

Joint Legislative
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Pollution Control and
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Committee



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The Chairman's Corner

Rep. Scott E. Hutchinson, Chairman

After three public hearings and nine months of research, the Joint Legislative Air and Water Pollution Control and Conservation Committee recently issued its report on the problem of combined sewer overflows (CSO's) in Pennsylvania.

By way of explanation, combined sewer systems are those designed to collect rainwater runoff, domestic sewage and industrial wastewater in the same pipe. Such systems, many of which are 50 years old or more, usually conduct all wastewater to a sewage treatment plant. However, during wet weather events, volume can exceed capacity and the systems are designed to overflow and discharge wastewater, including untreated sewage, industrial waste and toxins, directly into waterways.

The report contains eight recommendations formulated after the committee had heard from federal, state and local individuals, organizations, and government bodies. Chief among the recommendations is the call for passage of legislation that would provide state-secured bond funding for upgrades and capital improvements to sewer systems plagued with CSO's.

To demonstrate the scope of the problem, according to the Pennsylvania Department of Environmental Protection (DEP),

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Craig D. Brooks, Director

For many years, public and private recycling organizations have been working to develop new and expanded uses for recovered materials in consumer products and packaging. The reason is obvious - more recycled products containing recycled content equals greater demand for recyclable materials. The higher the demand, the more waste that can be recovered and returned to the commerce waste stream.

In concept, the relationship between supply and demand seems simple enough. In reality, increasing recycled content in products and packaging can be a monumental task. That's not to say there hasn't been progress over the past 20 years. Recovery rates for all recycling staples, including glass, paper and metals, have increased. The recycling of PET plastic into items like carpeting and clothing as well as plastic lumber is a success story in itself. Major corporations like McDonalds have made conscious efforts to use recycled content products in their packaging and in the construction of their restaurants. And while still in its infancy, the past several years have shown promise for the recovery of electronic materials, especially computers.

The consuming public has embraced recycling, but often has difficulty in purchasing recycled content products. This may be due, in part, because buying recycled content products may not be a purchasing option. Product manufacturers

aren't designing products with recycling and recovery in mind and the reasons for doing so are many - high costs, lack of technology, no available feedstock, historic methods of operation that use virgin materials, the abundance of inexpensive raw materials, and simply a lack of interest.

The situation is the same with procurement on the federal level. After more than two decades of promoting the "buy recycled" program, it appears that federal agencies lack the infrastructure to track purchases of recycled or "green" products.

Launched by the Resource Conservation and Recovery Act (RCRA) in 1995, the "buy recycled" program mandates that federal, as well as state and local agencies, using federal funds for procurement find the highest recycled content possible when buying any item costing more than \$10,000 per year. This program is intended to both reduce the amount of waste going into landfills and encourage the development of new markets for recovered materials.

The General Accounting Office recently studied six federal agencies and found that these agencies were generally not equipped to track procurement of green purchases. In some instances, purchasers were not aware of or simply didn't implement mandated programs that promote buying recycled products. As with the consumer, the federal agencies found that identifying products is often difficult and time consuming, and agencies responsible for managing the program have been slow to implement the mandate.

Although the program has been called a moderate success, the U.S. Environmental Protection Agency (EPA) is proposing to add 11 items to the federal buy recycle program, bringing the list total to 65 items. Among the new items are bike racks, office furniture, nylon carpet and backing, tires, roofing materials, and rebuilt vehicle parts. While the additional items can add to the field of recycled products available, the GAO suggests that the Office of Management and Budget, the U.S EPA Administrator and the Office of the Federal Environmental Executive find better ways to promote and report their green purchases. This also holds true for the product manufacturers and the consuming public.

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.





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.

EPA Report Touts Watershed Approach To Improving Water Quality

- Tony M. Guerrieri, Research Analyst

The management of water resources raises a number of unique and complex challenges. Among these are the difficulty of coordinating diverse public and private interests and promoting water resources from a regional and integrated perspective. Since 1991, the U.S. Environmental Protection Agency (EPA) has been promoting the watershed approach as a framework for meeting these challenges.

