



## *The Chairman's Corner*

Rep. Scott E. Hutchinson, Chairman

Since my last message to you, much has changed in the world. Terror came to America and to Pennsylvania, and America and Pennsylvania have responded in magnificent fashion. I have never been prouder of our state and our nation than I am today.

When last I wrote, Tom Ridge was Pennsylvania's governor. Now Governor Ridge has gone to Washington as Director of Homeland Security and former Lieutenant Governor Mark Schweiker is our governor. I pause to join with many other Pennsylvanians in sending our best wishes to both men.

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**"The hero is commonly the simplest and obscurest of men."**

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As you read this message, I also ask all of you to join with me in sending our thoughts, our sympathy and our prayers to the victims of terror, to their families, and to the selfless police, firefighters, American armed forces and volunteers who are helping America to dig out, recover and respond forcefully to the actions and threats of terrorists wherever they may be in the world. Let these American heroes not be forgotten and let each of us in our own fashion, find a way to help

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**A Legislative Service Agency of the Pennsylvania General Assembly**

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# Notes From the Director

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Craig D. Brooks, Director

Over the past several years, the Joint Committee has held a series of public hearings concerning Pennsylvania's water and wastewater infrastructure needs and has organized an Infiltration Task Force to examine infrastructure management programs.

In keeping with these initiatives, the Joint Committee, in partnership with the South Central Assembly for Effective Governance, has scheduled an infrastructure and asset management workshop at the end of October to discuss the latest information on improving and maintaining Pennsylvania's infrastructure.

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## **What is GASB? And what is its effect on infrastructure assets?**

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All public government agencies, which include water and wastewater systems, will experience a significant change in accounting over the next several years. The change is called the Governmental Accounting Standards Board, or GASB. What is GASB? GASB is a private, nonprofit organization formed in 1984 to develop and improve accounting and financial standards for state and local governments.

GASB is responsible for setting accounting principles and the criteria state and local governments must follow in order to get "clean opinions" from their auditors. A clean opinion means that you have good credit. This becomes very important when a state or local government wants to issue bonds, obtain financing for long-term construction projects, and procure performance bonds.

In June 1999, GASB approved GASB-34, the latest in a series of standards that requires state and local governments to begin reporting on the value

of their infrastructure assets - including roads, bridges, dams, and water and sewer facilities - and to develop procedures and methods for asset management systems. GASB defines infrastructure assets as long-term capital assets associated with governmental activities that are permanent in nature. Public water systems are examples of these infrastructure assets.

The goal of GASB-34 is to make financial statements reflect the financial health of government offices. This will help determine the overall condition of a government or public water system and its progress toward repair or replacement.

GASB-34 is designed to help inform the general public as to how well the government maintains infrastructure assets using preventive maintenance instead of replacement. GASB-34's reporting requirements are also designed to provide more information about the government's ability to repay its debts and maintain the infrastructure assets once they are built.

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GASB-34 and the idea of taking a closer look at water systems will require systems to perform a more technical analysis of the infrastructure network and possibly obtain technical guidance from engineers, contractors, and operators. It will also help municipalities and public water facilities evaluate their systems more closely to determine the life of their systems, and assist in evaluating and generating revenue for replacement and repair.

Check "Upcoming Events" (p. 7) in this newsletter to find the time and location of the workshop. If you plan to attend, please call the committee office.



# 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.

## *The Economic Impact of Low-Sulfur Diesel Fuel Regulations*

- Tony M. Guerrieri, Research Analyst

Because of air quality concerns associated with tractor-trailer rigs and other large trucks and buses, the U.S. Environmental Protection Agency (EPA) has proposed rules to reduce exhaust emissions. The rules are in two parts: installing pollution control equipment to trap particles from diesel engines, and supplying ultra-low sulfur diesel fuel. The proposed changes are aimed primarily at reducing nitrogen oxide and particulate matter emissions from vehicles that use diesel fuel.

A report by the U.S. Energy Information Administration (EIA) analyzes the impact of the proposed rules on diesel fuel prices and fuel availability. According to the EIA report, *"The Transition to Ultra-Low-Sulfur Diesel Fuel: Effects on Prices and Supply"*, compliance with the EPA's rules could result in shortages and price surges in the fuel on which truck and bus transportation depends.

