

ENVIRONMENTAL SYNOPSIS

The Chairman's Corner

Rep. Scott E. Hutchinson, Chairman



Pennsylvania has good reason to be proud of its state park system. And new developments continue to occur within that system. For example, Governor Rendell recently named Pennsylvania's 117th state park – the Erie Bluffs State Park on the Lake Erie shoreline.

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Another dedication event of new facilities at one of Pennsylvania's state parks has special meaning for the Joint Conservation Committee. The committee members and staff were pleased to see the committee's current vice-chairman, former chairman and long-time member Sen. Raphael J. "Ray" Musto honored at the dedication of the Raphael J. Musto Environmental Education and Visitor Center at Nescopeck State Park in Dennison Township, Luzerne County. It is a fitting tribute to Sen. Musto who has dedicated much of his distinguished career in public service to environmental improvement and



education. The committee sends its congratulations to Sen. Musto.

The mission statement of the Bureau of State Parks could easily be read as the exact kinds of improvements Sen. Musto has championed over the years. For example, the parks' primary purpose is to, "provide opportunities for enjoying healthful outdoor recreation and to serve as outdoor classrooms for environmental education." To meet these goals, first consideration is to be given to "...conservation of the natural, scenic, aesthetic and historical values of the parks." And, stewardship responsibilities are expected to be carried out in a way that "protects the natural outdoor experience for the enjoyment of current and future generations."

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NOTES FROM THE DIRECTOR

CRAIG D. BROOKS, DIRECTOR

Over the past two decades, the recycling rates of beverage container packaging have been worthy of praise. Less than five years ago, it was reported that by 1999, 60 percent of all beverage containers were being recycled, with aluminum cans leading the way. Because of this apparent success, the aluminum industry raised the bar even higher and called for a 75 percent recycling goal.

But a lot of things can change in five years. The Container Recycling Institute, a group that promotes waste reduction, has released some disturbing new information about recycling...the national recycling rate for aluminum beverage cans has dropped by at least 15 percent over the last 8 years, to 44 percent in 2003, the lowest can recycling rate in the past 25 years.

The national recycling rate for aluminum cans dropped to its lowest point in the last 25 years - 44 percent - in 2003

The public often views recycling, particularly in regard to the aluminum can, as an environmentally friendly thing to do. But just because something is recyclable doesn't mean that it's being recycled. According to CRI, over half of the 100 billion (yes...billion) cans sold in the United States in 2001 were not recycled. In the case of aluminum cans, for every six-pack of soda sold and recycled, there is one that is landfilled. It's been estimated that more than 33,000 Boeing 737 jets could be manufactured from the landfilled cans. Recycling the 52 billion aluminum cans landfilled would have saved an amount of energy equivalent to 16 million barrels of crude oil, or enough to supply over a million cars with gasoline for a year.

Stop and think about how many beer or soft drink cans you and your family consume in an average month. One of the possible reasons for the decline in recycling is the fact that people, in general, are drinking more beverages on the go. Because convenient recycling bins are often not close by, many of these cans end up in the waste stream.

Most likely, however, this spiraling downward trend can be attributed to the decreasing financial incentive to recycle aluminum cans. The value of a pound of aluminum cans hasn't changed much over the years, but the value of the dollar has declined. CRI says that the forecast is getting worse for recycled aluminum cans, but it is not impossible to turn things around.

One way to address the problem, according to CRI, is through beverage container laws. Beverage container deposit laws or "bottle bills" now exist in 11 U.S. states. Eight of these are celebrating anniversary dates reaching 30 years in existence. Bottle bill advocates say that bottle bills work because the 5 cent and 10 cent deposit paid by the consumer is refunded when the can or bottle is returned to the store or local redemption center. This is

the financial incentive the consumer needs to recycle. States that have enacted bottle bills routinely achieve a 70 percent to 90 percent recycling rate.

Advocates also point to the revenue generated from unclaimed deposits (deposits not claimed by the consumer) from the beverage distributor. Bottle bills that return these unclaimed deposits to the state see windfalls that support recycling and other environmental programs. Some states view the potential fiscal benefits of bottle bills as a way to direct unredeemed deposit money to state coffers in times of rising state budget deficits.

But opponents to bottle bills say they are expensive for distributors to operate and often create dumping grounds in grocery stores and other drop-off areas that affect public health and safety. For now however, there have been a flurry of bottle bills in state legislatures throughout the country, and language added to existing bottle bills to strengthen the current laws.

