

**JOINT LEGISLATIVE AIR AND WATER POLLUTION
CONTROL AND CONSERVATION COMMITTEE**

**REPORT ON
COMBINED SEWER OVERFLOWS
IN PENNSYLVANIA**

November, 2001

TO: All Members of the General Assembly

**FROM: Representative Scott E. Hutchinson, Chairman
Senator Raphael J. Musto, Vice-Chairman**

SUBJECT: Combined Sewer Overflows Report

DATE: November 20, 2001

Over the next ten years, Pennsylvania faces a daunting infrastructure challenge. Current sewer and wastewater facilities have not kept pace with urbanization, community development, new business creation and expansion, and other developments fueling demands on such facilities. Pennsylvania will need to invest billions of dollars over the next decade to upgrade and improve current sewer and wastewater infrastructure.

The following report is the result of a series of public hearings held by the Joint Legislative Air and Water Pollution Control and Conservation Committee throughout Pennsylvania to discuss financing the Commonwealth's aging infrastructure, Senate Bill 150, Printer's Number 155, and the issue of combined sewer overflows.

INTRODUCTION

Aging water and wastewater infrastructure in Pennsylvania and the United States is expected to create unprecedented financial demands in the next decade. The U.S. Environmental Protection Agency estimates that about \$1 trillion in spending will be needed between 2010 and 2020 for capital improvements, maintenance, and operation of water and wastewater systems across the country. Much of this spending is needed to replace and repair current systems, which have deteriorated to the point of being unsafe or unreliable.

The nation's wastewater systems are at a critical point in their lifecycles. While significant parts of the system are approaching the end of their useful lives, infrastructure spending falls short of the amount needed to replace aging and failing pipes and meet the objectives of the Clean Water Act.

Most people take for granted that their communities have safe delivery systems and environmentally sound wastewater collection systems. However, if the present situation persists, the financial solvency of many wastewater systems will be in doubt. This puts the environmental, public health, and economic gains these systems have provided over the years in jeopardy. Clearly, action must be taken to overcome what threatens to be a shortfall in wastewater investments because inevitably systems will break down, pipes will crack, and there will be overflows of sewage.

Why are we facing such a large financial burden? One reason is the simultaneous expiration of the useful life of wastewater infrastructure installed at different times. The nation's wastewater infrastructure and Pennsylvania's combined sewer systems represent nearly a century of investment, substantially funded by local taxpayers. More recent expansions of these systems took place following two world wars - all of which means many of the newest systems are over 50 years old.

Wastewater infrastructure and the combined sewer overflow (CSO) issue in Pennsylvania have become particularly acute in recent years due to the age of the sewer systems. When sewers were first installed in Pennsylvania, combined sewage systems were used to convey sewage to the nearest waterway. These systems provided a great convenience to cities and towns. Sewage and industrial waste was commonly thrown into waterways as a matter of course. At the time, streams and rivers were not thought of as recreational areas but instead were used for transport and waste removal. It is only relatively recently that the public perception of waterways has changed to conceptualize waterways as recreation, conservation and preservation areas.

Recent regulatory and fiscal pressure placed on small communities throughout the Commonwealth by the U.S. Environmental Protection Agency (EPA) and the Pennsylvania Department of Environmental Protection (DEP) to upgrade, repair, and replace aging CSO systems has often become burdensome to many municipalities. Having recognized this growing and present financial need, the Joint Legislative Air and Water Pollution Control and Conservation Committee (Committee) was asked to hold a series of public hearings to discuss the issue of Pennsylvania's aging wastewater infrastructure and offer possible remedies.

The hearings were held on March 23, 2001 in Nanticoke, Luzerne County; April 6, 2001 in Pittsburgh, Allegheny County; and June 15, 2001 in Oil City, Venango County.

