

*CONNECT Multijurisdictional Sewer
Management Study*

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Executive Summary

The purpose of this study is to review and evaluate alternative models to manage, operate and finance improvements to the multijurisdictional (or trunk) sewers located in the 18 CONNECT (Congress of Neighboring Communities) communities that have a direct flow connection with the Pittsburgh Water and Sewer Authority (PWSA). CONNECT was founded in 2009 to promote collaboration between the City of Pittsburgh and its 35 contiguous communities.

The four options discussed are:

- I. Continued use of intergovernmental cooperation agreements among municipalities sharing a particular trunk sewer.
- II. Use of an existing municipal authority.
 - A. Allegheny County Sanitary Authority (ALCOSAN).
 - B. Pittsburgh Water and Sewer Authority (PWSA).
- III. Creation of new, joint municipal authorities to manage, operate and finance one or more trunk sewers.
- IV. Formation of Environmental Improvement Compacts pursuant to state law.

Any one or more of these options could be employed to provide for the operation and maintenance of the trunk sewers. Each option has its advantages and disadvantages.

I. Intergovernmental Cooperation Agreements

Many of the existing intergovernmental cooperation agreements among municipalities sharing a trunk sewer are old, with many dating to the 1930's. Since population and sewage flow have changed since that time, the current agreements often place an unfair financial burden

on communities paying a disproportionate share of trunk sewer maintenance and repair costs. Therefore, the continued use of the agreements would require either substantial revisions to the existing agreements or the preparation of new agreements based on the model agreement attached to this study. This study recommends the use of four criteria, weighted according to the circumstances of each trunk sewer, to allocate the cost among the participating communities: (1) land area, by community, of the relevant trunk sewer sheds; (2) service population (in equivalent dwelling units); (3) inch-miles of collector sewers; and (4) dry and wet weather flow.

The main advantages to continued use of intergovernmental agreements are that they are established and longstanding and the municipalities can maintain direct control over maintenance decisions, contracting and the sewer or tax rates required to fund that maintenance.

Disadvantages include that major revisions to existing agreements are required, with no guarantee that such revisions can be successfully negotiated. In addition, these agreements are not well designed to raise large sums of money required to make major capital improvements to, or to replace, the old trunk sewers.

II. Existing Municipal Authorities

The standard approach for financing water and sewer capital projects on a regional basis in Pennsylvania is through a municipal authority. Many authorities are already in existence, including ALCOSAN and PWSA. The advantages to using either ALCOSAN or PWSA to manage one or more trunk lines include that both are familiar with the municipal bond market and have experience undertaking large public bond issues; they both have established sources of revenue pledged for their financings and a history of providing sufficient revenues to pay their outstanding debt; both have experience in contracting for sewer maintenance and repair projects; and ALCOSAN has an established county-wide operation and relationship with CONNECT communities. Disadvantages include the fact that both authorities have existing financial

obligations that may restrict their ability to raise additional debt for new projects; however, both authorities should be able to identify new revenues to support trunk sewer projects. A second hurdle to the use of either authority is that neither has representation on its board of directors from the CONNECT communities, other than Pittsburgh. Fortunately, the law governing both authorities provides flexibility in providing broader board representation.

III. New Joint Municipal Authorities

A third option is to create one or more new joint municipal authorities to manage one or more trunk sewers. There would be a great deal of flexibility in determining which municipalities would join, or be serviced by, a new authority. New authorities could be created on county-wide level, like ALCOSAN, or an authority could be created to maintain trunk sewers in a particular region. Such regions could include one or more of the seven “planning basins” used by ALCOSAN in preparing its wet weather plan or trunk sewers operated by municipalities comprising an active Council of Governments. New authorities start with a “clean slate” with no existing financial obligations and could be tailored to the trunk sewer projects. However, a new authority would not have a financing history or financing experience or an existing revenue stream available to support debt.

IV. Environmental Improvement Compacts (EIC)

EIC’s are authorized by state law. EIC’s powers closely resemble those of municipalities, including contracting, borrowing money, real property taxation and eminent domain. However, the statutory requirements for formation of EIC’s are extremely cumbersome, requiring compact formation and election of board members by referendum, not by action of participating governing bodies. There is no record of the formation of an EIC anywhere in Pennsylvania.

No matter which of these management options is used, the repair, maintenance and capital improvements to the trunk sewers must be funded.

If intergovernmental agreements are used, the funding methods will probably not change. Routine maintenance and repairs can be funded on a “pay as you go” basis using current municipal sewage fees or appropriations from the general fund. More expensive capital improvements will require municipal general obligation bond issues or bank loans.

If some form of municipal authority is used, then a revenue stream will have to be created to fund both routine repairs and capital improvements. Maintenance and repair expenses can probably be funded on a “pay as you go” basis by charging residents on a monthly basis, or municipalities in a lump sum, a fee for that service. These fees could also be pledged to support a bond issue or bank loan to address capital projects. The use of an existing authority like ALCOSAN has the advantage that these billing mechanisms are already in place with the CONNECT communities and ALCOSAN could simply increase existing fees or add a new fee to the bills it currently sends pursuant to the existing Standard Municipal Agreements which could be amended or supplemented, if necessary, to accommodate the new fee.

Introduction

Through the efforts of the Allegheny County legislative delegation, a grant was provided to 3 Rivers Wet Weather (“3RWW”) to pursue, through consultants, the development of a strategy for regional solutions regarding the rehabilitation and long-term maintenance and operation of sewers in Allegheny County (the “County”). As a subpart of this funding administered by the Pennsylvania Department of Environmental Protection (“DEP”), 3RWW awarded a grant to the Congress of Neighboring Communities (“CONNECT”) to analyze and develop recommendations for the operation, maintenance, management and financing for multijurisdictional, municipal sewer lines located in 18 of the CONNECT communities that have a direct flow connection with the Pittsburgh Water and Sewer Authority (“PWSA”) (the “multijurisdictional” or “trunk” sewers). Founded in 2009, CONNECT promotes collaboration between the City of Pittsburgh (“Pittsburgh” or the “City”) and its 35 contiguous communities. A Request For Proposals (“RFP”) was issued by CONNECT in December, 2010 and after a submission in response to the RFP, Eckert Seamans Cherin & Mellott, LLC was chosen to complete this Multijurisdictional Sewer Management Study. This study does not address the collector sanitary sewers (separate or combined) located throughout the CONNECT communities. Eckert Seamans was charged with conducting a review and evaluation of alternative models for managing, and financing improvements to, the multijurisdictional sewers located in the 18 CONNECT communities that have a direct flow connection with PWSA (the “Project”). As part of that undertaking, this study reviews and summarizes the currently available agreements among PWSA and the 18 CONNECT communities governing the trunk sewers and discusses two options for continuing operation through these agreements. In

addition, this study develops and evaluates alternative operation, management and financing structures.

Current Conditions

During the late 19th and early 20th centuries, sewers and water mains were constructed throughout the Pittsburgh region. In 1945, the State Sanitary Water Board ordered the communities and industries in the County to develop a sewage treatment plan and stop discharging untreated sewage into the rivers. As a result, a County authority was created to remove the burden of constructing separate wastewater treatment plants. In 1946, the Allegheny County Sanitary Authority (“ALCOSAN”) was formed and in 1954, ALCOSAN’s treatment plan was approved by the Sanitary Water Board. In 1959, ALCOSAN’s primary wastewater treatment plant, located on the North Side of Pittsburgh, began operations. Currently, ALCOSAN’s treatment plant is the largest wastewater treatment facility in the County. ALCOSAN serves nearly 315,000 residential, commercial and industrial customers throughout 83 municipalities (including the 35 CONNECT communities) in Allegheny and the surrounding counties. ALCOSAN is an independent municipal authority governed by a seven-member board of directors. Three members are appointed by the Mayor of Pittsburgh, three are appointed by the County Chief Executive, and one is a joint City-County appointee. The collector sewer systems are owned and operated by the customer municipalities and convey sewage or storm water from homes and businesses through the trunk sewers to ALCOSAN’s conveyance and treatment system. ALCOSAN owns and operates the conveyance system that intercepts and transports the flow from the municipal trunk sewers to the ALCOSAN treatment facility. There are approximately 90 miles of ALCOSAN interceptor sewers that transport flow to the treatment plant.

Municipal wastewater from 18 of the CONNECT communities reaches ALCOSAN’s interceptor system through the PWSA sewer system. According to information provided by

PWSA and 3RWW, there are 28 points of connection between the municipal trunk sewers and the PWSA¹ system.

These 18 CONNECT communities utilizing the multijurisdictional sewers connected to the PWSA system are: Baldwin Borough, Baldwin Township, Brentwood Borough, Crafton Borough, Dormont Borough, Edgewood Borough, Green Tree Borough, Ingram Borough, Municipality of Mt. Lebanon, Mount Oliver Borough, Municipality of Penn Hills, Reserve Township, Ross Township, Scott Township, Swissvale Borough, West Mifflin Borough, Whitehall Borough, and Wilkinsburg Borough.

