

ENVIRONMENTAL SYNOPSIS

The Chairman's Corner

Sen. Scott E. Hutchinson, Chairman



An exciting experiment is unfolding in the High Allegheny Plateau, which covers much of Northwest Pennsylvania and extends into New York. The plateau includes the Allegheny National Forest (ANF), state park land and other forest areas – both public and privately owned.

It's exciting because it features a successful public-private partnership that has developed and is implementing a comprehensive strategy to combat a forest invasive species and preserve and protect Pennsylvania's hemlock forests.

The hemlock is the official state tree of Pennsylvania and has been since 1931.

The lead team members in this partnership are the U.S. Forest Service and The Nature Conservancy (TNC). The lead players on each of these two teams are certified Forest Silviculturist Andrea Hille for the Forest Service, who has spent about 20 years of her career on the ANF, and Conservation GIS Analyst Sarah Johnson for TNC.

The lead villain in this effort is a tiny bug called the Hemlock wooly adelgid (HWA). The HWA is not a new pest to Pennsylvania. According to Andrea Hille, it arrived here in the 1950's and has been spreading from east to west ever since. The HWA feeds on the bases of needles of hemlock trees, sucking out the nutrients from the needles. It can kill otherwise healthy hemlocks in 5-8 years.

The HWA has no natural enemies and methods to try to control it are hit and miss, mainly relying on chemical treatment of individual trees and/or the use of predatory beetles. It has been difficult to get beetle colonies established, however, and experimentation with several different beetle species is still ongoing in the search to find the most effective one. Hille said a fungus-based control method that could be sprayed over wide areas from planes is still being studied, but might have potential.

According to both Hille and Johnson, back in 2012, before the HWA had been discovered in the approximately 1.2 million acres of the plateau (it has arrived now), a germ of an idea took hold. The idea was to try to get a jump on the HWA – get ahead of it – and identify priority areas to concentrate on so that efforts to combat the bug would be most efficient and most effective.

(continued on page 8)

In This Issue...

○ The Chairman's Corner.....p. 1

○ Notes From the Directorp. 2

○ Research Briefs.....p. 3-6

- ✓ More Than 200 Climate Change Ideas
- ✓ Beneficial Uses of Coal Ash Endorsed
- ✓ Toxic HF Acid Poses a Safety Issue
- ✓ New Strategy Being Employed to Block Keystone XL Pipeline

○ On the Horizon.....p. 7

NOTES FROM THE DIRECTOR

CRAIG D. BROOKS, EXECUTIVE DIRECTOR



A coalition of government officials and representatives from environmental organizations have set up a national network on water quality trading. The new network will show how water quality improvements can be made at a lower cost through market-based approaches rather than by installing controls at wastewater treatment facilities, industrial facilities and power plants.

Launched in January 2014, the network aims to provide options and recommendations to improve consistency, innovation and integrity across trading programs.

The Environmental Protection Agency's (EPA) water quality trading policy, issued in 2003, is essentially a cap-and-trade program with the total maximum daily load allocations for non-point and point sources serving as the cap against various sources that trade pollutant credits. These allocations are then incorporated into National Pollutant Discharge Elimination System (NPDES) permits for point sources.

The EPA policy allows point source dischargers such as publically owned water facilities and power plants to pay non-point sources such as farm operations to reduce certain pollutants such as nitrogen and phosphorus. States such as Oregon are using this scheme to trade credits earned through maintaining or lowering water temperature or meeting dissolved oxygen or ammonia limits.

According to the network overview, there are a variety of trading programs operating across the country at the state and local levels. The national network will provide a single forum for consolidating principles and practices of trading programs that have worked and lessons from programs that have failed. It will also offer a venue for federal and state environmental, agriculture and water officials to hold a dialogue with

representatives of the regulated sectors, including municipally owned wastewater utilities and power plants, environmental groups and landowners.

The network will release two white papers this spring. The first paper will consolidate a range of options with the pros, cons and issues based on experiences of existing water quality trading programs to consider in building a trading program. The second paper will attempt to establish a common set of principles and best practices to assist trading programs.