During the course of the hearings, the single most frequent request from local authorities was a call for financial help. The means of acquiring that financial help have been a little more difficult to discern. Many groups indicated that the federal government should work in conjunction with state funding sources in order to provide adequate funding resources. There was widespread concern that the federal agencies were more focused on penalizing the failure to comply with federal requirements than resolving the CSO problem. The alternative that the municipalities offered was for the federal government to assist in the remediation and replacement of the offending CSO problems. The Committee offered hearing participants a look at a funding proposal, Senate Bill 150, Printer's Number 155, the "Combined Sewer Overflow Control Act" that establishes a \$1 billion grant program to assist local authorities in addressing the impacts of CSO's.

In brief, SB 150 would establish a CSO grant program through a voter-approved \$1 billion bond issue to be administered by the Pennsylvania Infrastructure Investment Authority (PENNVEST). PENNVEST would also establish the criteria needed for awarding the grants which local authorities would apply for from the bond proceeds.

In general, there are no simple solutions to CSO problems. The solutions advocated at the state and federal levels involve considerable funds to achieve acceptable solutions. This report represents a review of public hearing testimony and subsequent meetings and briefings on the CSO issue. The following recommendations are based on a combined approach to funding that includes the possibility of rate increases at the local level, federal grant money, and state funding initiatives from executive branch-based programs and bond issue-based legislative funding measures.

RECOMMENDATIONS

- 1. Ensure that all CSO dischargers have implemented best management practices to eliminate or minimize CSO discharges by executing the “Nine Minimum Controls” and “Long-Term Control Plans” as outlined by the EPA, and provide technical assistance through the DEP to those communities that are out of compliance with these requirements.**
- 2. Encourage the EPA to grant Pennsylvania greater flexibility in addressing CSO’s and other wet weather challenges by fast tracking permitting options that will allow CSO communities to comply with federal and state mandates.**
- 3. Promote legislative initiatives that provide funding through the issuance of state secured bonds for upgrades and capital improvements for CSO’s.**
- 4. Inventory and prioritize CSO discharges based on water quality impact, and target those areas for receiving priority funding and capital improvement assistance.**
- 5. Consider use attainability adjustments in water quality standards during wet weather events for communities that demonstrate consistent annual achievement of water quality standards.**
- 6. Provide funding for and encourage the use of EPA and DEP prescribed innovative technologies to address CSO’s.**
- 7. Establish a clearinghouse of information regarding best management practices relating to specific CSO remediation techniques.**
- 8. Increase public awareness of the CSO issue, its costs, and the problems that occur if solutions are not implemented.**

COMBINED SEWER OVERFLOWS: THE ISSUE

Combined sewer systems are sewers that are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe. Most of the time, combined sewer systems transport all of their wastewater to a sewage treatment plant, where it is treated and then discharged to a water body. During periods of heavy rainfall or snowmelt, however, the wastewater volume in a combined sewer system can exceed the capacity of the sewer system or treatment plant. For this reason, combined sewer systems are designed to overflow occasionally and discharge excess wastewater directly to nearby streams, rivers, or other waterways.

These overflows, called combined sewer overflows (CSO's), contain not only stormwater but also untreated human and industrial waste, toxic materials, and debris. They are a major water pollution concern for communities that have combined sewer systems. Unfortunately, Pennsylvania has the distinction of leading the nation in the number of CSO outfalls. The DEP has identified 152 communities representing 1,569 discharge points that are currently operating with CSO discharges. CSO's may be thought of as a type of "urban wet weather" discharge. This means that they are discharges from a municipality's wastewater conveyance infrastructure that are caused by precipitation events such as rainfall or heavy snowmelt.

Historically, the control of CSO's has proven to be extremely complex. This stems partly from the difficulty in quantifying CSO impacts on receiving water quality and the variability of each CSO site. In addition, the financial considerations for communities can be significant. Ideally, the removal of CSO's would be the preferred way to go, however, this would be cost prohibitive for most, if not all communities to accomplish at the present time.

