

WASHINGTON COUNTY
SEWAGE PROVIDER
INVENTORY &
ASSESSMENT

DECEMBER 31, 2014

A guide for the
development of
wastewater facilities
and projects in
Washington County, PA





CONTENTS

- 1. INTRODUCTION/METHODOLOGY**
 - Acknowledgements
 - Definitions

- 2. BACKGROUND**
 - Act 537 Planning "Historic" 1
 - 1972 Sewage Plan Objectives..... 1

- 3. EXISTING CONDITIONS**
 - Targeted Areas for Investment 2
 - Long Term Control Plans..... 2
 - Completed Project and Funding Since 2005
 - County Totals by Project Type 3
 - Capital Project Cost per EDU..... 3
 - Table I - "Debt to Grant Ratio" 4
 - System Inventory
 - ★ Conveyance by Ownership 5
 - Table II - System Inventory 7
 - Financial Inventory 5
 - Table III - Financial Inventory 8,9

- 4. PLANNED PROJECTS**
 - Wastewater Improvement Plan 10
 - ★ Capital
 - ★ Capital Investment
 - Table IV - WWIP Capital Projects 11
 - Table IVa WWIP Capital Maintenance Projects 12

- 5. CONCLUSIONS AND RECOMMENDATIONS..... 13,14**

- 6. SEWAGE/MUNICIPAL AUTHORITY SERVICE AREAS
AND PROPOSED EXPANSION IN WASHINGTON COUNTY MAP**

- 7. PROJECT INVENTORY SHEETS**



INTRODUCTION/METHODOLOGY

The Washington County Sewage Provider Inventory Study was created to better prepare for short and long term plans of the authority and municipal sewage providers in the county. It was developed in a Mixed-Method approach: combining techniques from quantitative and qualitative research to create a unique methodology that is tailored to specific sewage infrastructure need in the county. The plan was developed by working one-on-one with representatives of the providers, review of relevant studies, basic survey for each provider and interview with local, state and federal agencies which impact advancement of sewage needs in the county.

The study details the intricacies of each provider system and proposed projects as well as the interrelationship between the providers. Since 2005, the 45 active providers have completed over \$188,000,000 worth of project. The sewage providers are in the process of developing the planning and engineering for well over \$150,000,000 of construction projects over the next 5-8 years. The Wastewater Improvement Plan (WWIP) developed in the study is a five to eight-year capital needs assessment which can be used to help steer local, state and federal funding sources to future projects.

The Washington County Commissioners have invested considerable financial and planning resources to assist the providers in advancing sewage projects. This funding complimented the state and federal government efforts to improve infrastructure over the last 10 years. The combined efforts made it possible to advance the projects at an affordable customer rate over the aforementioned time period. These efforts provided sewage to over 7,000 new customers.

There are 10-15 high priority capital projects remaining in the county addressing high density village areas (100-300 residents) that primarily have malfunctioning or no septic systems. Two-thirds (2/3) of the identified projects are to repair or replace older deteriorating systems. It is apparent that this will be an on-going issue as many of the systems are well over 50 years old and experiencing various wet weather issues. Advancement of many of the projects will be contingent on availability of local, state and federal grant or created financing.

This plan will be incorporated into the County Comprehensive Plan as a working document updated as projects advance. It is our hope that it not only projects the needs of our sewage providers but can be used to exemplify the funding needs across the state.

ACKNOWLEDGEMENT



The Washington County Sewage Provider Inventory and Development Plan was prepared by the Washington County Planning Commission under the auspices of the Washington County Board of Commissioners. The County Commissioners would like to thank all those who participated in the development of the Plan. The Plan was a combined effort of the County, State and Federal agencies, sewage providers and staff and participating wastewater engineering firms.

WASHINGTON COUNTY BOARD OF COMMISSIONERS

Larry Maggi, Chairman
Diana L. Irey Vaughan, Vice Chairman
Harlan G. Shober, Jr.

WASHINGTON COUNTY PLANNING COMMISSION

Lisa L. Cessna, Executive Director
Jeffrey W. Leithauser, Development Manager
Caroline Sinchar, Planning Administrator
Holly Dames, Grants Administrator
Jason Theakston, Land Use Planner
Vince Ley, Project Engineer
Sherri Taddeo, Graphic Supervisor
Melanie Thomas-Finney, Graphic Arts Tech IV
J. Denise Skoczylas, Clerical Supervisor

PLANNING PARTNERS

DEP

Emily Shade, Sewage Planning Specialist II
DEP Clean Water
California District Office

PENNVEST

Larry Gasparato, Project Specialist Region II

RUS

Todd Colley, Area Specialist
USDA Rural Utility Service
US Dept. of Agriculture

ACKNOWLEDGEMENT



Washington County Sewage Providers with Service Communities

Multi County (+)

Portions of (P)

