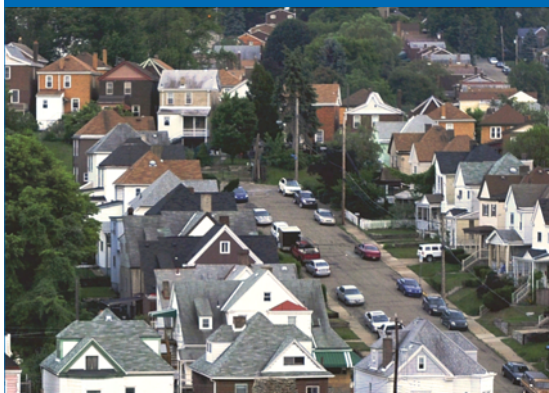


Allegheny Conference  
on Community Development



# sewer regionalization evaluation

review panel  
executive summary



march 15, 2013



### **SEWER REGIONALIZATION REVIEW PANEL EXECUTIVE SUMMARY**

#### **I. Introduction and Background**

The Allegheny County Sanitary Authority (ALCOSAN) and the 83 municipalities that convey wastewater and stormwater flow to ALCOSAN's treatment plant must implement a Consent Decree (CD) and municipal Consent Orders and Agreements (COAs) and Administrative Consent Orders (ACOs) to control wet weather discharges from sewers to the region's rivers and streams. This requires a major effort with significant costs to be borne by the approximately 320,000 rate payers within the 83 municipalities. ALCOSAN submitted its Wet Weather Plan (WWP) and summary of public comments to EPA and the Pennsylvania Department of Environmental Protection (DEP) on January 31, 2013. Municipalities are required to submit their feasibility studies to the Allegheny County Health Department and DEP in July 2013. ALCOSAN has requested from EPA a modification to its CD that would permit an 18-month extension (June 30, 2014) for submittal of its final WWP that will reflect the results of the municipal feasibility studies and green infrastructure/source reduction plans.

The issues that the pending implementation of ALCOSAN's CD and the various COAs and ACOs have raised within the ALCOSAN treatment area and throughout Allegheny County are not new; leaders in southwestern Pennsylvania have grappled with these and related topics for many years. The University of Pittsburgh's Institute of Politics (IOP) addressed the issue in 2006-2009 when its Regional Water Management Task Force, an 11-county effort to improve water management and water quality, concluded that our region faced many challenges, including sewer overflows that release billions of gallons of untreated sewage into our rivers each year. The Task Force recommended the creation of a Three Rivers Water Planning District to coordinate and integrate water resources management (water quality, water supply, flooding prevention, sewage disposal and pollution control) throughout southwestern Pennsylvania. The recommendation has yet to be acted on.

The current regionalization discussion is driven in large part by wet weather compliance costs that ALCOSAN and the service area municipalities face and by the sense that regionalization efforts in other parts of the country have resulted in economies of scale, systems integration, and increased consistency in meeting water quality standards. In the same timeframe, many in the region questioned ALCOSAN's predominantly "gray infrastructure" approach to control sewer overflows and requested that ALCOSAN consider source reduction and green infrastructure applications that would deal with precipitation where it falls rather than expand sewer

lines and treatment capacity to accommodate excess stormwater. Such source reduction would be best addressed by a regionalized approach to wastewater management since much of the flow travels through multiple municipalities on its way to ALCOSAN's Woods Run treatment plant.

### **II. Regionalization Evaluation Methodology**

In coordination with ALCOSAN, the Allegheny Conference on Community Development facilitated an intensive stakeholder outreach process, the Sewer Regionalization Review Panel, to develop and evaluate regionalization options for the ALCOSAN service area. The members of the Review Panel represented a cross-section of stakeholder groups (subject matter experts from private and non-profit organizations, municipalities, Allegheny County, water and sewer authorities and educational institutions). The Review Panel met ten times from September 2011 through February 2013. Additionally, Review Panel subcommittees met numerous times.

The Review Panel assisted in developing various options for regionalization and identified evaluation categories and assessment criteria. With the assistance of ALCOSAN's consulting team, subcommittees used these criteria to evaluate and rank the options for each category. The methodology is explained in detail in Section 6 of the report. Through the evaluation process, the Review Panel arrived at the following general findings and recommendations concerning regionalization for the ALCOSAN service area and implementation of the ALCOSAN WWP.

