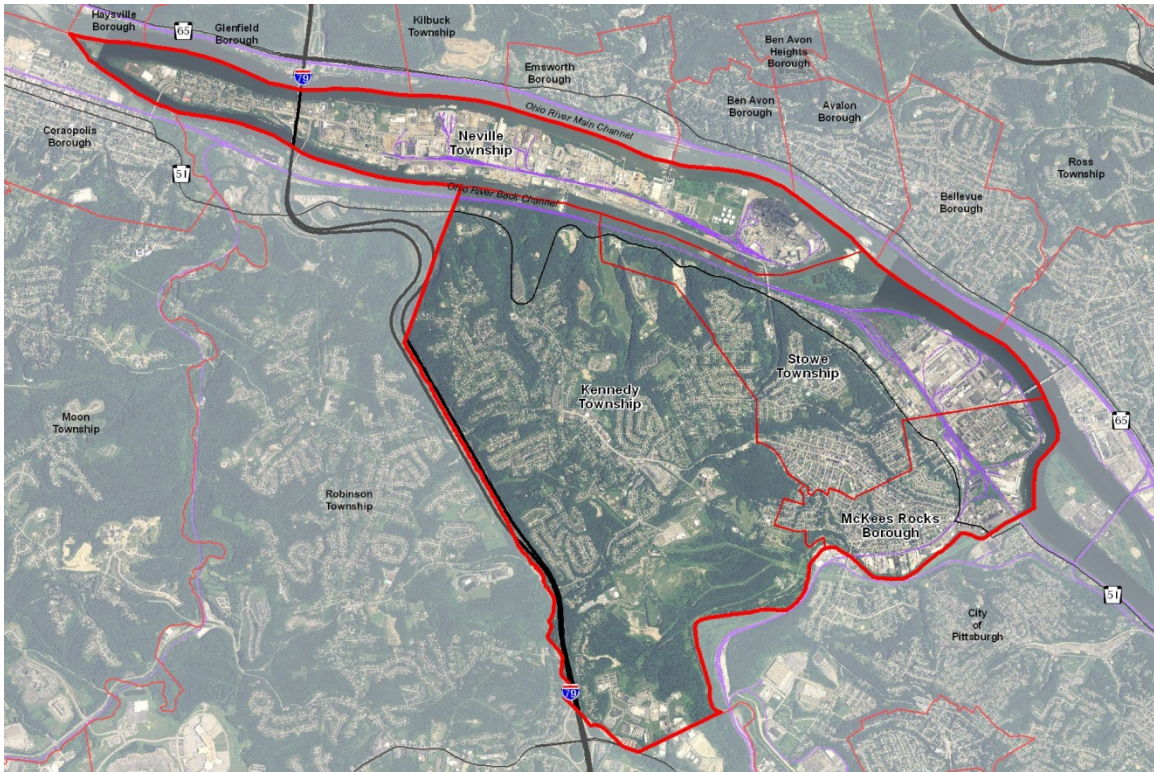


Ohio River Basin Sanitary Sewer Regionalization Study



**Borough of McKees Rocks and the
Townships of Kennedy, Neville and Stowe**

**Funded through a grant from
3-Rivers Wet Weather**

August 1, 2011

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Preface

The Allegheny County Sanitary Authority (ALCOSAN) provides sanitary sewage treatment services to 83 municipalities within Allegheny County, Pennsylvania. When formed in 1949, it was one of the nation's first efforts at regional metropolitan wastewater control. As the region grew, the original facilities became increasingly ineffective. Improvements were made, including the addition of secondary treatment in 1972, but pollution levels in the region's streams continued to grow. Suburban growth generated significant increases in both sanitary sewage and stormwater that severely stressed the unwieldy regional network of combined and separate sewers that collected and transmitted flows to ALCOSAN.

In 1993, the Environmental Protection Agency advised the Authority and its member municipalities that continuing and unabated violations of the federal Clean Streams Act would no longer be tolerated. The ALCOSAN system is particularly vulnerable because of its age with makeup of combined and separate (wastewater only) sewers and its reliance on one, central sewage treatment plant at the headwaters of the Ohio River.

The threat of litigation by the EPA and U. S. Department of Justice resulted in the promulgation of three (3) consent orders which bound combined sewer systems (by a Consent Order Agreement or COA), separate sewer systems (by an Administrative Consent Order or ACO) and ALCOSAN (Consent Degree) to rigid schedules for implementation of improvements aimed at reducing discharges of sanitary sewage into the regions streams and rivers. Compliance with the consent orders is projected to cost the region several billion dollars over the next 35 years.

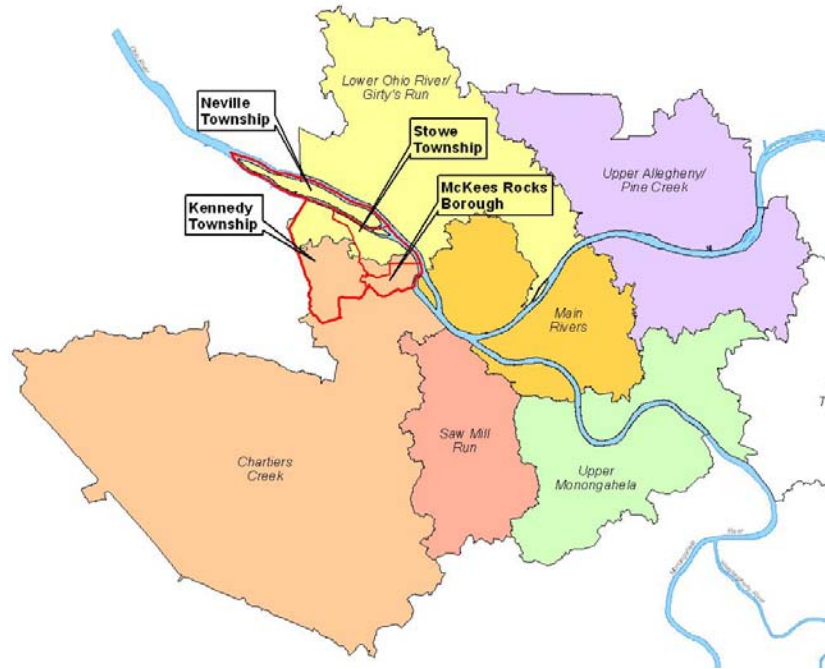
As a first step, ALCOSAN is preparing a Regional Long-Term Wet Weather Control Plan and the municipalities are making feasibility studies to identify the most effective alternatives for long-term compliance. One of the many problems that hinders development of an efficient and cost-effective regional Plan is the large number of system owners. Many of the system's local sewersheds lie within two or more municipalities. Working with many local governments whose focus is only their resident's interests complicates initial planning efforts. The Plan needs a more regional bias if effective pollution abatement is to be achieved at an affordable cost.

For this reason, the concept of regionalization has blossomed. Regionalization would reduce the number of operating entities by merger or consolidation of smaller entities into fewer, larger entities.

To spearhead this regional approach, 3 Rivers Wet Weather (3RWW), a joint effort between ALCOSAN and the Allegheny County Health Department (ACHD), has funded this Study to identify potential costs and benefits, as well as operating, legal, and political constraints associated with the regionalization of four (4) adjoining sanitary sewer systems situated near the headwaters of the Ohio River. The Study, one of six concurrently being undertaken within the ALCOSAN basin, focuses on the sewer systems of McKees Rocks Borough and the Townships of Neville, Stowe, and

Kennedy. Each of the municipalities owns its own system, but has no treatment facilities. Two of the systems, McKees Rocks and Stowe, are combined systems, which have been constructed to different standards and require different operation and maintenance protocols than separate systems. All of the systems have been developed using a variety of materials and technologies over a long period of time.

The four (4) communities are part of ALCOSAN's Lower Ohio River/Girty's Run and Chartiers Creek ALCOSAN Planning Basins. The communities have a combined population of approximately 22,000 people with 9,500 customers which include residential, commercial, and industrial users. The total service area is just over 9.7 square miles, with 5.4 square miles in Kennedy



Township alone. Although the four (4) communities have interconnected systems, there are differences in age, pipe materials, level of maintenance, and personnel. Total sewer revenues for the communities are over 5.3 million dollars with operating expenses including capital expenses just under 5 million dollars.

The Study

The Study will assemble key facts and data on each system, establish a baseline of existing conditions, identify financial, legal and operational conditions and constraints that must be accommodated or addressed if regionalization is to occur. The analyses and results of the Study can be used, as well, by other communities interested in assessing the feasibility of regionalization and can be used by ALCOSAN as it weighs broader regionalization or consolidation options. The Study is intended to analyze the different alternatives for regionalization. It is not intended to analyze if regionalization should be undertaken. And while there are no binding commitments to participation in the Study, the effort will provide a better understanding of the conditions and constraints that may ultimately lead to formation of a larger, more efficient, and less expensive sanitary sewer system.

The Study has five (5) objectives:

1. To identify and document issues and opportunities related to regionalization that can aid the participating communities in determining the best and most economical strategy for providing sewer service;
2. To meet individual municipal consent order mandates;
3. To improve the quality and consistency of sewer maintenance within each municipality;
4. To identify the legal and political aspects of regionalization; and
5. To identify potential reductions in operating and maintenance costs as well as long-term capital improvement investments.

Of the five (5) objectives, 3RWWDP acknowledges that objectives #4 and #5 are the most sensitive and the most pertinent to elected officials. Change and the loss of system control can dominate the perspectives of both residents and community officials. However, to most of the communities within the ALCOSAN basin, reducing costs is potentially the only real incentive that will generate movement towards regionalization.

Problem Statement

Rising Costs

Customer rates vary significantly among the municipalities within the ALCOSAN basin as well as among the four (4) Study communities. These variations stem from several factors including aging infrastructure, type of system (combined or separate), number of customers in the rate base, use of in-house forces, use of outside contractors, the number of pump stations, consent order compliance costs, maintenance and replenishment of sewer funds. Kennedy, McKees Rocks, and Stowe's rates for sewer service are below the average for the Southern Basin while Neville is 81% higher than the Northern Basin average. Neville's rates are higher because the municipality bears higher up-front costs for a smaller system and has been aggressively building its sewer fund in anticipation of the need to replace its aging infrastructure.

Average Quarterly Sewer Rates
(municipal only – does not include
the cost related to ALCOSAN
sewage treatment)

Northern Basin Communities	
Neville Township	\$96
Southern Basin Communities	
Kennedy Township	\$21
McKees Rocks Borough	\$39
Stowe Township	\$49
<i>Basin Average</i>	<i>\$58</i>
<i>Basin Average</i>	<i>\$53</i>

In general, the municipalities take different approaches towards reserve funding for capital projects. McKees Rocks and Neville have dedicated sewer funds for capital projects. Stowe and Kennedy use a rollover method where surplus revenues are incorporated into the subsequent year's budget.

Other than in Neville Township, municipal sewage rates have not been significantly impacted by anticipated improvements needed for consent order compliance. Because McKees Rocks, Kennedy and Stowe have not begun to build a reserve for their future improvements, these communities will most likely need to increase their rates once the improvements have been defined and the costs have been projected.

Individually, all four (4) municipalities have a significant amount of aging infrastructure, which will require increasing expenditures for both operations and maintenance (O&M) and capital improvements. Without both, expanded consent order compliance will become increasingly difficult. To date, all four (4) communities have responded to consent order requirements and have begun to assemble the required information and data. Some communities are further along than others, but all are taking the challenge seriously. Nevertheless, there is considerable work to be done.

Table 1: Status of ACO/COA Mandated Tasks

Community	McKees Rocks	Stowe	Neville	Kennedy
Type of System	Combined	Combined	Separate	Separate
	Percent (%) Complete			
Physical survey	90	100	71	100
Cleaning /CCTV	95	100	82	100
Cleaning /CCTV sewers ≥ 10 inch	NA	NA	100	100
GIS mapping	95	100	100	100
Dye testing	NA	NA	100	100
Ordinance development	NA	NA	100	100
Deficiency corrections	10	60	100	70
Hydraulic characterization	100	100	100	100
Implementation of "Nine Minimum Controls"	100	100	NA	NA
SSO response plan	NA	100	100	100
Flow monitoring	100	100	100	100
Prepare O&M Plan	NA	NA	100	100

NA = Not Applicable

The financial condition of a community dramatically affects its ability to afford large expenditures for improvements to infrastructure. Diminishing populations and tax bases make fund allocation problematic and the cost of future improvements will further stress their abilities to raise capital by floating bonds or transferring funds

from an individual municipality's general fund for sewer expenditures or by increasing rates.

Limited Resource Capacity

None of the four (4) municipalities has the in-house capacity to perform substantial system upgrades or repairs because of limited staff and equipment as well as commitments/obligations to other public works activities. Typically, larger projects are bid out to independent contractors. For the purposes of this Study, larger projects include anything beyond regular maintenance activities such as street sweeping or minor repairs to manholes or catch basins. One community, McKees Rocks, contracts all sewer work to local contractors. All four (4) communities retain engineering consultants to develop construction plans and specifications, prepare bid documents, and provide construction management and inspection services. None has the need or ability to maintain a full time municipal engineer and supporting staff.