Trading has to be incorporated into the Clean Water Act NPDES programs that 46 states are delegated to run with EPA oversight.

The network was launched two days after the Electric Power Research Institute (EPRI) released its report *"Case Studies of Water Quality Trading Being Used for Compliance with NPDES Permit Limits"*. The report provides a snapshot of how water quality trading programs are incorporated into 18 NPDES permits.

The new national network plans to release two white papers this spring regarding water quality trading programs

The report found that permit holders were not applying credits toward NPDES permit obligations because there was a lack of regulatory need to use the credits. EPRI also found variation in the types of permit holders who sought to incorporate trading, and also how trading was incorporated in the permits. The group also found that most of the permit holders seeking to use trading as one way for complying with permits are wastewater treatment facilities.

EPRI, which is a non-profit that conducts research and development on electricity generation, delivery and use is a partner itself in a pilot interstate trading project in the Ohio River Basin among farmers, power plants and wastewater treatment facilities.

RESEARCH BRIEFS

Each month, the committee's staff researches and prepares a number of "briefs" on several topics relevant to the Joint Conservation Committee's mission. Very often, these briefs include references to reports and further research on the topics so that readers may pursue issues on their own.

Please Note: The information and opinions expressed in the Research Brief articles do not necessarily represent the opinions or positions of the Joint Legislative Air and Water Pollution Control and Conservation Committee, nor those of the Pennsylvania General Assembly.

Presidential Actions Could Jumpstart Clean Energy

-- Tony M. Guerrieri, Research Analyst

Because of the federal gridlock around energy and climate change, a report by the Center for the New Energy Economy (CNEE) urges the president to advance key measures of a clean energy policy, chiefly by using executive powers that are not dependent on action by a divided Congress. The CNEE report, *"Powering Forward: Presidential and Executive Agency Actions to Drive Clean Energy in America"*, outlines an array of executive actions the administration could implement to advance climate policy.

It contains more than 200 policy recommendations on how the president can use executive authority on a broad range of energy topics. In addition to presidential initiatives, the report also offers recommendations to a number of federal agencies, such as the U.S. Department of Energy, the U.S. Environmental Protection Agency and the U.S. Office of Management and Budget (OMB).

The recommendations focus on clean energy solutions in six areas including:

- doubling the nation's energy productivity;
- developing renewable energy markets;
- financing renewable energy;
- producing natural gas responsibly;
- enabling electric and gas utilities to adapt to the country's changed energy landscape; and
- developing alternative fuels and vehicles.

Among its many recommendations, the report points out that the president has jurisdiction over energy-saving performance contracts (ESPC), arrangements in which private companies make energy efficiency improvements to federal buildings. There is no cost to taxpayers. The companies are repaid by sharing the government's savings on energy bills. In 2011,

the administration ordered agencies to execute \$2 billion in ESPCs over two years, but it could go further. The report suggests that the president amend the 2011 directive "to require that agencies execute \$1 billion in energy saving contracts in each of the next five years."

The national economy wastes a staggering 87 percent of the energy it uses, so coming up with more efficient technologies should be a top priority. As a start, the CNEE report suggests that the president order his OMB to complete a pending review of new efficiency standards for appliances within 90 days – which its own rules actually require.

What should be the Obama administration's role in furthering a clean energy policy for the nation?

It suggests directing the U.S. Bureau of Labor Statistics (BLS) to review and improve how it counts "green jobs" and to resume reporting the number of those jobs in the economy. The BLS suspended its reporting on green jobs after it was criticized for its methodology.

Another recommendation urges replacing the "all of the above" energy policy with a "best of the above" policy by determining the full life-cycle costs of energy options to reveal and give higher priority in federal policy to those that offer the greatest public benefit for the least environmental, economic, social and security costs.

The report contains 29 specific policy recommendations covering natural gas issues. For example, the report recommends the administration more clearly define its criteria for "responsible" natural gas production, and require that oil and gas companies use best available production practices on federal lands.