### **III. Findings**

The overarching theme is that improved alignment, stronger collaboration and greater integration among the various responsible parties – ALCOSAN, municipalities, authorities, appointing bodies and others engaged in wastewater management – will result in better services and better water quality for our residents, businesses and communities. Six particular findings are presented below.

#### **A. Governance Changes to Reflect the Multi-jurisdictional Interests in ALCOSAN Decision-making and Performance**

The current governance structure should be reviewed to ensure that the interests and performance expectations of the municipalities in the ALCOSAN service area are better represented. As the 83 municipalities are in a partnership with ALCOSAN, the legitimacy of the partnership's governance is indispensable to the success of the joint enterprise. Adequate municipal representation on the ALCOSAN board is crucial to the willingness of the 83 municipalities to take robust

regionalization actions. While about two-thirds of the households within ALCOSAN's service area lie outside the City of Pittsburgh, five of the seven ALCOSAN board members live in the City. Given the preponderance of households outside the City that are ultimately served by ALCOSAN, suburban representation on the ALCOSAN board should better reflect their waste flow contribution and promote the cooperative nature of the relationship between them and ALCOSAN.

Additionally, the municipalities want an assurance of continued service quality improvement. It is not uncommon in other regions of the country for background requirements to accompany appointments to such boards. Part of providing service quality assurance may hinge on ALCOSAN board appointees having particular, relevant qualifications.

Leadership at the regional level is needed to coordinate long term, integrated, cost effective, sustainable approaches to wastewater management. The Regional Water Management Task Force formed by the IOP in 2006 recommended the creation of a regional planning district within the Southwestern Pennsylvania Commission (SPC) to establish policy, develop plans, and promote a regional perspective on water issues. At this time, SPC is not directly involved in wastewater planning and management issues. As these issues would best be planned at a regional level, the County would be a reasonable alternative for housing these activities for the time being. Implementation of that important 2006 task force recommendation would be bolstered by the establishment of a Wastewater Planning Coordinator by the Allegheny County Executive to develop an integrated Allegheny County watershed management plan.

Changes in multi-jurisdictional governance entail delicate political tradeoffs. Therefore, it is important that specific recommendations regarding changes to ALCOSAN's governance and system-wide planning include broad-based and open discussion. Specific suggestions should come through a concerted, expertly facilitated multiparty process such as those convened by the IOP. The Allegheny County Executive and the Mayor of Pittsburgh should request that IOP address this issue.

### **B. Transfer of Intermunicipal Conveyance Lines and Wet Weather Control Facilities to ALCOSAN**

ALCOSAN operates a major wastewater treatment plant and approximately 90 miles of lines that intercept and convey flow from municipal collection systems to the treatment plant. Many lines from municipal collection systems to the ALCOSAN interceptors convey flow from multiple municipalities. These lines often are not appropriately sized to meet current flow conditions and are not subject to specific multi-municipal agreements that delineate necessary operational, maintenance, and

capital costs. In addition, a mismatch arises between the amount of flow that downstream communities produce and their shares of maintenance budgets for intermunicipal conveyance lines. ALCOSAN has the necessary resources to maintain these large, intermunicipal conveyance lines.

Some municipalities also currently maintain and operate wet weather control facilities. ALCOSAN has no control over the timing of the conveyance of the flow from these holding facilities to its plant.

Transfer of this conveyance and wet weather control infrastructure would create a more precise and practical division of responsibility between ALCOSAN's role as a provider of regional wastewater conveyance and treatment and of the municipalities as local collection providers for their residential and business customers. It is in both ALCOSAN's and the municipalities' interest to conduct these transfers expeditiously to facilitate compliance with the environmental regulations and orders. For these reasons, municipalities should transfer intermunicipal conveyance lines and wet weather control facilities to ALCOSAN as soon as possible.

The terms of these transfers should be based on considerations (e.g. debt assumption, debt service reimbursement, rate adjustment, etc.) mutually agreed to by ALCOSAN and the given municipalities pursuant to system upgrades and expansions related to the WWP. Normal operations and maintenance costs up to the time of asset transfer would be a municipal responsibility. Municipalities may wish to petition ALCOSAN to assume ownership of large municipal trunk lines that do not convey flow from other municipalities. All such transfers should be made in accordance with mutually agreed upon terms and conditions with the general and universal goal of improving the logic and management of the system as a whole.