Currently, these multijurisdictional or trunk sewers connecting the 18 CONNECT municipalities with PWSA are governed by an assortment of formal and informal intergovernmental cooperation agreements (ICA's) separately negotiated among the municipalities. The dates of these agreements range from 1911 to 2005. Some of the agreements require that the City (or PWSA) or a municipality pay a certain percentage of the cost to construct a sewer line. These are one-time payments without any future financial obligation. Other agreements require the City or municipality to assume all the costs of a particular project and/or to pay a percentage of future maintenance and reconstruction costs. There is no comprehensive list of trunk sewer construction/maintenance ICA's. The trunk sewer ICA's provided by 3RWW involving the 18 CONNECT communities and the City (or PWSA) are summarized as follows²:

¹ Prior to 1984, the City of Pittsburgh Water and Public Works Departments managed the City's water and sewer system. The City transferred operation and maintenance of the systems to the PWSA via a lease and Management Agreement dated March 29, 1984. The PWSA "leased" the existing water and sewer systems and the City provided services necessary to operate the systems as an agent for the PWSA. The 1984 lease agreement was terminated and replaced by a Capital Lease Agreement, effective July 27, 1995. PWSA assumed "all contracts, leases, permits, licenses and other instruments used in connection with the operation of the (water and sewer) System."

² The trunk sewer ICA's, as well as other municipal sewer documents, can be found at the 3 Rivers Wet Weather website, at 3riverswetweather.org, on the municipal data support page.

Negley Run (A-42³):

- April 8, 1962 agreement between the **City of Pittsburgh** and the **Township of Penn Hills**⁴ regarding the connection of a 47 acre parcel in the Township into the Negley Run Sewer system. The Township is required to make a one-time payment of \$12,000, and to pay 1.6% of the maintenance of the Negley Run Sewer System. The Township, in this agreement, also agreed to pay the charges of ALCOSAN for the “transportation, treatment and disposal of all sewage” relating to the 47 acre parcel.
- January 7, 1986 agreement between **PWSA** and the **Municipality of Penn Hills** regarding the drainage of 5 acres in the Municipality into the Negley Run Sewer system; the Municipality is to pay \$250.00 per tap-in; PWSA is responsible for maintaining the Negley Run Sewer system from the City line to the Allegheny River; the Municipality is to pay a fee to ALCOSAN for the transportation, treatment and disposal of the sewage.

Nine Mile Run (M-47):

- May 15, 1933 agreement between the **Borough of Swissvale** and the **City of Pittsburgh** regarding the construction, maintenance and repair of a separate branch sewer that connects into the Nine Mile Run Trunk sewer; the Borough agrees to pay the City a one-time fee of \$9,422.45 and also agrees to repair and maintain the branch trunk sewer, and to pay 6.6% of the costs of maintenance and repair of the Nine Mile Run trunk sewer to the City.

³ These numbers designate specific municipal (or multi-municipal) points of direct connection between trunk sewers and PWSA. See PWSA Multi-Municipal Conveyance Sewers Map, attached to this Report as Exhibit “A,” prepared and provided by 3RWW.

⁴ Penn Hills became a Home Rule Municipality on November 6, 1973. Prior to that time, Penn Hills was a Township.

Beck's Run (M-34)

- March 22, 1930 agreement among **Baldwin Township, Mt. Oliver Borough** and the **City of Pittsburgh** for the construction and maintenance of the trunk sewer, with costs shared on a percentage basis for both construction and maintenance.

Streets Run (M-42):

- October 14, 1936 agreement between **Brentwood Borough** and the **City of Pittsburgh** regarding the costs of construction, maintenance and repairs of the main trunk sewer with the Borough contributing a fixed cost for the construction and paying 25% of any repair or maintenance costs.
- May 8, 1941 agreement between **Baldwin Township** and **City of Pittsburgh** regarding the connection of branch trunk sewers and lateral sewers to the existing Streets Run trunk sewer with the Township paying a fixed cost for the construction of the trunk sewer and the City agreeing to maintain and repair the trunk sewer with the Township paying 30 % of the cost of repairs and maintenance.
- October 10, 1953 agreement between the **Borough of West Mifflin and the City of Pittsburgh** regarding the drainage by the Borough of 280 acres into the Streets Run sanitary sewer; the City also is to connect 89 acres in the City to this new sewer; the Borough is to pay the City a one-time fee of \$21,216; in addition, if the City "finds it necessary to reconstruct the lower portion of the Streets Run Sanitary Sewer, or to construct a relief sewer," the Borough is to pay the City 18% of the cost, with a maximum amount of \$21,600 to be paid to the City; the Borough agrees to maintain the sewer constructed by it, and the City agrees to maintain the Streets Run sewer.

“Maintenance” is specifically defined in the agreement as “reconstruction or enlargement of relief sewers as may be necessary, and as determined by the City.”

- April 1, 1957 agreement between the **Borough of West Mifflin and the City of Pittsburgh** regarding the drainage by the Borough of a 12 acre parcel into the Streets Run sanitary sewer; the connecting sewer is to be constructed by the Borough; the Borough agreed to pay a one-time fee of \$900, and it incorporates the previous agreement between the Borough and the City (October 10, 1953) relating to maintenance.
- July 19, 2000 agreement among the **Borough of Brentwood, Borough of Baldwin, the Borough of Whitehall, and West Mifflin Sanitary Sewer Municipal Authority** regarding a portion of the Streets Run sewer. Improvements to the Streets Run Sewer were in the design process, with the improvements scheduled to be made by June 30, 2002. This agreement attaches exhibits setting out the percentage share of each party based on prior agreements. In the alternative, the agreement sets up a schedule for the parties to collect data and prepare a new allocation for these and future repairs. In addition, the agreement encourages the initiation of a similar agreement with PWSA.

McDonough’s Run (McNeilly Road area) (S-15)

- March 14, 1930 agreement among the **City of Pittsburgh, the Borough of Dormont, Mt. Lebanon and Baldwin Township**. (see discussion below of Little Saw Mill Run).
- May 2, 1991 expansion construction agreement among the **City of Pittsburgh, Mt. Lebanon and Baldwin Borough**. Costs of construction divided equally among three parties (33 1/3 %), and then costs of maintenance to be shared between Mt. Lebanon and Baldwin Borough.

Little Saw Mill Run (Banksville Road)(MH-18):

- 1925 Agreement among the **City of Pittsburgh, Dormont, Knoxville, Carrick, Brentwood, Overbrook, Mt. Lebanon, Castle Shannon, and Mt. Oliver** regarding the construction and maintenance of the main trunk sanitary sewer in Saw Mill Run drainage basin. Costs are allocated on a percentage basis.
- December 8, 1926 agreement between **Borough of Dormont and Union Township** for the construction and maintenance of a 15 inch sanitary sewer between Dormont and Union. Municipalities agree to maintain sewer “in a proper state of repair.”
- March 14, 1930 agreement among the **City of Pittsburgh, the Borough of Dormont, Mt. Lebanon and Baldwin Township**. The agreement allocates costs, on a percentage basis, among Pittsburgh and the three municipalities. Subject of agreement is a “branch trunk sewer” in the Elwyn Hollow Branch Basin of the Saw Mill Run Drainage Basin. Although the original agreement refers to the “Saw Mill Run Trunk Sewer,” a settlement that occurred between the parties in 2006 (and the documentation leading up to that settlement) refers to the “McNeilly Run Trunk Sewer.”
- December 7, 1936 agreement between **Green Tree Borough and City of Pittsburgh** regarding the construction of the branch sanitary trunk sewer in Little Saw Mill Run Basin; the Borough paid the City its pro rata share of construction costs (3.6%) and agrees to bear the same pro rata share for maintenance and repair of the branch sanitary trunk sewer.
- January 8, 1951 agreement between **Green Tree Borough and the City of Pittsburgh** regarding the drainage of a 36 acre parcel of land located in the Borough into the Little Saw Mill Run drainage basin; the Borough paid a one-time payment of \$4,447.44 and

agrees to pay 1.87% of the cost of maintenance of the branch trunk sewer in Little Saw Mill Run and 0.33% of maintenance costs of Saw Mill Run trunk sewer.

- January 15, 1955 agreement between **Scott Township and the City of Pittsburgh** regarding the drainage of 18 acres into the Little Saw Mill Run drainage basin (on McMonagle Avenue); the Township pays a one-time fee of \$2,223.72 to the City; the City agrees to maintain and keep in repair the branch trunk sewer in Little Saw Mill Run, and the Township agrees to pay 0.94% of the cost of the maintenance, including reconstruction, repairs and other work. The City also agrees to keep in repair the trunk sanitary sewer in Saw Mill Run Drainage basin⁵, and the Township agrees to pay 0.17% of the repair costs.
- December 7, 1959 agreement between the **City of Pittsburgh and Green Tree Borough** regarding the construction of a connector sewer from Green Tree to the existing City trunk sewer along Banksville Road. The City is to build and maintain the connector sewer, with the Borough paying 33 1/3% of the construction costs, apportioned on the basis of sewer usage by the Borough and the City. Maintenance expenses are also to be paid based on the apportionment, and the agreement provides that readjustment of the apportionment should be made every year on the anniversary date of the date of completion.

McCartney Run (C-29):

- December 29, 1947 agreement between **City of Pittsburgh and Green Tree Borough** regarding the drainage of an 18.90 parcel of property located in Green Tree into the McCartney Run sewer (also mentions the Saw Mill Run Trunk Sanitary Sewer). The

⁵ According to information obtained from 3RWW, the Saw Mill Run trunk sewer was at one time owned by Pittsburgh. Roughly 20 years ago, ALCOSAN took ownership of the trunk.