Moreover, the small customer bases found in some of the municipalities make it very difficult to build up reserve funds. In fact, current balances found in some of the Study communities sanitary sewer funds are not adequate to cover even unexpected emergency repairs.

The diminishing population/tax base syndrome is particularly acute in McKees Rocks Borough and Stowe Township. In addition to diminishing operating funds, both municipalities currently carry "BBB" bond ratings as established by the Standard & Poor's (S&P) Corporation which identifies the communities as "high risk." This results in higher than average interest rates when borrowing money for capital improvements and ultimately higher project costs due to significant finance costs. This situation will become increasingly problematic as consent order mandates and aging infrastructure place even greater strains on financial resources.

Downstream Inequities

A sewershed is defined as a geographic or hydrologic region or basin in which all wastewater flows are conveyed to a single point, or outlet, before being treated or conveyed elsewhere. Typically, a sewershed is comprised of a series of collector sewers and lift stations upstream of a major regional trunk sewer or pump station. The wastewater flows, leaving one or more sewersheds are typically conveyed to a larger trunk sewer or to the wastewater treatment plant itself.

The cost to downstream communities to maintain and repair their sewer systems is affected by upstream connections. One of the most significant challenges to multi-municipal sewersheds is establishment and implementation of mechanisms for equitable cost sharing by upstream communities for operation, maintenance, repair and improvements to downstream infrastructure. There are at present, no agreements between the Study communities for the sharing of costs where infrastructure is interconnected.

This Study explores these issues in an effort to identify and evaluate the alternatives available to the four (4) communities. Depending on the nature of future Consent Order mandates, these issues could place severe hardships on the communities. Regardless, there are options for managing the sewer systems that could provide substantial benefits. These are discussed in detail in the following sections.

Legal Concerns

Neville, Stowe, and Kennedy are First Class Townships which are governed by Boards of Commissioners; McKees Rocks is a borough which is governed by a Borough Council. For the purposes of operating a sanitary sewer system, there is little difference between the two governmental structures. All four (4) communities have the authority to hire employees, purchase equipment, enter into labor agreements, sell bonds, borrow money, levy taxes, establish user fees and operating rules and regulations. All four (4) communities have the power to enact Zoning Ordinances to control land use, and Subdivision and Land Development Ordinances to regulate land development. These ordinances permit the establishment of design requirements for new sanitary sewer installations.

All four (4) communities can enter into cooperative agreements under the state's Intergovernmental Cooperation Act, and all four (4) can establish municipal authorities or joint municipal authorities under the Municipal Authorities Act. All four (4) communities can sell or lease infrastructure to any other municipality, municipal authority, school district, volunteer fire department or public utility. None however can sell infrastructure to a private entity without soliciting public bids.

Background

Overview

The four (4) Study communities encompass 11.28 square miles, have approximately 10,600 households and a population of 22,000 residents (2000 Census). The four (4) sewer systems have approximately 114 miles of sewer pipe with over 3,000 manholes and all four (4) communities have pump stations.

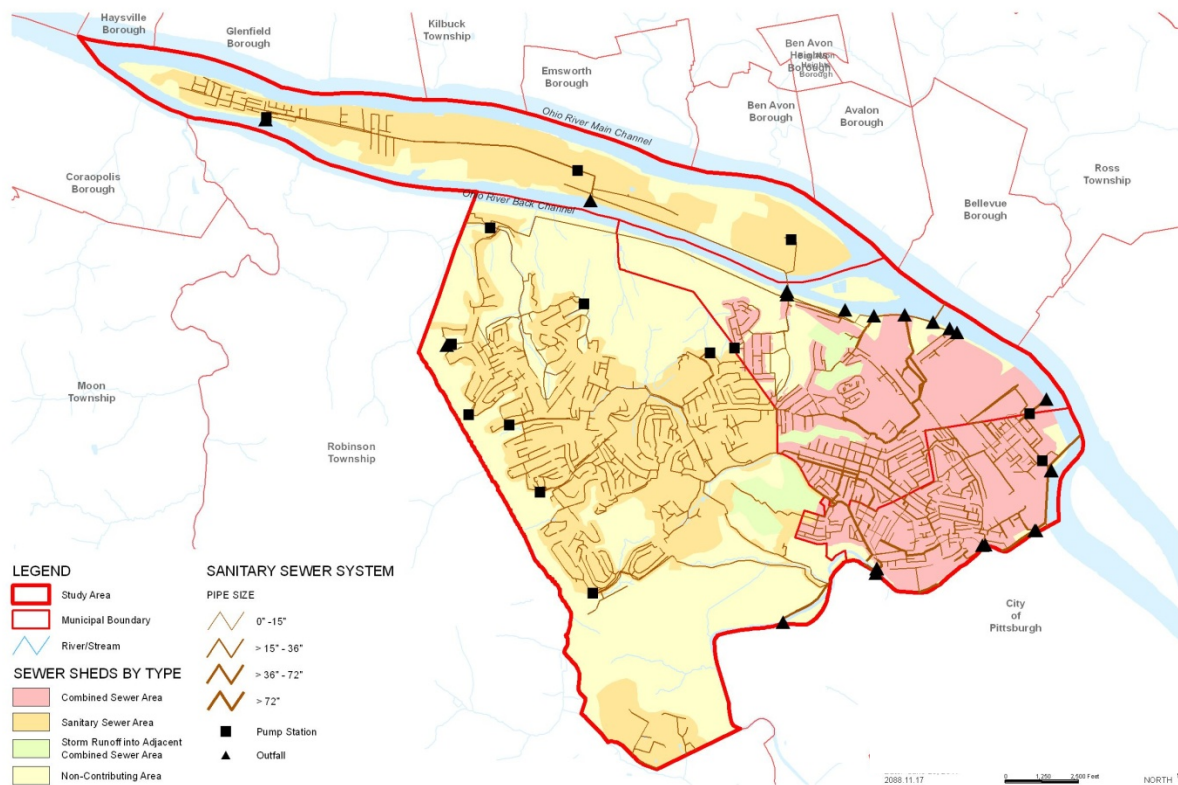
Kennedy Township, which is the largest community geographically and has the largest population, delivers wastewater into systems owned by Stowe Township and McKees Rocks, as well as directly to ALCOSAN's Chartiers Creek Interceptor. Neville discharges directly to ALCOSAN's Lower Ohio Shallow Cut (Lower Ohio) Interceptor in Stowe Township; and Stowe delivers wastewater directly to ALCOSAN at several locations as well as into the McKees Rocks system, which discharges directly into the ALCOSAN System.

Each of the municipalities in this Study owns its sanitary sewer system as well as backhoes, dump trucks, street sweepers, and pickup trucks. Other equipment is rented as needed; "Vactor service" for sewer pipe cleaning is provided by the Char-West COG on an hourly cost basis. None of the four (4) communities treats or

stores sewage; they all convey it directly or indirectly to ALCOSAN for treatment. ALCOSAN invoices treatment charges to the communities based on metered water consumption, except where sewage meters are installed. The latter are primarily used by industrial customers.

Sewer maintenance is performed by public works departments in each municipality, except McKees Rocks, where all sewer work is contracted. There are currently no workers in any of the four (4) municipalities that are dedicated solely to sewer-related operation, maintenance and repairs. The public works employees have other daily duties which include street paving grass moving, park maintenance, etc.

Overall Sewershed Map



Community Inventory

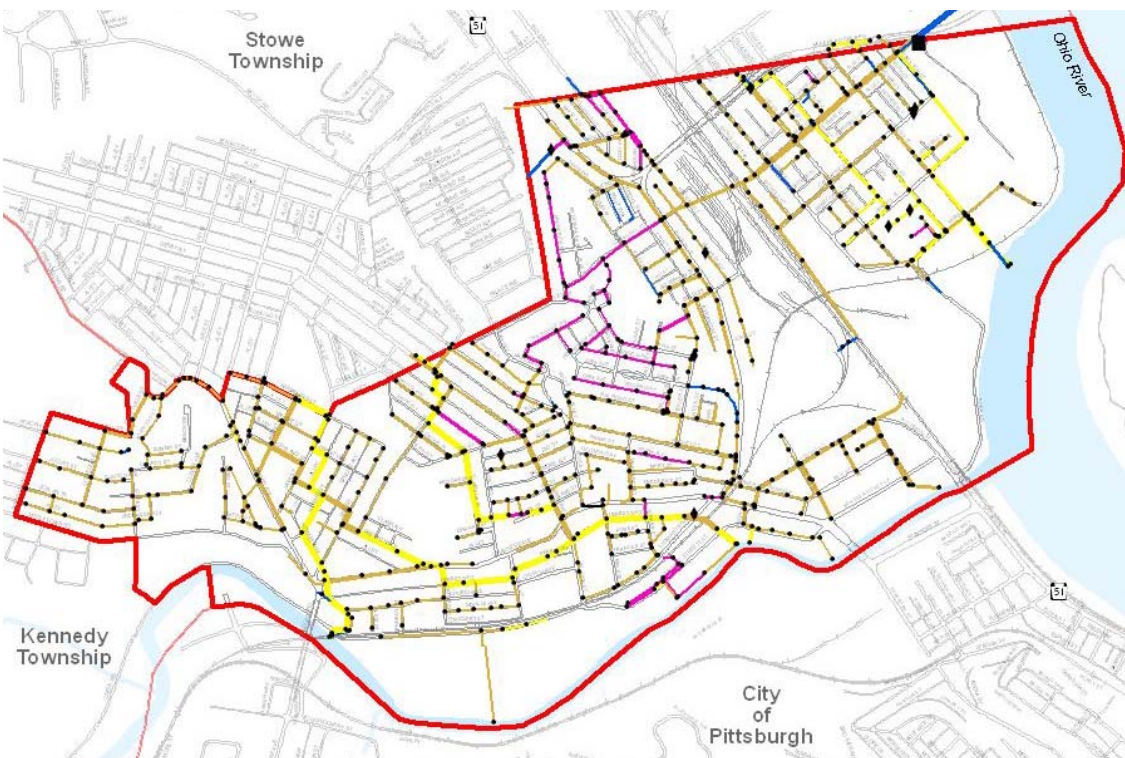
Each of the four (4) Study communities is unique in its population, infrastructure, development patterns, and sewer system management practices. Following are brief community and system descriptions that provide insights into the general composition of each. The sewer system maps show manhole locations (diamonds) and pipe layout (colors indicate different pipe materials if known).

McKees Rocks Borough

McKees Rocks Borough has a population of over 6,500 with almost 2,500 sewer system customers, the majority of which are residential. The system varies in age from 10 years for the newest sections to sections which are in excess of 100 years old. Consequently, there are a wide variety of materials and structural features in the systems 22 miles of pipe and 700 manholes. Materials used in pipe and manhole construction include concrete, clay, brick, plastic, composite and metal.

McKees Rocks has two sub-sewersheds, both of which are combined systems; the eastern portion of the Borough drains to a collection system which is interconnected with Stowe Township. The system has several points of connection at the Chartiers Interceptor. The eastern portion of the Borough, which is known locally as The “Bottoms”, also drains to the Chartiers Interceptor in the vicinity of the McKees Rocks Bridge. The “Bottoms” portion also has interconnections with Kennedy and Stowe Townships. The Borough owns two sets of pumps which are used for wet weather overflows only. Ownership of a third pump station has recently been transferred to ALCOSAN.