There is no legal or regulatory definition of intermunicipal conveyance lines under the ALCOSAN Consent Decree, the municipal compliance orders, or state or federal regulations. The operational principle that should be used to determine what constitutes an intermunicipal conveyance line is:

Sewer lines that capture flow from more than one municipality and, if operated and maintained by ALCOSAN, would improve operational integration in the ALCOSAN service area. Lines of 12" or greater diameter may be a generally useful guide, although in combined sewer systems, some lines of this size may not fit this definition.

Ninety-four of the more than 400 points of connection (POCs) to ALCOSAN's interceptors receive flow from intermunicipal conveyance lines.

### **C. Financial Incentives to Promote Municipal Flow Control**

ALCOSAN's WWP relies on construction of large storage tunnels and parallel lines largely because, given the regulatory timing that scheduled the due date of municipal feasibility studies six months after the due date of the WWP, ALCOSAN had to assume that current volumes of wastewater from the 83 municipalities would not be reduced. If municipalities were to aggressively address precipitation at the source and address inflow and infiltration, remove streams from sewer lines, fix leaking collection pipes, and employ other source reduction and green infrastructure practices where practical, ALCOSAN could likely reduce the amount of proposed gray infrastructure and its associated construction and maintenance costs in both the expansion of the interceptor tunnel system and in new upstream wet weather control facilities located within the municipalities.

A financial incentive program for flow control could be developed and incorporated into sewer transfer agreements to foster the regulation of flows into ALCOSAN's conveyance and treatment system. One approach would be to establish target flow volumes for each municipality, and municipalities that exceed the targeted volumes would pay a surcharged rate for the volumes in excess of the targets. ALCOSAN would separately escrow surcharge payments from each municipality in an account which the municipalities would use to make local system improvements to reduce flows. ALCOSAN would need to make provisions for municipal growth and associated new tap-ins.

Such an incentivized flow reduction approach that promotes municipal infrastructure improvements already exists in several municipalities in the region. For example, the Boroughs of McDonald and Oakdale, the Municipality of Penn Hills, North Fayette Township and the South Fayette Municipal Authority currently are subject to such wet weather surcharges on excess flow. These communities use their escrowed surcharge payments to ALCOSAN to make system improvements that reduce infiltration and inflow.

### **D. Consolidation of Municipal Wastewater Collection Systems**

Municipalities should voluntarily consolidate municipal wastewater collection systems. ALCOSAN, other existing authorities or new watershed-based organizations could serve as regional sewer collection system operators.

### **E. Consolidation of Municipal Stormwater Collection Systems**

Stormwater management plays a key role in attainment of regulatory requirements of the Clean Water Act for the region. Many municipalities are under the obligation

to address stormwater discharges from municipal separate storm sewer systems (MS4s). Municipalities should collaborate to manage stormwater systems on a watershed basis to promote efficiency, and to improve water quality and flood control. As with consolidation of wastewater collection systems, other existing authorities or new watershed-based organizations as well as ALCOSAN could assume stormwater systems. This is a longer-term priority since a stormwater infrastructure inventory as well as a comprehensive understanding of the condition of stormwater systems do not yet exist.

Additionally, Allegheny County is in the process of preparing a county-wide Act 167 (PA Storm Water Management Act) stormwater management plan. The ALCOSAN service area will be in a better position to consider how the consolidation of stormwater collection systems should proceed once this effort is complete. Municipal stormwater collection and conveyance should be consolidated, but the necessary details are not yet available.

### **F. Integrated Municipal Stormwater and Wastewater Planning**

In “integrated planning,” responsible parties sequence actions to address first those sources of pollution that provide the greatest return of clean water for the given effort. According to EPA, regulatory agencies and municipalities often focus on Clean Water Act (CWA) regulatory requirements in isolation without identifying a prioritized critical path to achieving the water quality objectives. Integrated planning can result in sustainable and comprehensive approaches, such as source reduction and green infrastructure, that improve water quality while supporting other important quality of life attributes that enhance community vitality. Regulatory standards are not lowered nor are needed improvements abandoned. Rather, it permits an optimizing of benefits from infrastructure improvement investments.<sup>1</sup>

Such an approach should be employed to develop and implement the WWP, including incorporation of source reduction and green infrastructure into wet weather control strategies. Use of source reduction strategies can reduce the extent of traditional gray infrastructure needs (e.g., increased conveyance capacity, tunnels and storage tanks) and potentially reduce overall program costs. Allegheny County’s Congressional delegation and the EPA both support the incorporation of green infrastructure and source reduction into the wet weather control strategy. Other regions facing combined sewer overflow Consent Decrees, including Cincinnati, Cleveland, Philadelphia and Washington, D.C., are successfully implementing adaptive management approaches.