Borough paid the City a one-time charge of \$5,200, and agreed to pay 27.50% of the maintenance costs in connection with McCartney Run and 0.16% of the maintenance costs in connection with Saw Mill Run Trunk Sewer.

Bells Run (C-24; C-25)

- May 4, 1928 Agreement between the **City of Pittsburgh** and the **Borough of Crafton** regarding the construction and maintenance of the Bells Run Trunk sewer with the City being responsible for construction and maintenance of the sewer, and the Borough responsible for making the connections (lateral) to the sewer.
- January 23, 1929 agreement between the **City of Pittsburgh** and **Green Tree Borough** regarding sewer extensions into the Bells Run trunk sewer with the Borough maintaining the sewer extensions; also relates to a storm sewer to be constructed to relocate a portion of Bell's Run Creek; upon completion, the City assumes all maintenance and repair obligations of the storm sewer.
- October 22, 1956 agreement between the **City of Pittsburgh** and **Green Tree Borough** regarding the drainage by the Borough of approximately 26 acres into the Bells Run Trunk Sanitary Sewer; the Borough made a one-time payment of \$705.13 to the City, and the Borough agrees to pay 0.60% of future maintenance costs associated with Bells Run Trunk Sewer.

Jack's Run (O-25):

- February 1, 1960 agreement among the **City of Pittsburgh, Ross Township, Bellevue Borough and ALCOSAN** regarding the construction of a relief sewer to divert dry-weather flow from the Jack's Run trunk sewer; cost of design, construction, repair and maintenance of the relief sewer is divided on a percentage basis, based upon the

communities' respective use of the relief sewer, as follows: City of Pittsburgh 33 1/3 %; Ross Township: 41 2/3%; and Bellevue Borough: 25%. The communities agreed to advance to ALCOSAN a total of \$10,000 for ALCOSAN to prepare construction plans and supervise construction; ALCOSAN also agreed to maintain, repair, renew and reconstruct the relief sewer, with payment for such services to come from the communities as outlined above.

- January 26, 2004 agreement among **Ross Township, Bellevue Borough and ALCOSAN** entitled "Joint Municipal Jacks Run Sanitary Sewer Improvement Agreement"; ALCOSAN agrees to pay for all construction costs related to a proposed 24 inch sewer construction project; the Township and Borough agree to apply for grant funds for the cost of the remediation of the sewer; the Township and the Borough agree that they are to be joint owners of the 24 inch sanitary sewer and are obligated for all future costs of repair, maintenance and rehabilitation; the Township and the Borough agree to abandon the existing 18 inch sewer line that is being replaced by the 24 inch sanitary sewer; the Borough and Township agree to prorate the costs to provide any additional capacity, storage or treatment, and additional maintenance for such facilities as might be required for any future obligations; the charges for the future capacity costs are to be prorated based upon the average aggregate per capita peak hourly flow conducted by flow monitoring over a 12-month period;
- January 26, 2004 agreement among **PWSA, Ross Township, Bellevue Borough and ALCOSAN** regarding stream culvert maintenance; ALCOSAN to maintain, repair and improve the stream culvert, with PWSA, the Township and the Borough responsible for sharing costs of maintenance, repairs and improvements to the stream culvert, on a

proportionate share basis, with ALCOSAN paying 40% and PWSA, the Township and the Borough all paying 20% each.

- March 24, 2005 agreement between **PWSA and ALCOSAN** regarding the establishment of rights and obligations with respect to the design, construction, ownership, maintenance and repair of the relocated overflow pipe, a 30 inch connector line and diversion structure located in the Jack's Run sewer and the design and construction of a new section of 84 inch culvert segment in the Jack's Run sewer; ALCOSAN paid for design costs and will be providing engineering services for all of the above structures; PWSA is to let the construction contract, and ALCOSAN is to pay 50% of the construction costs related to the overflow pipe (\$41,000), all of the construction costs related to the diversion structure (\$100,000), all of the construction costs related to the 84 inch culvert segment (\$268,300), and all of the construction costs related to the connector line (\$2,600). Parties agree that they will be joint owners of the overflow pipe and are jointly obligated for all future maintenance and repair costs; ALCOSAN is to own the diversion structure and connector line, and future maintenance and repair costs for the 84 inch culvert are set forth in a separate "Stream Culvert Maintenance Agreement."

Woods Run (O-27):

- June 1, 1965 agreement between the **City of Pittsburgh** and **Ross Township** regarding the approval of the connection by Ross Township into the Woods Run sewer for a 65 acre parcel located in the Township; the Township paid a one-time fee of \$1,950.00 to the City; the Township is to maintain and repair the portion of the Woods Run sewer constructed by the Township; gives additional approval to the Township to drain 1.85 acres and nine (9) undeveloped lots into the City sewer;

Butcher's Run (East Street Valley)(A-58)(Pittsburgh, Ross Township and Reserve Township)⁶:

- No Agreements available.

Spring Garden Run (A-60)(Pittsburgh, Ross Township and Reserve Township):

- No Agreements available.

Weyman Run (MH-89)(Whitehall, Brentwood, Castle Shannon, Pittsburgh and Bethel Park):

- No Agreements available.

Plumber's Run (West Liberty Avenue) (SMRE-40)(Pittsburgh and Dormont)

- No Agreements available.

East Carnegie Area (C-28)(Pittsburgh, Green Tree and Scott):

- No Agreements available.

⁶ There are numerous communities without any existing ICA. If a community or agreement is not listed above, there are no trunk sewer ICAs available in the 3 Rivers Wet Weather database.

Management and Financing Options

The main focus of this report is to review and evaluate options for the management, operation and financing of maintenance, repair and capital improvements to the multijurisdictional, or trunk, sewers. The reviewed options are as follows:

I. Continued use of ICA's among municipalities sharing use of a particular trunk sewer.

- A. Update existing intermunicipal agreements.**
- B. Create new agreements based upon a model ICA.**

II. Use of an existing municipal authority to manage, operate and finance maintenance, repair and capital improvements.

- A. ALCOSAN**
- B. PWSA**

III. Creation of new joint municipal authorities to manage, operate and finance one or more trunk sewers.

IV. Formation of Environmental Improvement Compacts pursuant to state law.

I. Continued Use of ICA's

A. Update Existing Intermunicipal Agreements

Since the adoption of existing intermunicipal trunk sewer agreements, many communities have undergone significant development which has resulted in an increase in both population and sewage flow. This has likely produced an unfair burden upon certain communities that are required to pay a disproportionate share of maintenance and repair costs because there is no mechanism under current agreements to reflect the population and sewage flow changes that

have occurred. Therefore, one option is for the participating municipalities to update and restructure the agreements to accurately reflect the changes that have occurred and may occur in each community. Based upon our review of available, current ICA's summarized above, substantial revisions would be required to update these agreements.

B. Create A New Model ICA

The review of the available trunk sewer agreements establishes that they are old and outdated and that numerous trunk sewers have few or no intermunicipal agreements to address repair, maintenance and operational costs. Therefore, a second option is to create a model ICA that may be customized and tailored to each trunk sewer and its respective municipal participants. This model agreement could be used to formalize mutual understandings of the repair and maintenance responsibilities for each trunk sewer. A draft model ICA is attached to this study at Exhibit "B." The following is a summary of the suggested content of such an agreement.

1. Introduction Recitals (Preamble or Whereas clauses): The agreement should contain enough information at the outset to identify the parties to the agreement, as well as why the agreement is being prepared and executed. It should identify the existing shared trunk sewer and define the geographical area to be covered by the agreement, including maps outlining the proposed area. If possible, the agreement should identify the current as well as the proposed ownership and operation of the common trunk sewer. The agreement should express an intent by the parties to achieve equitable cost sharing regarding capacity, operation/maintenance and capital improvements.

(a) Identify Prior Agreements: The agreement should identify any prior intermunicipal agreements between the parties, and what action is being taken regarding those

agreements. Are old agreements to be replaced by the new agreement? Does the new agreement serve to only modify existing agreements?

(b) Identify the trunk sewer(s) at issue: If possible, ownership of the trunk sewers should be defined, as well as any permits necessary for the operation of the trunk sewers.

(c) Responsibilities of Parties: The general responsibilities of the parties should be outlined, including responsibility relating to any regulatory orders, as well as the ability to participate in any joint decision making.

2. Maintenance and Repair Obligations: Define which parties are responsible to operate and maintain which portions of the system.

3. Capital Improvements: Define which party is responsible to implement any required capital improvements; set forth how capital improvements are to be identified and agreed to; identify who is responsible to design and implement; define cost allocation.

4. Emergency Repairs: Address emergency expenditures outside the approved annual budget and approval process.

5. Cost Allocation: Set the specific criteria for allocating costs of operation and maintenance, capital improvements, administration, etc. for the shared facilities. Potential cost allocation components of the agreement are discussed in more detail below.

6. Adjustment of Cost Allocation or Other Reopener: Describe conditions or events prerequisite to reopening the agreement to address modifications, such as flow distribution, additional service area, or reallocation of capacity.