A report by the EPA's Office of Water, *"Protecting and Restoring America's Watersheds: Status, Trends, and Initiatives in Watershed Management"*, examines successful watershed approaches and provides general recommendations for policymakers and watershed groups for future actions.

The watershed protection approach is an integrated strategy for more effectively restoring and protecting aquatic resources. This approach focuses on defined drainage basins – watersheds – rather than on areas defined by political boundaries. For a given watershed, the approach encompasses not only the water resources, but also all the land from which water drains to the resource. To protect water resources, it is increasingly important to address the condition of land areas within the watershed because as water drains off the land it carries with it the effects of human activities throughout the watershed.

Healthy watersheds mean a better quality of life. Wildlife, fish, and aquatic life rely on clean rivers and streams and healthy stream corridors for food and shelter. Unfortunately, human activities and resource management practices often have negative impacts. Polluted runoff from commercial, urban, and agricultural areas, erosion from development and other activities, and flood

and drainage impacts all threaten watersheds. The report suggests that watershed health will only improve significantly with changes to individual land use and lifestyles and the implementation of cleaner technologies.

The focus is on defined drainage basins – watersheds – rather than on areas defined by political boundaries.

Successful ongoing efforts to address priority water problems are found throughout the country. The report highlights success stories demonstrating how cooperation between federal, state, and local partners can lead to innovative restoration solutions addressing a broad spectrum of water quality problems. For example, a non-profit organization called AMD&ART is working in the town of Vintondale, Cambria County, to create a unique acid-mine treatment system to transform a 35-acre brownfield into a passive treatment wetlands system. (On October 1, 2001, the Joint Conservation Committee held an Environmental Issues Forum featuring Dr. T. Allan Comp, AMD&ART founder). AMD&ART designs treatment systems as community parks that can be used for recreation and education. According to the report, these results will allow other communities with similar discharges and environmental conditions to build upon Vintondale's successes.

The EPA report includes a seven-theme approach that should be taken into account in any watershed planning process. These seven themes describe the actions that should be taken by various stakeholders to help each watershed meet water quality goals and provide a set of criteria for evaluating existing watershed planning frameworks.

- Increasing public education and awareness.
- Developing new partnerships and coordinating efforts.



- Collecting information through monitoring and research.
- Establishing appropriate plans and priorities.
- Obtaining funding and technical assistance.
- Implementing solutions.
- Evaluating the results.

Many elements highlighted in the report were initiated or completed during implementation of the Clean Water Action Plan, which served as the overarching strategic framework for interagency partnerships in watershed management. The report uses the major facets of the watershed framework itself to categorize case studies, program descriptions, and feedback from multiple stakeholders.

A copy of the report, *“Protecting and Restoring America’s Watersheds: Status, Trends, and Initiatives in Watershed Management”*, may be found at the U.S. EPA’s website at www.epa.gov/owow/protecting.

Urban Runoff’s Role in Watershed Pollution

- Jason H. Gross, Research Analyst

The report written by Sustainable Conservation, entitled *“Working in Urban Watersheds: Industry Analyses”* details the environmental impact of urban watershed pollution and its connection to automotive recycling. According to the report, polluted runoff is the single largest urban water quality issue facing the nation today, and the report analyzes what it says are several of the industries contributing to the urban watershed pollution problem. They are automotive recycling, scrap processing, and metal decomposition.

The report makes two premises: polluted water runoff is the single largest urban water quality problem in the country; and improper storage and disposal of recycled cars is one of the most ignored and understudied pollutants that affect groundwater recharge.

Regarding the first premise, impervious surface is responsible for a high proportion of urban landmass, covering as much as 90% of urban surfaces. Pavement, gravel, and asphalt force water to quickly collect and run off. As the water travels it carries along pollutants that are first deposited on the surface and then picked up in the flow. Stormwater runoff, carrying a high quantity of road and industrial pollutants, is discharged into the

sewage system and then carried directly into rivers, lakes, and bays without treatment.

