

# ENVIRONMENTAL SYNOPSIS

## The Chairman's Corner

Rep. Scott E. Hutchinson, Chairman



When I try to rank the importance of the duties of the Joint Legislative Air and Water Pollution Control and Conservation Committee (Committee), solving problems is at the top of the list. Helping others also ranks right up there as does education.

Perhaps that's understandable since in most cases, educating

people about a problem usually leads to the best possible solutions that help the most people. These three results – solving a problem, educating others and helping as many people and communities as possible – have driven the Committee's actions in the investigation into the "Kilbuck Township landslide".

By way of review, the Committee conducted a public hearing in Sewickley, Pennsylvania on November 2, 2006 to receive testimony regarding the massive landslide at the site of the former Dixmont State Hospital in Kilbuck Township, Allegheny County. The site, comprised of a hilltop with a steeply sloping hillside, is presently under construction for the purpose of building a large shopping complex. The project received local and state approvals.

The landslide, which occurred in September, 2006, deposited massive amounts of dirt, rocks, trees and other debris over a four-lane highway (Route 65) and the nearby Norfolk-Southern railroad tracks, closing the highway and rail lines for several days. The closure caused the rerouting of 22,000 vehicles a day and stopped vital rail traffic on the main East Coast railway connection between New York and Chicago, and requires highway reconstruction, which could last several months. Even

as plans to stabilize the slope are under review today, movement on the slope continues.

After reviewing the hearing testimony, the Committee has offered three suggestions to the Joint State Government Commission, which was directed by House Resolution 897 to establish a task force to conduct – with the Committee's assistance - an in-depth investigation of the landslide. HR 897 was adopted by the House on October 24.

There have been and continue to be extensive communications between our Committee and the Commission, seeking to gather as much knowledge as possible, enlist as much expertise as possible and maximize cooperation as much as possible. The task force is being formed and it will be providing a vital service, not only for the citizens of Kilbuck Township but also potentially for all Pennsylvanians.

Before listing the Committee's suggestions for the task force to review, it should be noted that the movement of soils is a natural process that often occurs on hillsides. When people interfere with this natural process, however innocently or well intentioned, unplanned consequences such as landslides or other mass movements and resultant damage, suffering

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# NOTES FROM THE DIRECTOR

CRAIG D. BROOKS, EXECUTIVE DIRECTOR

Wind power has come a long way from the windmills used throughout rural America in the early twentieth century. Ever since the energy crisis of 1973 first pushed government funding for renewable energy development, the United States wind power industry has achieved remarkable advances in technology, cost reduction and market growth.

Fortunately, new technologies and policies are evolving to take full advantage of wind's potential. The United States actually reached a wind energy milestone this past year with 10,000 megawatts of total generating capacity, or enough to power 2.5 million homes. That's a remarkable achievement.

One of the most effective advances the industry has developed for increasing output and reducing costs of electricity generation is building larger turbines with longer blades and placing them on taller towers. Because power output from a turbine increases as a function of wind speed, the higher speed winds typically found at greater heights can generate far more electricity than low speeds near the ground. In addition, a larger rotor swept area increases the amount of energy that can be captured.

For example, a 50-kilowatt wind turbine with a rotor diameter of 15 meters was considered large in the 1980's, but today's land-based wind turbines generate 30 times as much electrical output with a rotor diameter only five times larger (77 meters). This increase in size, however, has created some challenges.

Larger, longer components are more costly to transport and require special equipment to assemble. In addition, the larger machines operate at higher capacities for longer hours per year, thereby increasing the wear and tear on the components, and requiring increased maintenance and replacement.

Two exciting new technologies hold out promise for consistent growth in the wind industry in the coming decades: turbines that can be set in deep offshore waters, and land-based turbines that can operate cost effectively at lower wind speeds. Tapping into strong wind sources located far offshore, however, will require floating platform foundations, transmission technologies and anchoring systems. For land-based turbines, generating wind at low speeds will likely require even taller towers, longer blades and more efficient mechanical components and electronics. Fortunately, none of these obstacles is insurmountable.