McKees Rocks Borough Sewer System Map

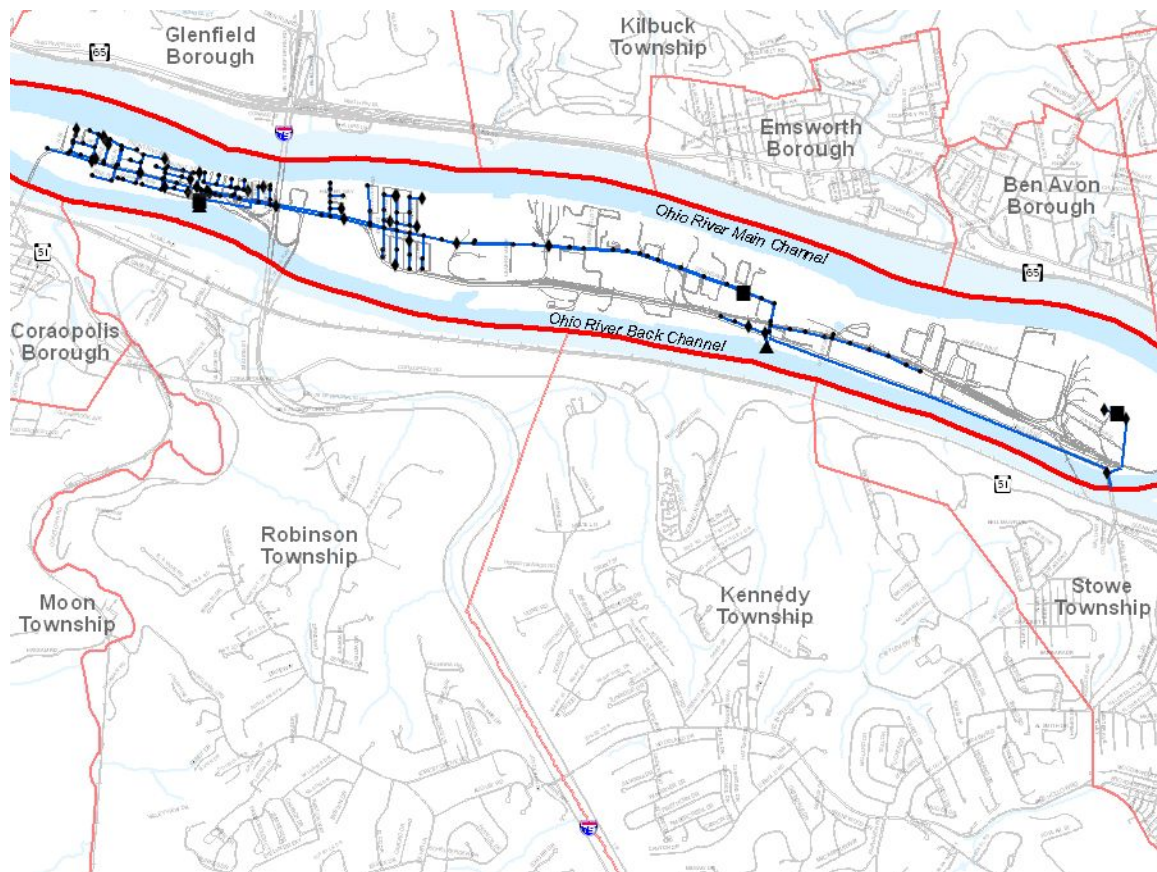


Neville Township

Neville Township has the smallest population of the four (4) Study communities with approximately 1,050 (2010 census) residents and 632 residential, commercial, and industrial customers. Although residential customers constitute about 80% of the rate base, more 84% of the annual revenues are generated by industrial customers. Neville is comprised of one separate sewershed and wastewater is collected and pumped off the Island via a sewage force main. Stormwater is collected and discharged by an independent system. The gravity portion of the system is 7-1/2 miles in length and has just over 160 manholes. The majority of the collector pipes are terra cotta and are over 50 years old, although recent line replacements totaling about 2,000 feet are PVC. Collector mains are predominately concrete pipes with terra cotta in upper reaches.

Neville has 2 pump stations which are 54 years old; 1 station pumps sewage off the island to ALCOSAN. The capacities and complexities of these pump stations are greater than any of the other stations in Study communities and they account for the most of the Township's sewer operation and maintenance costs. The pump stations have 3.6 miles of pressure pipe (force mains) which have recently been re-lined.

Neville Township Sewer System Map

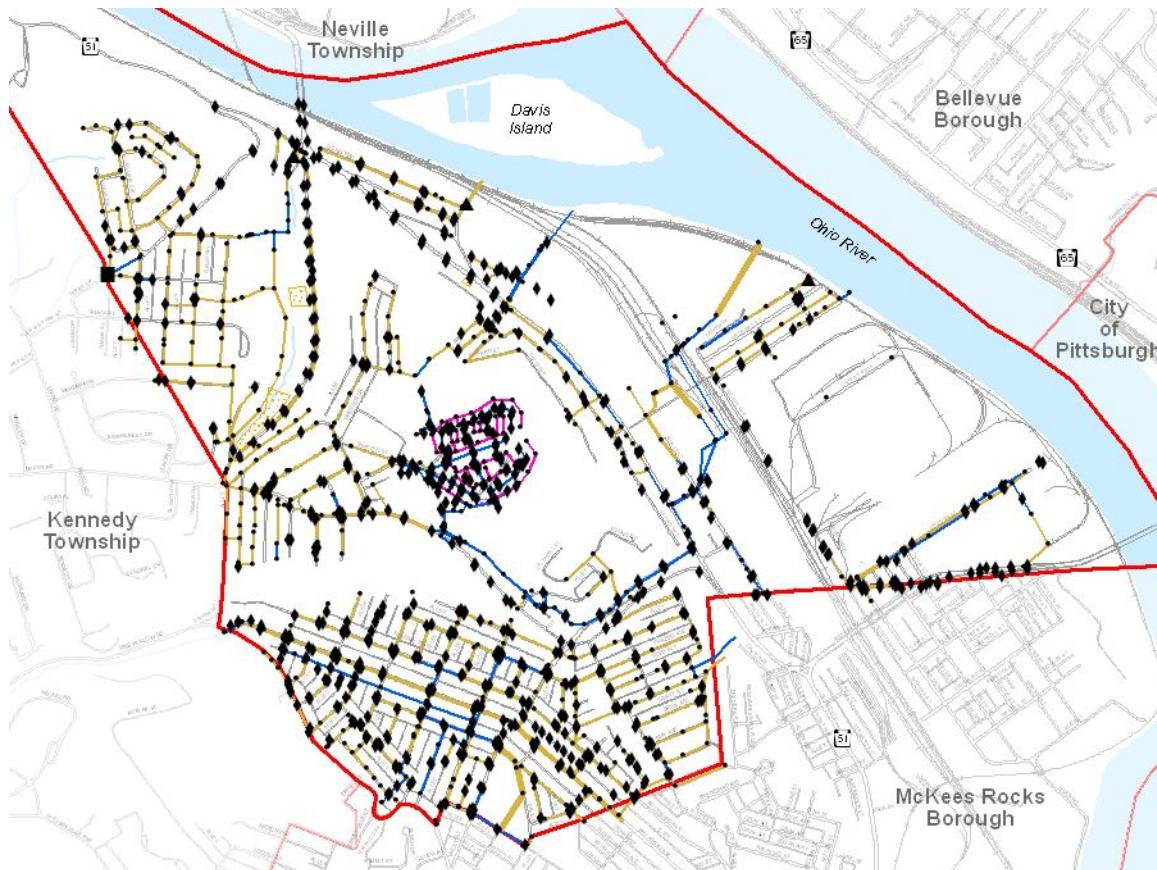


Stowe Township

Stowe Township is home to just over 6,700 residents, mostly residential, with approximately 2,900 sewer customers. Portions of Stowe's sewer system are more than 100 years old, and materials and structures are similar to those of McKees Rocks. Most of the 30 miles of pipes and 750 manholes are clay or brick with only a small, newer section using PVC pipe. Stowe has one pump station which serves a limited number of customers.

Stowe has three (3) main sub-sewersheds. The upper portion, to the north, is interconnected with Kennedy Township and discharges to the Lower Ohio Interceptor near the Fleming Park Bridge. The middle portion collects wastewater from Stowe and Kennedy which then flows into the McKees Rocks "Bottoms" sub-sewershed. The lower portion, which drains from Stowe and portions of Kennedy Township is interconnected with McKees Rocks and flows to the Chartiers Interceptor at several locations.

Stowe Township Sewer System Map



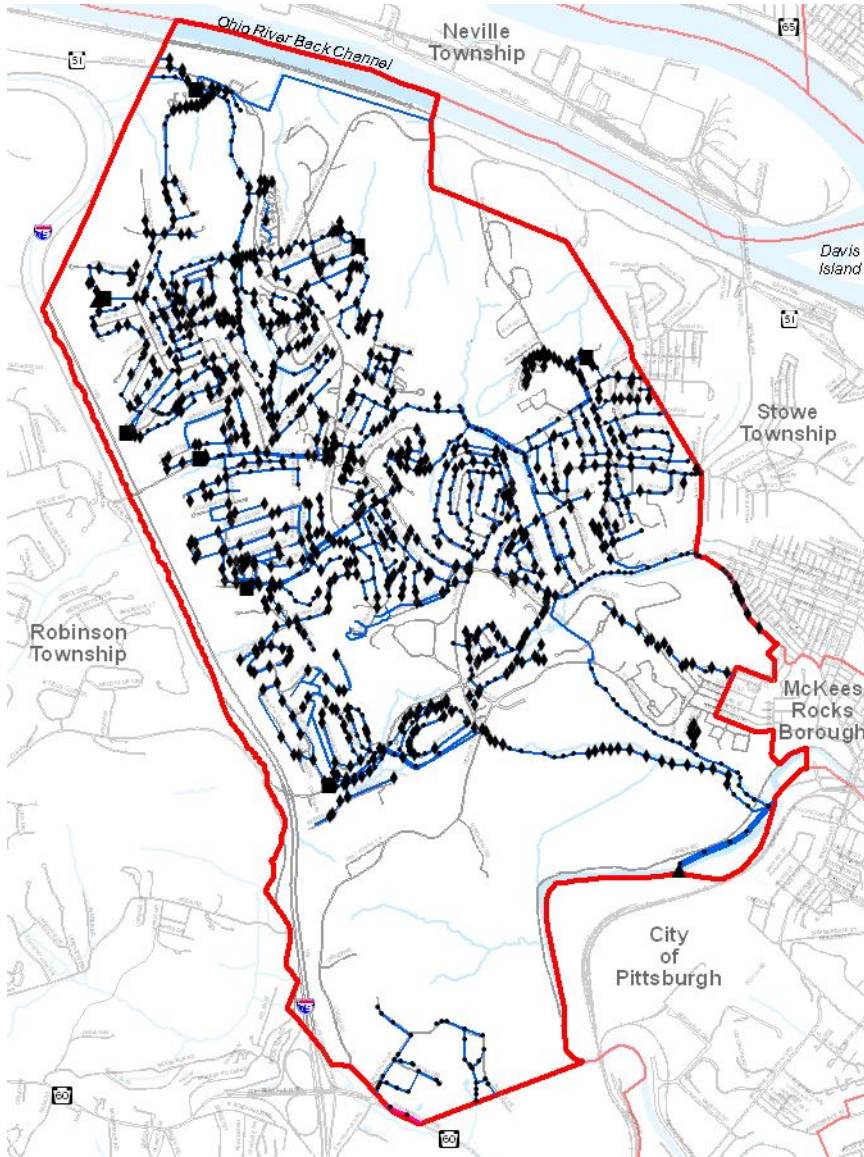
Kennedy Township

Kennedy Township is the largest of the four (4) communities at over 7,500 residents and 3,500 sanitary sewer customers. Like Stowe and McKees Rocks, the majority of sewer customers and revenues are residential. Kennedy is the 'youngest' of the four (4) communities, whose character is a typical of a suburban community consisting of residential neighborhoods and commercial corridors.

Kennedy's service area is 5.4 square miles and has 54 miles of sanitary sewer pipes and more than 1,500 manholes. The Kennedy system has 10 pump stations, which while newer than the Neville pump stations, require significant labor and financial resources. Kennedy's sanitary sewer system was once controlled by an authority but has been returned to direct municipal control.

Kennedy has five sub-sewersheds. The western-most collects a large residential area and transmits the flow by force main to the Lower Ohio Interceptor in Stowe Township. The middle portion is interconnected with Stowe Township and also discharges to the Lower Ohio Interceptor. A third sub-sewershed directs wastewater along Pine Hollow Road into the Stowe Township system. A fourth sub-sewershed is collected by two interceptor sewers that discharge directly to the Chartiers Creek Interceptor. The fifth sub-sewershed collects wastewater from a commercial/industrial area along the southern border with Robinson Township and flows discharge to the Chartiers Interceptor in Crafton.

Kennedy Township Sewer System Map



The Study Area

The preceding system descriptions show the complexity of the sewersheds that comprise the Study Area. Multiple interconnections, aging and under capacity infrastructure, financially distressed communities, lack of concurrence on responsibilities for operation and maintenance costs, are unfortunately typical of the entire ALCOSAN service area. But the commonalities of the four (4) communities make the Study Area a logical candidate for a regionalization study.

Study Methodology and Metrics

This Sewer Regionalization Study will compare three (3) scenarios for the ownership operations and management of the Study Area's sanitary sewer systems. The scenarios are A) Intergovernmental Cooperation Agreement, B) Consolidation into a New Entity, and C) Outright Sale to Another Entity.

A Working Group was formed to develop and assess the scenarios. Members included municipal engineers from each of the four (4) communities and Environmental Planning Design, LLC personnel. The Working Group convened six (6) times to discuss the key elements, goals, and steps needed to formulate final conclusions and observations. Other coordination meetings held throughout the process included two (2) system managers meetings, three (3) 3RWWDP coordination meetings, and two (2) elected officials briefings. The system manager meetings solicited input from the managers and sewer superintendents of each community. The coordination meetings with 3RWWDP discussed progress and direction of the Study as well as additional needed data. Elected Officials Briefings were held twice for each of the four (4) communities; first to introduce the project and solicit input on the scope of the project, and second to present the final draft and obtain final comments.

The four (4) municipalities have collected large amounts of data from investigations required for consent order compliance; this data has been extensively used in this Study. The data has been analyzed and evaluated to identify potential issues that are important or that will influence any effort to merge or consolidate sewer systems. These issues include: (1) personnel costs, hiring, transfer, training, and benefits, (2) financial resources including customer rates, tax bases, bonding and borrowing, (3) administrative capacities including staff and management qualifications and capabilities, (4) legal issues such as municipal governmental structure and structure flexibility, and (5) logistical capabilities including equipment inventory and procurement constraints.