EPA recognized this dilemma and published its CSO Control Policy in 1994. The policy is a national framework for control of CSO's through the National Pollutant Discharge Elimination System (NPDES) permitting program. It is the result of negotiations among municipal organizations, environmental groups, and state agencies and provides guidance to municipalities and state and federal permitting authorities on how to meet the federal Clean Water Act's pollution control objectives in a flexible and cost-effective manner.

EPA continues to develop guidance and information to foster implementation of the CSO Policy. State and EPA NPDES permitting authorities are working with permittees to incorporate CSO conditions into NPDES permits and other enforceable mechanisms, such as administrative or judicial orders.

The first milestone under the CSO Policy was the January 1, 1997 deadline for implementing minimum technology-based controls. The Nine Minimum Controls are measures that can reduce the prevalence and impacts of CSO's and that are not expected to require significant engineering studies or major construction. Communities with combined sewer systems are also expected to develop Long Term Control Plans that will ultimately provide for full compliance with the federal Clean Water Act, including attainment of water quality standards.

CSO communities are now in various stages of developing and implementing their long-term control plans, including characterizing their combined sewer systems, monitoring the impacts of CSO's on waterways, and discussing water quality and CSO control objectives with permitting authorities, water quality standards authorities, and rate payers. EPA encourages municipalities to take advantage of the flexibility in the policy as they embark on this process, particularly where opportunities exist to evaluate water pollution control needs on a watershed management basis and to coordinate CSO control efforts with other point and nonpoint source control activities. DEP is responsible for implementing the CSO Control Policy and monitoring CSO permittees to make sure the Nine Minimum Controls and long-term control plans are in place.

EPA recognizes that financial considerations are a major factor affecting the implementation of CSO controls. For that reason, the policy allows consideration of financial capability in the planning efforts. However, each permittee is still responsible for aggressively pursuing implementation of the controls.

STATE FUNDING PROGRAMS AND PROPOSED INITIATIVES

Pennsylvania municipalities and authorities are currently making significant investments in infrastructure through the PENNVEST program and other funding mechanisms. Growing Greener has increased funding for infrastructure projects and created new and innovative technologies needed by Pennsylvania communities.

The federal Rural Utilities Service operates a fairly large loan and grant program and Congress has just passed federal wet weather pollution control legislation that authorizes about \$1.5 billion for EPA to make grants to communities with CSO's in 2001 and 2003. This made EPA's CSO Policy part of the federal Clean Water Act under Section 112(q)(1). As part of the Act, Congress earmarked funding for CSO projects with a priority given to financially distressed communities.

Looking further ahead, the Water Infrastructure Network and others are working to stimulate additional federal grant funding for infrastructure construction and rehabilitation.

During testimony, DEP was asked to provide information on how other states address CSO funding issues, and worked with the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) to conduct a survey of states. The survey asked two questions:

1. Does your state have any state-funded initiatives to provide funds to address CSO's?
2. Are there any serious legislative proposals or bills along the same lines?

The following is a summary of responses to the survey:

State	Brief Description of Program
Alabama	<ul style="list-style-type: none"> • No state program.
California	<ul style="list-style-type: none"> • Only three CSO's. • Considerable work has been performed on the CSO's, currently pose no problems. • No current funding programs.
Connecticut	<ul style="list-style-type: none"> • Have been funding CSO work consistently since the State Revolving Fund (SRF) program started. • Provide a 50% match on CSO projects performed through SRF (for planning, design, construction work related to CSO abatement projects). • CSO projects given extra priority point consideration in the development of the annual priority list for SRF projects. • CSO communities typically are large urban areas where median incomes are below \$30,000 per year.
Florida	<ul style="list-style-type: none"> • No CSO's.
Illinois	<ul style="list-style-type: none"> • No existing special financial assistance program for CSO's. • CSO projects eligible under SRF.
Indiana	<ul style="list-style-type: none"> • SB 236 would permit the State Budget Agency to make grants to political subdivisions from the Supplemental Drinking Water and Wastewater Assistance Fund for tasks associated with the development and preparation of long-term control plans, use attainability analyses, and stormwater management programs. Provisions would go into effect on July 1, 2001. As of April 16th, the bill had passed both houses.
Iowa	<ul style="list-style-type: none"> • No specific state initiatives targeted at CSO's. • Fourteen CSO communities.
Kentucky	<ul style="list-style-type: none"> • No state program.
Maine	<ul style="list-style-type: none"> • A 1989 bond issue of \$2.4 million that provided up to 75% funding for CSO abatement construction. Funding went quickly.