7. Dispute Resolution: Set out a procedure for resolving any disputes among the parties to the agreement.

8. Estimated Costs/Budget: Require preparation, circulation and approval of an annual maintenance/repair budget, and multi-year plan for capital improvements. The parties responsible for initial preparation of the budget should be identified.

9. Recordkeeping requirements.

10. Access: Grant easements, licenses, or rights of way, as needed, in streets, public thoroughfares or other real property as may be needed for maintenance, repair and/or capital improvements.

11. Term: Set the “life” and termination date of the agreement. Define actions that could terminate the agreement.

C. Allocation of Costs

The following components could be used in a revised or new ICA to determine the cost sharing percentages among the municipalities. These components would probably be used in combination and pursuant to a weighting system. The components used, and their respective weighting, would depend upon factors unique to each trunk sewer such as its location and general condition.

1. Land area: Using GIS mapping, the total amount of land area, by community, contained in each relevant trunk sewer shed is identified. The advantage of using land area is that no further data collection is required as the land area of a particular sewer shed will likely remain static. Although generally the larger the land area of the relevant sewer shed, the greater the share of contribution, there certainly could be differences depending on whether the development density is urban or suburban. However, as stated above, the land area will likely remain constant, thereby providing no incentive to improve the trunk sewers.

2. Service Population (in EDU's): Using GIS mapping, the service population may be calculated for the trunk sewer, by community, using the building units as identified in GIS

mapping. A standard conversion factor for each residential unit should be identified; for example, one residential unit equals one Equivalent Dwelling Unit (“EDU”). In addition, commercial contributions may be calculated by using water consumption figures, and then converting this information into EDU’s. An advantage to using service population is that base wastewater (domestic) sewer flow is likely proportional to the service population, so that the more people who are served by the trunk sewer, the more the municipality would contribute to the costs. In addition, any changes in population that occur in the municipality will be reflected in the service population figures. However, census data may be needed to identify the number of residential units in a particular area, and this information is only updated every 10 years. Also, this method, in and of itself, does not project the wet weather flow. The ratio between dry weather flow and wet weather flow can vary significantly within any portion of a sewer system.

3. Inch-miles of Collector Sewers: Information supplied by 3RWW identifies the particular inch-miles of collector sewers for each community flowing into the trunk sewer. A measurement by inch-miles of collector sewers takes into account both the length and the diameter of the sewers. One advantage of using inch-miles of collector sewers is that the amount of sewer pipe in a community is, depending on the location and condition of the collectors, related to inflow and infiltration issues. In addition, as a municipality grows, the relevant collector sewer system (and the cost allocation) would also increase. However, in an analysis using inch-miles, the condition of the collector sewers is not taken into account. Moreover, there are no incentives to maintain or improve the trunk sewers.

4. Daily dry and wet weather flow: Flow data acquired in 2008 to 2009 from the regional flow monitoring program for all the communities has been collected and reported to 3RWW. One advantage to using dry weather flow is that many times dry weather flow is a

direct reflection of service population, system usage and the size of a service area. In addition, dry and wet weather flow is a direct reflection on the condition of the collector sewer systems, and therefore could be structured to provide an incentive for improving the collector sewers to decrease the costs allocated to the municipality. However, not every connection to the trunk sewer can be accurately monitored, so flow from some areas will be more reliable than others. Regarding wet weather flow, one advantage is an incentive it provides to reduce extraneous flow; however, as stated above, not every connection to the trunk sewer can be accurately monitored. Using flow data is often considered one of the most equitable methods of allocating costs as it implies that “you pay for the proportion of system capacity that you utilize,” but this method also is generally recognized as most difficult and expensive to implement as it generally presumes either continuous flow monitoring or periodic flow monitoring as a basis for evaluating changed conditions. Also, if done on a continuous basis, it could result in significant changes in cost distribution on an annual basis based upon varying climate conditions.

D. Advantages/Disadvantages of Continued use of ICA’s

Advantages:

ICA’s are the format currently used by virtually all the CONNECT communities and PWSA to address their shared trunk sewers. The intermunicipal relationships are established and longstanding and, in at least some cases, necessary maintenance to the sewers has occurred. In carefully drafted ICA’s, the municipalities maintain direct control over maintenance decisions, contracting and the sewer or tax rates required to fund that maintenance.

Disadvantages:

Major revisions to the current ICA’s will be required. New methods of equitably allocating costs among the municipalities must be negotiated and implemented. A few documented efforts to amend ICA’s have failed and, in any event, it is likely that negotiations to

revise or replace existing ICA's will be lengthy, with no guarantee of success. The vast majority of the trunk sewers are old, and significant capital improvements/replacements will be necessary including extensive wet weather control facilities. The ICA's are not well designed to raise large sums of money for such major capital expenditures. Long term financing by each participating municipality will most likely be required.

II. Use of An Existing Municipal Authority

The standard approach for financing water and sewer capital projects on a regional basis in Pennsylvania is through a municipal authority established pursuant to the Pennsylvania Municipality Authorities Act (53 Pa.C.S. §§ 5601 *et. seq.*, as amended) (the "Act"). Many municipal authorities are already in existence under the Act, including ALCOSAN and the PWSA. In general, all municipal authorities are given the power under the Act to supply water, sewer and other services to and for municipalities that are not members of the authority and to fix the rates to be paid for such service. The rates and charges of municipal authorities are not subject to the jurisdiction of the Pennsylvania Public Utility Commission. The Act requires the rates and charges to be "reasonable" and any challenge to the rates and charges of a municipal authority must be taken to the local court of common pleas.

Because of their size, scope of services, and existing involvement in some manner with the trunk sewers, either ALCOSAN or the PWSA may be potential candidates to undertake the Project. The following is a brief description of both ALCOSAN and the PWSA.

A. ALCOSAN⁷

ALCOSAN is a municipal authority created in March 1946, under the Act, pursuant to a resolution of the Board of County Commissioners of the County. A brief history of ALCOSAN is set forth under Current Conditions above. Pursuant to a Certificate of Joinder issued by the Secretary of the Commonwealth on March 16, 1955, the City became a member of ALCOSAN. ALCOSAN's Articles of Incorporation, as amended, currently provide that the board of ALCOSAN will consist of seven members serving staggered five-year terms. Pursuant to the Articles, three members of the Board are appointed by the County, three are appointed by the City and one is jointly appointed by the County and the City. ALCOSAN's authorized powers include among others, the collection, transportation, treatment and disposal of sewage in the County, and certain adjacent areas and the collection, transportation, treatment and disposal of such industrial wastes as shall be acceptable to ALCOSAN within its service area.

ALCOSAN's service area is made up of the City and 82 neighboring municipalities in the County and parts of communities in Washington and Westmoreland Counties. ALCOSAN serves an area of approximately 300 square miles with a population of approximately 843,000. ALCOSAN provides wastewater conveyance and treatment to all or portions of these eighty-three municipalities within the service area. The municipalities or municipal authorities own and operate their respective collector sewer systems, totaling approximately 4,500 miles of sewers.

ALCOSAN, the City and certain other municipalities in and around the County have entered into agreements (the "Standard Municipal Agreements") under which ALCOSAN is designated (within its service area) the exclusive agent of each such municipality to furnish sewage treatment and disposal service. The Standard Municipal Agreements require the

⁷ Certain information in this section was taken from ALCOSAN's Official Statement dated October 7, 2010 which was prepared in connection with the offering of its 2010 Sewer Revenue Bonds.

participating municipalities to bring sewage, at their own expense, to specified points of connection to ALCOSAN's intercepting sewers. Such agreements cannot be terminated before the expiration of one year after the payment of all ALCOSAN bonds. The Standard Municipal Agreements also effect uniform sewage charges throughout the service area. A schedule of charges, based upon the quantity of water used in sewerred premises, is billed to every property owner or occupant, and if not paid by the customer within sixty (60) days of the due date, must be paid by the municipality within sixty (60) days after notification of delinquency to the municipality by ALCOSAN. Each municipality also is given the option of paying all the bills of its residents quarterly in a lump sum and, in such event, receives a refund from ALCOSAN for the savings in billing expense. As of December 31, 2009, five (5) municipalities allow ALCOSAN to bill users directly, and seventy-eight (78) municipalities, including the City, pay ALCOSAN the aggregate of all the bills of its users. Each municipality agrees to provide annually in its budget the funds necessary to meet its obligations under the Standard Municipal Agreement. If the entire amount due ALCOSAN under the applicable Standard Municipal Agreement for any year is not paid out of the current revenues of the municipality for such year, the balance is required to be paid out of the current revenues of the municipality for succeeding years.

The Standard Municipal Agreement was developed in the 1950s at the time of the construction of the initial interceptor system and treatment plant. ALCOSAN has also entered into an "Upper Allegheny Agreement" with certain communities for which additional expenditures for connecting facilities were required. These include the Boroughs of Verona and Blawnox and the Township of O'Hara and the Municipality of Penn Hills. In addition to the provisions in the Standard Municipal Agreement, the Upper Allegheny Agreement authorizes

ALCOSAN to impose an additional service charge to recover additional construction and operating costs related to providing services. Service agreements entered into since 1993 also impose limitations on the type and volume of flows from municipalities, exclude storm water, and impose surcharges for excessive inflow and infiltration. In addition to the Standard Municipal Agreement, industrial agreements (“Standard Industrial Agreements”) have been executed by the City and ALCOSAN with some corporations whose acceptable industrial wastes enter the system’s intercepting sewers directly instead of through a municipal sewer.