That problem is exacerbated further in and around urban recycling yards where the impermeable surface carries a higher degree of pollutants. The runoff around these sites picks up automotive pollutants that come from vehicle fluids and corrosion. In times of precipitation the pollutants are also carried from these yards into the runoff that flows into the watershed.

The foundation believes polluted water runoff is the single largest urban water quality problem and improper storage and disposal of recycled cars one of the most ignored and understudied pollutants.

According to the report, when proper automotive recycling procedures are followed and potential contaminants are separated, stored and properly disposed of, automotive recycling is a highly efficient and environmentally beneficial process. However, the report states that auto recyclers are a primary concern for analysis and assessment because often the proper procedures are not taken to protect the environment. Auto recyclers provide an important and environmentally valuable service by recycling automobiles but this service cannot come at the cost of contaminating urban watersheds.

While best management practices (BMP’s) exist for auto recyclers, many recyclers are not putting them into practice. The report researched industry economics, value chain structure, pollutants, and regulatory structure in an effort to develop such BMP’s, made an in depth analysis of possible barriers to their adoption, and developed suggestions for dissolving the barriers. The report hopes that if auto recyclers have incentives to implement BMP’s, then greater environmental stewardship will be created within the industry.

According to the report, by adopting BMP’s the industry can reduce or eliminate the environmental contaminants that originate in automotive recycling yards. The BMP’s fall into four basic categories:

1. Store everything inside so there is no rain contact and leakage.
2. Pave or berm the site to create a barrier to contaminant runoff.
3. Inspect for leaks.
4. Drain and dispose of fluids in an environmentally responsible fashion.

Based on an analysis that the foundation performed, there are significant barriers to installing

BMP's in every auto-recycling yard. Some of these barriers include: economics, the low priority of stormwater, lack of recognition for environmental stewardship, lack of education, no federal grants available to provide an incentive to implement BMP's, high disposal fees of recycling, and the difficulty of separation of automotive components. In the future Sustainable Conservation hopes to coordinate with the auto recycling industry in an effort to adopt BMP's for responsible environmental stewardship.

The report is available by calling Sustainable Conservation at 415-977-0308 or on the World Wide Web at www.suscon.org.

Federal IPM Strategies Do not Lead to Reduction in Pesticide Use

- Tony M. Guerrieri, Research Analyst

Although pesticides play a significant role in increasing food production, exposure to pesticides can be harmful to humans. Because of the potentially harmful effects of pesticides on human health and the environment, the U.S. Department of Agriculture (USDA) has advocated the use of integrated pest management (IPM) practices as an alternative to pesticide use.

A report by the U.S. General Accounting Office (GAO) finds that despite the USDA's commitment to reduce pesticide use, pesticide use has risen over the past eight years. The GAO report, *"Agricultural Pesticides: Management Improvements Needed to Further Promote Integrated Pest Management"*, charges that the USDA has done little to act on its goal to reduce pesticide use through promotion of IPM practices.

IPM is a well-established approach to managing pests. It seeks to prevent or address pest problems by employing a range of strategies, generally using chemical pesticides as a last resort. IPM has long been a high priority for farmers, communities, and environmental advocates interested in reducing chemical pesticide applications. Pesticide producers are also interested in the technology because of the rising resistance of several species of pests to standard pesticide applications.

The report charges that the USDA has done little to reduce pesticide use through promotion of IPM practices.

In 1994, the USDA established a goal of implementing IPM practices on 75 percent of the nation's crop acreage by the year 2000. The USDA currently estimates that some level of IPM has been implemented on about 70 percent of the nation's crop acreage, just short of the 75 percent goal. However, the GAO report suggests that although the IPM goal has nearly been achieved, the implementation rate is a misleading indicator of the progress made toward the original purpose of IPM – reducing chemical pesticide use. According to the report, in preparing its estimate of IPM implementation, the USDA counts a wide variety of farming practices without distinguishing between those that tend to reduce chemical pesticide use from those that may not.