	<ul style="list-style-type: none"> • A 1990 bond issue of \$2.4 million that provided 25% grant funding for communities and districts to develop CSO Long-Term Control Plans. Using these funds, Maine was able to get all CSO communities through the initial planning process. • Utilize State Revolving Loan Funds for many construction projects outlined in the LTCP's. (80% federal, 20% state) • No current legislative proposals.
Michigan	<ul style="list-style-type: none"> • Utilizes SRF for funding CSO programs. • No separate funding initiatives.
Missouri	<ul style="list-style-type: none"> • State-funded loans and grants for stormwater management. Funding comes from state bonds. Seriously considering use of these funds for CSO rehabilitation and storm water portion of CSO separation.
Nebraska	<ul style="list-style-type: none"> • No state funded initiatives and no pending legislation.
Nevada	<ul style="list-style-type: none"> • Has not funded any combined sewer projects.
Ohio	<ul style="list-style-type: none"> • No state funding or grants targeted to CSO's.
Rhode Island	<ul style="list-style-type: none"> • In November of 2000, voters approved a referendum creating a pool of money to be used to provide a 0% interest rate on SRF loans. Part of the referendum's language reserved \$70 million in 0% loans for the Narragansett Bay Commission's (the sewer authority serving the greater Providence area) \$400+ million CSO abatement program. • No other current state funding programs assisting CSO abatement at this time or in the foreseeable future.
South Dakota	<ul style="list-style-type: none"> • One CSO. • CSO qualifies for general state water/wastewater grant program.
Tennessee	<ul style="list-style-type: none"> • No specific state-funded initiatives directed at funding CSO work. • Nashville has spent over half billion dollars on rehabilitation of CSO's. • Chattanooga has also worked on an ambitious program. • Successful enforcement actions initiated in the late 1980's and early 1990's have enabled great progress on CSO projects.
Vermont	<ul style="list-style-type: none"> • State grant for 25% of eligible project cost (capital cost). • SRF loan of 50% of eligible cost at zero percent interest for a 20-year repayment term.
Virginia	<ul style="list-style-type: none"> • No state-funded initiatives to provide funds to address CSO's.
West Virginia	<ul style="list-style-type: none"> • No current funding programs that deal with CSO problems. • Proposal to legalize video poker machines, part of the revenue intended for debt service, allowing the Infrastructure Council to sell more bonds for funding of water and sewer projects (including CSO's).

SUMMARY OF TESTIMONY

Pennsylvania Department of Environmental Protection

Pennsylvania has a significant number of aging water treatment systems that are near the end of their effective lives and has the distinction of having the largest CSO problem in the United States. According to testimony, there are 152 CSO communities throughout Pennsylvania and DEP is committed to eliminating these overflows to the highest degree possible. Toward this end, DEP believes that a stepwise approach must be used to address CSO discharges. This means contacting CSO communities to ensure that EPA's programs - the Nine Minimum Controls and the Long Term Control Plans - have been implemented. Of the 152 communities that have CSO's, only 67 have implemented the Nine Minimum Controls and only 18 of those have received approval for their Long-Term Control Plans. In cases where communities have not implemented these programs, Consent Orders will be negotiated by DEP to put these communities in compliance.

Compliance will not be inexpensive. Preliminary estimates suggest that it will cost over \$4 billion to remedy the CSO problem in Pennsylvania, and the actual cost will most likely be substantially higher. The CSO issue is only part of the overall infrastructure problem. Estimates to repair both wastewater and drinking water systems have reached the \$11 billion figure statewide.