The sewage service charges authorized to be made by ALCOSAN under the Standard Municipal Agreements and the Standard Industrial Agreements are calculated to yield the amount required to pay the administrative and operating expense of ALCOSAN, and the amounts required to be paid on outstanding bonds of ALCOSAN under ALCOSAN’s trust indentures, which are the primary documents under which ALCOSAN issues its revenue bonds to pay for capital improvements.

ALCOSAN’s primary Trust Indenture contains a “rate covenant” which requires ALCOSAN to maintain, charge and collect, until all indebtedness has been retired, reasonable rates, rentals and other charges for the use of the sewer system which (after making due and reasonable allowances for contingencies and a margin of error in the estimates), together with other gross revenues, will be at least sufficient on an annual basis to pay the current administrative and operating expenses of ALCOSAN and produce in each fiscal year an amount which equals, together with any amount in ALCOSAN’s Revenue Fund at the beginning of that fiscal year in excess of one fourth of the estimated current expenses for that fiscal year, not less than 110% of the debt service requirements with respect to ALCOSAN’s bonds during that fiscal year; but in any event, shall equal, without consideration of any amount in the Revenue Fund at

the beginning of that fiscal Year, not less than 100% of the debt service requirements with respect to ALCOSAN's bonds during that fiscal year.

B. The Pittsburgh Water And Sewer Authority⁸

The PWSA is a municipal authority organized under the Act and created by the City in 1984. Under its Articles of Incorporation, the PWSA is authorized to acquire, hold, construct, finance, improve, maintain, operate, own and lease, either as lessor or lessee, projects of the following kinds and character: sewers, sewer systems or parts thereof, waterworks, water supply works, and water distribution systems, low head dams and facilities for generating surplus power.

The PWSA was established in February 1984 by the City for the purpose of assuming responsibility for the operation of the City's water supply and distribution and wastewater collection systems. The water and sewer system provides water, wastewater collection and transmission service to approximately 250,000 customers. The water and sewer system does not include wastewater treatment facilities; such facilities are the responsibility of ALCOSAN.

Pursuant to a Lease and Management agreement dated March 29, 1984 between the PWSA and the City, the PWSA leased the water and sewer system from the City and the PWSA assumed responsibility for establishing and collecting user fees and charges and for maintaining and improving the water and sewer system. The Lease and Management Agreement further provided that the water and sewer system was to be operated and maintained for the PWSA by the City, subject to the general supervision of the PWSA.

In 1995, the 1984 Lease and Management Agreement was terminated and the PWSA was granted an option to acquire the portion of the water and sewer system owned by the City

⁸ Certain information in this section was taken from the PWSA's Official Statement dated November 5, 2009 which was prepared in connection with the remarketing of certain of its 2008 Water and Sewer System Revenue Bonds.

pursuant to a Capital Lease Agreement dated as of July 15, 1995 between the PWSA and the City. The Capital Lease Agreement, which has a term of thirty (30) years, provided for payments totaling approximately \$96 million which were made to the City during the initial three (3) years of the agreement. The agreement further provided that on September 1, 2005, upon payment of One Dollar (\$1.00), the PWSA acquired title to the water and sewer system.

Concurrently with entering into the 1995 Capital Lease Agreement, the City and the PWSA entered into a Cooperation Agreement, dated as of June 15, 1995. Pursuant to the Cooperation Agreement, the City provides certain specified engineering, communications, vehicle maintenance, legal, information and financial services to the PWSA on a fee for services basis and the PWSA makes certain other payments to the City to reimburse it for costs and capital expenses incurred by the City in regard to the operation and maintenance of the sewer system.

As is the case with ALCOSAN, the PWSA has issued outstanding bonds under trust indentures which contain "rate covenants." Under these indentures the PWSA is required to maintain, charge and collect, so long as any bonds are outstanding, reasonable rates, rentals and other charges for the use of the facilities of the water and sewer system which (after making due and reasonable allowances for contingencies and a margin of error in the estimates) together with other receipts and revenues, including any unrestricted cash and investments accumulated in the PWSA's Revenue Fund at the beginning of each fiscal year, shall be at all times at least sufficient to provide annually: (a) the PWSA's current expenses; and (b) an amount equal to 120% of the debt service requirements with respect to the PWSA's indebtedness (but not less than an amount equal to 100% of the debt service requirements with respect to the PWSA's indebtedness during the then current fiscal year of the PWSA.)

C. Pros And Cons of Using An Existing Municipal Authority Like ALCOSAN or PWSA

The use of an existing municipal authority has some advantages and disadvantages, particularly when project financing is considered. On the “pro” side, both ALCOSAN and PWSA have done (and will in all likelihood continue to do) numerous public borrowings, so they are familiar to the municipal bond market and have the expertise to undertake large bond issues. In addition, they have established sources of revenue pledged for their financings and therefore have a history of providing sufficient revenues to pay their outstanding debt through rate increases. This may enable an existing municipal authority to finance the Project through the issuance of public bonds at slightly lower interest rates than a newly established municipal authority might be able to obtain. Both authorities have established histories of contracting, including specifically the maintenance and repair of trunk or interceptor sewers. Because of its treatment services, ALCOSAN has an established county-wide operation and relationships with CONNECT communities.

On the “con” side, as briefly describe above, both ALCOSAN and the PWSA have existing financing documentation that may restrict their ability to issue additional debt for the Project. The financing documents of each authority have rate covenants that have to be met prior to the issuance of additional bonds. Both ALCOSAN and the PWSA therefore have existing trust indentures which will have to be closely reviewed. Both authorities will have to identify additional sources of revenue in order to undertake new debt to support the Project.

In the case of ALCOSAN, its Trust Indenture pledges all net revenues from its “sewer system” and, as described above, there is a “rate covenant” in the documents which requires ALCOSAN to set its rates at amounts at least sufficient to pay its operating expenses, as well as principal and interest on its debt. Therefore, if additional funds are borrowed under its existing

financing documents, ALCOSAN would have to increase its rates or identify additional sources of funding to take on the additional obligations that may be required by the Project. The PWSA has a similar revenue pledge under its existing trust indentures pursuant to which it pledges certain revenues from its “water and sewer system” to repay its outstanding debt. The PWSA’s financing documents also contain a rate covenant. Created to manage only the City’s water and sewer systems, PWSA does not have the county-wide operation of ALCOSAN.

Therefore, prior to using ALCOSAN, PWSA or any other existing authority, its financing documents will have to be reviewed to establish that it will be permitted to finance the improvements to the Project. A revenue source for the repayment of this indebtedness will have to be identified. As described below, this source of payment could come from rate increases from existing users, municipal contributions or some other source.

Finally, as with any organizational structure other than the use of ICA’s, the CONNECT communities will not have direct control over selection of projects, contracting or rates.

D. CONNECT Representation on ALCOSAN or PWSA Boards

Neither ALCOSAN nor PWSA has any representation on its board from the CONNECT communities, other than the City of Pittsburgh. In order to provide CONNECT communities with some control over projects, contracting and the rates to be charged, this issue would have to be addressed.

Fortunately, the Act provides flexibility in providing broader board representation. Pursuant to the Act, each member of an authority board must be a taxpayer in (this probably refers to real estate taxes, but it is not defined in the statute), maintain a business in (physical location), or be a citizen (have a residence) of either the municipality by which he or she is appointed, or a municipality in which one or more of the projects of the authority extends, or is to extend, or to which one or more projects have been, or is to be, leased. The Act requires that

there be no fewer than five members of the board, but does not specify a maximum number of board members.

Under the Act, the addition of board members to an existing authority like ALCOSAN or PWSA could be accomplished by one of two methods.

First, the articles of incorporation of either authority could be amended to provide that certain municipalities specified in the amendments would actually join the existing incorporating municipalities as members of the authority. Such a “joinder” would require the consent of the authority and the joining municipalities. Also, in the case of ALCOSAN, the County and the City would have to approve the joinder. In the case of the PWSA, the City would have to approve. As actual members of the authority, each member is entitled to appoint at least one representative to the board of the authority. Members of an authority are not entitled to have any particular number of board representatives as long as they have at least one. The articles of incorporation would have to be amended to specify how many appointments each municipality would have.

Second, board members could be added by amending the existing articles of incorporation to provide that one or more “outside” participating municipalities would have representation on the board without having any such participating municipalities actually formally become members of the authority. However, it is important to note that the actual appointments would be made by the incorporating municipalities of the authority and not the participating (CONNECT) municipalities, which could only recommend whom to appoint. It would be possible to set forth in the articles (or possibly in an intergovernmental municipal agreement) that either certain named CONNECT municipalities would be able to recommend a board member to the authority or it could be done on a rotating basis among CONNECT

municipalities with the actual procedure to be set forth in the articles or in an intergovernmental municipal agreement.

