

Heat shields, which will protect responders as they work near a well fire;

Pneumatic cutting devices that clamp onto damaged pipe to allow responders to cut it at a safe distance;

and

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## Specialized Natural Gas Emergency Responders Locating in PA

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A “hot tap,” which will drill a hole into damaged pipe to either relieve the pressure or allow responders to pump material into the well to kill it.

The commonwealth will employ CUDD’s services as needed through emergency contracts on a case-by-case basis, meaning there is no cost to taxpayers until CUDD personnel are mobilized. If that happens, the state will work aggressively to recoup those costs from the well operator.

DEP plans to enter into a formal contract with a well control specialty company through a competitive bid process by Oct. 15.

Hanger noted that emergencies at natural gas wells pose a considerable challenge and cost to local emergency response crews, but said that enacting a severance tax can offset those additional expenses.

“Local fire and police departments are usually the first ones on the scene when the worst happens. These emergency responders are our first line of defense in a community and natural gas wells are creating new burdens and costs for them,” said Hanger.

“When accidents happen, the natural gas industry should be bearing those costs, not the public or our fire, EMT and police departments. That’s one of the main reasons we need a severance tax: so taxpayers aren’t shouldering this financial burden and emergency response crews have the funds they need to respond appropriately, as well as get proper training and equipment.”

While finalizing the 2010-11 state budget, lawmakers agreed to vote on a severance tax by Oct. 1 with an effective date of Jan. 1, 2011.

Source: PA DEP