To meet the more stringent emission standards, heavy-duty trucks and buses will have to be equipped with pollution controls that reduce exhaust emissions – similar to the catalytic converters that have been required on cars for years. However, these devices would be corrupted by the amount of sulfur presently in diesel fuel. Therefore, the EPA is lowering the allowable sulfur levels in diesel fuel. The EPA maintains that ultra-low sulfur diesel is essential for the pollution control equipment to work properly, and the newest technologies for emissions control are especially sensitive to sulfur.

Refiners will have to reduce the amount of sulfur in diesel fuel from as much as 500 parts per million to no more than 15 parts per million, a reduction of 97 percent. Under the existing timetable, 80 percent of all diesel fuel sold will be required to meet the standard by 2006, and the rest by 2010.

Opponents have criticized this 15 parts per million

standard as too costly and likely to lead to supply disruptions. According to the report, the short-term costs to the refining industry by the 2006 implementation date will cause the production costs of diesel fuel to increase between 6.5 cents and 7.2 cents per gallon.

The EIA report also did a midterm estimate under a "severe" case scenario in which some differences with assumptions were raised by industry. Five such differences were factored into the severe case scenario. Included were industry concerns like capital costs higher than the EPA estimates, unexpected losses in vehicle efficiency, and losses in energy at refineries. Factoring these differences into a cost analysis for 2008 to 2011, the report predicts the increased costs to range between 8.4 cents and 10.7 cents per gallon.

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Concerns have also been raised about fuel availability and price spikes, especially during the introduction of the new fuel. The report suggests the possibility of a tight diesel market when the ultra-low sulfur rule is implemented. Making the ultra-low sulfur diesel that the EPA proposes would require investments that could drive many small refiners out of business, causing fuel shortages and price increases. In addition, if supplies fell short of demand, the report indicates that sharp price increases would likely occur to balance supply and demand.

To obtain a copy of the report, *"The Transition to Ultra-Low-Sulfur Diesel Fuel: Effects on Prices and Supply"* (SR/OIAF/2001-01), contact the EIA's Office of Integrated Analyses and Forecasting, U.S. Department of Energy, Washington, D.C. 20585; telephone: (202)-586-2222. The report is also online at <http://www.eia.doe.gov>.

## Watershed Monitors and Liability Issues

- Jason H. Gross, Research Analyst

In order to function, watershed-monitoring groups must have access to areas where they can collect samples. Samples must come from streams and rivers in the watershed and must come from a wide variety of source locations along the watershed. Private land must frequently be entered in order to gain access to collection points, and consent from the landowner sought in order to gain access to the property. Sometimes consent is given in written form, but very often, as in the case of a private landowner, consent is merely given verbally.

Besides being polite, consent of the landowner provides the necessary legal standing to the watershed group so that trespass does not become an issue. Therefore the consent protects the watershed group and its members. But there is still an issue that has sparked many questions among watershed groups. Who protects the landowner?

Protection of the landowner is important because it provides incentive to the landowner to allow the watershed group onto the property. The fear is, that if a member of the watershed group is injured or causes injury to another while on the property of the landowner the landowner can be liable for that injury. If the landowner was fearful of being sued because of liability questions, then he or she would be reluctant to grant permission to the watershed group to enter his or her land. At a public hearing that the Joint Conservation Committee held on acid mine drainage (AMD), the question came up as to whether a statute exists, or in its absence could be created, that protects landowners from being sued when watershed groups want to enter the property for the purpose of collecting samples. Such a statute would remove the disincentive of liability that landowners feel when permitting a watershed-monitoring group to enter their land.

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**The Recreation Use of Land and Water Act was designed to limit liability of landowners toward recreational users of land and waterways.**

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There is a statute in Pennsylvania that specifically addresses liability issues for possessors of land (68 P.S. section 477-1 of 1966, P.L. (1965) 1860, section 3). The act known as the Recreation Use of Land and Water Act

(RULWA) was designed to protect landowners by limiting their liability toward recreational users of their land and waterways. Enacted as public law in 1966, the statute was specifically drafted to encourage landowners to make their land and water areas available to the public for recreational purposes. Historically this statute has mostly been used to protect landowners from liability in the cases of hunting, fishing, and other traditional recreational purposes. The question: does the statute also protect watershed monitors who enter a property for the purpose of collecting samples?