III. Creation of a New Joint Municipal Authority

In lieu of using an existing municipal authority like ALCOSAN or PWSA, one or more new municipal authorities could be created under the Act. There would be a great deal of flexibility in determining which municipalities would join (or be serviced by) a new municipal authority. For instance, new authorities could be created on a county-wide level, like ALCOSAN, or an authority could be created to maintain trunk sewers in a particular region. For example, authorities could maintain the trunk sewers in one or more of the seven “planning basins” used by ALCOSAN in preparing its Wet Weather Plan under its Consent Decree with EPA, the Department of Justice, the DEP and County Health Department or authorities could maintain the trunk sewers shared by municipalities which comprise active Councils of Governments.

It should be noted that once a municipal authority is created, it becomes an independent municipal body. While the incorporating municipalities have the power to appoint members to the board of the new authority, the board members cannot be removed by the appointing bodies “at will.” Rather, prior to the expiration of their appointment terms, the members of the board of a municipal authority can only be removed by a court of common pleas “for cause”.

A new municipal authority must create its own bank accounts and its funds are not commingled with those of any municipality. It must retain a consulting engineer, accountant and solicitor (although these may be the same parties that represent one of the municipalities or such services can be performed on a contract basis with a municipality). Typically, the funds that are set up by a municipal authority are:

- (a) a Revenue Fund into which all revenues that it receives are deposited upon receipt;
- (b) an Operations and Expense Fund into which moneys are transferred from the Revenue Fund to pay operating expenses in accordance with the authority's operating budget;
- (c) a Debt Service Fund into which moneys are transferred from the Revenue Fund to pay debt service on indebtedness; and
- (d) a Capital Reserve Fund into which moneys are transferred to pay for future capital expenditures (or for emergency repairs).

There are various advantages and disadvantages in establishing one or more new municipal authorities. On the "pro" side, obviously everything is started with a "clean slate" and there are no existing financing documents (or existing obligations) with which to be concerned. Also, the responsibilities of any new municipal authority could be "tailored" better to the Project, and depending on the scope and members of the new authority, the local representatives may have more say in the governance and setting of rates by the new authority.

On the "con" side, if the Project improvements are to be financed with publicly issued debt, the new authority would not have a financing history or financing experience. A set of financing documents would have to be created and a new revenue stream would have to be identified to repay the debt. This lack of any history may make it a bit more expensive to issue debt. In addition, as with any new entity, there are start-up costs and ongoing costs that will have to be funded

Ownership of The Trunk Sewers Under Municipal Authority Operation

Since each trunk sewer is located within, and serves, several municipalities, the "ownership" of the sewers is not well defined. If an existing or new municipal authority is used, ownership of the trunk lines should be transferred to the authority. This could be done by

“quitclaim” deed by every party who has had some type of responsibility for the particular trunk line. Any permits relating to the trunk lines must also be transferred to the authority. The consideration for such a transfer should be modest since the trunk lines represent a liability to each municipality, and they do not generate municipal revenue apart from each municipality’s collector sewer system.

IV. Formation of Environmental Improvement Compacts (EIC)

These intergovernmental organizations are authorized pursuant to state statute, 53 P.S. §2501 *et seq.*. An EIC is empowered to carry out municipal functions involving two or more municipalities. They must be created by referendum in the participating municipalities. The board is elected directly by the voters in the participating municipalities. The EIC’s powers closely resemble those of municipalities, including contracting, borrowing money, real property taxation up to two mills and eminent domain (with county approval).

The advantages of EIC’s are limited. An EIC is broadly empowered to carry out municipal functions involving two or more municipalities. By statute, they have powers closely resembling those of municipalities and municipal authorities. However, the statutory procedures for formation of EIC’s and election of board members are extremely cumbersome. EIC’s are created by referendum, not by action of participating governing bodies. The EIC board is directly elected by the citizens of participating municipalities rather than being appointed by the municipal governing bodies. EIC powers are similar to those of more common municipal authorities. There is no record of the formation of an EIC anywhere in Pennsylvania.

Financing Trunk Sewer Repair, Maintenance and Capital Improvements

No matter which of the above management options is used, the repair, maintenance and capital improvements for the trunk sewers must be funded.

If ICA's are used, then the funding methods will probably not change. Individual municipalities will probably continue to fund their share of repair and maintenance expenditures on a "pay as you go" basis using current municipal sewage fees charged for the use of their collector systems or appropriations from their general funds. More expensive capital improvements can be funded by bond issues or bank loans by the individual municipalities sharing a trunk sewer. The bonds or bank notes would probably be issued as general obligations of the issuing municipality and therefore backed by its full faith, credit and taxing power.

If some form of municipal authority is used, then a new revenue stream will have to be created to fund both routine maintenance and repair and capital improvements to the trunk sewer(s). Again, maintenance and repair expenses can probably be funded on a "pay as you go" basis by charging residents on a monthly basis, or municipalities in a lump sum, a fee for that service. For more expensive capital improvements, that same fee revenue stream could be pledged to support a bond issue or bank loan. These fees could be negotiated and imposed pursuant to a cooperation agreement between the authority and each participating municipality⁹.

⁹ Whether or not an existing municipal authority or a new municipal authority is used, the Act requires that the rates charged to customers be "reasonable" and "uniform." However, the uniformity of rates does not mean that every customer of the authority has to be charged the same rate. The authority is entitled to create different "classes" of users and to charge each class a different rate. For instance, a different rate could be charged to users within each individual "planning basin" or some other smaller identifiable unit, depending on the capital costs required to repair that individual unit. In addition, the authority could create such internal funds and accounts as it may deem necessary in order to track revenues and expenses for specific units of the system. For instance, the tracking could be done on a "planning basin" level or on an individual trunk sewer level. For purposes of transparency, the

The use of an existing authority like ALCOSAN has the advantage that these fee billing mechanisms are already in place with the CONNECT communities. ALCOSAN could simply increase existing fees or add a new fee to the bills it currently sends for its services pursuant to the existing Standard Municipal Agreements which could be amended or supplemented, if necessary, to accommodate the new fee. Since participating municipalities would be shedding the responsibility to fund trunk sewer maintenance, repair and capital improvements, perhaps their fees could be reduced in an amount equal to the new authority fee, resulting in a “wash” to municipal residents. As discussed above, any revenue stream established to support any authority’s bond or bank financing would have to be sufficient to meet the authority’s rate covenants.

Finally, in the instance of a newly created authority (or an existing authority pledging new revenues), the buyer of any debt (a bank lender or public debt holder) may not want to rely solely on the revenue stream for the repayment of the debt since there is a lack of historical data regarding the revenue stream. There are a couple of options to “supplement” the security for the borrowing.

First, the participating municipalities could agree to guarantee a proportionate share of the borrowing. This would mean pledging their full faith credit and taxing power to support a proportionate share of the debt. However, this becomes complicated (both in the sale of the debt and in the future) in the event that one municipality fails to perform under its guaranty. This

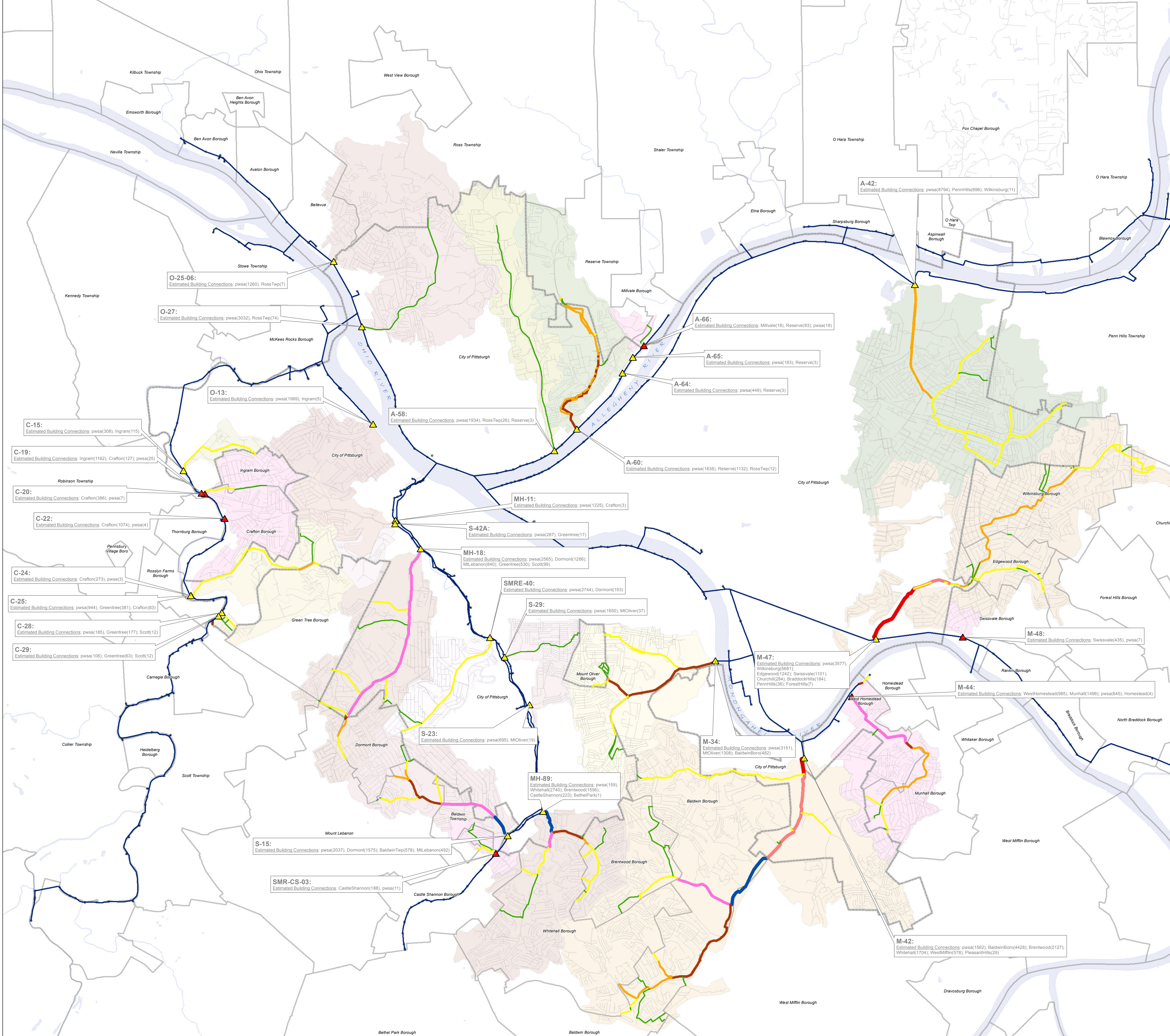
communities may want the authority to do this in order for them to be comfortable that the revenues and expenses for their portion of the lines are reasonably allocated.