DEP recommended encouraging the use of new technologies that assist in water quality improvements in order to ensure the lowest cost to improvement efforts. DEP believes that increased wet weather monitoring efforts are necessary in addressing CSO's.

Some of these improvements are already underway through the activities of watershed groups, the Growing Greener program, and PENNVEST. DEP attributed volunteer watershed groups, along with funding from the Growing Greener program, as contributing to the wide base of knowledge we now have regarding CSO's.

Office of Watersheds, U.S. Environmental Protection Agency Region III

CSO's are considered point sources and are therefore subject to NPDES permitting, compliance and enforcement requirements. EPA has been regulating CSO's through their 1989 and 1994 national CSO policies. These policies provide the guidelines for meeting pollution control goals of the federal CWA.

According to EPA testimony, separation of sewage and wastewater output is the preferred solution to the CSO problem, but EPA recognizes that this solution is cost prohibitive. EPA's control policies are designed to allow cost-effective retrofitting and expansion of existing facilities if additional controls are necessary. The agency believes that the Control Policy will also enable communities to reach the Nine Minimum Controls by using a set of best management practices applied to the existing sewer system.

EPA recognizes that CSO communities need financial assistance in achieving the Nine Minimum Controls and the intent of the Control Policy. According to testimony, EPA's Clean Water State Revolving Fund Program has provided about \$50 million per year since 1989 to PENNVEST and DEP. The EPA funds, plus the required state match and loan repayments, bring the total available funds to approximately \$85 million. This includes all water pollution control needs, not just CSO's. The EPA suggests that while federal funding is available it cannot reach the full needs of all CSO communities in Pennsylvania. EPA suggested that support from all levels of government - federal, state, and local - are needed to fully address this critical need.

Greater Wilkes-Barre Chamber of Business and Industry

The chamber discussed the nature of the CSO problem and how it relates to their community as well as the greater Wyoming valley. According to the chamber there are many communities in their area that share in the CSO problem. Several communities in the area have CSO problems far beyond their financial ability to solve them. The chamber noted that the problem worsens as development increases and the stress on each sewage system greatly overrides the capacity to moderate the flow.

The assurance of water quality in the area is considered by the chamber to be a compelling problem. Water quality has been identified as one of the greatest threats affecting the future investment and patronage of a developing riverfront area. The chamber believes that if the water quality issue is addressed now, the ability to develop a thriving waterfront will increase.

The chamber supports SB 150 and believes that the monies collected through this proposed legislation would help alleviate the burden on the Wilkes-Barre area and would support greater economic development and private investment in the area.

Greater Hazleton Joint Sewer Authority

Given the magnitude of the economic impact to a community with only 43,000 people in their service territory, the Hazleton Authority finds itself in the same situation as many other communities in Pennsylvania - one with aging infrastructure combined with significant costs associated with upgrade and replacement. The authority is very supportive of SB 150 and the funding mechanism provided in the proposed legislation.

The authority has partially implemented the Nine Minimum Controls and is currently developing a long-term control plan. The authority estimates separating all combined sewers within its jurisdiction would cost up to \$100,000,000. The impact of such a project will cost users and the average homeowner between \$430 and \$575 each year. This would include an upgrade to its wastewater treatment plant and the construction of a primary treatment facility at each of its 14 overflows. The authority believes that this places a deep financial burden on its community and its citizens, and will in turn, drive out new business investment and property development.

Susquehanna River Basin Commission

With the limited financial and technical resources of most communities in Pennsylvania and the projected expense of correcting the CSO problem, the Susquehanna River Basin Commission (SRBC) supports a funding mechanism such as SB 150. The SRBC is a federal-interstate water management agency created by the Susquehanna River Basin Compact. The SRBC is charged with encouraging efforts to prevent, reduce, control, and eliminate water pollution and to maintain water quality as required by the comprehensive plan.