A "baseline" inventory of the data and corresponding interpretations have been prepared as part of this Study. The baseline is presented as a series of matrices for easy comparison and it provides a tool to evaluate the issues and opportunities of each of scenarios with a comparison to existing conditions. The topics or considerations contained in each of the scenarios follow the same order throughout the discussions for ease of comparison.

Baseline

Considerations

Demographics

The four (4) communities have relatively small populations, all of which are in decline except Kennedy which showed a slight increase from 2000 to 2010. The populations of McKees Rocks, Stowe, and Kennedy are fairly close in number though geographically Kennedy is much larger. Neville, due to its geography and large industrial area on the eastern half of the Island, has a much smaller population.

Table 2: Demographics

	McKees Rocks 2010	Neville 2008/2011 ¹	Stowe 2010	Kennedy 2010	TOTAL
Customer Base					
Total population	6,622	1,232	6,706	7,504	22,064.0
Number of households	2,905	624	3,064	2,917	9,510.0
Service Area (sq. miles)	1.0	1.3	2.0	5.4	9.7
Number of customers	2,446	632	2,889	3,514	9,481
residential	2,245	500	2,874	3,171	8,790
commercial	191	60	2	343	596
industrial	6	72	8	0	86
public	4	0	5	0	9
percent of residential customers	92%	79%	99%	90%	

The majority of sewer customers (over 80%) for the four (4) communities are residential; residential fees generate the majority of the sewer revenues except in Neville where industrial fees constitute the bulk of the sewer revenue.

Assets

Infrastructure

McKees Rocks and Stowe have fairly dense urban development patterns. With only three (3) square miles between the two (2) communities, there are over 50 miles of sewer pipe. In comparison, Kennedy has 54 miles of sewer pipe for an area of 5.4 square miles. Neville, while not as sprawling as Kennedy, has a lower development density than McKees Rocks or Stowe.

Equipment

All of the Study municipalities own a backhoe and pickup trucks which are used by the public works departments for a variety of services. McKees Rocks owns a dump truck and Neville owns two dump trucks; and Neville and Stowe both own street sweepers. The equipment in all four (4) communities is used to fulfill a wide range of public works obligations including maintenance of municipal streets, parks, storm sewers and at Neville, a water distribution system. However, none of the four (4) municipalities owns the specialized equipment needed to service their sanitary sewer systems. Equipment such as a Vactor truck, Bobcat[®], camera truck, or boom truck are contracted or rented on an hourly basis when needed. Most often this

equipment is contracted through the Char-West Council of Governments. Limitations in equipment inventory and availability restricts the range of sewer repairs and maintenance that the each municipality can undertake without outside assistance.

Table 3: Assets

	McKees Rocks 2010	Neville 2008/2011 ¹	Stowe 2010	Kennedy 2010	TOTAL
Assets					
Length of sewer pipe (miles)	21.8	7.5	30.7	54.0	113.9
Manholes	684	163	748	1,513	3,108
Pump stations (public)	2	2	1	10	15.0
Backhoe	1	1	1	1	4
Dump truck	1	2	0	0	3
Street sweeper	0	1	1	-	2
Boom truck	0	0	0	0	0
Bobcat	0	0	0	-	0
Truck (pickup)	4	2	6	1	13
Sewer vactor	0	0	0	-	0
Camera truck	0	0	0	0	0

Combined Systems vs. Separate Systems

The Townships of Neville and Kennedy both own and maintain separate sewer systems and are not subject to the Nine Minimum Controls. McKees Rocks and Stowe, have combined systems and must comply with the Nine Minimum Controls.

The Nine Minimum Technology-Based Controls are as follows:

1. Proper operation and regular maintenance programs for the sewer system and CSO outfalls.
2. Maximum use of the collection system for storage.
3. Creation, review and modification of pretreatment program requirements to ensure that CSO impacts are minimized.
4. Maximization of flow to the publicly-owned treatment works (POTW @ ALCOSAN).
5. Elimination of chronic combined sewer dry weather overflows.
6. Control of solids and floatable materials both into the CSS and in CSOs.
7. Pollution prevention programs to reduce contaminants in CSOs.
8. Public notification to ensure that the public receives adequate notification of CSO occurrences and impacts.
9. Monitoring to effectively characterize CSO impacts and the efficiency of CSO controls.

The McKees Rocks and Stowe have combined sewers that carry both stormwater runoff and sanitary sewage in a single pipe. Combined sewers are designed to overflow into streams and rivers during heavy rainfall events. The overflow points are designated as Combined Sewer Overflows (or CSO's). These systems are older and were not perceived as major environmental problems when they were first constructed. Combined systems have significant differences from separate systems. Catch basin inlets are constructed with a water trap to prevent the escape of malodors from the sewer; and typically, combined sewer pipes have larger diameters than separate sewer pipes. Communities with combined sewer systems signed a different consent order than separate sewer communities. The Consent Order Agreement (COA) signed by combined sewer communities requires the specific implementation of the Nine Minimum Controls (see sidebar).

Located within McKees Rocks are eight (8) ALCOSAN-owned overflows which are co-permitted with McKees Rocks and three (3) which are exclusively permitted by McKees Rocks. The overflows discharge storm and wastewater collected in Kennedy and Stowe Townships as well as McKees Rocks. Stowe Township has seven (7) CSOs which are owned and maintained by ALCOSAN. Stowe's CSOs discharge stormwater and wastewater from both Kennedy and Stowe.

Neville and Kennedy have separate systems which are required by the Clean Streams Act to have no overflows. When a separate system discharges illegally to a water course or backs up into a basement, the event and location are termed a Separate Sewer Overflow (SSO). Separate sewers typically have narrower pipe diameters than combined sewers and are subject to more stringent operational

requirements. Sewer inflows must be limited only to sanitary wastewater, and infiltration of groundwater is to be minimized or eliminated.

The combined systems in McKees Rocks and Stowe are unlikely to be converted into separate storm and sanitary sewer systems in the foreseeable future. This is because of the extraordinary expense required to install new sewers parallel to the existing pipes in high density neighborhoods and business districts.

Moreover, the sanitary systems of all four (4) communities convey stormwater to some degree. Historically, stormwater from an upstream community has been allowed to pass through a downstream community and is typically not assessed a conveyance fee. Sanitary sewage is also typically conveyed from upstream communities to downstream communities either as a combined system or separate system. Systems that convey sanitary sewage from one community with a separate system to another community with a separate system can be metered or monitored for flow. The impact of an upstream community's sanitary sewage contribution can be determined and financially assessed in an equitable manner. Hence, the practice of charging an upstream community for sanitary sewage conveyance is not uncommon.

In the case of a combined system flowing to another combined system the situation gets cloudier. A combined system conveys not only sewage which can be measured or estimated, but stormwater as well which is more difficult to quantify due to CSOs. While a downstream community could possibly charge for conveyance of upstream stormwater and sanitary flows, to the knowledge of the authors of this Study, there are no local or regional precedents.

Regardless, collecting fees from upstream communities to pay for conveyance and repair and maintenance of a downstream combined system poses a major political issue and will continue to raise legal questions for communities in this situation. Until this issue is resolved, downstream communities will likely continue to be responsible for the conveyance of flows from upstream communities without the ability to recoup related maintenance and capital costs.

Consent Order Mandates

The ACOs and COAs signed by ALCOSAN communities require the communities to accurately map their systems, visually inspect all pipes and manholes, perform dye tests and eliminate illegal connections, perform extensive flow monitoring, analyze system hydraulic capacities, and immediately begin correcting deficiencies.

The identification of deficiencies is accomplished by evaluating the closed circuit television (CCTV) recordings and physical (visual) inspection records of pipes and manholes, and assigning a numerical rating for both structural and maintenance conditions. The rating, which is a number from one to five, is based on guidelines provided by the National Association of Sewer Service Companies (NASSCO). Ratings one (1) , two (2) , or three (3) show increasing levels of wear and deterioration, but imply functionality and anticipated acceptable performance for at

least 10 years. Ratings of four (4) and five (5) indicate conditions that require immediate response; a five indicates failure or failure within five years and a four (4) indicates a condition that will deteriorate to failure within five to ten years.

Level 4 and Level 5 issues typically include safety issues and any condition that compromises or significantly diminishes hydraulic capacity in structures (pipes, manholes, siphon chambers, pump stations, force mains, regulators, diversion chambers and outfalls). These issues include: structural defects such as collapsed sections, sections with missing crowns or missing inverts, missing pipe, voids, blockages, infiltration defects and defects that compromise, block or diminish the capacity of the pipe; and any location or point where an upland creek or stream is permitted to enter a sewer pipe.

The latter condition is referred to as a 'stream capture' and is specifically cited as a deficiency that must be eliminated immediately. One such stream capture removal, for Pine Creek, is presently under construction in Stowe Township and McKees Rocks.

Financial Analysis

Revenues and Funding

Sewer system revenues are a reflection of the number and type of customers. Kennedy with almost 9,500 customers has the largest annual revenue at about \$2.3 million. Neville, with 623 customers, has the smallest annual revenue at about \$770 thousand. However, a comparison of per customer revenue shows a much different picture. Neville's annual per customer revenue is the highest at \$1,215, while Kennedy has the lowest annual revenue at \$242 per customer. McKees Rocks and Stowe have comparable per customer revenues at \$432 and \$428 respectively. The disproportionate Neville value is due to a large industrial base that pays significantly more for sewage disposal than the residential and commercial customers (\$5,130, \$467 and \$752 respectively).

A more telling number is the annual expenditures for sewer services. Neville again leads with an annual cost per customer of \$1,075. Kennedy is lowest at \$227 and McKees Rocks and Stowe are respectively \$454 and \$352. The effectiveness of rate policy is indicated by the difference between per customer revenues and costs. The values are Neville: \$140, Stowe: \$76, Kennedy: \$15, and McKees Rocks: **-\$22**. These values are consistent with data supplied by ALCOSAN which show that only McKees Rocks ran a deficit in 2010 for sewer service.

Table 4: Financial Analysis

	McKees Rocks 2010	Neville 2008/2011 ¹	Stowe 2010	Kennedy 2010	TOTAL
Financial Analysis					
Total annual revenues	\$1,055,767	\$768,200	\$1,239,438	\$2,297,224	\$5,360,629
Annual residential revenues	\$804,965	\$121,400	\$1,066,129	\$2,067,502	
Annual non-residential revenues	\$327,035	\$646,800	\$173,309	\$229,722	
Annual costs (includes ALCOSAN charges)	\$1,110,582	\$679,625	\$1,016,640	\$2,150,801	\$4,957,648
Surplus/Deficit (Revenues - Expenditures)	(\$54,815)	\$88,575	\$222,798	\$146,423	
Annual contribution to the sewer fund for capital expenditures ²	(\$54,138)	\$66,000	\$0	\$0	
Sewer fund balance	\$32,767	\$607,173	\$0	\$0	
Quarterly residential rates/revenues					
Current quarterly rate (with ALCOSAN costs) charged per residential customer (provided by engineers)	\$92	\$160	\$118	\$68	
Annual cost per mile of sewer pipe	\$51,038	\$90,502	\$33,159	\$39,815	
Actual quarterly cost per customer (annual cost divided by number of customers)	\$114	\$269	\$88	\$153	\$156
Debt service and principal					
principal	\$80,000	\$32,184	\$0	\$70,000	\$182,184
interest	\$18,000	\$11,117	\$0	\$72,928	\$102,045
ALCOSAN annual treatment charges (to each municipality- a portion of annual costs)	\$721,367	\$300,387	\$722,798	\$955,808	
ALCOSAN cost per customer	\$73.73	\$118.82	\$62.55	\$68.00	
Estimated costs for level 4&5 repairs/improvements through 2016	\$3,026,248	\$100,000	\$250,000	\$100,000	
Level 4 & 5 repairs percent completed	10%	100%	60%	80%	

1 Budget number for 2011 for salaries and benefits only; all other data from 2010

2 Stowe and Kennedy do not have separate sewer funds. Excess budget rolls over into consecutive budgets. Neville amount represents 4 year average

McKees Rocks and Neville both have dedicated sewer funds for O&M and capital projects. In 2010, McKees Rocks transferred money from their general fund to cover the sewer budget deficit. Neville has been using the revenue surplus to build the fund for future sewer projects. Kennedy and Stowe do not have dedicated capital funds for sewers but rather “roll the money over to the subsequent budget” if there is a surplus. Stowe has recently raised rates to cover increasing O&M costs and to prepare for future sewer repairs and upgrades.

Using the estimates of work needed, to be completed in the next 5 years (as provided by the municipal engineers) it appears that Neville, Stowe, and Kennedy will have adequate funds to perform the work. McKees Rocks, however, faces a significant funding shortfall. However, these estimates are preliminary and may change once ALCOSAN announces its Long Term Wet Weather Control Plan. It is also expected that individual municipalities will not be required to fund improvements beyond some as yet to be defined 'ability to pay' amount.