An excerpted quote of the statute reads (bold added):

“An owner of land who either directly or indirectly invites or permits without charge any person to use such property for **recreational** purposes does not thereby: 1) extend any assurance that the premises are safe for any purpose, 2) confer upon such person the legal status of an invitee or licensee to whom a duty of care is owed, 3) assume responsibility for or incur liability for any injury to persons or property caused by an act of omission of such persons.

“Recreation purpose includes but is not limited to any of the following: hunting, fishing, swimming, boating, camping... **nature study**, water sports and **viewing or enjoying historical, archaeological, scenic, or scientific sites.**”

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The statute does not specifically address watershed monitor groups' access to land for the purpose of sampling. The case law precedent also does not specifically address the issue. After an analysis of the case law, there are several cases that show that much more invasive and dangerous uses of the land are still free from liability when the landowner has not charged a fee and the purpose is recreation. Additionally the statute and case law both suggest that the language in the statute should be read broadly. As a result the terms “recreation” and “nature study” can be read to include volunteer watershed monitoring groups. Unfortunately there is no clear answer to the issue of whether watershed monitoring is specifically covered by the statute. Despite this lack of a clear answer, it could be interpreted that RULWA covers watershed-monitoring groups.

## National Governors Association Report Seeks Alternatives to Sprawl

- Tony M. Guerrieri, Research Analyst

Traditional forms of town planning, with pedestrian-friendly streets, walkable distances to town centers, and houses with porches and front yards is an antidote to sprawl and a powerful tool for addressing many quality-of-life issues, according to a report by the National Governors Association (NGA) Center for Best Practices.

The NGA report, “*New Community Design to the Rescue: Fulfilling Another American Dream*”, explains how states and communities can encourage New Community Design (NCD), a mixed-use, mixed-income, walkable development, by eliminating institutional barriers in the marketplace.

NCD can be defined in many ways, but according to the report, the basic features include: extensive mixed land use, reduced land consumption, community centers, ample green space, transportation options, and building designs that reflect the local culture and harmonize with the natural environment.

The report cites national surveys stating that about one-third of Americans want to live in places that embody NCD features. However, these options are rarely offered to homebuyers. Less than one percent of housing offers such mixed-use places, according to the report.

The gap between demand for and supply of NCD, the report says, is a result of government policies that hinder development of NCD projects. These obstacles include:

- Local zoning laws that prohibit the development of mixed-use projects and that favor single-use projects like strip malls and suburban office parks.

- Limited use of development impact fees by local governments. Suburban sprawl development imposes high costs for new infrastructure, like roads, sewers and schools. Without imposing impact fees, the general public has been subsidizing sprawl and then suffering with traffic congestion, loss of open space, and other impacts of sprawl. NCD projects should also pay impact fees, but they impose lower infrastructure costs on a per housing basis and can compete effectively against sprawl projects.

- Building codes that favor new construction over rehabilitating older and often historic buildings, ripe for revitalization, in urban areas and older suburbs.

To succeed, the report suggests, NCD needs both public and private leadership. Governors should help the public understand the benefits of NCD by seeking citizen input on growth and its impact on quality of life through surveys, and by creating design centers where citizens can see alternative community designs.

To help understand the true solution to sprawl, the report includes a checklist to evaluate communities and projects for their consistency with “smart growth” principles.

The report also presents examples of successful NCD urban infill, suburban redevelopment, and greenfields projects nationwide, where developers have persevered against obstacles or where local government has changed zoning. Also provided are a number of innovative policies and actions by governors and states that are helping to advance NCD and provide more housing choices. For example, five states (Maryland, Minnesota, Oregon, Rhode Island, and Utah) have already adopted model codes that local governments can consider using to level the playing field and give NCD projects a fair opportunity.