could lead to a default on the indebtedness for all of the participating municipalities up to the guaranteed portion of their debt¹⁰.

Second, municipal bond insurance could be obtained to secure the debt. In this case, the authority pays (typically from the proceeds of the borrowing) an up-front premium payment in exchange for a highly rated municipal bond insurer to guarantee the payment of the authority's borrowing in the event that the authority fails to make timely payments. Today there is only one bond insurer offering this product. Because of the lack of an historical revenue stream, that bond insurer may also want municipal guarantees to issue its bond insurance policy. At the time the debt is issued an evaluation is made by the issuing authority to determine whether or not the purchase of the municipal bond insurance sufficiently lowers the interest rate on the bonds such that it is cost effective to acquire the bond insurance policy.

¹⁰ In providing a guaranty supported by a municipality's full faith, credit and taxing power, the municipality would have to comply with the applicable provisions of the Pennsylvania Local Government Unit Debt Act, 53 Pa.C.S. §§ 8001 et seq., which establishes limits on the amount of debt a municipality may have outstanding. However, in certain cases it is possible to exclude debt (including a guaranty) which is otherwise supported by other revenues, such as the revenues that would be received by the authority from customers, from the municipality's debt limit.

PWSA Multi-Municipal Conveyance Sewers



Legend

- Alcosan POCs
- Alcosan Interceptor
- Multi-Municipal POCs with PWSA Flow
 - PWSA Direct Connect
 - PWSA Connect via Others
- Multi-Municipal Conveyance
 - Greater than 25 Upstream Connections
 - 25 - 99 Foreign Building Connections Above*
 - 100 - 499 Foreign Building Connections Above*
 - 500 - 999 Foreign Building Connections Above*
 - 1,000 - 1,999 Foreign Building Connections Above*
 - 2,000 - 3,999 Foreign Building Connections Above*
 - 4,000 - 5,999 Foreign Building Connections Above*
 - 6,000 - 7,999 Foreign Building Connections Above*
 - 8,000 - 9,949 Foreign Building Connections Above*
- Municipal Boundaries
 - City of Pittsburgh
 - Other Communities

* Foreign Building Connections are buildings upstream contributing flow to pipes not owned by PWSA

Notes:
 - All sewer data provided by SRWW from the OneOverall dataset v4.21.
 - Municipal Boundaries and Rivers provided by Allegheny County
 - Basin delineations provided by Alcosan

March 2011

_____ TRUNK SEWER
INTERGOVERNMENTAL COOPERATION AGREEMENT

THIS _____ TRUNK SEWER INTERGOVERNMENTAL COOPERATION AGREEMENT, dated and effective as of _____, 20__, is entered into by and among the (Borough, Township, Municipality) of _____ and the (Borough, Township, Municipality) of _____ and (PWSA, other municipalities).

WITNESSETH:

WHEREAS, (identify parties, i.e., the Borough of Brentwood, Allegheny County, Pennsylvania, is a political subdivision organized and existing under the laws of the Commonwealth of Pennsylvania (the “Borough” or “Brentwood”); and

WHEREAS, (name parties here) each uses a common sanitary sewer trunk line which serves all or a portion of each (borough, township) and is depicted as the highlighted sections on the map set forth on Exhibit “A,” attached hereto (the “_____ Sewer”); and

WHEREAS, (if there is an existing agreement between these parties, describe the terms of the agreement here); and

WHEREAS, (again, if there is an existing agreement), the parties to this Agreement wish to modify and amend the _____(year) Agreement so as to assure equitable apportionment of maintenance, repair and capital improvement costs for the _____ Sewer; and [alternate: terminate the (year) agreement and replace it with this _____ Agreement.]

(or, if no prior agreement) **WHEREAS**, it is the desire of the (name parties) to enter into this Agreement and adopt the same by ordinance pursuant to the provisions of the Intergovernmental Cooperation Law, Act of July 12, 1972, No. 180, 53 P.S. §481 et seq., in order to provide for the equitable apportionment of maintenance, repair and capital improvement costs for the _____ Sewer;

WHEREAS, the parties to this Agreement agree that the continued operation, maintenance and repair of the _____ Sewer shall benefit each of them and, therefore, desire to set forth their respective obligations for the maintenance and repair and capital improvements of the _____ Sewer in this Agreement;

NOW THEREFORE, in consideration of the foregoing and of the mutual promises herein contained, and of other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto intending to be legally bound, hereby agree as follows:

1. Recitals. The foregoing recitals are hereby incorporated into this Agreement as if set forth at length.

2. Maintenance and Repair.

(a) The parties shall prepare annually a routine maintenance and repair program for the _____ Sewer, which will include, but is not limited to, periodic inspections, cleaning, manhole repair and cover adjustment, sewer repair and such other activities as may be set forth in the maintenance and repair program (hereinafter, "Maintenance and Repair").

(b) Each party (or identify party) shall maintain and repair the portion of the _____ Sewer located in its respective community in a safe and effective manner and in accordance with all applicable laws, regulations and permits.

(c) Each party shall prepare and submit to the other parties to this Agreement, on an annual basis, on or before the first day of October, an estimate of the cost of Maintenance and Repair of its portion of the _____ Sewer during the next calendar year, to enable the parties' respective officials to provide for such costs in their annual budgets. If the total estimated cost of all Maintenance and Repair of all portions of the _____ Sewer for any calendar year exceeds \$_____, then within thirty (30) days of the receipt of the estimated costs of Maintenance and Repair, the parties shall meet and consult regarding the estimated costs of Maintenance and Repair.

(d) Each party shall be responsible for its percentage share, determined as set forth in section ____, below (“Equitable Share”), of the cost of any and all necessary Maintenance and Repair of any portions of the _____ Sewer.

(e) Each party shall pay its Equitable Share of Maintenance and Repair costs to any party submitting an estimate for its portion of the _____ Sewer in two installments, on or before March 31 and June 30, of the year to which the estimated costs of Maintenance and Repair pertains, or on such other schedule as the parties may approve and adopt.

(f) Each party shall provide to all parties to this Agreement, no later than March 1 of each year, a statement of the actual costs incurred in the Maintenance and Repair to its portion of the _____ Sewer during the previous calendar year. If the estimated costs exceed the actual costs for any calendar year, and the parties have paid their Equitable Share as and when due, then the parties shall receive a credit against their Equitable Share of Maintenance and Repair costs for the succeeding year. If the actual costs exceed the estimated costs for any year, then the parties shall each pay their Equitable Share of the difference between the actual costs and the estimated costs to the party conducting the repairs within thirty (30) days of the receipt of the annual statement.

3. Capital Improvements. Each party shall be responsible for its Equitable Share of the cost of any and all necessary capital improvements to the _____ Sewer (“Capital Improvements”).

(a) Capital Improvements shall include, but are not limited to, work necessary to do the following: (i) reconstruct, relocate and/or extend the life of the _____ Sewer; and (ii) comply with any requirements imposed by applicable statutes, regulations, and/or the orders of any regulatory agencies or court of law.

(b) On or before the first day of October, the parties shall prepare annually a Five Year Capital Improvement Plan (CIP), including an estimate of the cost of Capital Improvements to the _____ Sewer during the next calendar year, to enable the parties' respective officials to provide for such capital costs in their annual budgets. As part of the CIP, the parties shall select one party (the "Responsible Party") to undertake the Capital Improvements during the next calendar year and to receive each party's Equitable Share of Capital Improvements for that year.

(c) Each party shall pay its Equitable Share of Capital Improvement costs to the Responsible Party on or before March 31 of the year to which the estimated costs of Capital Improvement pertains, or by such other date as the parties may approve and adopt.

(d) The Responsible Party shall provide to all other parties to this Agreement, no later than March 1 of each year, a statement of the actual costs incurred in the Capital Improvements to the _____ Sewer during the previous calendar year. If the estimated costs exceed the actual costs for any calendar year, and the parties have paid their Equitable Share as and when due, then the parties shall receive a credit against their Equitable Share of Capital Improvement costs for the succeeding year. If the actual costs exceed the estimated costs for any year, then the parties shall each pay their Equitable Share of the difference between the actual

costs and the estimated costs to the Responsible Party within thirty (30) days of the receipt of the annual statement.

