

# MUNICIPAL SEWER SYSTEM CONSOLIDATION STUDIES

## OVERVIEW

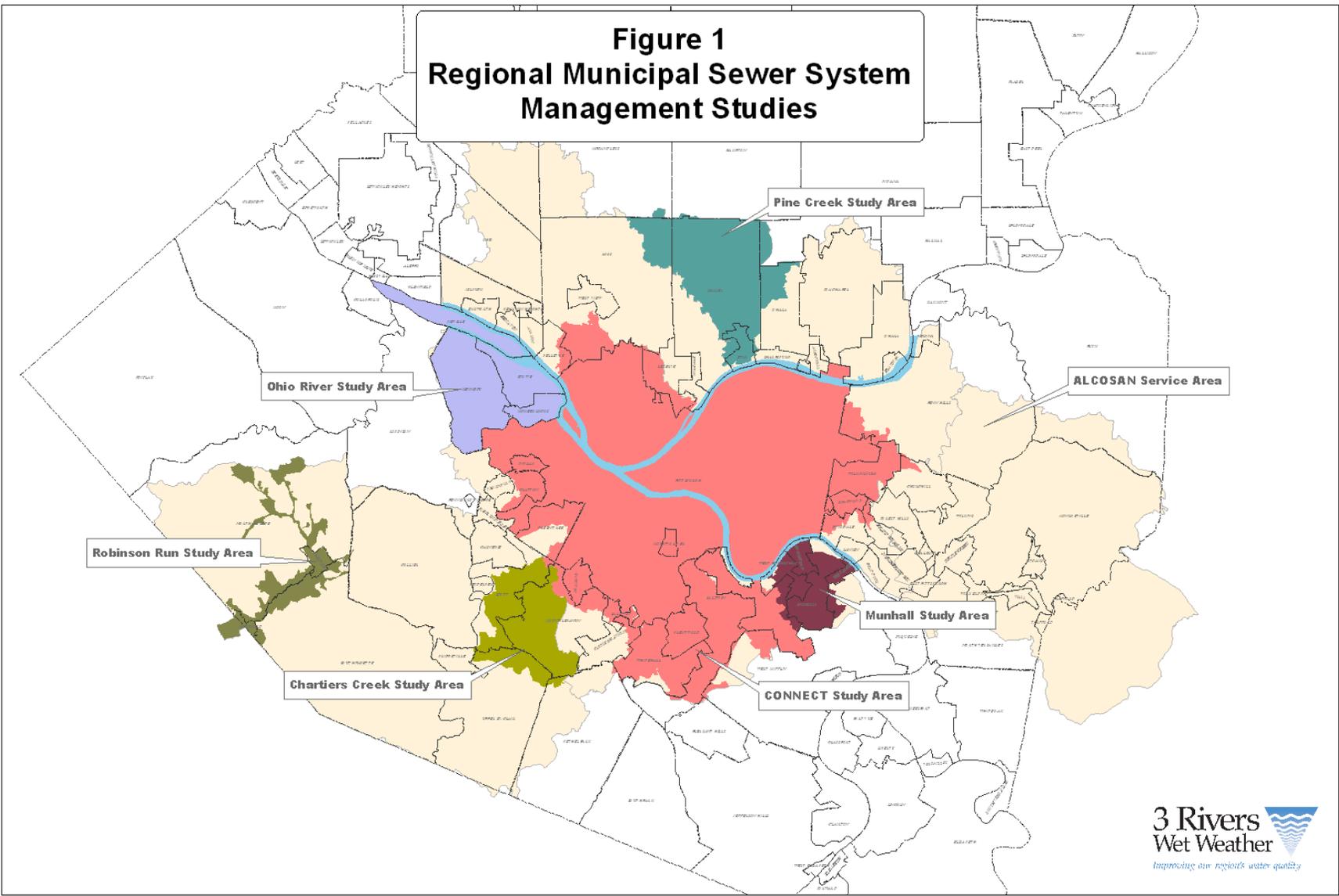
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The objectives of the 3 Rivers Wet Weather – funded sewer system consolidation studies were to have interested communities explore both management and consolidation options within a representative number and location of regional multijurisdictional municipal sewer systems. Options could range from maintaining the status-quo to upgrading existing inter-municipal service agreements, to complete transfer of assets, operation and maintenance and regulatory compliance responsibilities. The 3RWW–funded studies were completed by six different consulting teams of varied composition including a mix of municipal engineers, attorneys, planners, non-profits (Pennsylvania Environmental Council), municipal managers and elected officials. Each study followed individual work plans developed by the grant applicant, which were approved by 3RWW. Each focused on consolidation issues or themes which were determined to have particular relevance in each of the six (6) multijurisdictional study areas. Study approach and methodology varied from heavy reliance on available secondary information, e.g. preliminary feasibility study information prepared at request of ALCOSAN, to more rigorous review of existing conditions and analysis of the same as relates to potential consolidation scenarios. Some involved participation and interaction among municipal stakeholders represented by engineers, managers, and public officials, while others were completed by engineers or solicitors with little or no interaction with public officials. Taken together, these study areas represent a cross section of ALCOSAN tributary systems with respect to physical infrastructure, demographic and political profiles. The location of the six study areas is shown on Figure I.