Finally, on alternative fuels, the report calls on the administration to institute a few incentives. For example, the report suggests the administration “Create a Golden Carrot” for advanced biomass fuels – commonly known as biofuels. This would be a significant cash prize to reward a company or individual for bringing greener fuels into the mainstream.

These types of executive branch actions could provide states and local governments the ability to take a regional approach to climate adaptation and energy policies, the report says.

The report does not include several controversial topics, including the Keystone XL pipeline and exports of natural gas and oil.

The report was developed by the CNEE at Colorado State University, after a series of roundtables with CEOs, energy experts, academics and a variety of stakeholder groups. Participants were allowed to remain anonymous so that they would openly express their thoughts. Not all of the participants agreed with all of the ideas, but the report reflects the recommendations that received the strongest support.

To learn more about the CNEE’s proposed ideas, download the full 207-page *“Powering Forward: Presidential and Executive Agency Actions to Drive Clean Energy in America”* report from the CNEE’s website at: <http://www.poweringforwardplan.org>.

EPA Evaluation Endorses Beneficial Reuse of Coal Ash in Concrete, Wallboard Products

-- Craig D. Brooks, Executive Director

The Environmental Protection Agency (EPA) has released an evaluation supporting the encapsulated beneficial reuse of coal ash in concrete and wallboard products. The agency’s evaluation came after concluding the potential for release of hazardous constituents was at or below levels for products not containing coal ash.

According to the evaluation, reusing coal ash materials creates environmental benefits like reducing greenhouse gas emissions, lowering the amount of coal ash in landfills, and alleviating the need to use virgin materials. In addition, the evaluation states it reduces the cost of coal ash disposal, boosts revenue from the sale of coal combustion materials and increases savings from reusing materials, according to the evaluation.

The evaluation was limited to the beneficial reuses of coal ash in concrete and wallboard products but interested parties could use the methodology developed by EPA to evaluate other potential encapsulated uses of coal ash. Approximately 11.8 million tons of coal ash are used in concrete annually and 7.6 million tons are used in wallboard. These two applications amount to nearly 50 percent of all the coal ash beneficially reused in the United States.

A conceptual model for evaluating un-encapsulated uses of coal ash – where coal combustion residuals are in loose or unbound particulate or sludge form – will be developed in 2014, according to the agency. The protective reuse of coal ash advances sustainability by saving valuable resources, reducing costs and lessening environmental impacts. Beneficial reuses of coal ash are currently exempt from federal regulations under the Resource Conservation and Recovery Act (RCRA).

A decision supporting the beneficial reuse of encapsulated coal ash in concrete and wallboard products is a major victory for the coal ash recycling industry

Based on the information contained in the evaluation, it has been concluded that environmental releases of constituents of potential concern (COPCs) from coal combustion residual fly ash concrete and gypsum wallboard during use by the consumer are comparable to or lower than those from analogous non-coal combustion residual products, or are at or below regulatory health-based benchmarks for human and ecological receptors.

EPA’s evaluation of beneficial reuses comes shortly after the agency agreed to complete a long-standing rulemaking on the management of coal ash. The agency has been deciding whether to regulate the material under the hazardous waste provisions of Subtitle C of RCRA or under the non-hazardous waste provisions of Subtitle D.

The decision comes as a major victory for the coal ash recycling industry. Recyclers have said regulatory uncertainty on how the EPA would treat coal combustion residuals has harmed the beneficial reuse industry, but the endorsement of coal ash in concrete and wallboard should boost confidence in the use of the material.

The American Coal Ash Association (ACAA) said in November 2013 that continued regulatory uncertainty surrounding the material harmed beneficial reuses. The group said that 51.9 million tons of coal ash were reused in 2012, down from 56.6 million tons used in 2011 and well below the 2008 peak of 60.6 million tons.

The groups are pleased with EPA for returning regulatory certainty and creating additional opportunities for reuse of the material. According to ACAA, regulatory certainty combined with strong statements of support will help grow the beneficial reuse industry and the reuse of coal ash, safely keeping the material out of disposal facilities and creating economic and environmental value.