Debt

McKees Rocks, Neville, and Kennedy each have a relatively small amount of bonded debt; none exceeds \$80,000. However, as the extent and cost of mandated improvements becomes clearer, the assumption of additional debt is likely and customer rates will increase accordingly. Under those conditions, a municipality's bond rating may have a significant impact on project costs.

Administration & Personnel

Labor Force

The four (4) Study communities have public works departments that are staffed with sufficiently qualified personnel to meet their current municipal operational and maintenance obligations. Stowe, Kennedy and Neville have personnel who regularly perform sanitary sewer related tasks, ranging from pump station operation to combined sewer catch basin maintenance. McKees Rocks routinely contracts out all sewer related work. All four (4) communities normally contract out larger tasks such as line replacements, manhole repairs or replacements, and sewer cleaning. While it may be argued that none of the communities dedicates sufficient resources for replacement of aging infrastructure, the current level of effort expended is sufficient to continue operations on a day-to-day basis. It is safe to say that none of the communities has the capacity at current staffing levels to expand sewer O&M or system improvement programs without increasing staff or reducing commitment to other municipal obligations or both.

Administrative Experience

Stowe and Kennedy have administrative staffs headed by experienced Secretary/Managers who have, for many years, performed the managerial tasks required to continue effective and efficient sanitary sewer operations. McKees Rocks has recently replaced its Borough Secretary and Neville Township is currently interviewing candidates for the position of Secretary/Manager. While the loss of experience is lamentable, both communities have well established managerial procedures and remaining experienced staff, consultants, and public works personnel who can be expected to provide assistance and guidance during the transitions.

Nevertheless, as with the four (4) public works departments, present administrative staff capabilities are generally limited to continuing the sewer systems present level of service. Significant increases in sewer operations, maintenance, repairs, and/or improvements will strain even the two experienced administrative staffs. Any such growth must be accompanied either by staff increases or by increased use of consultants, or both, which will increase administrative costs.

Table 5: Administration and Personnel

Administration and Personnel					
Estimated personnel time devoted to sewers					
administration	1	3 part time: sewer commissioner, secretary, asst. secretary	1	2	7
laborer	5	5	2	2	14.0
equivalent full time	1.2	1	0.75	2	5.0
minimal full time needed to meet acceptable standards	3	2	2	3	10.0
Experience of personnel					
administration (average tenure)	<1	<1	20+	20+	
laborer (average tenure)	10	10	10++	10	
Salaries-Total	\$44,200	\$92,200	\$25,300	\$121,619	
Administration	\$17,600	\$47,200	\$8,900	\$9,200	
Labor	\$26,600	\$45,000	\$16,400	\$112,419	
Benefits	Healthcare, Sick/Vacation included in salaries, Pension Contributions to Local Union 1058	Healthcare, Sick (15) / vacation (4-6 weeks)/ holidays(10), small pension contribution, Disability and Workman's Comp, Life Insurance (\$30,000)	Healthcare, Dental, Sick/Vacation included in salaries, Pension Plan, Disability and Workman's Comp	Healthcare, Dental, Sick/Vacation included in salaries, Pension Plan, Disability and Workman's Comp	
Administration	\$14,667	\$16,333	\$13,000	\$35,568	
Labor	\$45,000	\$25,000	\$6,000	\$4,078	
Total Annual Administration & Labor Costs	\$103,867	\$133,533	\$44,300	\$161,265	
Unionized	Yes	Yes	Yes	Yes	NA

Existing and Proposed Projects (not included in future consent order costs)

Each of the communities has recently completed improvement projects or is planning new projects for their sewer systems. The costs of these projects were not included in projected costs for complying with the Consent Order mandates.

McKees Rocks

- Pine Hollow stream removal project
- Robb Street pump station repairs
- Annual cleaning and televising contract

Stowe

- Pine Hollow stream removal project
- Orr Street line replacement
- Sewer line repairs in conjunction with the COA
- Shaw Avenue manhole replacement

Neville

- 3rd Street sanitary sewer replacement
- Front River Road relining project
- New Haven Land sewer replacement
- Force main relining project
- Patricia Way sewer replacement

Long-Term Proposed

- Main pumping station rehabilitation
- Back channel pumping station rehabilitation
- 1st Street sanitary sewer replacement

Kennedy

- Pine Hollow stream removal project
- Slip lining of pipes in conjunction with the COA
- Creek Road sewer replacement (~1000 ft of 15" pipe)
- Clever Road pump station repair
- Force main replacement by St. Mary's Cemetery

Baseline Summary

All four (4) of the Study communities have their own unique issues regarding their sanitary sewer systems. The four (4) however, do share many of the same problems related to the Consent Order mandates, financial issues, size of the customer base, and aging infrastructure. Future Consent Order mandates expected in the next few years will impact the finances of each of these communities. Although only McKees Rocks ran a deficit for the sewer budget in 2010, none of the municipalities have substantial sewer funds or excess sewer budgets which may be needed for larger repairs or to address future mandates.

The four (4) communities have administration and labor skills needed to maintain the sewer systems on a day to day basis. The skill level, equipment, and size of the work force however limit the communities' ability to tackle larger sewer repairs and upgrades. In addition, the small customer base and other public works responsibilities further exhibit potential benefits for cooperation among the communities.

Scenario A: Intergovernmental Cooperation Agreements

Concept

Scenario A explores the potential for using an Intergovernmental Cooperation Agreement (ICA) to improve the quality of service and maintenance and reduce operating and possibly capital costs. This scenario does not change ownership of the infrastructure assets (pipes, pump stations, etc.) but rather will provide a mechanism for the communities to consolidate equipment, labor and administrative personnel.

Potential Structure

One community would create an ICA (hereafter known as the Maintainer) and would contract maintenance services with the other three (3) communities. The Maintainer would be selected based on:

- 1) The ability of the community's existing labor force to perform the services needed. Factors in determining this ability would be the level of experience with sewer maintenance and repairs and size of the labor force. A community with a small public works department may not be willing to divert their limited public works personnel away from other projects.
- 2) The experience level of the Maintainer's administrative personnel and support staff to develop and incorporate new billing, accounting, and other duties needed to facilitate the ICA.
- 3) The willingness of the municipal government (and voters) to expand its operations. Development of an ICA will not occur without some defined benefits (most likely financial) to the Maintainer.

Key Considerations to be Evaluated

Primary considerations for this scenario are sharing of personnel and equipment, legal hurdles, administration, financial concerns such as purchasing equipment, floating bonds, agreed upon cost of services, employee benefits, skills of the labor force and administrative staff, and political will and accountability.

Analysis

Personnel

Administrative Skills

The nature of a larger sanitary sewer system necessitates administration skills above and beyond those required to maintain the status quo. An administrator with strong organizational, coordination and communication skills is needed to effectively manage a more complex system and deal with a larger array of issues. The new management system will involve a significant learning curve in the early stages. The administrator would be responsible for bookkeeping, liaison with elected bodies, scheduling, complaints and public relations.

Labor

The non-hourly costs associated with personnel are an important factor that needs to be agreed upon by all municipalities. Currently, there are substantial differences in the overall salaries related to sewer services for each of the municipalities. This is likely a reflection of the overall hours devoted to sewer issues rather than differences in individual wages. All four (4) communities are unionized which most likely results in competitive wages. Laborers chosen to undertake sewer maintenance for the municipalities would receive benefits determined by the Maintainer keeping within the agreed upon maintenance costs. Overtime policies would also need to be considered as part of forming a crew.

Choosing the most qualified employees for the crew would need to be worked out by the Maintainer and the other communities. Each municipality may not want their most qualified workers to leave their current employment if those workers also excel at other public works functions. Likewise, the Maintainer may not agree that employees recommended by each of the municipalities are able to meet the qualifications needed for an efficient crew. If a sufficient number of qualified workers cannot be found within the current work force, the Maintainer may have to hire from outside.

There would likely need to be some minor retraining of personnel related to performing maintenance on separate (SSO) and combined systems (CSS). Although this is not a major concern, it is an issue that would need to be addressed depending on the composition of the work force. Having a work force composed of workers from SSO and CSS communities would ensure ease of training to satisfy state requirements. At least one worker needs to be certified in order to oversee the pump stations for all four (4) communities. The municipalities could save money on training and certification by having only one person fill this role.

Workers that spend a majority of their time addressing only sanitary sewer related issues can reasonably be expected to perform higher quality and more efficient work. The scope of the work performed both in type and scale can likely be expanded as well. A more highly trained labor force with all of the needed equipment should be able to tackle a wider variety of projects and reduce the need

for outside contractors. This labor force would also be able to perform all of the service on pump stations regardless of the type. There is a possibility that due to the size of the sewer systems for all four (4) communities, a higher level of certification may be needed for a member of the labor force.

Equipment

There are several options for acquiring equipment by the Maintainer in conducting maintenance services. The baseline shows that none of the communities have sufficient equipment to service all four (4) communities. The first option is for the Maintainer to purchase any additional equipment needed and include the cost in the maintenance billings. The second option would be to utilize the equipment currently owned by each of the municipalities and provide a credit for the use of the equipment at an agreed upon rate. Coordination with the public works departments of the municipalities could be challenging or impractical depending on the type of equipment.

The minimum level for equipment needed to be able to service all four (4) communities has been calculated for sewer related needs (Table 6). As Table 6 illustrates, the amount of equipment needed for a combined maintenance approach for the four (4) communities is reduced especially as related to backhoes.

Table 6: Recommended Equipment

Item	Quantity Recommended
Equipment -assumes ownership by lead entity	
Backhoe (large)	1
Backhoe (small)	1
Dump truck	2
Street sweeper	1
Boom truck	1
Bobcat	1
Truck	
Sewer vactor	1
Camera Truck	1

Maintenance, Repairs and Upgrades

Maintenance covered by the ICA would be determined through consensus by each of the communities. A contract would be developed between the Maintainer and the other participants. The term of the contract would need to be of sufficient duration to allow for initial integration on a familiarization (learning curve) to develop a smooth operating program. Because of the investment needed early on in personnel and equipment, any sudden departure by one of the contracted municipalities would have a harmful impact on those remaining in the agreement.

Financial Resources

Implementation of an ICA may require significant financial resources in the early phases. Costs associated with developing the administration and legal reviews as well as equipment purchases will consume the majority of this money.

Administration costs would include development of invoices and budgets, consolidation of previous administrative records such as financial, staff, benefits, insurance, overtime and equipment. A substantial amount of time will be needed to consolidate these records and to develop new administrative and accounting methods. A minimum contract term length of at least 10 years is suggested to cover initial costs which could be over \$400,000. It is unlikely that the lead agency will have adequate budget to cover these initial costs. A short-term loan/bond may be needed to allow for startup related expenses. The municipalities would need to explore how the start up costs are retired such as using a fixed term or fixed payment amount.

Political Will/Some Loss of Control/Governance

An ICA will result in a reduction in control by three (3) of the four (4) municipalities. The quality and timeliness of services will be removed from local control. Complaints from residents and the perception of the local elected officials could be negatively affected if the current level of service is diminished. As discussed earlier, the elected officials will be held directly responsible by their constituents but will have a diminished ability to affect change or correct problems. The contracted communities may have difficulty addressing concerns in the short-term depending on the length and stipulations of the contract and the length and smoothness of the start-up period.

Pump Stations

The multiple pump stations throughout the four (4) communities operate in a fairly similar manner. Some retraining may be required for specific issues with different pump models and based on the history of issues with each pump station. Alarms would need to be connected to the Maintainer. The current alarm system for each of the communities would likely be left in place to enable each of the municipalities to be aware of any sewer issues in “real-time”.

Costs

Pre-agreed upon maintenance costs will need to be developed to the acceptance of all four (4) municipalities. These costs will need to be reflective of previous maintenance levels and projected and known issues with each of the individual systems. Maintenance costs would need to take into account age of infrastructure, number of customers, CSS vs. SSS, length of pipe, number of pump stations, and previous level of maintenance, since there are many factors impacting current maintenance costs. To avoid increases to any individual community, an Agreement that takes these factors into account and utilizes separate rates for each community may be necessary.

Maintenance costs would likely be billed quarterly from the Maintainer to the other participants in the ICA and would be based on a per incident basis. The municipalities would need to determine the cost bases for the use of manpower, equipment and administration depending on the type of work to be performed. The ICA would function as a service agreement and rate schedule as well. Long-term costs for maintenance would likely be lower as the procedures are worked out of the system and better training and other efficiencies come in to play.

The municipalities may wish to consider including reopening cost clauses at the end of the 1st, 2nd, and 3rd years of the Agreement to adjust the Agreement as needed. Other costs, such as those for major repairs or upgrades would need to be billed separately from routine maintenance activities. A threshold would need to be established during the development of the ICA to determine the criteria for routine maintenance issues vs. a large project.

Larger Projects and New Loans/Bonds

The Maintainer may need to secure loans for purchasing equipment and making repairs and upgrades to the sewer systems. For issues where all of the communities in the ICA benefit, the related interest charges can be distributed evenly. For larger repairs/upgrades which are not included in the maintenance program defined by the ICA, the communities would bid projects using independently current procedures.