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.

Leaky Underground Storage Tanks Still Turn Up

— Tony M. Guerrieri, Research Analyst

Over a million of them are gone but the problem isn't solved yet. That is the quick take on leaking underground storage tanks (USTs) in the United States, according to a report by the U.S. Environmental Protection Agency (EPA).

The EPA report, "*Underground Storage Tanks: Building on the Past to Protect the Future*", shows how federal, state, and local agencies, and industry have worked together over the past two decades to protect the nation's soil and groundwater from leaking USTs.

2004 marks the 20th anniversary of the federal Underground Storage Tanks Program. In 1984, Congress responded to the increasing threat to groundwater posed by leaking USTs at gas stations and other places by directing the EPA to develop a comprehensive regulatory program. Although tank owners and operators are ultimately responsible for cleaning up contamination from leaks, Congress created a trust fund in 1986 to help the EPA and states cover the costs that tank owners and operators could not afford or were reluctant to pay.

The majority of Leaking Underground Storage Tank Trust Fund monies are provided to states by the EPA to oversee cleanups, take enforcement actions at leaking tank sites, and undertake state-led cleanups when a party responsible for the leaks cannot be found or is unwilling or unable to clean up the site.

From the outset, the program was designed to be implemented primarily by the states. In 1990, the EPA approved Mississippi as the first state to run its own UST program in lieu of the federal program. Currently, 33 states, including Pennsylvania, have EPA-approved programs.

At the inception of the UST program, there were more than two million underground tanks storing petroleum and certain hazardous substances. Many of them were old steel tanks suffering from corrosion. To date, more than 1.5 million substandard tanks have been

closed. Currently, there are nearly 700,000 active USTs, nearly all of which now have required leak detection and prevention equipment and are less likely to corrode and leak than the tank systems of the previous generation.

The EPA and states have made substantial progress in cleaning up releases from leaking USTs. Of the 400,000 plus known leaks, nearly 70 percent - or over 300,000 - have been cleaned up. In fact, over 18,500 cleanups were completed in 2003, representing a 17 percent increase in the number of cleanups completed over the previous year. Considerable progress has also been made in reducing the number of new releases. Approximately 12,000 new releases were reported in 2003 - about 60 percent lower than the annual national average of approximately 27,000.

While substantial progress has been made, the EPA offers a number of recommendations for further improvements

The EPA report warns that although the UST program has made substantial progress, there are additional challenges that need to be addressed. These challenges include cleaning up and encouraging reuse at 200,000 or more abandoned gas stations and petroleum brownfield sites; cleaning up more than 100,000 remaining known releases at active sites; and improving operation compliance at every site to prevent new releases.

Underground storage tanks that leak petroleum or other hazardous substances contaminate nearby soil and groundwater. These substances can contain known carcinogens, and individuals coming into contact with this contamination may experience health problems ranging from nausea to kidney or liver damage. Furthermore, one contaminate - methyl tertiary butyl ether (MTBE), a fuel additive being used with increasing frequency in recent years - is particularly troublesome in that it migrates quickly through the soil into groundwater and even small amounts can render the groundwater undrinkable. Communities across the country are finding MTBE contamination in their groundwater. For example, the city of Santa Monica, California, has lost a significant portion of its drinking water supply due to MTBE contamination caused by leaking USTs.

To better ensure that USTs meet federal equipment, operations and maintenance requirements to prevent leaks and contamination that pose threats to public health, the EPA report makes several recommendations. First, the report recommends improving operational compliance by increasing the frequency of tank inspections. While few states conduct annual inspections, most inspect them much less frequently. Second, the EPA also needs to ensure inspectors are well-trained, according to the report. To meet this need, the EPA and the states are developing Web-based training for federal and state tank inspectors and site cleanup managers. The online modules will be available later this year.

In addition, the report said, the EPA and the states are developing a model workbook that can be tailored to individual states and used by tank owners to determine if they are in compliance.

Copies of the EPA report, "*Underground Storage Tanks: Building on the Past to Protect the Future*", are available at <http://www.epa.gov/swrust1/pubs/20annrpt.pdf>.