**Growth in the wind power industry is enhanced by two new technologies: turbines set in deep, off-shore waters and land-based turbines that operate at lower wind speeds**

It should be noted that technology has not been solely responsible for the success of wind power nor is it the only factor affecting its future. Though the U.S. wind industry continues to expand at a rapid pace, the cost of developing a wind power project has actually increased over the past 18 months.

Federal and state tax incentives have helped drive the development of new wind resources since 1978. The federal production tax credit, currently expanded through 2007, provides a 1.8 cent per kilowatt-hour incentive for the first 10 years of a wind turbine's life. And, 20 states require utilities to gradually increase the amount of renewable energy in their supply mix.

On one hand, high global demand has caused most turbine manufacturers to sell out through 2008 and the cost of steel and other materials has risen sharply due mostly to higher fossil fuel prices. On the other hand, higher fossil fuel prices have driven up the cost of conventional power, enabling wind power to remain cost-competitive.

Technological innovation and market growth have transformed wind energy into an efficient and reliable energy source. With further support, the near future holds even more promise.

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# RESEARCH BRIEFS

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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.

## Great Lakes Cities Graded on Sewage Management

– Tony M. Guerrieri, Research Analyst

Billions of gallons of untreated urban sewage and toxic effluents that flow into the Great Lakes each year are threatening a critical ecosystem that supplies drinking water to 17 million people. This according to a report by the environmental group Sierra Legal Defense Fund.

The report, *"The Great Lakes: Sewage Report Card"*, suggests that even though municipalities in the Great Lakes region have spent vast sums of money in recent decades upgrading their wastewater plants, the situation remains critical.

The Great Lakes basin is the largest freshwater ecosystem on earth and holds one-fifth of the world's fresh water. The Great Lakes include lakes Superior, Huron, Michigan, Erie and Ontario, all of which are interconnected by rivers, channels and smaller lakes. The report examines 20 American and Canadian cities in an ecosystem-based survey. It also offers an analysis of municipal sewage treatment and discharges into the Great Lakes basin.

The survey graded municipalities in areas such as collection, treatment and disposal of sewage based on information provided by the local governments.

The main problem, the report concludes, is that most cities in the eight U.S. states and two Canadian provinces that surround the lakes have antiquated sewage systems that are incapable of dealing effectively with the vast amounts of effluent that flow through them.

The situation is especially bad when heavy rains overwhelm treatment systems in cities where storm water runoff is collected in the same pipes as sewage.

The report estimates that the 20 cities – home to about one-third of the 35 million residents of the Great Lakes basin – discharge about 24 billion gallons of untreated effluent into the Great Lakes every year through combined sewage overflows.

At the same time, it takes about a century for the Great Lakes to completely recharge.

In the United States, Green Bay, Wisconsin topped the report card with a B-plus grade. Green Bay, which borders Lake Michigan and serves 176,000 people with its sewer system, was given the highest grade for report-

ing no overflows, bypasses or spills. Duluth, Minnesota received a B and three cities (Rochester, New York; Erie, Pennsylvania and Chicago, Illinois) received B-minuses.

Three Canadian cities received B grades – the Peel Region (including the cities of Mississauga and Brampton) earned a straight B and Thunder Bay a B-minus. According to the report, these cities were the best performers, thanks largely to their ability to keep rain water and sewage separate.

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**It's a familiar problem: most cities surrounding the Great Lakes have antiquated sewage systems incapable of dealing effectively with the vast amounts of effluent flowing through them, especially in wet weather events**

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The worst offenders: Detroit, Michigan, which earned the lowest grade in the entire report card with a D, Cleveland, Ohio (D-plus), and the Canadian city of Windsor (D-plus). In Detroit, according to the report, from July 2000 to June 2001, the city's sewage system spilled 39 million gallons of raw, untreated sewage from 41 discharge points that eventually flowed into Lake Erie.