Permitting

Obtaining permits from PA DEP and the Allegheny County Health Department (ACHD) is a significant issue in the operation and management of the sewer system. Any violations fall on the permit holder. Although there is no change in ownership associated in this scenario, violations as a result of the Maintainer's actions or inaction could occur though unlikely. Permit renewals will continue to be the responsibility of the permit holder.

Grant Applications

Current grant funding typically favors multi-municipal efforts. The Maintainer would be responsible for submitting grants on behalf of the other municipalities. The administration for the Maintainer would have more knowledge regarding the current sewer needs of the municipalities and would be heavily involved in any projects receiving the funding. Grant applications would have to be developed in a manner that will benefit all of the cooperating municipalities. As is currently the case with the Pine Hollow Stream Removal Project, multiple municipalities were involved on a joint project with grant funding. Any fiscal involvement such as matching funds would be provided by only the municipalities involved in the grant.

Engineering Consultant

Three (3) engineering consultants currently provide service to the four (4) municipalities. These consultants include:

NIRA Engineers
McKees Rocks

Remington, Vernick, and Beach
Kennedy
Stowe

James E. Barrick, Ph.D., P.E.
Neville

The ICA would have an impact on the responsibilities of the municipal engineers for each community. The Maintainer would need to coordinate with the individual municipal engineers and provide service reports. Any capital projects would also necessitate good communication and coordination between the municipal engineers and the Maintainer.

Conclusions

The ICA approach could provide a more efficient use of personnel and equipment compared to the status quo. The ICA will need to be able to address a very wide range of considerations which may take substantial effort to develop such as rates, permitting, purchasing equipment, and many financial issues. An ICA will allow a greater level of control than the other scenarios discussed in this report. The communities studied have worked together on other issues in the past though there would need to be a much greater level of cooperation for an ICA to be successful and satisfactorily address the needs of each of the communities.

Scenario B: Creation of an Authority

Concept

Scenario B explores the potential for consolidating the four (4) communities' sanitary sewer services into a Sewage Authority (Authority). Ownership and maintenance of all sewer infrastructure and facilities would be transferred to the Authority. Some of the equipment would not be transferred depending on the needs of the municipalities for their Public Works departments. The Authority would be responsible for collection and conveyance to ALCOSAN treatment facilities and would not include any treatment.

Potential Structure

An Authority would own and maintain all pipes, pump stations, and other infrastructure related to conveyance of sewage to the ALCOSAN treatment facility. The outfalls located in Stowe and the pump station in McKees Rocks that are currently owned and maintained by ALCOSAN would not change ownership. The

Authority would be controlled by a Board of Directors with representation by all communities serviced by the Authority.

Key Considerations to be Evaluated

Considerations such a rate structure, powers and responsibilities of the Authority, sewer districts, financing, and public perception are the key factors to be explored. Public perception/loss of control is perhaps the largest obstacle to overcome; without success in this area there will be little chance of creating an Authority.

Analysis

Personnel

Administrative Skills

Administrative personnel for the municipalities, now have full responsibilities for all aspects of municipal services. Transferring sewer service to an Authority would reduce the work load for the administrators and would allow them to spend their limited time on other municipal issues. Quarterly billings, collection of fees from customers, organizing and scheduling maintenance and repairs, and coordination with engineers on sewer issues could all be eliminated. With an Authority, only limited involvement would be required primarily for coordination with the Authority. The Authority would compensate the cost for municipal officials to attend meetings and coordinate with the Authority.

Labor

Depending on the level of experience, some of the existing public works employees may be ideal candidates for employment by the Authority. These existing workers would be most familiar with the systems and could ensure that the loss of knowledge is minimized. Not all of the workers qualified will desire to take on sewage issues full-time and may require financial incentives or other perks to join the Authority. Municipal officials may have conflicts with the Authority over potential loss of their more highly-trained public works employees.

The Authority would be responsible for all hiring, discharge, and supervision of employees for the sewer system. The Authority would establish wages, benefits, and employment policies. Any employees transferring from the municipalities would answer to the Authority only.

Technical Skills of Labor Force

The Authority, based on job interest and qualifications of current public works employees, may need to advertise openings beyond current municipal employees. The Authority would need a highly skilled work force to undertake all repairs, maintenance, and upgrades regardless of size. All sewer-related projects would fall under the responsibility of the Authority. All training and required certifications would be handled by the Authority.

Equipment

As with personnel, existing equipment from the municipalities would be transferred as available. However, much of the equipment currently owned by the municipalities is utilized for other public works responsibilities. Equipment including pickup trucks and backhoes fall into this category.

Maintenance, Repairs and Upgrades

Currently, administration of sanitary sewer systems by the individual municipalities affords a great deal of control in determining priorities. The municipalities understand the long history of their systems and determine which issues should be addressed in the short-term vs. long-term. Budgets are balanced with these timeframes in mind to avoid having a large public works project undertaken during the same timeframe as a sewer repair or upgrade.

The reality, however, is that many municipalities always have higher priorities than their sanitary sewer systems. Upgrades and repairs to sewer systems exhibit little to the general public whereas repairs to roads or parks have a more visible impact. As long as problems are relatively few and minor, the average resident is rarely concerned with the system. Putting these small upgrades and repairs off to a later date will eventually become larger problems especially regarding consent orders as discussed in the Baseline. An Authority would be concerned solely with sanitary sewer service and have less to gain from delaying needed services.

Financial Resources

The Authority would have the power to charge, collect rents, rates, fees, or other charges. The Authority would be authorized to provide for the issuance of bonds and secure loans as needed to finance any aspects of the Authority.

Political Will/ Loss of Control/Governance

Perceptions & Control

As with an Intergovernmental Cooperation Agreement, loss of control by the elected officials and public perception are the biggest obstacles towards pursuing any regionalization solution, especially for the creation of an Authority. Generally residents and elected officials are skeptical of an Authority and because of isolated instances over a long period of time have formed the opinion that Authority can lead to abuse of power and corruption. The benefits of an Authority would have to be significant enough to counteract this negative perception.

Each municipality would have representation as a voting member of an Authority board. The degree of control each municipality has would be significantly reduced in comparison to the existing sewer management.

Control of fees is one of the main concerns with using an Authority for sewer management. An Authority is less likely to be concerned with the political

ramifications associated with rate hikes. Elected officials would face criticism by customers if there are issues or political upheaval over rate increases.

In addition to loss of control over fees, the Authority may want changes to the Subdivision and Land Development Ordinances related to standard sewer construction details and practices. The creation of additional ordinances may be needed to enforce Authority regulations. The Authority may also require an agreement with the municipalities for unrestricted access to enter, use, and connect with any existing public drains, conduits, pipelines, or any public property of a similar nature as needed for sewer-related issues.

Creation and Governance

A substantial amount of debate, meetings between the municipalities, public presentations, and public hearings would precede the creation of an Authority. The adoption of parallel ordinances by each municipality would officially create the Authority. This will likely be the most difficult step in the creation of an Authority.

Prior to adoption of the ordinance, the municipalities' would need to determine the overall parameters of the Authority regarding ownership, administration, and operations. One of these factors would be which assets would be transferred or sold to the Authority. This could include equipment as well as personnel; each community must determine what they need for their public works department to continue to operate at the same level. Another issue would be the length of the agreement and how dissolution of the Authority would take place. Some Authorities have a 50 year agreement with dissolution of the Authority achieved through unanimous vote of the municipalities. Regardless, an Authority may not be disbanded until its debts are retired or agreeably distributed.

Board membership would need to be determined; the number of members, appointment to the Board (by resolution from governing bodies), and term length. The Authority, through action of the Board would be responsible for:

- Billing and collection
- Authorizing the filing of liens
- Enforcing remedies including sheriff's sales, water shut-offs and referral to collection agencies
- Hiring, discharge, and supervision of all employees for the sewer system
- Establishing wages, benefits, and employment policies
- Acquiring and disposing of real estate, purchase and sell personal property
- Issuing bonds

Costs

Several of the cost benefits realized through Scenario A may also apply to this scenario. In brief these include 1) the assembling of specialized, highly trained individuals whose sole purpose is to repair and maintain the sewer system and 2) a reduction in the amount of equipment needed by the municipalities. A benefit

related to cost that would not occur using an ICA agreement is that municipalities would not have to take out loans for sewer-related projects. The amount that the municipalities would be able to borrow would not be affected by any sewer expenses, particularly larger projects.

A Sewer System Operating Budget Template developed by 3 Rivers Wet Weather is available to municipalities as a tool to help calculate actual costs of sewer services. Completion of this template could help the municipalities involved in this Study to get a better understanding of the benefits of transferring sewer service responsibilities to an Authority.

Many municipalities knowingly or unknowingly subsidize their sanitary sewer operations with general funds due to the overlapping nature of personnel, equipment, and administration. Most municipalities have incomplete and inaccurate records for sewer costs due to time constraints of administrative personnel as well as the inherent difficulty in keeping track of hours for equipment and personnel (wages, benefits, overtime.) that are specifically attributed to sewer-related activities.

The Authority would have full control over determination of customer rates. These rates could increase to cover the startup cost of the Authority for items such as for purchasing equipment, setting up administration, legal reviews, as well as improvements needed to bring each of the communities to an equal level of maintenance. However, existing rates could be maintained or even lower rates applied if the Authority covered initial and start-up cost by floating loans or incurring bonded debt. It is reasonable to assume that an Authority would divide the service area into several sewer districts to reflect the large differences in the condition of each municipality's systems.

A base rate could be determined that would cover general operational costs of the system to be applied equally to all districts. Surcharges over a period of time for individual districts to pay for necessary repairs or upgrades to bring the district to parity with the other districts could be implemented. This would allow for a fair system of bringing all communities up to the same level without communities subsidizing each other's repairs for previous issues. The surcharges would not be assessed for system-wide improvements since these would be of benefit to all communities in the Authority. Once the repairs/upgrades needed to achieve parity have been completed, no additional surcharges would be assessed. Any other communities wishing to join the Authority would follow the same procedure until parity is achieved as related to the improvement of their system and assets.

The Board would vote on any surcharge, rate change, or assessment. A time limit could be implemented for expiration of surcharges at which point the sewer districts would be consolidated except for any new districts incorporated following creation of the Authority.

Larger Projects and New Loans

The Authority would be responsible for all sanitary sewer-related projects regardless of size. The Authority would have the power to take out new loans or float bonds as needed and pass the costs onto customers through decision of the Board. Any interest on loans accrued to bring a community to a level of parity would be billed to customers in the sewer district for which the loans capital would be used.

Permitting

The Authority would be fully responsible for obtaining all permits and complying with all regulations and consent order mandates. The municipalities would no longer play a role in this aspect.

Grant Applications

All grant applications would be submitted by the Authority. Any financial backing such as matching funds would be provided by the Authority regardless of the community(ies) in which the grant funding would be applicable.

Engineering Consultant

The Authority would retain its own engineering consultant. The Authority would have to make this determination based on expected work load as well as potential short time frames for immediate repairs. A contracted consultant would be able to provide the services of multiple engineers to solve immediate issues unlike a single, in-house engineer.

Liability and Litigation

Although the Pennsylvania Department of Environmental Protection (PA DEP) does not have adequate resources to enforce many of the regulations currently in place, there is always the possibility of fines for non-compliance. Typically, PA DEP does not get involved unless there are overflow problems. By creating an Authority, the municipalities may be able to avoid consequences for past non-compliances.

Sewer systems by their nature are not confined to political boundaries. Often, issues facing an upstream community will affect downstream communities. As a result, there is the potential for conflict between municipalities sharing the same sewershed. Existing conflicts between the municipalities as well as potential future litigation could be abated or resolved by formation of an Authority that encompasses all the municipal systems.

Conclusions

Many of the difficult issues inherent in an ICA would be somewhat less complicated with the creation of an Authority. Borrowing money, use of equipment, permitting, grant applications, and performing larger repairs/upgrades would all clearly be the responsibility of the Authority with limited coordination and no new contracts required

with the municipalities. As discussed in the purpose and intent, the primary obstacle is perception and loss of control.

There are multiple benefits for developing an Authority. Municipal administrators would no longer need to be involved in sewer services. Any intentional or unintentional subsidies by the municipalities' general funds would be eliminated. Potential litigation from adjoining municipalities and from PA DEP would be shifted from the municipalities. Clearly there are substantial trade-offs which each municipality would need to evaluate related to forming an Authority.

Scenario C: Sale to an Outside Entity

Concept

Scenario C explores the viability to completing an out-right sale of the 4 municipally owned sanitary systems to an entity that currently exists in the region. This scenario transfers the ownership of the infrastructure assets (pipes, pump stations, etc.) and the customer base of each municipalities' system to an existing authority (such as , West View Water Authority or ALCOSAN) or a private-sector entity (for example the American Water Company or Veolia Water, Inc.).

Key Considerations to be Evaluated

The primary considerations for this scenario include: loss of control, value of the customer base, municipal standards for repair of other infrastructure, customer service, emergency response, regulatory and permit responsibilities, rates, and customer representation. The following sections outline the specific issues related to each consideration.