Communities Can Improve Water Source Protection

— Craig D. Brooks, Executive Director

Communities are doing a better job of implementing programs to protect drinking water sources, but more work is needed, according to the authors of a new report, "*Protecting the Source*". The Trust for Public Land and the American Water Works Association, authors of this report, suggest that the Safe Drinking Water Act Amendments of 1996 requiring states to do source water assessments prompted communities to give more thought to water protection strategies. This includes combining regulatory strategies with land conservation strategies as a way of protecting source water.

According to the report, the loss of natural lands to development not only impacts the quality of our drinking water, but also the cost of treatment and the quantity of water available. Development increases the demand for drinking water and at the same time, decreases the ability of water to filtrate the ground and recharge water supplies. Because of this, several large metropolitan areas have recognized the benefits of protecting source water and recharge areas and have combined land conservation with regulatory source protection strategies. Boston, New York, San Francisco and Seattle are just a few examples of cities that have historically initiated combined source water protection strategies.

The report suggests that many newly developing mid-size cities and suburbs have not been as proactive as larger cities in protecting their water sources. Land conservation initiatives and better water management practices are needed to reduce pollutant loads to rivers, aquifers and other drinking water sources. Communities need to invest in land conservation as a means of water source protection and guide development away from sensitive water resources. As a way for communities to better plan and implement water protection strategies, the report offers the following guidelines for what communities may need:

- ◆ An improved understanding of the watershed to design an effective source protection plan and build community support;
- ◆ The use of maps and models to prioritize protection so that funding can be directed accordingly;
- ◆ The establishment of strong partnerships that extend throughout the watershed, which frequently covers multiple jurisdictions prompting the need for better coordination;
- ◆ The creation of a comprehensive source protection plan with strategies for managing threats and protecting resources that involve both regulatory and voluntary initiatives; and
- ◆ The implementation of a "funding quilt" that will secure money from a variety of sources at the local, state and federal levels.

Because development activities remove natural buffers such as forest cover and pave over areas that supply groundwater recharge, the report suggests that states that combine drinking water programs with Clean Water Act programs tend to be much farther ahead in providing source water protection. This would include a watershed approach with emphasis on protecting aquifer recharge areas. According to the report, a study of 27 water suppliers found that the amount of forest cover in a watershed had a direct relationship to the cost of treatment. For every 10 percent increase in forest cover in a source area, treatment and chemical costs decreased approximately 20 percent. In forested watersheds with 60 percent forest cover, average treatment and chemical costs dropped by more than one-third, from \$115 per MG to \$37 per MG. While many communities are finding out that land conservation is a big investment, it may also be less expensive than the long-term cost of water treatment.

The report by the American Water Works Association and the Trust for Public Land, "*Protecting the Source*", is available at <http://www.tpl.org/publications>.

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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GAO Report Highlights Asset Management Issues for Water Infrastructure

— Tony Guerrieri, Research Analyst

Comprehensive asset management programs can help water and wastewater utilities maximize the life of all facility assets, but implementing a program can be challenging. Asset management programs can require major up-front implementation costs and offer no guarantee of overcoming rate-hike resistance by elected officials and the public, according to a report by the U.S. General Accounting Office (GAO).

The report, *“Water Infrastructure: Comprehensive Asset Management Has Potential to Help Utilities Better Identify Needs and Plan Future Investments”*, also highlights federal efforts to promote asset management and recommends ways to encourage water agencies to adopt the practice.

The goal of asset management is to manage infrastructure assets so that the total cost of owning and operating them is minimized. Asset management is seen as particularly relevant to the water and wastewater industry because they are capital intensive and have a sizable investment in pipes and other assets with a relatively long service life.

The U.S. Environmental Protection Agency (EPA) has promoted asset management as an essential utility tool for managing the massive estimated costs to upgrade aging infrastructure over the next 20 years. However, asset management has only been adopted by a handful of water and wastewater systems (mostly large systems) in the last few years. Asset management is being considered by Congress as a condition for obtaining federal infrastructure-assistance funds.

Based largely on interviews with staff at 46 drinking water and wastewater utilities that were implementing comprehensive asset management, as well as more

focused interviews conducted at 15 of these utilities, the GAO report offers a comprehensive overview of utility experiences implementing asset management and their perspectives on its benefits and challenges.

Citing its earlier survey of August 2002, which indicated that 29 percent of water utilities and 41 percent of wastewater systems were not collecting enough revenues to fully cover their costs of service, the GAO report described asset management implementation benefits and obstacles experienced by utilities.