The EPA evaluation is available at: <http://1.usa.gov/1ixOBA1>.

Toxic Hydrofluoric Acid Puts Millions at Risk

-- Tony M. Guerrieri, Research Analyst

A United Steelworkers (USW) report, *"A Risk Too Great: Hydrofluoric Acid in U.S. Refineries"*, warns that refiners that use hydrofluoric acid (HF) in their alkylation process to make clean-burning gasoline do not have adequate safety systems in place and are not prepared to handle a release.

The U.S. Occupational Safety and Health Administration (OSHA) and the U.S. Environmental Protection Agency (EPA) regulate HF as a highly toxic chemical. It is used as an alkylation catalyst to manufacture high-octane fuels. Exposure to HF can cause severe burns and damage the eyes, skin, nose, throat and respiratory system. At high enough exposures, HF can be fatal.

If released into the atmosphere, HF rapidly forms a dense vapor cloud that is able to spread over large distances. Releases of HF from U.S. refineries could range from 3 to 25 miles, depending on the amount stored. More than 26 million people live within this range, many in urban areas that are impossible to evacuate quickly should there be a major release. According to the report, no other chemical process puts as many people at risk.

Fifty U.S. oil refineries use HF alkylation and on average each stores 212,000 pounds of the highly concentrated chemical. The USW represents workers in 28 of these refineries, and local unions in 23 of them

formed site survey teams and completed the USW's standardized questionnaire on HF. These 23 refineries put about 12,000 workers and 13 million community members at risk of exposure from an HF release.

Safety experts from inside and outside the USW examined the safety of USW-represented refineries using HF alkylation by reviewing the survey results and data from OSHA, the U.S. Chemical Safety Board and the industry. Their aim was to see how well these refineries were managing the risk of an HF release.

At three-quarters of the refineries surveyed, a total of 131 HF-related incidents or near misses had occurred the previous three years. Sixteen sites that reported their most serious or potentially serious HF-related events said workers either were or could have been injured, and half said that these events could have caused injuries to people in the community.

More than half of the site survey teams reported that 26 out of 32 safety systems were less than very effective in maintaining the integrity of HF alkylation processes and related processes such as storage and transfer, and in handling an HF emergency. A majority of the survey teams rated the six remaining safety systems as being very effective.

The safety level of the alkylation process of hydrofluoric acid in fuel refining is the issue raised in a new report

Almost two-thirds of the survey teams said their sites were less than very prepared in providing emergency personal protective equipment for on-site workers who might need it during a release.

More than half of the survey teams rated on-site and off-site emergency responders and medical personnel as being less than very prepared for an on-site emergency. Sites were assessed to be even less prepared for a release spreading into the local community.

A number of site survey teams commented that staffing levels were too low to ensure the safe operation of alkylation units.

Recent HF accidents have sparked concern. Federal investigators have twice deployed to a refinery in Corpus Christi, Texas since 2009 in response to accidents that unleashed the acid.

HF-related accidents have brought about pressure from labor unions and community groups to find replacements for HF and its associated technology. The USW report cites alternatives to using HF. It notes two options – a solid acid catalyst and an ionic liquid alkylation process – would virtually eliminate the risk. Both have been used in pilot projects, but U.S. companies have yet to adopt either.

The report also recommends stronger oversight by regulators. Both OSHA and the EPA should better use their authority to police facilities using hazardous substances by doing intensive inspections of HF alkylation units, the report says.

The USW is the largest industrial union in North America and has 850,000 members in the U.S., Canada and the Caribbean. The union represents workers employed in metals, rubber, chemicals, paper, oil refining, atomic energy and the service sectors.

The report, *"A Risk Too Great: Hydrofluoric Acid in U.S. Refineries"*, is available at: <http://www.usw.org/results?q=hydrofluoric&cx=002815250263393764720%3A2bbhy3ivkuq&cof=FORID%3A11&ie=UTF-8>.