The SRBC has a comprehensive plan which calls for sufficient control of water pollution to maintain and establish water quality capable of supporting multiple purpose uses for public water supply, recreation, fish, and wildlife. The SRBC believes that in order to follow the purposes of the plan that CSO's must be dealt with. According to SRBC, CSO's are one of the biggest and most expensive environmental issues facing both Pennsylvania and the nation as a whole.

The SRBC is concerned on behalf of recreational water users along the Susquehanna and its tributaries. SRBC believes that CSO's pose a major health risk to people who swim, water ski, and fish in Pennsylvania's river ways.

Wyoming Valley Sanitary Authority

As the regional wastewater authority for 36 Luzerne County municipalities, the Wyoming Valley Sanitary Authority (WVSA) incorporates communities both with and without combined systems. The authority operates as an incorporating body for the 36 independent communities it serves.

The WVSA is currently planning a use attainability analysis to assist in determining the proper cause of action for treating the CSO problem in their authority's region. Through this analysis, WVSA hopes to determine the most cost-effective and reasonable plan for remediating CSO's.

The WVSA strongly supports SB 150 and a similar piece of legislation, House Bill 332, because it would assist in mitigating the extensive costs associated with dealing with CSO issues. The WVSA believes that \$1 billion will not be enough to remediate the statewide problem. WVSA showed that clean water infrastructure investment is one of the highest generators of jobs for all infrastructure categories and contends that public investment in wastewater facilities improves competitiveness of industry, private profitability, wages, and higher tax revenues due to increased development. WVSA believes that Pennsylvania should be proactive in allocating funds to treat CSO problems across the state.

Pennsylvania Environmental Council

The council believes that CSO's are a significant threat to water resources and water quality in the Wyoming valley and is encouraged to see legislative initiatives, such as SB 150 recognize the significance of the problem. Adequate funding resources are essential to properly addressing CSO's and the council is supportive of SB 150. They suggest that the bond issue would reduce the financial burden on local communities and help meet regulatory requirements.

Looking toward the future with increasing populations, progressing development, and increasing amounts of impervious cover, the Council suggests that communities need to examine their entire water control system. This would include prioritization of a community's CSO problem, with special emphasis paid to preventative measures for future CSO events. One method of dealing with this problem is to encourage stormwater infiltration rather than runoff - a technique that would reduce the overall flow into a sewer system. In order to achieve these goals, proper planning and land use management are the best tools for minimizing environmental problems associated with future wet weather events.

The Council recommends that priority funding should be given to areas that pose the greatest risk to public health, and engineering solutions that use natural processes should be encouraged whenever possible.

Allegheny County Sanitary Authority

Like many regions in Pennsylvania, the Allegheny County region is faced with aging infrastructure. Systems that were designed for the 1950's cannot keep pace with new land development and redevelopment of existing land. As with most overflow events, CSO's in the Allegheny County region are attributed to wet weather events, which when combined with an aging and deteriorating sewer system, allow sewage to flow into streams and rivers. Due to the large municipal interconnection systems in the region, every municipality contributes to CSO overflows. Because communities were added to other CSO communities in the Allegheny County Sanitary Authority (ALCOSAN) region, there are hundreds of miles of sewer systems that contribute to the CSO problem.

Aside from the problems associated with municipal connections to sewer systems, ALCOSAN suggested that storm flow entering the sewers from private homes is also a significant problem.

ALCOSAN further suggested that it will cost \$3 billion to repair the municipal systems in their region, not including the cost of addressing private sector contributions to the CSO problem. According to ALCOSAN, half of excess wet weather water comes from privately owned property. Repair of these sources could reach thousands of dollars per property.

ALCOSAN recommended additional public support for funding the repair of pipes on private lands that contribute to CSO's with a substantial commitment made to remedial projects from funding sources aside from local monies. Because of the magnitude of the problem, the federal government needs to allow a realistic time frame for achieving compliance with federal requirements and perhaps offer amnesty to those willing to encourage corrective action before cumbersome penalties are levied by the federal and state governments.