There are two key benefits that will come from asset management, according to the report. Collecting, sharing, and analyzing data through comprehensive asset management can help utilities to make more informed decisions about maintaining, rehabilitating, and replacing their assets. In particular, utilities can use the information collected and analyzed to prevent problems and allocate their maintenance resources more effectively.

In addition, comprehensive asset management also helps managers to make more informed decisions about whether to rehabilitate or replace assets, and once they decide on replacement, to make better capital investment decisions.

The GAO report lists three issues or obstacles that hamper development of asset management plans:

- To determine the condition of current assets and the need for future investment, utilities have to gather and integrate complete and accurate data, which may require significant resources.
- Successful implementation requires cultural change – departments long accustomed to working independently must be willing to coordinate and share information.
- Utilities may find that their efforts to focus on long-term planning conflict with short-term priorities of their governing bodies.

These three challenges, according to the report, may be more difficult for smaller utilities because they have fewer financial, staff, and technical resources.

The GAO also notes utility objections to Congress or the EPA requiring asset management. The report indicates that water industry officials raised concerns about the implications of mandating asset management, citing challenges in defining an adequate asset management plan and in the ability of states to oversee and enforce compliance.

The report recommends that the EPA should take steps to strengthen the agency’s existing initiatives on asset management and ensure that relevant information is accessible to those who need it.

The report, *“Comprehensive Asset Management Has Potential to Help Utilities Better Identify Needs and Plan Future Investments”*, is available at <http://www.gao.gov/atext/d04461.txt>.

EPA Issues eWaste Guidelines

— Craig D. Brooks, Executive Director

eWaste is the fastest growing waste stream in the United States with recent estimates suggesting that more than 500 million computers will become obsolete by 2007, resulting in more than 6 billion pounds of plastic, and 1.5 billion pounds of lead and other materials generated for possible disposal. eWaste contains more than 1,000 different substances, some considered toxic and some benign. About 70 percent of the heavy metals in landfills now come from electronic waste, with consumer electronics making up about 40 percent of the lead.

But computers and other large pieces of electronic equipment are not the only culprits adding to this particular waste stream. Cell phones are playing a larger part in the generation of waste materials. On average, cellular phones are used only 18 months before they are discarded and by 2005, about 130 million cell phones will be retired. Most, if not all of these will eventually enter the waste stream. Similar problems are also posed by other small electronic devices such as pagers, pocket personal computers, MP3 players and personal digital assistants. Because these devices are small, it might appear that their environmental impact would also be small, but the volume of material makes these items a significant concern.

Because of the concern about the effects of eWaste on our health, our environment and that of other nations where this material is often exported, the U.S. Environmental Protection Agency (EPA) has issued guidelines to help encourage people to reuse and recycle old electronic equipment. The *Guidelines for Materials Management* have been established as a framework for EPA's "Plug-In to eCycling" campaign. Campaign partners will test the guidelines to determine the best methods for safely managing used electronic equipment. Partners in the eCycling initiative include manufacturers, retailers, government agencies, and nonprofit businesses that help collect, reuse, recycle or refurbish old electronic equipment. Among them are Dell, Envirocycle, Best Buy, Staples, AT&T Wireless and the Recycle America Alliance. The guidelines apply to Plug-In partners, who through contracts or other arrangements utilize reuse, recycling or disposal facilities. The guidelines also spell out partner responsibilities.

The guidance applies to designated materials that are directed for reuse or refurbishment. The materials include batteries, mercury and PCB-containing lamps and devices, circuit boards (unless they are contained in hand-held electronic equipment and cathode tubes) and CRT glass (both of which are adequately processed for use as industrial feedstock prior to reuse). This materials

list only applies to electronic equipment that has been prescreened to meet legitimate reuse or recycling specifications and includes: monitors, televisions, CRT bulbs, laptops, printers and cell phones. The guidelines ensure that all items are packaged correctly to preserve used equipment for reuse with manifest records that track equipment from each destination.

The guidance suggests that reuse is the preferred management option for old electronic equipment, followed by recycling, with landfilling or incineration understandably being the least desirable method. The guidance document states that where incineration or landfilling is unavoidable, the Plug-In partner should ensure that "consideration is first given to whether the waste has value for energy recovery".

The devices may be small, but the volume of material makes personal e-items a significant concern

The guidelines call for "due diligence" of Plug-In partners when considering disposal of electronics. The level of due diligence should equal the risk of handling the materials as well as fulfilling waste management goals. It is recommended that steps for reuse and recycling focus on used electronic equipment that, if mismanaged, is likely to present hazards to human health or the environment. Partners are asked to provide written evidence that wastes are managed safely at facilities that are fully licensed for treatment and disposal. This would include compliance with all federal and state requirements pertaining to the transport, processing and managing of electronic products and components.