Keystone XL Pipeline Opponents Attempt Unusual Block to Construction

-- **Craig D. Brooks, Executive Director**

Environmental groups are making an unusual argument in their attempt to block construction of the Keystone XL pipeline to carry oil sands crude from Alberta, Canada to Texas. The argument is that trains cannot move all of the oil out of Canada.

Keystone supporters say Canada could just as easily transport the additional crude from the Alberta fields to the United States on trains, meaning that building the pipeline won't contribute to climate change because the oil will be extracted, pipeline construction or not.

Opponents have worked hard to dispel the argument ahead of the State Department's release of a key environmental impact statement in the coming weeks. A draft of the environmental statement in March 2013 said new railroad cars and pipelines will be developed to get the Alberta oil out of Canada even without the proposed Canada-U.S. link. It concluded that regardless of the Keystone XL pipeline construction, the Alberta oil fields will be developed.

If the final report alters or reverses that conclusion, it could mean difficulties for TransCanada Corp.'s application to build the \$5.4 billion pipeline to link the oil sands of Alberta to the refineries in the Gulf of Mexico. The relative safety of pipelines and the safety of rail lines will be part of the State Department review. At the end of the day, trains are safe and pipelines are safer, and accidents from either or both are relatively few. Opponents aren't so sure.

With pipeline capacity limited, Canadian oil producers must rely on trains to deliver oil to the U.S. and the U.S. National Transportation Safety Board and the Canadian Transportation Safety Board have said that increases in moving crude by train should significantly bridge the export capacity gap. However, oil hauled by rail needs to be shipped in stronger tank cars as a safety measure to avoid accidents.

Train or pipeline? How will oil sands crude be moved from Canada to the U.S. Gulf Coast

The U.S. and Canadian safety boards made the recommendation after a CSX Corp. train hauling crude derailed January 2014 near the Schuylkill River near Philadelphia, Pennsylvania.

Shipping crude by rail is definitely more costly. According to the Canadian Energy Research Institute in Calgary, it costs about \$9 to ship diluted bitumen, as the crude is known, from Alberta to the Gulf of Mexico by pipeline, and about \$20 to do so by rail.

However, the higher costs aren't derailing the project. Shipments by rail will increase significantly in the next few years as pipelines reach their capacities. And, the cost of moving it by train may increase with an additional regulatory response.

After a final environmental assessment is released, federal agencies, including the Environmental Protection Agency, will have 90 days to advise the State Department whether or not the Keystone XL pipeline is in the best interest of the United States.

Proponents of the pipeline are cautiously optimistic as to the outcome of the assessment due to the mounting evidence showing the project's critical importance to the tar sands industry's expansion and benefits to the United States.

ON THE HORIZON...

A LOOK AT UPCOMING EVENTS

- ✓ **Monday, April 7, 2014, 12 noon - Environmental Issues Forum.** Room 8E-B, Capitol East Wing, Capitol complex, Harrisburg, PA – Greg Brouse, Quality Manager for Eastern Industries, Inc., will discuss the benefits of using recycled ground tire rubber (GTR) in asphalt road paving and GTR's potential role in furthering highway infrastructure improvements in Pennsylvania. Brouse will describe a new, innovative way to use GTR – recently employed in a pilot paving project in central Pennsylvania – that he believes will add durability and extended life to roads. He will also describe technology improvements that should lessen the cost of GTR in asphalt mixes and could stretch how far tax dollars go in highway construction.
- ✓ **Thursday, April 10, 2014, 10 a.m. - Public Hearing.** West Pikeland Township Building, 1645 Art School Road, Chester Springs, PA - The purpose of the hearing is to listen to concerns about pipeline construction and its impact on residents in Chester County and the southeast region of PA.

✓ **Monday, May 5, 2014, 12 noon - Environmental Issues Forum.** Meeting room to be determined
The TreeVitalize program will be the topic of the May 5 Environmental Issues Forum. More details to follow.