Department of Agriculture research scientists, grower associations, and major food processors have shown that IPM practices can produce major environmental benefits in particular crops and locations without sacrificing yield quality or adding costs, the GAO notes. For example, apple and pear growers in Washington, Oregon, and California used IPM techniques to cut use of chemical pesticides by 80 percent. The IPM strategy reduced farmers' pest management costs and produced a higher quality harvest.

According to the report, since 1993, the amount of pesticides used has actually increased. Chemical pesticide use in agriculture, which accounts for about three-fourths of all pesticides used in the United States, has increased from about 900 million pounds in 1992 to about 940 million pounds in 2000. While the use of the riskiest pesticides has declined, the report shows that they still account for more than 40 percent of all pesticides used today.

The IPM program has run into serious management problems, the GAO report notes. Despite the USDA's initial commitment to the IPM initiative, federal efforts to support IPM adoption suffer from shortcomings in leadership, coordination, and management, according to the report. Specifically, the USDA has not provided any departmental entity with the authority to lead the IPM initiative, the report states. In fact, the USDA has been indecisive about the intended results of the IPM project, causing confusion among stakeholders about IPM's purpose, the GAO report charges. As a result of these deficiencies, federal funds are being spent on IPM without a clear sense of purpose and priorities, the report concludes.



The IPM program faces a number of other obstacles, including providing insufficient information and services to growers, and the higher costs of some alternative pest management products and practices.

The GAO recommends that the federal government establish more effective, coordinated leadership of the IPM program, and set clear, measurable goals for the program's success. The government also needs to develop a method for measuring the progress of federally funded program activities, and encourage collaboration between the USDA and the EPA to support activities that will reduce chemical pesticide use.

To obtain a copy of the report, call the U.S. General Accounting Office at (202)-512-6000. Request report number GAO-01-815. The report is also available on the GAO's website at: <http://www.gao.gov>.

Report Strengthens Case for Anthropogenic Causes of Global Warming

- Jason H. Gross, Research Analyst

The United Nations Intergovernmental Panel on Climate Change issued its *"Third Assessment Report"* on the current and future trends in global climate change. The panel is a leading authority on climate change science and compiles the data of scientists from around the world in an effort to record and predict global climate change. The report includes data and conclusions that attribute global warming and climate change primarily to human (anthropogenic) activity.

The report notes that a more accurate and predictive climate change model continues to evolve, made possible through an ever-growing body of observations and research that provide a basis for greater insight into the trends in climate change. The study of current and past paleological data and the climate information stored in it, is developing increased accuracy in determining past and future climate conditions. The panel also credits improved data analysis techniques, more rigorous evaluation of data quality, and better comparisons between different data sources.

The report contains the following climate change observations:

- the global average surface temperature has increased over the 20th century by about 0.6 degrees Centigrade;
- temperatures have risen during the past forty years in the lowest 8 kilometers of atmosphere;
- snow cover and ice have decreased in the northern hemisphere by about 10% to 15% since the 1950's; and
- global average sea level has risen by 0.2 meters during the 20th century and ocean heat content has increased.

These are all significant changes to the climate, but without knowing what causes these changes we are without a means of addressing them.

Climate changes occur as a result of both natural (i.e., solar output and volcanic activity) and anthropogenic forces. According to the report, natural forces have had a limited impact on the climate in the last 1000 years. The report contends that it is not natural forces which have caused major changes in climate, but rather human activity.

The report cites several anthropogenic sources of climate change. It notes that greenhouse gas production has increased by 31% and methane has increased by 151% since 1750. Fossil fuel use and biomass burning have contributed to high amounts of aerosols being emitted into the atmosphere and takes the position that increased greenhouse gas emissions and aerosols have a deleterious affect on the atmosphere. According to the report, the combination of all these factors have resulted in global warming, air quality degradation, and decreased precipitation.

The report recommends further research to refine the ability to detect, attribute, and understand climate change. This includes systematic observations and reconstructions in order to enhance the development of historic climate reconstructions, more work to improve the observations of the spatial distribution of greenhouse gases, and further effort in modeling and process studies so that better adaptive and predictive models can be developed. In addition, the study calls for a strengthening of international cooperation and coordination of scientific, computational, and observational resources.