3 Rivers Wet Weather Demonstration Program

The 3 Rivers Wet Weather Demonstration Program (Program) is a nonprofit corporation created through a partnership between the Allegheny County Health Department and ALCOSAN. Its goals are to provide funding for demonstration

programs and to cultivate inter-municipal partnerships for cost-effective regional watershed solutions.

The Program suggests that wet weather issues are a blend of three problems: CSO's, sanitary sewer overflows (SSO's), and stormwater. In order to adequately deal with the CSO problem, the Program supports legislation that provides appropriate funding for all three issues and advocates the management of sewage systems as a regional public utility. The regional approach would allow systems to be properly maintained, monitored and operated. The division of the sewage system into 83 municipally owned collection systems that is currently in place in the region complicates repairing the CSO problem. By uniting the systems under a regionalized approach a more cohesive rehabilitation can occur. Additionally, rehabilitation by individual communities is not cost-effective due to the costs of developing a broad-based plan of repair and the lack of large scale bidding on the project.

The Program advocates the consideration of several legislative initiatives. First, financial incentives must be provided, such as those contained in SB 150, so that municipal leaders will have the tools to accomplish the goals of reaching a regionalized and sustainable solution to CSO discharges. Second, local officials must be organized into regionalized watershed based groups so that the obstacles created by decentralized sewer systems can be bridged. Third, smart growth initiative and sewage facilities act programs must be enhanced and fostered and public dollars should be authorized for the use of rehabilitating pipes on private lands that contribute to the CSO problem.

Ben Avon Borough Council

The Council of Ben Avon Borough supports the proposed funding outlined in SB 150 as a method for alleviating the financial burden placed on local authorities by federal mandates. However, the council believes the proposed legislation should also include funding for SSO's as well. Overflows from SSO's and CSO's are all public health hazards that pollute waterways and should be addressed as such.

The council testified that several municipalities contribute to a single overflow. Elimination of the single overflow requires the participation of more than one contributing municipality. Therefore, state revolving grant awards that emphasize inter-municipal cooperation are a useful tool in encouraging the proper working of a unified solution to the overflow problem.

The council also urges inclusion of SSO's in state proposed grant programs in order to assist municipalities in complying with the Clean Water Act and suggests funding multi-municipal projects in areas of shared sewersheds.

CET Engineering Services

The ultimate solution to solving the CSO problem, according to CET Engineering, is a combination of options, not just one single operation. The best solution to the CSO problem will combine the separation, diversion, and upgrade to water treatment facilities. By combining these approaches into a single planned solution, the simplest and most cost-effective solution can be implemented.

To date, solutions for treating CSO's have encompassed treating all discharged water. CET instead offered a solution to meeting the NPDES requirements by combining full treatment with partial treatment of the water. When these methods are combined, overflows meet or exceed the NPDES requirements for clean water. These methods are functional and often less expensive but they cannot be implemented because they have not yet been permitted by DEP. CET contends that wider permitting would enable them to implement newer and less expensive CSO remediation tools. One example of a system that functions properly and efficiently that has not seen wide permitting by DEP is the Actiflow system. This system has a lower installation cost than a new primary treatment plant, it has a small footprint, and it is effective.

At the same time CET acknowledged that all new systems on the market for repairing CSO problems are not equivalent. Many of them are less than useful, cumbersome, or potentially dangerous to the environment. Such a system that does not work properly, according to CET, is the temporary storage system.

KLH Engineers

KLH Engineers presented testimony that provided a strong engineering and practical picture of the CSO issue. KLH explained EPA's control policy and how it impacts engineers who are attempting to solve the CSO issue. According to KLH, communities must capture 85% of the annual wet weather flow and transport it to the wastewater treatment plant; reduce annual CSO events to no more than four events per facility; and capture 85% of the annual pollution load and transport it to the wastewater treatment plant.