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<sup>1</sup> <http://cfpub.epa.gov/npdes/integratedplans.cfm>

### **IV. Specific Action Steps**

The findings of this evaluation point to a number of action steps by specific agents:

- To promote a genuine partnership between ALCOSAN and the 83 contributing municipalities, the Allegheny County Executive and the Mayor of the City of Pittsburgh should immediately and jointly call for the IOP to convene a stakeholder process for recommending the appropriate size and mix of ALCOSAN board membership.
- The Allegheny County Executive should immediately establish the position of Wastewater Planning Coordinator.
- With the assistance of the Wastewater Planning Coordinator, ALCOSAN and its contributing municipalities should immediately initiate an expeditious process to determine how intermunicipal conveyance lines, other trunk lines and upstream wet weather facilities will be conveyed to ALCOSAN.
- Municipalities should pursue integrated municipal stormwater and wastewater planning and include source reduction approaches in their feasibility plans
- ALCOSAN and the municipalities should develop a standard agreement to replace existing Project Z agreements that would incentivize flow reduction from municipal conveyance sources.
- As soon as details are available from regulatory agencies, municipalities should determine the potential for developing regional stormwater collection services on watershed or other logical bases.
- Municipalities should explore the practicality of voluntary consolidation of their collection systems with watershed-based systems or with ALCOSAN.

The members of the Sewer Regionalization Review Panel (membership list provided on following page) hope this study of improvements to the region's approach to addressing wastewater will be taken to heart by policy-makers and practitioners. The Review Panel is committed to the implementation of these action steps and stands ready to lend its assistance to their implementation.

*The complete Sewer Regionalization Evaluation report is available for review and download on the ALCOSAN website: [www.alcosan.org](http://www.alcosan.org).*



## ***Sewer Regionalization Evaluation***

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### **Sewer Regionalization Review Panel Membership**

<b>Name</b>	<b>Affiliation</b>	<b>Title</b>
Jared Cohon ( <i>Chair</i> )	Carnegie Mellon University	President
Duane Ashley	Office of Mayor Ravenstahl	Director of Operations
John Barrett	Baldwin Borough	Manager
Dennis Blakley	McCandless Sanitary Authority	Manager
Linda Book	Whitehall Borough	Council Member
Kathy Coder	Bellevue Borough	Council President
Patrick Dowd	Pittsburgh Water & Sewer Authority	Board Member, Pittsburgh City Council
Joe Duchess	South Fayette Municipal Authority	Chair
Susan Everingham	RAND Corp.	Director, Pittsburgh Office
Deron Gabriel	South Fayette Township	Commissioner
Jim Good	Veolia Water North America	PWSA Acting Executive Director
Lou Gorski	South Hills Area Council of Governments	Executive Director
Debby Grass	Delta Development	Principal
Bob Grimm	North Fayette Township	Manager
Dick Hadley	Allegheny League of Municipalities	Executive Director
Bob Hurley	Allegheny County Economic Development	Deputy Director
Tim Inglis	Colcom Foundation	President & Treasurer
Chris Lochner	Hampton Township	Manager
Mark Mansfield	Upper St. Clair Township	Assistant Manager
Marla Marcinko	Wilkinsburg Borough	Manager
Kathy McKenzie	West Penn Allegheny Health System	Vice President, Civic Affairs
Joe Milicia	Turner Construction Co.	Vice President and General Manager
Dave Miller	University of Pittsburgh – Center for Metropolitan Studies	Director
Dave Montz	Greentree Borough	Manager
Ruthann Omer	Gateway Engineers	President
Mary Ellen Ramage	Etna Borough	Manager
Tim Rogers	Shaler Township	Manager
Joe Rost	McKeesport Municipal Authority	Director
Tim Ryan	Eckert Seamans	CEO
Pat Schaefer	Edgewood Borough	Council President
Steve Schillo	Duquesne University	Vice President for Marketing & Business
John Schombert	3 Rivers Wet Weather	Executive Director
Alex Sciulli	Highmark	Executive Vice President
Jack Ubinger	Pennsylvania Environmental Council	Vice President