3RWW does not necessarily approve or endorse any of the individual findings or conclusions. The primary purpose of this overview is to facilitate further development of regional consolidation efforts by highlighting core issues and useful tools/guidelines, which were presented in the studies. In addition, recommendations are made on the basis of these findings for implementation of certain action items, which, in the opinion of 3RWW, should be completed to facilitate consolidation decision-making prior to the July 2013 milestone for submission of municipal feasibility studies.

**Figure 1  
Regional Municipal Sewer System  
Management Studies**



This information is provided by 3RWW for the benefit of municipal stakeholders, ALCOSAN and others who are evaluating the feasibility of sewage facility consolidation.

I. CORE ISSUES

“Core Issues” represent those issues, which were identified by the majority of studies as either prerequisite to, or which presented significant challenges to the pursuit of multijurisdictional sewage management or infrastructure consolidation. As important as these issues are to ongoing consolidation studies, 3RWW has listed two additional issues, which were *not* addressed to any extent in the individual studies, but in the opinion of 3RWW are critical to pursuit of further regional or countywide consolidation efforts. These are presented last (*italics*).

- a. **Cost Sharing:** By far, the issue of cost sharing for both capital and operation & maintenance costs was recognized as a significant challenge to the development of new Inter-municipal Service Agreements (ISA’s ) and/or actual consolidation of sewage assets. Absent the takeover of ownership, operation & maintenance of all multijurisdictional sewers by one entity , the development of cost-sharing mechanisms will involve assessment of a multitude of factors including: physical geometry; hydraulic allocation (dry vs. wet weather flows); service population; consecutive conveyance charges, etc. As noted in Item III below, development of an expanded cost-sharing guideline is recommended as an early action item.
- b. **Status of Wet Weather Planning:** None of the studies resulted in a specific recommendation or implementable plan for consolidation. While characterized in different ways, most studies alluded to circumstances described in one study, as a “climate of uncertainty”, relating to the status of the regional county-wide wet weather plan (WWP). Lack of definitive plans and costs associated with the ALCOSAN WWP, which will not be available in final form until submission of the WWP in January 2013 was recognized as a barrier to the formulation of any concrete plan to go forward with consolidation efforts at this time.
- c. **ALCOSAN service agreements:** The evolution and status of the existing ALCOSAN service agreements is addressed in one or more reports. Whether these agreements are sustainable needs to be addressed.
- d. **Affordability:** ALCOSAN has submitted an affordability analysis to the regulators, which computes a maximum cap on future capital costs based upon assessment of customer municipalities’ median household income levels and EPA’s 2 % MHI affordability criteria. Typical municipal sewage system planning protocols incorporate comparative alternatives analyses, which provide the basis for selecting one alternative over another. With respect to evaluating the costs/benefits associated with consolidation, a municipality would presumably need to complete

its own affordability and user rate analysis under various sewer system management/ownership scenarios. Each municipality will likely need to determine its ability to incur debt and to generate sufficient revenue to retire such debt and operate and maintain the selected physical alternative under the current institutional or an alternative consolidation scenario. This analysis would be completed as part of the Feasibility Studies mandated in the municipal consent orders.