As for the other cities in the United States, Syracuse, New York scored a C-minus; and Milwaukee, Wisconsin and Grand Rapids, Michigan rated a C-plus. Canadian cities such as Toronto (C) and Hamilton (C) also earned below-average grades.

In addition to grading the cities, the report provides an analysis of the region's sewage treatment laws and policies. A patchwork of national, provincial, state, regional and city governments hampers clean-up efforts, the report says.

The report makes several policy and infrastructure recommendations, including improving water conservation in order to reduce the flow to sewage plants, and keeping rain water out of sewers by disconnecting downspouts and separating storm drains and sewer systems.

A copy of the Sierra Legal Defense Fund report, *"The Great Lakes: Sewage Report Card"*, and background materials are available at <http://www.sierralegal.org/reports/great.lakes.sewage.report.nov.2006b.pdf>.

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# Oversight of EPA Grant Process and Management Needs Improvement

– Craig D. Brooks, Executive Director

Although the Environmental Protection Agency (EPA) has improved its management of grants in recent years, it needs to improve the oversight of its “earmark” grants, according to EPA’s Office of Inspector General (OIG). The report, aptly titled *“EPA Needs to Emphasize Management of Earmark Grants”*, suggests that EPA clarify its grants management process and provide better training for its employees.

As a result of insufficient management of earmark grants over the past 10 years, the OIG has questioned the use of nearly \$73 million in federal funds. In addition, EPA has been unable to identify the environmental benefits of millions of additional dollars, the report said.

The OIG recommended that EPA issue a memorandum on its earmark grant policy, identifying actions that program offices can take to improve grant awards with added oversight of the award process. The inspector general also recommended that the memorandum’s guidance be incorporated into future training courses for staff who manage grants.

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## EPA needs to clarify its grants management process and provide better employee training in the area of earmark grants

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A congressional earmark is a portion of an appropriation designated by Congress to be spent on a particular project, often referred to as a “line item” in EPA appropriation bills. Earmarks are designated for a wide variety of projects. Over the past 10 years, such earmarks have included grants to assist minority firms obtain contracts, to study watersheds, to help Alaskan villages build drinking water and wastewater facilities, to assist rural water facilities comply with federal regulations, to increase awareness of alternative heating sources like geothermal heat pumps, and to educate companies on how to reduce carbon emissions.

The earmarked funds EPA receives each fiscal year account for about six percent of its annual budget, the report said. Most of the money is administered through assistance agreements - usually grants.

In conducting its review, the report looked at 18 previous audit and investigation reports on earmark grants since 1996. Six of the 18 reports found that EPA’s lack of oversight was a cause for a grant recipient’s misuse of federal funds, while 12 reports identified management of the grants by recipients as the problem.

Some of the problems resulted from a perception by EPA employees and earmark recipients that EPA has limited control over the grants once approved by Congress. The report suggests that insufficient planning often results from this perception.

According to the report, general EPA policy calls for earmarks to be managed as any other assistance agreement. However, EPA policies do not provide specific options for employees and grant recipients to address concerns about earmark projects.

Among the problems identified, the report suggests that incomplete grant work plans, improper accounting and financial procedures, non-compliance with grant terms and conditions, and non-compliance with applicable laws and regulations topped the list.

As an example of improper accounting or financial procedures, the inspector general questions the use of a nine-year, \$232 million grant to build water and wastewater facilities in Alaskan villages. OIG found that discrepancies with U.S. Treasury compliance regulations had occurred regarding federal funds and has recommended the repayment of the money unless a proper explanation of how the money was spent can be obtained.

In an example of unclear environmental benefits, the report cites \$70 million in earmark grants given to the National Drinking Water Association over the past five years to be issued to state associations for technical assistance to rural water utilities. According to the report, EPA did not sufficiently measure the outcome of grant funded projects, which may or may not have resulted in environmental benefits.