However, EPA acknowledges that exporting eWaste is a problem because large portions of obsolete electronics are shipped out of the country. Between 50 percent and 80 percent of the electronic waste collected in the United States for recycling is sent to China, India, Pakistan or other developing countries. Although it is referred to as recycling, it is often viewed as another form of disposal.

Electronics manufacturers, environmental groups and legislators agree that more needs to be done on the front-end of an electronic product's life to prepare for its disposal on the back-end. Representatives from various stakeholders groups have agreed to work with EPA toward creating a financing system that will include the cost of managing used electronic equipment in the overall purchase price of these products.

A copy of EPA's Plug-In to eCycling's Guidelines for Materials Management is available on the Internet at <http://www.epa.gov?epaoswer/osw/conserves/plugin/guide.pdf>.

ON THE HORIZON . . .

A LOOK AT UPCOMING EVENTS



✓ **Monday, October 18, 12 noon, location to be announced – Environmental Issues Forum.** The Pennsylvania Hardwoods Development Council will make a presentation on the council's activities and the hardwood industry. The Pennsylvania WoodMobile traveling educational exhibit will also be available for visits during the day.

Environmental Issues Forums are open to the public. Please call the committee office at (717) 787-7570 if you would like to attend.

Visit our website (<http://jcc.legis.state.pa.us>) or check future editions of the Environmental Synopsis for upcoming events.

COMMITTEE CHRONICLES . . .

REVIEW OF SOME MEMORABLE COMMITTEE EVENTS



Scenes from the dedication ceremonies at the new Raphael J. Musto Environmental Education and Visitor Center at the Nescopeck State Park. Check out the Chairman's Corner for more information on this tribute to the vice-chairman of the Joint Conservation Committee — Sen. Raphael J. Musto (D-14).

Sen. Musto, who is also Democratic chairman of the Senate Environmental Resources and Energy Committee, is the author of the "Environmental Education Act." During his tenure on the Joint Committee, he has led the way on numerous environmental studies and reports, many of which have resulted in positive legislative advances in the area of grayfields, forestry, and water and sewer infrastructure and safety, for example.

Department of Conservation and Natural Resources (DCNR) Secretary Michael DiBerardinis acknowledged Sen. Musto's contributions in his remarks. "This magnificent facility is a direct result of Sen. Musto's vision, persistence and leadership," he said. "He cares deeply about the natural resources across his state. He is recognized as a leader in environmental education. It, therefore, is so fitting that the building should bear his name."

**"I am very grateful to be honored by having
this building named after me in a park
that means so much to so many."
*Sen. Raphael J. Musto***

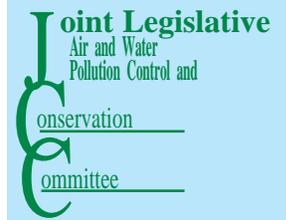
The \$1.5 million center will serve as the hub of activities at the 3,500 acre park. It will house extensive environmental education programs servicing area school districts and communities, visitor services and staff offices. Staff will use the center to offer DCNR's Watershed Education Program to area high schools, teachers and other groups. Visiting biologists, college students and researchers are expected to use the park as a natural outdoor laboratory. In addition to the new center's facilities, the park offers nine-acre Lake Frances, more than 200 acres of wetlands, six miles of high quality trout stream in Nescopeck Creek and 20 miles of hiking and cross-country ski trails.

The park is well known to Sen. Musto, who years ago united opposition to flooding much of the area with a dam, recognizing the park's unique aspects and local citizens' desire for an alternative use. In remarks at the dedication, where he was accompanied by his wife Frances and grandson Nicholas – a regular angler at the park, Musto commented, "Long ago, myself and others in neighboring communities recognized the potential here for yet another first-rate state park – the assets of this tract are all around us. DCNR has worked closely with the local community, sportsmen and conservation organizations to create a park suited to the region's needs. I consider it the highest honor to have my name affixed to a



building that will better help its visitors protect and enhance this park and other natural resources across the state."

The Joint Committee is honored to count Sen. Musto among its members and officers and thanks him for his contributions toward improving Pennsylvania's parks and environmental quality.



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