Copies of the full report are available at www.ipcc.ch.

On The Horizon...

a look at upcoming committee...and other...events

► **February 12-14, 2002, Holiday Inn, Grantville, Dauphin County – Nutrient and Sediment Control Innovative Technology Forum.** The PA Department of Environmental Protection (DEP) and the PA Agriculture Department, with 18 other cosponsoring organizations, will conduct the forum, featuring 16 technical sessions and 50 speakers. The forum will cover new developments in nutrient and sediment control technologies and practices relating to municipal wastewater and stormwater management, agricultural activities, biosolids and manure management, and feature a technology exhibition area. Information is available on DEP's website at www.dep.state.pa.us (direct link is "Innovative Technology Forum"). To register, or for exhibitor information, contact the PA Association of Conservation Districts (PACD) at (717) 545-8878 or visit www.pacd.org.

► **The Joint Conservation Committee is putting together a full slate of Environmental Issues Forums for 2002. Please check this section in future newsletters for dates, times, places and details.**

Committee Chronicles...

a review of some memorable committee events

The committee conducted public hearings on combined sewer overflows (CSO's – see page 1) in Nanticoke (Luzerne County), Oil City (Venango County) and Pittsburgh (Allegheny County), and conducted an on-site visit in Crafton Borough, a CSO community outside of Pittsburgh.

In these photos, Crafton Borough officials explain to committee chairman Rep. Scott Hutchinson (R-Venango) (2nd from left, top photo) and committee member Rep. Tom Petrone (D-Allegheny) (3rd from left, bottom photo) what happens when wet weather events trigger CSO discharges.



Pennsylvania leads the nation in the number of such CSO outfalls, with 152 communities identified as having 1,569 discharge points.

To lend even further perspective, the federal Environmental Protection Agency (EPA) has estimated a minimum cost of \$4 billion to solve Pennsylvania's CSO problems. EPA established a CSO Control Policy in 1994, including a list of "Nine Minimum Controls" to be met and creation of "Long-Term Control Plans", but to date, only 67 of the 152 CSO communities have implemented the minimum controls and only 18 of those have received approval for long-term control plans.

**Copies of the CSO report are available
by contacting the committee office
at (717) 787-7570.**

The testimony the committee heard re-emphasized what the figures quoted above showed – that the CSO problem is a large-scale, complex and expensive problem. And, the theme the committee heard most consistently from local authorities during the hearings was a call for financial help. The committee's recommendation that the state play a part in providing that help is based on a combined approach to funding to include federal grant money, a new state bond fund, and other targeted initiatives from existing state programs to augment local efforts.

The piece of state legislation most often discussed during the hearings was Senate Bill 150, introduced by committee vice-chairman Sen.

Raphael Musto (D-Luzerne). SB 150 would establish a CSO grant program, funded by a \$1 billion bond issue to be administered by the Pennsylvania Infrastructure Investment Authority (PENNVEST).

In addition to funding assistance, the committee report also recommended a number of performance, regulatory and technical assistance steps to address CSO's. Among these specific recommendations are:

- ensuring that all CSO dischargers have implemented best management practices to eliminate or minimize CSO discharges by executing EPA's "Nine Minimum Controls" and "Long-Term Control Plans" and having DEP provide technical assistance to those communities not in compliance;
- encouraging EPA to grant Pennsylvania greater flexibility by fast tracking permitting options to allow CSO communities to comply with mandates;
- inventorying and prioritizing CSO discharges based on water quality impact, and targeting these areas for priority funding;
- considering use attainability adjustments in water quality standards during wet weather events for communities otherwise consistent in achieving the standards;
- funding and encouraging EPA- and DEP-prescribed innovative technologies to address CSO's;
- establishing an information clearinghouse of best management practices relating to CSO remediation techniques; and
- increasing public awareness of the CSO issues, its costs and the problems that will result if not solved.

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