Based on information of past reports, the OIG is recommending that EPA take additional steps to improve overall management of earmark grants.

The report is available at <http://www.epa.gov/oig/reports/2006/20060926-2006-P-00037.pdf>.

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## Report Finds Many Supermarkets Do Not Warn Shoppers About Mercury in Seafood

-- Tony M. Guerrieri, Research Analyst

Fish can be a good, healthy food source. Fish is protein rich, low in fat and can even protect against heart disease. Unfortunately, this otherwise healthy food has been contaminated by mercury pollution and many species can be unsafe to eat. In 2004, the U.S. Food and Drug Administration (FDA) and the U.S. Environmental Protection Agency recommended that women of childbearing age, including pregnant and nursing women, and young children not eat four species of ocean fish: swordfish, tilefish, shark, and king mackerel. The federal government also recommends those women limit consumption of light tuna to 12 ounces per week and albacore tuna to six ounces per week. Albacore are larger, live longer and can accumulate more contaminants than other species.

Most people, however, are not aware of this advice, or simply not able to recall the specific types of fish they have been advised to avoid. According to a report by the conservation group Oceana, only 12 percent of U.S. grocery store chains post at their seafood counters the FDA's advisories warning consumers about the dangerous levels of mercury found in specific types of fish.

The report, *"Vital Signs: The Status of Mercury Warning Signs in U.S. Grocery Stores"*, contends that providing information at the point of purchase is an easy and effective way to ensure that consumers know which fish to buy and which to avoid.

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**Only 12 percent of U.S. grocery store chains post Food and Drug Administration advisories about dangerous mercury levels in specific types of fish**

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Mercury is a toxic metal that can cause nerve damage in humans and is particularly dangerous to children and women of childbearing age. Methylmercury, a form commonly found in fish, is the type most likely to cause health problems. Children exposed to methylmercury before birth may be at increased risk of poor performance on neurobehavioral tasks, such as those measuring attention, motor function, language skills and verbal memory.

The report includes Oceana's "Green List," a distinction given to 15 grocery store chains (nearly 3,000 stores) that already voluntarily make this information available to consumers. Those stores include Safeway, Star Market, Vons, Trader Joe's and Albertsons. Grocery stores not posting the warning are on Oceana's 50-member "Red List."

All 50 states and the District of Columbia were ranked, and graded based on the prevalence of stores posting signs. According to the report, California has been at the forefront for warning its citizens about mercury and seafood, and is the only state so far that has mandated that seafood counters be equipped with information on mercury risks. As a result of Proposition 65 (the state's "right to know" law), all grocery stores are required by law to post warning signs at seafood counters with the FDA's advice on which fish to avoid.

Other states with a high percentage of stores posting mercury warnings include Hawaii (75 percent), Alaska (71 percent), Oregon (68 percent), Washington (61 percent), Idaho (59 percent), Illinois (57 percent), Nevada (49 percent) and Massachusetts (45 percent). These nine states and the District of Columbia (with 71 percent) received "A" grades.

Pennsylvania received a "C" in the report. It was ranked 24<sup>th</sup> with 16 percent of the grocery stores in the state posting mercury consumption advisory signs. Ninety-three stores were on the "Green List" and 492 stores were on the "Red List."

The report indicates that shoppers in southeastern states are least likely to get the FDA advice. West Virginia is one of four states where not a single grocery store warns consumers of the possible dangers of mercury in fish. Mississippi, Alabama and North Dakota also recorded zeros for in-store warnings.

Together, the bottom 10 states collectively have 29 stores on the "Green List," earning them all "F" grades. According to the report, the chance of a consumer finding this type of information while buying fish is almost zero.

The report recommends that state and federal governments should require warnings to be posted where fish covered by government advisories is sold. Further, state health agencies and the FDA should develop and implement more effective programs to educate the public about mercury in fish, including requiring stores that sell fish covered by the FDA advisory to post warning signs.