- e. **Consecutive conveyance fees:** The issue of consecutive conveyance fees wherein a downstream municipality accepts variable flows (dry vs. wet weather) from an upstream municipality and in many cases conveys the combined upstream and local flows to a consecutive downstream conveyor is recognized as a significant challenge to pursue equitable management or consolidation options.
- f. **Regulatory compliance liability:** Elimination or minimization of regulatory compliance liability was recognized as a potential benefit attendant with a municipality relinquishing title to its sewer system. However, past federal Environmental Protection Agency (EPA) actions in Allegheny County have indicated that EPA will regulate and prosecute under a “joint liability” policy whereby the owner of the pipe and the generator of the sewage/overflow/CSO etc., would be held jointly liable. In any case, assuming EPA-enforced stipulated penalties, the ratepayers would pay the bill. What, if any, benefit consolidation has on the liability/exposure of current municipal owners needs further clarification.
- g. **Consolidation decision-making criteria, process & institutional framework:** *Much information is provided in the studies regarding the legislative/legal framework necessary to develop more appropriate and modern (commensurate with prevailing municipal consent orders and ALCOSAN Consent Decree context) Inter-municipal Service Agreements (ISA), and for the transfer of existing assets to existing authorities or formation of totally new authorities within studied basins. However, from a county-wide or regional sewage system planning perspective, the planning and implementation framework necessary to first evaluate institutional alternatives, obtain municipal and regulatory approvals, etc. among the 83 customers serviced by ALCOSAN has not been identified. It’s acknowledged that ALCOSAN is performing a separate regionalization study, but it is uncertain as to how far that study will go with respect to defining specific consolidation programs and providing the basis for municipal officials to make the key decision, i.e. consolidate or maintain the status quo. One study concluded rather emphatically that reducing costs is likely the only real incentive to overcome the “loss of control” concern and tip the decision towards regionalization/consolidation. The pieces of the puzzle are there. However, a top-down, universally accepted and implementable (among 83 customers) methodology has not yet emerged. Given the pro-rata ownership share of the regional sewer infrastructure ownership (ALCOSAN – 7%; PWSA- 41%; Municipal Customers – 52%)*

*the need for a coordinated municipal decision-making process is evident.*

*h. **Potential need to coordinate consolidation efforts:** Multiple studies introduced the prospect of municipal sewage infrastructure consolidation and willingness to further explore. One study suggested complete breakaway from the ALCOSAN system and formation of an independent authority. Another study suggested formation of three regional authorities following the North, East and South Basin delineations created by 3RWW for administrative purposes. ALCOSAN has initiated its own regional consolidation study and the CONNECT organization has recently submitted a proposal to ALCOSAN for ALCOSAN's takeover of 73 miles of multijurisdictional sewers in 18 of the 33 CONNECT municipalities connected to PWSA. From the 3RWW WebMap tool, it is estimated that there are up to 470 miles of municipal shared sewers (approximately 11.5% of the municipally owned sewer tributary to ALCOSAN) throughout the ALCOSAN service area, which provide the opportunity for multiple municipal consolidation programs. A coordinated regional effort and application of common assessment and valuation criteria is necessary. Any initiative, which potentially impacts all of ALCOSAN's 83 municipalities, will require top-down political coordination and steering which, to date has been absent in the wet weather planning process.*

II. USEFUL TOOLS & DATA: A number of useful tools, model agreements and guidelines were developed within one or more studies. They provide a substantive foundation and point of departure for use in ongoing and future regionalization efforts. These are listed below.

- a. Capacity Allocation & Planning Module Guideline
- b. Cost-Sharing and Billing Guideline
- c. Financing Options
- d. Model Memorandum of Understanding for municipal service agreements
- e. Model Inter-municipal Service Agreement (ISA)
- f. Ownership and Permitting Guideline

III. EARLY ACTION RECOMMENDATIONS: Review of the studies has indicated the need for further analysis and resolution of the issues listed below to facilitate the development of municipal feasibility studies and analysis of management, consolidation and regionalization alternatives.

- a. Cost-sharing guideline

- b. Asset inventory by municipality
- c. Asset valuation and comparison with necessary repair costs
- d. Compliance liability
- e. Delineate multijurisdictional sewer segments
- f. Determination of the suitability & integrity of existing ALCOSAN Service agreements relative to the WWP
- g. Develop affordability analysis for municipalities
- h. Clarify and or validate reported opinions, which are routinely interpreted as consolidation-adverse. Research reported reasons for failure of past consolidation efforts ascribed to “Attitudinal Inertia”.
- i. It has been reported that past efforts to renegotiate ISA’s have failed. Determine why and what can be done to ensure success.