4. Emergency Repairs. Each party shall be responsible for its Equitable Share of the costs of any and all necessary emergency repairs to the _____ Sewer (“Emergency Repairs”).

(a) Emergency Repairs shall include, but are not limited to, work necessary to do the following: (i) respond to sewer line breaks and/or backups within the _____ Sewer; (ii) respond to conditions within the _____ Sewer causing sewer overflows; (iii) temporarily bypass conditions in the _____ Sewer. The party within whose jurisdiction the conditions in the _____ Sewer requiring Emergency Repairs are located is responsible to coordinate and effectuate the Emergency Repairs. The other parties to this Agreement shall be notified of an Emergency Repair within fourteen (14) days of the completion of the Emergency Repair.

(b) Within thirty (30) days of the completion of an Emergency Repair, the party(ies) incurring costs for the Emergency Repair shall provide each of the other parties with an invoice for that party’s Equitable Share of such costs and supporting documentation regarding the cost of Emergency Repairs. Payment of each party’s Equitable Share of the cost of Emergency Repairs will be due within thirty (30) days of receipt of the invoice.

5. Equitable Share.

(a) The following components, weighted as set forth on Exhibit B hereto, shall be used to determine the parties' Equitable Share of Repair and Maintenance, Capital Improvements and Emergency Repairs: (1) dry weather flow; (ii) wet weather flow; (iii) service population (in equivalent dwelling units or EDU's); (iv) inch-miles of collector sewers; and (v) land area of relevant trunk sewer shed. See Exhibit B for the specific weighting of these factors and the calculation of the Equitable Shares adopted by the parties.

(b) Subject to the provisions of section 6 below and pursuant to Exhibit B, during the term of this Agreement the Equitable Shares of the parties shall be as follows:

Name of Party

Equitable Share (%)

6. Review and Adjustment of Equitable Shares.

(a) The parties will undertake a review of the Equitable Shares no earlier than the fifth year following the execution of this Agreement and no later than the tenth year following the execution of this Agreement (the “Share Review”). Thereafter, the parties will undertake a Share Review every successive ten year period following the initial Share Review or on such other schedule as the parties may approve and adopt. The Share Review will consider the following factors: (i) change in land area of the trunk sewer shed; (ii) change in service population; (iii) change in dry weather flow; (iv) change in wet weather flow; (v) change in inches of collector sewers; and (vi) any other criteria determined by the parties to be relevant in determining the Equitable Share. This Agreement shall be amended to reflect any such changes in the parties’ Equitable Shares.

(b) If the parties cannot agree to an adjustment of the Equitable Shares, then a party or parties may submit the determination of Equitable Shares to arbitration pursuant to Section 7.

(c) The parties may unanimously agree in writing to forgo a Share Review pursuant to section 6(a) and to continue to use the Equitable Shares then in effect.

7. Arbitration of Equitable Shares. Pursuant to Section 6(b), if a party or parties submits the determination of the Equitable Shares to arbitration, then the dispute will be settled by arbitration by the American Arbitration Association (“AAA”) in accordance with the current rules in effect governing arbitration of such matters. The arbitration shall be conducted in Allegheny County, Pennsylvania, by three (3) independent and impartial arbitrators, one of

which shall be selected by the party or parties submitting the matter to arbitration, one of which shall be selected by the other party or parties, and the third arbitrator to be selected by the other two (2) arbitrators so selected. Notice of demand of arbitration shall be filed in writing with the other party or parties and with the AAA. The award rendered by the arbitrators shall be in writing. The award rendered by the arbitrators shall be final and a judgment may be entered upon it according to applicable law in any court having jurisdiction. The arbitrators shall allocate equally among the parties the costs and expenses of the arbitration, including compensation of the arbitrators, the AAA fees, and the costs for any stenographer or court reporter employed by them. Each party shall be responsible for its own legal fees. If at any time during the pendency of this Agreement, arbitration through AAA is no longer available or feasible, the parties shall confer in good faith to agree upon an alternate provider of alternative dispute resolution services and the rules pertaining thereto.

8. Access. The parties to this Agreement, and their duly authorized agents, shall have the license and right at any time to access or enter the _____ Sewer for the purpose of assessing or evaluating any Maintenance and Repair, Emergency Repair and/or Capital Improvement work performed or being performed.

9. Default. “Event of Default” means any failure by any party to this Agreement to perform any covenant, condition, or agreement on its part to be performed if the failure or breach continues for a period of thirty (30) days after receiving written notice of the failure to perform from another party or parties. When an Event of Default occurs and continues for ten (10) days, the other party or parties may take any action at law or in equity that may

appear necessary or desirable to enforce the performance of any obligation, agreement, or covenant under this Agreement.

10. Term. The term of this Agreement (hereinafter “Term”) shall be _____ (__) years from the date of the Agreement. The Agreement shall be renewed automatically at the end of the Term for an additional term of _____ years (the “Additional Term”), provided, however, that the Agreement will not be automatically renewed if any party provides notice to the other parties one year prior to the end of the Term, that it wishes to terminate the Agreement.

11. Abandonment by All Parties.

(a) If the parties unanimously agree to abandon and not replace the _____ Sewer, then the Agreement shall terminate upon the completion of all tasks required to abandon the _____ Sewer (“Abandonment Activities”).

(b) The parties shall perform the Abandonment Activities in a safe and effective manner and in accordance with all applicable laws and regulations.

(c) Each party shall be responsible for its Equitable Share of the cost of any and all Abandonment Activities.

(d) If the parties unanimously agree to abandon and replace the _____ Sewer, or part thereof, then the Agreement shall not automatically terminate upon the completion of the Abandonment Activities, but shall remain in force and applicable to the facilities and/or sewer line that replaces the _____ Sewer and/or to any remaining, operable portion of the _____ Sewer.

12. Abandonment by a Party.

(a) If a party chooses to abandon all its interconnection(s) to the _____ Sewer so that flow from its municipal sewer system will not flow through the _____ Sewer (the “Disconnecting Party”), the Disconnecting Party’s participation in this Agreement shall terminate upon the completion of all tasks required to disconnect its municipal sewer system from the _____ Sewer and to prevent flow from its municipal sewer system from entering the _____ Sewer (the “Disconnection Tasks”).

(b) The Disconnecting Party shall perform the Disconnecting Tasks in a safe and effective manner and in accordance with all applicable laws and regulations.

(c) The Disconnecting Party shall be solely responsible for any and all costs associated with the Disconnecting Tasks. The Disconnecting Party shall also be responsible for its Equitable Share of the costs for Maintenance and Repair, Capital Improvements and Emergency Repairs incurred prior to the completion of the Disconnection Tasks.

(d) The Disconnecting Party shall provide notice to the other parties to this Agreement no later than one (1) year prior to the initiation of the Disconnection Tasks.

(e) Within sixty (60) days of receipt of the notice required at paragraph 12(d) above, the remaining parties to this Agreement shall meet and revise their Equitable Shares pursuant to the criteria set forth at paragraph 5.

13. Notices. Any notice, request, demand, approval or consent given or required to be given under this Agreement shall, except as otherwise expressly provided herein, be in writing and shall be deemed to have been given when mailed by United States registered or

certified mail, postage prepaid, to the other parties at the addresses stated below or at the last address provided in writing by the party to be notified as hereinafter specified:

[list parties and addresses]

14. Governing Law. This Agreement shall be subject to and governed by the laws of the Commonwealth of Pennsylvania, without reference to its conflict-of-laws principles.

15. Amendment. This Agreement may not be amended except by agreement of the parties in writing.

16. Inurement. This Agreement shall be binding upon and inure to the benefit of the parties and their successors and assigns.

17. Validity/Enforceability. If any section of this Agreement or any part of any section of this Agreement shall be held unlawful, invalid, or unenforceable, that section or part shall be deemed deleted and without prejudice to the lawfulness, validity, and enforceability of the remaining sections and parts of this Agreement.

18. Headings/Captions. The section headings or captions in this Agreement are for convenience and reference only and in no way define or limit the scope and content of this Agreement or in any way affect its provisions.

19. Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed an original, and all such counterparts together constitute one and the same instrument.

IN WITNESS WHEREOF, the parties have executed this Agreement pursuant,
respectively to

[list, by party, all ordinances or resolutions authorizing execution of the Agreement]

[Signatures]

Exhibit B

Calculation of Equitable Shares

Municipality	Service Population (EDU's)	% of Service Population	Land Area of Sewershed	% of Land Area Sewershed	Inch-Miles of Collector Sewers	% of Inch-Miles of Collector Sewers	Avg. Dry Weather Flow (mgd)	% of Dry Weather Flow	Avg. Wet Weather Flow (mgd)	% of Wet Weather Flow

Component	Weighted Percentage
Service Population	_____ %
Land Area	_____ %
Inch-Miles of Collector Sewers	_____ %
Avg. Dry Weather Flow	_____ %
Avg. Wet Weather Flow	_____ %

Municipality	Equitable Share
	_____ %
	_____ %
	_____ %