Oceana is an international organization dedicated to protecting the world's oceans. For a copy of the report, *"Vital Signs: The Status of Mercury Warning Signs in U.S. Grocery Stores"*, visit [http://oceana.org/fileadmin/oceana/images/greenlist/VITALS\\_REPORT.pdf](http://oceana.org/fileadmin/oceana/images/greenlist/VITALS_REPORT.pdf).

# NOx Emissions Down in Eastern States

- Craig D. Brooks, Executive Director

Nitrogen oxide (NOx) emissions declined 11 percent in 21 eastern states in 2005 according to a recent U.S. Environmental Protection Agency (EPA) report. These 21 states participate in an EPA emission-reduction program known as the NOx SIP Call, which was designed to reduce nitrogen oxide emissions from power plants and other large industrial sources in 21 states and the District of Columbia by one million tons per year. The 11 percent emission reduction occurred despite a seven percent increase in power generation in the region, according to EPA.

Nitrogen oxide emissions were 57 percent lower than they were in 2000, before the NOx SIP Call was implemented, and they were 72 percent lower than before the Clean Air Act Amendments of 1990 were enacted. According to EPA, long-term trends show that our nation's air is cleaner than it was over a generation ago and continues to improve with innovative clean air policies. The report, *"The NOx Trading Program: 2005 Program Compliance and Environmental Results"*, evaluates the progress under the NOx SIP Call in 2005 by examining emission reductions, comparing changes in emissions with changes in ozone concentrations and reviewing compliance results and the market for nitrogen oxide emissions allowances.

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**EPA – Long-term, the nation's air is cleaner than a generation ago and continues to improve with innovative clean air policies, despite a 2005 increase in ozone pollution**

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In addition to the region's nitrogen oxide reductions, nearly 70 percent of the areas in the region that previously did not meet the national air quality standard for eight-hour ozone now have ozone levels lower than what the standard requires. The NOx Budget Trading Program (NBP) is the major contributor to these improvements, according to the report. In 2003, EPA designated 103 counties in the region as non-attainment areas for ozone.

Nationwide, however, ozone pollution was slightly worse in 2005 than in 2004, showing a breach of the ozone standard in more than 1,000 monitors.

The majority of NOx emissions in the eastern United States comes from mobile sources, industrial processes and the power industry. Mobile on-road and non-road

sources (59 percent) and the electric generating units and large industrial sources (22 percent) were responsible for the majority of annual NOx emissions in the eastern United States in 2005.

EPA has developed more than a dozen programs since 1990 to improve ozone air quality by reducing NOx emissions from major sources. In 1995, EPA and the Environmental Council of States formed the Ozone Transport Assessment Group to begin addressing the problem of ozone transport across the entire eastern United States. Based on the group's findings, EPA issued a regulation in 1998 to reduce the regional transport of ground-level ozone.

This rule, commonly known as the NOx SIP Call, requires states to reduce NOx emissions that contribute to ozone non-attainment, but does not mandate which sources must reduce emissions. Instead, it gives flexibility to the states to meet emission budgets and develop control strategies to meet those budgets through the NBP.

NBP allows states to meet their emission budgets in a cost-effective manner through a region-wide cap and trade program for electric generating units and large industrial boilers.

The report is available at <http://www.epa.gov/air-markets/fednox/>.



## News to Use in the Environmental Synopsis... share it with a friend

The *Environmental Synopsis* is issued monthly.

The newsletter examines timely issues concerning environmental protection and natural resources.

If someone you know would like to receive a copy of the *Synopsis* each month, please contact the Committee office at 717-787-7570.



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# ON THE HORIZON . . .