Analysis

Benefits

One of the key benefits of a sale to an outside entity is the transfer of liability to the outside entity. Currently, the municipalities are responsible for any damage to life or property resulting from owning and operating the sewer system. This includes liability for municipal workers hurt on the job as well as any injuries to the general public although liability for injury and damage to third parties may be limited by the doctrine of 'sovereign immunity'.

Sale to an outside entity has several benefits which directly affect the municipalities' budgets. The costs of any current or future repairs and upgrades would be transferred to the outside entity. This includes existing Level 4 and 5 issues, as well as future Consent Order Mandate obligations, Level 1 through 3 issues that have not been addressed. The municipalities may also receive a windfall from a private entity for the purchase of the system's customer base depending on its value as discussed in subsequent sections.

As is the case with Scenario B, costs to the municipalities could be reduced by eliminating subsidies for their sewer systems from the municipal general fund. The municipalities will also be able to reduce equipment inventory.

The municipalities would have greater borrowing capacity without the burden of sewer-related expenses which would result in securing loans for other public works-related capital improvements. Other public works projects that may be currently deferred due to limited funds could be undertaken.

The cost per customer in a smaller system is typically higher than the cost per customer for a system that has a larger customer base. Sale of the sewer systems to an outside entity would increase the customers serviced by a single entity and should be reflected in a reduction in per customer costs (and rates) in the long-term. In the short term, rates may increase as repairs and upgrades are made to bring the newly acquired systems up to a similar level of maintenance and Consent Order compliance with the other communities serviced by the outside entity. The costs of any future repairs or upgrades would be spread over the larger customer base, which most likely would keep increases more steady and predictable without spikes as a result of future repairs or Consent Order mandates. Initial or short-term rates could be included as a condition of sale, with the purchaser spreading out costs by loan or bond financing.

In the case of sale to a private utility company, the Pennsylvania Public Utility Commission (PUC) would have oversight regarding customer rates and provide some level of protection of the public interest. Rates charged to the customers would need approval from the PUC. The private utility company would also have to meet quality standards established by the PUC. This would add a layer of protection that is not applicable when the sanitary systems are municipally-owned or Authority-owned.

Finally, transfer of services and sale of assets should be relatively quick, extreme and inexpensive for the municipalities. Any existing Authority or public utility company will have personnel, accounting, and equipment already in place. There will be a need for coordination between the managers/secretaries and the outside entity initially to transfer information but should come at little or no cost to the municipalities.

Key Considerations

The following section describes the key issues to be considered by each of the municipalities regarding sale to an outside entity. The issues listed represent the general considerations that should be resolved and made a part of any pending/future sales agreement.

Establishment of the Value of the Customer Base

Since an authority is non-profit, the benefit of increasing its customer base is related to its ability to spread cost of services over a wider number of customers and

therefore reduce costs. A private utility company, in addition to adding existing customers, is formed to make a profit and has a vested interest in the value of the customer base. Sanitary sewer service would be transformed to a consumer utility and would be subject to the expansion of the number of customers is important for the growth of a company. Although McKees Rocks and Stowe are largely built out and unlikely to grow, Neville and Kennedy still have growth potential. Kennedy has a significant amount of undeveloped land that is attractive to additional residential and commercial development. Neville has limited growth potential for residential customers but has large amounts of vacant/underutilized commercial and industrial land.

Loss of Control/Municipal Representation

Similar to Scenario B, the municipalities would lose control over the sanitary sewer systems. There is a significant difference, however, between the Authority described in Scenario B versus the Authority in Scenario C. The municipalities would be responsible for creating the Authority in Scenario B and would have representation on the Authority's Board and would have indirect control. This allows some oversight for rates and also provides a mechanism for dissolution of the Authority if desired by the municipalities. Sale to an existing Authority may or may not include representation on the Board and would remove all control by the municipalities. Even if the municipalities do have representation, they may not have the necessary votes for dissolution of the Authority, control over rates or changes in policies.

As the sanitary systems age, problems with maintenance will likely increase and could eventually become apparent to customers in the form of higher rates or problems with service or odor. The municipalities would no longer be responsible for these repairs or the multitude of potential issues triggered by the Consent Order Mandates and any issues stemming from a lack of past compliance.

Due to the long history of ownership and maintenance by the municipalities, there is likely to be a lingering perception of ownership and responsibility for the sewer system by the municipalities. Changes in service or rates, as in Scenario B, will likely be directed towards the municipalities and their elected officials for some time to come. This is one of the key tradeoffs with sale of a sanitary sewer system; loss of actual responsibility but not loss of perceived responsibility.

Repair/Restoration Requirements

Following the sale of sanitary sewer systems, the municipalities would need to address issues that have traditionally been closely coordinated within the municipalities. For example, the municipalities currently have control over both the sewer systems and other public works projects and can therefore repair or restore roads to their standards. An acceptable set of standards related to any municipal infrastructure impacted by sewer repairs should be included in a sales agreement with an outside entity. This would include quality and type of materials to be used, construction techniques, road closure procedures, timeframes for completion (to limit

disturbance to the public), advance notice to the municipalities, and coordination with the public works departments to ensure conflicts with other utilities are addressed.

Customer Service

With municipal management of the sewer systems, customers have easy access to those responsible for the operations and maintenance. All four (4) communities have small populations and customers have a greater voice in the operations of the municipalities. The sale of the sewer systems would significantly diminish this accessibility to those accountable for addressing problem. Customers wishing to voice their opinions or request a repair may be served by out of state employees. This may lead to a perception that customer service has been diminished.

Actual responses by the outside entity to concerns and repairs may be different than the perceptions depending on the outside entity. Many private companies are able to address customer concerns quickly and reliably and have a higher level of quality customer service. The initial quality of service will likely have a long-term impact on the perceptions and acceptance of new management.

Emergency Response Expectations

How an outside entity handles emergency response is an important consideration for the municipalities. Coordination with the public works departments, other utility companies, fire, police, emergency management agencies and municipal, county, or state-level officials would need to be clearly defined in the case of a major emergency such as a chemical spill that enters the sewer system. The 2010 BP Gulf of Mexico oil spill provides an example of the loss of control by local officials related to a large emergency situation. BP was in large part responsible for the allocation of resources and methods for addressing the situation. The municipalities may consider adding requirements for cooperation with local emergency management and municipal officials in the sale agreement.

Regulatory Responsibilities

Responsibility for any current or future mandates from the United States Environmental Protection Agency, the Pennsylvania Department of Environmental Protection, and the ACHD would be transferred to an outside entity. Since under this scenario, the municipalities would no longer own the system, the outside entity would be responsible for these issues.

Permittee Responsibilities

Municipalities with CSOs are responsible for the maintenance and performance of the outfalls regardless of ownership of the sewer system. The permit is always tied to the community where the CSO is located and cannot be transferred to an outside entity. There would need to be an agreement with the outside entity as to how to deal with overflow events including costs for capital improvements and potential violations. These responsibilities would need to be clearly defined since the municipalities will lose virtually all control over the sewer systems under this scenario.

Caps on Customer Rate Increases

A primary concern of the sewer customers is rate increases. The loss of control by the municipalities will be most noticeable to the customers in terms of rates. The municipalities should consider incorporating caps to the rate increases as a stipulation of the sale. This would have to be negotiated with the outside entity and could be difficult to come to an agreement on.

Transfer of Municipal-ALCOSAN Agreements

The existing agreements between each of the municipalities and ALCOSAN would need to be transferred to the outside entity. The agreement, known as Agreement Z, dates back to the 1950's and is the original agreement between the municipalities and ALCOSAN for treatment and conveyance of sewage. The agreement stipulates that the municipalities will supply ALCOSAN with all of their sanitary waste and that ALCOSAN will accept the waste. As part of Agreement Z, ALCOSAN agreed to maintain their interceptor pipes while the municipalities maintain their own sewer infrastructure.

Establishment of a Citizen Advisory Panel (CAP)

A citizen advisory panel could be formed for achieving some level of representation with an outside entity. The purpose of the CAP would be to provide a forum for customers to voice concerns, complaints, compliments etc, and to work collaboratively with the decision makers of the outside entity. The composition of the panel, duties, responsibilities, terms, and powers etc. would need to be determined. The members could be appointed by each of the municipalities in the service area to accurately reflect the views of the citizens and businesses affected. Establishment of a CAP should be incorporated into the sales agreement. The Port Authority of Allegheny County has a citizen advisory panel for similar purposes. Potential issues that could be reviewed by the CAP include rates, service levels, rules and regulations, prioritization of projects, and evaluation of the program results.

Conclusions

The sale of the existing sewer systems to an outside entity has significant benefits and municipal cost savings that come at a cost in terms of the loss of control and accountability. The loss of control in this scenario, unlike the others, is permanent in nature. Once the system is sold, there will be few options for re-acquiring the system or any control other than outright purchasing. It is therefore of great importance to consider all of the aforementioned items in depth. How the municipalities and an outside entity deal with all of these issues would need to be very clearly understood and agreed by all parties involved. Although it may take some time, eventually the perception of municipal accountability for sewer rates and services would likely diminish. In the short-term, pressure on elected officials regarding a decision to sell the sanitary sewer assets will be an issue.

As previously noted, negotiations most likely would occur between the purchaser and each individual municipality; there is a strong possibility that not all of the four (4) communities would accept a bid to purchase their system. An outside entity

could through analysis of the municipalities' sewer assets and valuation of the customer bases likewise conclude purchasing the sewer systems of some of the municipalities is not in its best interest. Purchase of a single system, however, is unlikely due to the minimal increase in the customer base. Although four (4) municipalities are included in this Study, each will have to weigh its options. Scenario C has the least dependence on the cooperation between the municipalities out of all of the scenarios.

Many of the considerations described in Scenario B: Creation of an Authority would be applicable to this scenario. The analysis on personnel (p.29), equipment (p.29), maintenance, repairs, and upgrades (p.30), costs (p.31) permitting (p.32), grant applications (p.33) and liability and litigation (p.33) would equally apply to this scenario. Finally, as part of this scenario, municipal resources would no longer be expanded for repair/ replacement of aging infrastructure, liability, and Consent Order Mandates. Municipal resources in terms of personnel, equipment, and budgets could be focused on other municipal operational functions and capital projects.

Scenario Comparison

The three (3) scenarios describe the options for regionalization determined by the Working Group to have the greatest potential for implementation. Scenario A: Intergovernmental Cooperation Agreements allows the municipalities to maintain the greatest level of control with a modest reduction in municipal responsibilities and costs for maintenance. Scenario B: Creation of an Authority provides a lower level of control over the sewer systems with the advantage of reduced municipal responsibilities and resources allocated while retaining some level of local participation. Cost savings to the municipalities are also a benefit. Scenario C: Sale to an Outside Entity is the furthest on the spectrum with dramatic changes to the control of sewer services but with the greatest cost savings and the greatest reduction in liability and responsibility of the municipalities. The cost savings to the municipalities would likely be greater than in Scenario B.

The following section describes the Working Group's thoughts and impressions regarding the most important considerations relative to maintain the baseline arrangement or other words the status quo and the three (3) alternative scenarios assessed by this Study. The comparison was formatted as a *Consumer Reports*[®]-style evaluation and is intended to provide an elected official, resident and business owner with a "Quick View" comparison of the virtues of each of the scenarios. The comparison evaluates the scenarios based on three (3) ranks – Fair, Good, and Best. The rankings are relative to each of the considerations. For example, the ranking for sewer rates indicates the relative dollar value whereas ranking for customer service compares the quality of service not a dollar amount. A ranking of fair, or one dot shown on the chart, represents the least benefit provided by the scenario for a particular consideration. Three (3) dots, or "best" illustrates a measure of the greatest or most significant positive effect.

Two types of evaluations have been developed for the Scenario Comparison. The first examines the considerations for each scenario through the perspective of an elected official; the second comparison is viewed through the eyes of a typical residential sanitary sewer customer. Each evaluation contains a set of definitions that apply to the section, a qualitative comparison table which summarizes all of the individual insights and observations gleaned through the Study, and analysis of the findings. The table allows an understanding of how each of the scenarios stack up against each other as well as how they relate to the existing conditions as identified under the baseline column.

The key considerations related to this evaluation include:

- Control of residential sewage rates
- Control related to day to day decision making
- Control over accountability and response to a problem
- Length of the operational transition
- Cost of the operational transition
- Liability
- Need for Municipal Spending on Long-Term Capital Projects
- Permanency/termination
- Municipal resource demands
- Regulatory responsibilities
- Borrowing ability for capital projects
- Rate consistency
- Grass roots customer service/response

The second comparison summarizes the likely impacts and implications that the Status Quo and the Scenarios would have on the general customer base. The general pros and cons as well as the implications of the scenario on the customer base vary from that of municipal elected officials to reflect issues that have a greater impact on the rates and services for customers. At first glance, some of these considerations do not appear to directly impact the customer. Indirectly, issues such as the cost of the operational transition will eventually get passed on to the customers in some form or fashion. This could result in higher rates or subsidies from the general fund which could reduce other services which benefit citizens.