Among the examples of NCD communities in the report is Washington’s Landing in Pittsburgh, Pennsylvania. For more than 100 years, the 42-acre island in the Allegheny River was used for industrial purposes. Through public and private investment, the result is a mixed-use community, including more than 100 residential homes, a number of commercial buildings, a state agency, several manufacturing operations, and a restaurant.

The report concludes that there is no one “right” American dream. For many people, the dream has been, and will remain, a single-family house in a safe suburb on a large lot with lots of privacy. For other Americans, however, it is a real neighborhood in a mixed-use community with NCD features.

The NGA report is available for viewing or downloading on the NGA’s Center for Best Practices website at [www.nga.org/center](http://www.nga.org/center) or by calling (202)-624-5371.

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



## Optical Brighteners Offer New Method to Locate Sewage Seepage

- Jason H. Gross, Research Analyst

One of the main, and sometimes most difficult, issues in dealing with sewer overflows, infiltration and inflow, and watershed monitoring is determining the presence and source of human-based effluent. Sewage can seep into the ground and then waterways from sewage pipes, sewer overflow and bad transmission lines, contaminating waterways with bacteria that are dangerous to wildlife and people.

The most common method of discovering the source of a leak involves placing a special dye in a home's toilet and flushing. The area surrounding the house, in addition to areas where the suspected leak is occurring, are then inspected for the dye. Often there is an overly lengthy wait to allow the dye to percolate into the surrounding ground area. But what if there was a marker already present in the water supply that could be used to identify specific sewage seepage? According to the Massachusetts Bay Program, such a marker already exists which makes testing for sewage leaks economical and efficient.

Optical brighteners are agents in laundry detergents and soaps, which use a fluorescent dye that imparts a fluorescent marker into whites that makes them appear very white. Optical brighteners follow household sewage through groundwater and outflows. As the sewage seeps into soil and waterways the optical brighteners are deposited along with the sewage. By using relatively inexpensive equipment to illuminate the dye it is possible to locate the dye's presence in soil and water. Optical brighteners can be successfully detected in small streams, storm drains, and faulty septic systems, but are not useful in larger bodies of water where the brighteners are diluted beyond detection.

Using optical brighteners to test for human sewage carries one advantage over bacteriological tests. Examining bacteria from direct waterway samples is one of the more common ways of determining the waste content in waterways. There is one problem with this method, however, in that animals also produce the same bacteria that are the most common in human waste, leaving the actual source of the bacteria in doubt. Optical brighteners only occur in human waste, so the source of the sewage outflow is not in doubt.

Under optical brightening testing, the optical brightener infuses fabric with a chemical that is an emitter of long-wave ultraviolet light. This chemical glows with an intense bluish-white light when exposed to the proper

kind of light source. That is the way that brighteners cause white cotton fabrics to appear super-white. By using this phenomenon, optical brighteners can be detected in surface and subsurface waters.

The test works like this. A segment of cotton fabric is placed in a sampler and immersed in the water that is to be tested. The fabric is then left in the ground or water for approximately one week. The fabric is then retrieved and exposed to an ultraviolet light. If the fabric produces a fluorescent glow then the test medium contains or has come into contact with human-based sewage. The relatively simple equipment needed to perform the optical brightener test includes untreated cotton pads, a cage to hold the pad under water, and a long-wave fluorescent light, which should cost under \$500 and are relatively easy to acquire.

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According to the Massachusetts Bay Program, optical brighteners have been used extensively for tracing surface and groundwater because of their low detection limits, ease and economy of detection, and safety. Optical brightening has been used in two Massachusetts programs as well as by several watershed organizations throughout the United States. While far from being the established norm in sewage seepage detection, the optical brightener system is gaining popularity for watershed organizations that seek a quick and effective means of determining sewage seepage and its sources.

Optical brightener testing is a qualitative test since it only offers an indication as to the presence of sewage in the area, not the level of bacteria. Quantitative measures must still be used in regulatory and enforcement actions. However, for determining the presence of human-based sewage in a watershed or groundwater the optical brightness test ranks high for a combination of ease of use, economy, and reliability.