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A LOOK AT UPCOMING EVENTS

- ✓ Thursday, February 8, 10 a.m., Conference Room 107, Penn Stater Conference Center Hotel, 215 Innovation Boulevard, State College – Sewage Management and Treatment Task Force Meeting.
- ✓ Thursday, February 15, 10 a.m., Conference Room 108, Penn Stater Conference Center Hotel, 215 Innovation Boulevard, State College – Legislative Forestry Task Force Meeting.

Task force members should call the committee office at (717) 787-7570 if they plan to attend.

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# COMMITTEE CHRONICLES . . .

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REVIEW OF SOME MEMORABLE COMMITTEE EVENTS



*The final Environmental Issues forum of 2006 featured J. Kent Crawford, Water Quality Specialist for the Pennsylvania Water Science Center of the U.S. Geological Survey (USGS), pictured at left.*

*Crawford told the audience (pictured below) about “Emerging Contaminants in Pennsylvania Waters.” Pharmaceutical compounds and physician-prescribed antibiotics are among the compounds known as “emerging contaminants.” Crawford, who has over 30 years of experience in a variety of water quality projects, discussed what is known about the occurrence of these contaminants in Pennsylvania streams and ground water and whether they presented cause for concern.*



*Following the forum, (in photo at left) Crawford (right) discussed his work with Committee Chairman Rep. Scott Hutchinson.*

and inconvenience can be the result. In the case of the Kilbuck site, it appears that several red flags suggesting that just such an occurrence might happen may have been missed or ignored.

While engineers and geologists often distinguish between a landslide's immediate cause and the underlying causes, initial testimony offered at the November 2nd hearing would seem to point to a combination of the effects of heavy rains on a construction-weakened slope as the immediate cause of the Kilbuck landslide. Coupled with that immediate problem is a history of slope and earth instability problems dating back to the time when the state hospital occupied the site. The underlying physical status of the site may have led to weakening of the slope in the first place.

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### **The Committee has offered three suggestions to the task force as focuses of the "Kilbuck Township landslide" investigation**

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The focus of the Committee's suggestions is on the underlying causes, and the roles government may have played in creating them and could play in resolving them. In many major projects like this one, planning is left in the hands of local officials, for better or worse. Commercial developments like this, that are intended to serve more than the host community, often generate burdens and benefits that are inequitably distributed among the host township and other nearby municipal governments and their residents. Planning for such projects may also strain the expertise available in local municipalities.

In many circumstances the lack of county-wide or regional land use planning as well as the lack of regional tax sharing often results in actions by local municipalities that may short-circuit prudent planning in a headlong pursuit of revenue. The impact is then often felt not only in the "pursuing" municipality, but also in its neighboring boroughs and townships. An added layer of oversight to the planning functions permitted to local municipalities may not only be prudent, but also necessary.

With that as a backdrop, the Committee offered the following suggestions to the Joint State Government Commission's task force as it pursues its in-depth investigation of the Kilbuck landslide:

- Examine the process of local government oversight in construction projects. In particular, review geologic requirements for project approval such as grading, slopes, stabilization and proximity to highways and railways. More specifically, look at the possibility of monitoring geologic review by the Department of Conservation and Natural Resources for large projects. Also, examine the process for waiving local ordinances for such construction activities and decisions on projects of a specific size.
- Study whether local government should continue to have unilateral authority to make land use decisions that affect entire regions. Consider the possibility of county oversight and approval of projects where appropriate in areas affecting multiple jurisdictions.
- Giving due consideration to the economic development challenges that face the 67 counties in Pennsylvania, investigate the possibility of creating a regional and/or state planning council(s) to help develop and guide land use planning and transportation policies for cities, towns and municipalities.

The Committee stands ready to assist in the investigation and urges that no time be wasted in moving the study forward given the urgency of the situation. The potential instability of the site, the impact it may have on the area, and the extent of local, county and state legislative interest in addressing the problem are all key reasons to advance the study. And, in the long run, the results of the Kilbuck landslide investigation may have an important impact on development, land use and planning in many municipalities across the state.

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