Please call the committee office at 717-787-7570 if you plan to attend Environmental Issues Forums. And, check the committee website at <http://jcc.legis.state.pa.us> for more details and events that may be added to the schedule.

Don't forget to Visit Our Website

Learn More at
<http://jcc.legis.state.pa.us>

To learn more about the Joint Legislative Air and Water Pollution Control and Conservation Committee, simply pay a visit to our website.

Website visitors will find information such as the Environmental Issues Forums schedule; the *Environmental Synopsis* monthly newsletter; committee members; current events; committee reports; staff contact information; committee history and mission; and links to other helpful sites.

The website address is <http://jcc.legis.state.pa.us>. Stop by the website often to keep up with committee information and events.



Why Not Switch to "E-Synopsis"

You can receive the *Environmental Synopsis* electronically if you don't want to wait for the mail to be delivered or you want to help the committee save paper and reduce mailing costs.

If readers would like to change the method in which they receive the *Synopsis* from mailed hard copy to an e-mailed version, please call the office at 717-787-7570 and request to be removed from the mailing list and added to the e-mail list. Remember to provide your e-mail address. Readers are also reminded that the *Synopsis* is available on the committee website each month.

Hille was able to get \$80,000 in federal funding from the "State and Private Forestry" section of the Forest Service to put a strategic plan together.

I know that so far, this might sound like just so many other government-funded causes. But Hille and Johnson wanted to go about building a plan in a couple of different ways so it would be much more than the usual.

First, they wanted it to be an all-lands approach. The HWA doesn't recognize park boundaries or national forest boundaries, so why should the approach to combat the bug. They didn't want to limit the effort to just the ANF, for example, but take an ecological area-wide approach.

Second, it was decided that this could not be just another public agency project, but called for a real public-private partnership, including private forest landowners, and including members of the forest industries throughout the area.

Each agency brought strengths to the table. The history, experience and knowledge of the Forest Service is obvious. According to Johnson, TNC's experience in managing partnerships and building collaborations between diverse entities has proven to be very important. Johnson is a GIS specialist and was brought on board to lend that expertise to this project (as well as others on TNC's platter).

According to both Hille and Johnson, they are extremely pleased with what has transpired so far. Both say the public-private partnership approach is working well. After initial well-attended planning sessions, which Hille said involved more than 50 entities, a steering committee has been established to coordinate efforts. Hille says she has "never worked on anything so efficient."

Using GIS technology in conjunction with what Johnson called "good, old-fashioned discussion" and field knowledge, a comprehensive data set has been gathered and maps developed to establish priority focus areas. The goal, according to Hille, is to select priority areas in order to be "...smart where we spend money."

Among factors considered in denoting priority areas are where hemlock forests have an impact on water quality, trout streams and wildlife habitat, wild and scenic areas, old growth forests, recreation areas and where hemlocks exert ecological and social impacts.

Since the start of the project, education and outreach components have been incorporated. Area citizens and groups have agreed to monitor areas, for example, with more than 30 areas having been adopted. Both Hille and Johnson were excited to note that a workshop meeting held during a February 5th snowstorm had an attendance of 45 people despite the weather.

Johnson believes that long-term, this project could be a good strategic model in setting up cooperative land management areas (management across ownership boundaries), both on the plateau and in other areas. Both women are anxious to keep the collaboration going, and Hille is pursuing further funding to do just that. The information and outreach components are also working to foster monitoring of the HWA and hemlock health and to get people thinking and talking about forest management – always a good thing.

It is indeed an exciting time on the High Allegheny Plateau these days.

How to Contact The Joint Conservation Committee

Phone:
717-787-7570

Fax:
717-772-3836

Location:
Rm. 408, Finance Bldg.

Internet Website:
<http://jcc.legis.state.pa.us>

Mail:
Joint Conservation Committee
PA House of Representatives
P.O. Box 202254
Harrisburg, PA 17120-2254



**Printed on
Recycled Paper**

Joint Legislative
Air and Water
Pollution Control and
Conservation
Committee