Additional information on optical brighteners can be found at:

- [www.thecompass.org/8TB/pages/SamplingContents.html](http://www.thecompass.org/8TB/pages/SamplingContents.html) (OB handbook and Massachusetts Bay Program)
- [www.novaregion.org/4MileRun/obm.html](http://www.novaregion.org/4MileRun/obm.html) (Proposal to the Virginia Department of Environmental Quality)
- [www.epa.gov/volunteer/fall99/pg21.html](http://www.epa.gov/volunteer/fall99/pg21.html) (National Newsletter of Volunteer Water Quality Monitoring).

## On The Horizon...

### a look at upcoming committee events

- **Monday, October 29, 9 a.m. to 1 p.m., Hearing Room 1, North Office Bldg., Capitol Complex – Infrastructure Workshop.** A joint workshop on infrastructure and asset management with the South-Central Assembly for Effective Governance.
- **Monday, December 3, 11 a.m., Hearing Room 1, North Office Bldg., Capitol Complex – Infiltration Task Force meeting.** Task force will review draft report, comments, questions and recommendations.
- **Tuesday, December 11, 8:30 a.m., Location to be determined – Environmental Issues Forum.** Susan Stout, Research Project Leader with the USDA Forest Service's Northeast Research Station in Irvine, PA, will discuss forestry research projects underway at the station.

## Committee Chronicles...

### a review of some memorable committee events

On August 22, then-Lieutenant Governor Mark Schweiker officially designated Pennsylvania's 10<sup>th</sup> Heritage Park – the Lancaster/York Heritage Area. He made the announcement on the banks of the Susquehanna River in Wrightsville, York County.

Joint Conservation Committee chairman Rep. Scott Hutchinson, member and former chairman Rep. Dave Argall and committee staff were on hand for the event. The committee has been working at increasing funding for the state's heritage regions and had recently toured the Lancaster-York Heritage Region.

These photos show scenes from the designation event.

Shortly after the Lancaster-York region was designated, Pennsylvania's 11<sup>th</sup> heritage region, the Lumber Heritage Region in the north-central part of the state, received its official designation.

For more information on heritage regions, visit the Department of Conservation and Natural Resources' (DCNR) website at [www.dcnr.state.pa.us](http://www.dcnr.state.pa.us).



them, whether it be monetarily, by donating blood, by sending clothing and supplies or by volunteering our time and effort.

Let us also demonstrate to terrorists and to the world that America will not be cowed and we will not be diverted from conducting our lives and our duties in freedom. Vigilant, yes. Careful, yes. Fearful, no.

The terrorist activities have an impact on our nation's and our state's environment. For example, rubble and debris from the World Trade Center bombing in New York have been brought to Pennsylvania for disposal under agreement between the Commonwealth and New York. We have read of the "pollution" brought about by the infusion of anthrax at several sites across the nation and ponder what sort of harm could be done to air and water supplies.

Despite all of our questions, concerns and misgivings, we must do what President Bush has asked all Americans to do...to live our lives and do our jobs and thus be part of restoring the faith of Americans and Pennsylvanians and helping our society and economy continue on, strong and unbowed.

And so, the Joint Conservation Committee joins in that effort. We look for ways to help our communities reduce pollution and safeguard drinking water by seeking solutions to infiltration of sewage systems and cost-effective ways to reduce overflows of combined sewer systems.

The forestry task force is moving ahead with its statutory mission to investigate ways to strengthen our forest resources in conjunction with prudent growth in timbering and related industries.

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**"Perhaps the greatest contribution the Joint Conservation Committee can make is to do our everyday tasks, but do them even better than before."**

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We continue to partner with local communities to rebuild infrastructure and better protect and manage infrastructure assets. We take pride in the designation of two new Heritage Regions – Lancaster-York and Lumber Heritage – and seek ways to further the preservation and growth of Pennsylvania's glorious heritage. We share information on innovative methods to reduce acid mine drainage, improving local watersheds and bringing new life to Appalachian communities.

In our changed world, such tasks may seem mundane. But as Henry Thoreau once said, "The hero is commonly the simplest and obscurest of men." And so, perhaps the greatest contribution the Joint Conservation Committee can make is to do our everyday tasks, but do them even better than before. In that way, we demonstrate our strength, our resiliency and our dedication to our state, our nation and to our way of life.

## How to Contact The Joint Conservation Committee

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