KLH explained several systems and methods for dealing with CSO issues. Most local authorities "over build" their treatment systems. Many times CSO re-

mediation techniques use a method of overbuilding the system. The systems are designed to run all the time when all they really have to do is run during storm events. Designing a system that must run all the time necessitates that the system is large and expensive. The usual way that these overbuilt systems are applied is by adding stormwater treatment facilities and by increasing capacity. KLH recommends the alternative of combining water treatment plant expansion with various straining and storage systems that will alleviate demands upon the plant during storm events. That way treatment plant expansion is minimized and cost expenditures are reduced.

Pennsylvania Municipal Authorities Association

The Pennsylvania Municipal Authorities Association (PMAA) has addressed the CSO issues in Pennsylvania by creating a CSO/SSO protocol. The protocol provides state and federal agencies with possible alternatives, time frames, and general permitting options for solving the CSO problem.

Funding is a critical part of the CSO solution. Continued and expanded federal and state funding is necessary to offset the local share of addressing the potential solutions. PMAA specifically requested help in securing funding under the federal Wet Weather Act of 2000 as a start to federal funding. At the state level PMAA supported the legislative funding efforts of SB 150. PMAA also believes that executive-branch directed funding through PENNVEST and other programs should be applied to CSO remediation efforts.

State and federal agencies must be aware that communities in Pennsylvania cannot come into compliance overnight. Many communities have to deal with complex infrastructure issues and do not have populations that can support the needed upgrades. PMAA testimony suggested that DEP and EPA need to be more responsive to the needs of these communities and offer solutions instead of citations and compliance decrees. PMAA recommended establishing a clearinghouse of information that informs CSO communities about the best management practices that are permitted by DEP and EPA.

Further, different EPA regions have varying standards on CSO issues. This causes a disparity in treatment among different states. **This is especially acute in regard to Pennsylvania since EPA Region III is one of the strictest.** Some regions have adopted the approach that swimmable/fishable conditions do not occur during peak wet weather flows and that the waste streams in these conditions are diluted by heavy flows. EPA does not recognize the variation between peak wet weather flow dilution and dry weather flow conditions that are not diluted. This factor places additional strain upon CSO communities.

City of Oil City

The City of Oil City owns and operates its sewage collection, conveyance and treatment systems within the city. The sewer system serves most of the city's population (75,000) and several neighboring townships. The city's CSO's have been authorized by the state and federal governments and are now regulated by the CSO Control Policy issued by EPA. The city has performed a system inventory and characterization and documented the implementation of the Nine Minimum Controls as required by permit. Although the city has complied with the Nine Minimum Controls, the development of the Long-Term Control Plan (LTCP) is expected to be challenging and expensive.

According to testimony, Pennsylvania has the opportunity to take the lead in providing the necessary funds to municipalities to deal with the CSO issue and adopting a watershed approach in their LTCP. It is unclear, however, whether preparing and implementing the LTCP for CSO control will actually improve water quality in Oil City waterways.

PARTICIPANTS

PUBLIC HEARINGS ON SENATE BILL 150 OF 2001

THE FOLLOWING ORGANIZATIONS SUBMITTED COMMENTS TO THE COMMITTEE

3 Rivers Wet Weather Demonstration Program
Allegheny County Sanitary Authority
Borough of Ben Avon
Borough of Crafton
CET Engineering Services
City of Erie
City of Johnstown Wastewater Treatment Plant
City of Oil City
Carroll Township Authority
Gannett Flemming, Inc.
Greater Wilkes-Barre Chamber of Commerce
Greater Hazleton Joint Sewer Authority
Kennedy Township
KLH Engineers
Pennsylvania Department of Environmental Protection
Pennsylvania Environmental Council
Pennsylvania Municipal Authorities Association
Pittsburgh Water and Sewer Authority
Susquehanna River Basin Commission
U.S. EPA Region III, Office of Watersheds
Wyoming Valley Sanitary Authority