The key considerations evaluated include:

- Control of rates
- Control related to day to day decision making
- Control over accountability and response to a problem
- Cost of operational transition
- Need for a municipality to spend on long-term capital projects
- Borrowing ability for capital projects
- Rate consistency
- Grass roots customer service/response

Municipal Officials Considerations

Definitions

Outlined below are brief explanations of the Working Group's definitions of the considerations. Although many of the terms are used for municipal and customer considerations, the implication may be different. For example, control of rates for a municipality reflects the ability to set rates while to a customer it is the ability to be heard regarding any complaints related to the rates.

Control:

Rates - the level of control by the municipality over establishing rates and adjustments.

Day to Day Decision Making - the ability of municipal officials to determine and prioritize the various operational and management decisions related to the sewer systems. This could include priority of repairs, routine maintenance schedules, personnel and equipment allocations.

Accountability and Response to a Problem - the responsibility of the municipality provide to customer service and customer satisfaction related to the level of control available to the municipality.

Length of Operational Transition - the time it would take to transfer assets or implement an agreement

Cost of Operational Transition - the relative cost of transferring assets includes the cost of developing the agreements or to enter into an agreement.

Liability - the responsibility of the municipality for any damage to life or property as a result of ownership of the sewer system.

Capital Expenditures - follows the same pattern as liability; capital expenditures directly tied to the ownership of the assets. The sale or transfer of the systems would reduce the expenditures of the municipalities.

Permanency/Termination - the ability to withdraw from, modify or rescind an arrangement for sewer operations based on the length of agreements or ownership.

Municipal Resource Demands - the amount of public works and administrative resources necessary to operate the sewer system; includes management and expenditures.

Regulatory responsibilities - the responsibility of the municipality for permits, consent orders, and other agreements as levied by the EPA, PA DEP or ACHP.

Borrowing ability for capital projects – how much can be borrowed under a set ceiling.

Rate consistency - the level to which rates would be consistent in subsequent years for a municipality.

Grass roots customer service - the perception by the customers regarding the quality of sewer services in terms of maintenance, emergency repairs, and dealing with customer service representatives.

Table 7: Municipal Officials

	Considerations	Baseline (stauts quo)	A (ICA)	B (creation of Authority)	C (sale to outside entity)
1	Control				
	a. Rates	●●●	●●	●●	●
	b. Day to Day Decision-making	●●●	●●	●●	●
	c. Accountability and Response to a Problem	●●●	●●	●●	●
2	Length of Operational Transition		●●	●	●●●
3	Cost of Operational Transition		●	●●	●●●
4	Liability	●	●	●●	●●●
5	Capital Expenditures	●	●	●●	●●●
6	Permancy/Termination	●●●	●●●	●●	●
7	Municipal Resource Demands	●	●●	●●●	●●●
8	Regulatory Responsibilities	●	●	●●	●●●
9	Borrowing Ability for Capital Projects	●	●	●●●	●●●
10	Rate Consistency	●●●	●	●	●●
11	Grass Roots Customer Service/Response	●	●●●	●●	●●

Key	
Best =	●●●
Good =	●●
Fair =	●
NA =	Shaded

Observations

Control

As discussed throughout this Study, the level of control for any of the scenarios is lower than the status quo. The level of control for Scenarios A and B are fairly similar for rates, decision making and accountability. Scenario C provides the lowest amount of control for the municipalities.

Length of Operational Transition

Sale to an outside entity provides the most streamlined process for implementation of a regionalization solution. An outside entity would have all of the resources and experience needed to quickly integrate the new customer base. The creation of a new Authority would take significant time and effort to establish including a number of steps such as ordinance revisions and public hearings that could most likely require formation of the Authority. A new Authority would also be subject to a start-up period where operations may be less than smooth. A 'start-up' period would also be required for a KA. An ICA would take a considerable amount of negotiation between the municipalities as well as setting up administration, purchasing equipment, and assembling needed personnel.

Cost of Operational Transition

The cost for setting up an ICA would be the greatest for the municipalities since they would need to bear all of the costs directly. A new Authority would have the ability to incur its own debt as would an outside entity and therefore have less impact on the municipalities. Initial costs, which could be substantial would be covered by the municipalities to setup the new Authority before it could incur any debt. The creation of an Authority would require some upfront costs by the municipalities for ordinance revisions and legal reviews prior to the actual implementation of the Authority.

Liability

Liability for the status quo (baseline) and an ICA is the same; the ICA effects only maintenance and does not involve any changes in ownership. The municipalities would remain liable with the creation of an Authority (Scenario B) since there would be representation and some control retained. Sale to an outside Authority should remove all liability from the municipalities.

Capital Expenditures

Capital expenditures follow the same pattern as liability; the ownership of the assets is directly tied to capital expenditures. The sale or transfer of the systems would reduce the expenditures of the municipalities.

Permanency Termination

The status quo and ICA provide the greatest flexibility in maintaining control over the long-term management of the systems. An ICA would require a time commitment, most likely ten years. Scenarios B & C would involve much greater timeframes; Scenario B has severe debt/termination conditions; in the case of Scenario C it would be most likely extremely difficult to return to status quo.

Municipal Resource Demands

Scenarios B & C would involve very little financial or personnel assistance from the municipalities other than the initial startup period. An ICA would reduce the level of resources needed by the municipalities since the majority of service currently provided by the municipalities related to the sewer system is for routine repairs and maintenance. Absent these routine tasks, the demands on the public works

departments would be reduced. Scenarios B & C provide the greatest benefit to the municipalities.

Regulatory Responsibilities

The regulatory responsibilities, as with liability and capital expenditures, are tied directly to ownership of the sewer system. A change in ownership would result in fewer responsibilities. Scenario C would be the most advantageous from a municipal official's perspective.

Borrowing Ability for Capital Projects

The amount the municipalities can borrow is a finite amount, the more that is borrowed, the harder it is to get additional financing. Sale or transfer of the assets frees the municipalities from the burden of floating bonds for sewer-related issues. Scenarios B & C therefore provide the greatest borrowing ability for the municipalities.

Rate Consistency

Large expenditures for construction projects could produce a spike in rates under the status quo and Scenario B. An outside entity, due to its larger customer base would likely provide the most consistent rates out of the three (3) scenarios. Rate increases would likely be uniform with little change of lowering.

Grass Roots Customer Service

In the status quo, all customer issues are addressed by the municipalities; all of the responsibility for the system lies with the municipality. Maintenance service provided through an ICA as well as control by an Authority or outside entity shifts a certain level of customer service issues away from the municipalities. However, even with the complete sale of the system, the municipalities will not be completely free of the public perception regarding responsibility for sewer services. Due to the long history of municipal services, it will take some time for customer perception of responsibility for the system to change.

Customer Considerations

Definitions

Control:

Rates - the ability of customers to influence rates through voicing opinion with officials

Day to day decision making - the ability of customers to provide input on operations and policies related to sewer service

Accountability and response to a problem - a customer's ability to be heard on issues related to repairs as well as political pressure on officials

Cost of operational transition - indicates the relative cost of transferring assets or to enter into an agreement as well as cost of developing agreements which may be passed onto the customer

Capital expenditures - the amount of municipal budgets to be spent on capital sewer projects; costs passed on to the customer

Borrowing ability for capital projects - the amount that municipalities will be able to borrow based on their bond ratings and amount of debt currently owed

Rate consistency - the level to which rates would be consistent in subsequent years for a municipality.

Grass roots customer service - the perception by the customers regarding the quality of sewer services in terms of maintenance, emergency repairs, and dealing customer service representatives

Table 8: Customer Perspectives Comparison

	Considerations	Baseline (stauts quo)	A (ICA)	B (creation of Authority)	C (sale to outside entity)
1	Control				
	a. Rates	●●●	●●	●●	●
	b. Day to Day Decision-making	●●●	●●●	●●	●
	c. Accountability and Response to Problem	●●	●●●	●●●	●●
2	Cost of Operational Transition		●	●	●●●
3	Capital Expenditures	●	●	●●	●●
4	Borrowing Ability for Capital Projects	●	●	●●●	●●●
5	Rate Consistency	●	●	●●	●●●
6	"Grass Roots" Customer Service/Response	●●●	●●●	●●	●

Key	
Best	= ●●●
Good	= ●●
Fair	= ●
NA	= Shaded

Observations

Control

The customer's ability to affect change in the sewer management through exchanges with responsible officials will diminish in direct proportion to the level of local ownership. A customer's views are more likely to be heard with local officials than with a large company or an Authority.

Cost of Operational Transition

The municipalities' costs are greatest for implementing an ICA or creating a new Authority. Although each municipality may choose different methods for bearing the costs, residents will be impacted. The sale to an outside entity removes the majority of these costs since they can be financial and/or spread over a larger customer base.

Capital Expenditures

Expenditures for capital projects remain unchanged with the status quo and an ICA; and are passed on to the customers. Costs of improvements and repairs performed by an Authority or corporation are also passed on but may be less visible to the customer base.

Borrowing Ability for Capital Projects

The increased borrowing ability of the municipalities resulting from Scenarios B & C will allow the municipalities to provide other services with less tax increases or rate increases.

Rate Consistency

Rates for the status quo and an ICA could be significantly impacted by the Consent Order Mandates in the near future. These costs would be spread across a very small customer base and could dramatically affect rates. Repairs and rehabilitation resulting from insufficient capital spending could also cause spikes in future rates. Scenarios B and C may provide at least a smoothing of rate hikes.

Grass Roots Customer Service

The quality of customer service and satisfaction will likely be higher when customers feel they are heard by those responsible for the system. A decrease in control over the systems by the municipalities will have a direct impact on customer perceptions and satisfaction.

Final Comments

Key Points

Through analysis of the eleven criteria used in the comparisons of the three (3) scenarios, it is clear that the creation of an Authority or sale to an outside entity provides the most positive implications related to the considerations that were assessed. Transfer of liability and regulatory responsibilities offer substantial incentives for implementation of these scenarios. While Scenario C allows the municipalities the greatest benefit of transfer of these issues, there would be greater loss of control.

Of the three (3) scenarios, the ICA offers the least benefit to the customers and municipalities based on the criteria used in the analysis. This is due to less control over day to day operations with only modest cost savings and no change in liability or regulatory responsibilities. The startup costs and effort for updating ordinances, negotiating with other municipalities, setting up the organizational structure, organizing personnel, and administrative changes may provide too much of a disincentive to justify the modest financial gains.

The status quo, based on the Working Group's analysis provides less overall benefit than Scenarios B & C but does come out ahead of an ICA. The unknowns of the

Consent Order mandate, years of deferred maintenance for aging infrastructure and future legal issues give reasons to investigate regionalization opportunities further.

All of the scenarios offer the possibility of reducing sewer service costs to the municipalities. Scenarios B and C offer the greatest reduction both in terms of present maintenance and repair costs and future costs of Consent Order Mandates. The relatively small amount of funding set aside for sewer capital improvements by the four (4) municipalities is further incentive to explore these scenarios in greater detail.

Scenarios B and C would allow a regional approach for the planning, rehabilitation and development of the systems rather than by municipal boundaries. The individual municipal systems that make up the sewershed could be more effectively managed as part of a larger system. Issues such as conveyance of sewage through downstream communities could be more easily coordinated removing financial and legal obstacles which currently exist. As each individual municipality's financial burden increases due to Consent Order mandates, the downstream communities will likely face increased pressure to recoup costs for maintaining interconnected infrastructure.

Ultimately, the choice to pursue any of the regionalization scenarios explored in this Study comes down to one issue; control vs. responsibility. Loss of control and the associated public perception are powerful influences. The transfer of liability, legal issues, regulatory responsibilities, and future Consent Order mandates are equally important. The loss of control over rates is by and large the greatest concern to customers and elected officials. The advantages of any of the regionalization scenarios must be substantial enough for customers and elected officials to cede their current level of control.

Each municipality's elected officials and residents need to understand the tradeoffs involved in the implementation of a regionalization scenario. This Study was designed to provide an analysis of the key issues and provide observations and insights. The municipalities must ultimately determine if there is potential for implementation of one of these scenarios and how best to proceed. Once a general understanding of the issues and the concerns of citizens have been discussed, and vetted further study into one or more of the scenarios may be warranted.

Final Suggestions

The four (4) municipalities should consider holding an annual Sewage Summit to discuss collective issues related to the sanitary sewer systems. The purpose of the Summit would be to work collectively in response to Consent Order mandates and how they can address the issues. The outcome of the Summit should be a regional task force to work with 3 Rivers Wet Weather and ALCOSAN as the next round of mandates is revealed. The municipalities, working together, would have an improved ability to size what the costs may be and lobby more effectively. A combined voice will have a stronger impact than individual municipalities.

The first step for the task force would be to review the recommendations in this Study. The task force may or may not implement the changes; however, continuation of the task force is critical in the coming years to address mandate orders regardless of what recommendations of this Study are followed. The task force should be concerned with how the mandates affect the four (4) municipalities collectively rather than discussing individual projects or larger basin issues as is done with current basin meetings.

Holding a summit and developing a task force should be an informal effort. This should not require any resolutions or paperwork, but rather cooperation on issues which are mutually beneficial. This effort could be similar to the recommendation in the Char-West Multi-Municipal Comprehensive Plan for McKees Rocks, Neville, and Stowe to work together on common efforts.