20. Midway Sewage Authority (MSA)
 - Midway
 - Cecil, Mt. Pleasant, Robinson, Smith (P)
21. Mon Valley Sewage Authority (MVSA) (+)
 - Donora
 - Monessen
 - Carroll (P)
22. Mount Pleasant Township Township Municipal Authority (MPTMA)
 - Mt. Pleasant
 - Cecil (P)
23. Municipal Authority of the City of Monongahela (MACM)
 - Monongahela City
 - Carroll (P)
24. New Eagle Municipal Sewage Authority (NEMSA)
25. North Strabane Township Municipal Authority (NSTMA)
26. Peters Creek Sanitary Authority (PCSA)
 - Finleyville
 - Nottingham
 - Peters
 - Union
27. Peters Township Sanitary Authority (PTSA)
 - Peters
28. Pigeon Creek Sanitary Authority (PCSA)
 - Bentleyville
 - Cokeburg
 - Ellsworth
 - Fallowfield, North Bethlehem, Somerset (P)
29. South Franklin Township
30. South Strabane Township Municipal Authority
31. Union Township
32. Vestaburg-New Hill Joint Authority (VNHJA)
 - East Bethlehem, Centerville (P)
33. Washington East Washington Joint Authority (WEWJA)
 - Washington City
 - East Washington
 - South Strabane, Canton, North Franklin, Chartiers, (P)
34. West Pike Run Township Municipal Authority (WPRTMA)



DEFINITIONS

**** in context of the document ****

CAPITAL MAINTENANCE PROJECTS - A complex, large-scale project involving planning, permitting and construction. Directly related to the rehabilitation or major maintenance of existing wastewater facilities including wet-weather related projects. The project funding will be a non-recurring expenditure.

CAPITAL PROJECT - A complex, large-scale project involving planning, permitting and construction. Directly related to Act 537 Sewage Facility Planning, primarily related to the extension of an existing system or new sewage facilities, to serve unsewered areas. The project funding will be a non-recurring expenditure.

COMBINED SEWER OVERFLOW (CSO) - An intermittent overflow, or other untreated discharge from a municipal combined sewer system (including domestic, industrial and commercial wastewater and Stormwater) which results from a flow in excess of the dry weather carrying capacity of the system.

<http://www.pa.code.com/secure/data/025/chapter94/s94.1.html>

CORRECTIVE ACTION PLAN (CAP) - A plan and schedule developed by the permittee of a sewerage facility which has an existing or projected overload. A CAP establishes actions needed and a schedule to reduce the overload and provide needed capacity.

<http://www.pacode.com/secure/data/025/chapter94/S94.1.html>

EQUIVALENT DWELLING UNITS (EDU's) - are units of measure that standardize all land use categories (housing, retail, office, food service, etc.) to the level of wastewater demand created by one single-family dwelling unit.

LONG TERM CONTROL PLAN (LTCP) - Planning document primarily developed to eliminate or limit Combined Sewage Overflows. Federally mandated through the Clean Water Act.

SANITARY PROVIDER - Typically a Municipal Authority or Municipality.

SANITARY SEWER OVERFLOW (SSO) - An intermittent overflow of wastewater, or other untreated discharge from a separate sanitary sewer system (which is not a combined sewer system), which results from a flow in excess of the carrying capacity of the system or from some other case prior to reaching the headworks of the plant.

<http://www.pa.code.com/secure/data/025/chapter94/s94.1.html>



DEFINITIONS *(continued)*

**** in context of the document ****

SEWAGE FACILITY PLAN (SFP) - "Official Plan" means a comprehensive plan for the provision of adequate sewage systems adopted by a municipality or municipalities possessing authority or jurisdiction over the provision of such systems and submitted to and approved by the State Department of Environmental Resources as provided herein.

<http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-52064/Act%20537%20of%201965.pdf>

WASTEWATER IMPROVEMENT PLAN (WWIP) - Active list of wastewater projects advanced through planning which are planned to be permitted and constructed in the next (5) years. Scheduled years will be contingent of serving financing and grant. The WWIP is broken into two (2) categories.

WWIP - Capital

WWIP - Capital Maintenance

WASTEWATER/SEWAGE PLANNING - Planning for a wastewater project based on State and/or Federal regulations and requirements.

Reference Types

Act 537 Official Sewage Facilities Planning (SFP)

Long Term Control Plan (LTCP)

Corrective Action Plan (CAP)

ADDITIONAL ACRONYMS:

WWTP - WASTEWATER TREATMENT PLANT

STP - SEWAGE TREATMENT PLAN

I/I - INFILTRATION AND INFLOW

O/M - OPERATION AND MAINTENANCE

WCSP INVENTORY SHEET BACKGROUND

2014

BACKGROUND

Act 537 Planning

In 1972, Washington County adopted a county-wide Act 537 Sewage Facilities Plan. The Plan developed policies and recommendations to provide a sound basis for sewage facility planning in the County. The Plan developed a proposal for the creation or improvement of 35 municipal or multi-municipal sewerage systems throughout the County, concentrating on urbanized and potential growth areas.

The objectives of the 1972 plan are still relevant today. The majority of short- and long-term plans of the current sewage providers laid out in this document are consistent with the 1972 Plan.

1972 Sewage Plan Objectives

The objectives of the Washington County Sewage Facilities Plan are:

- to protect the streams in the County from pollution from residential, commercial and industrial sources.
- to alleviate and prevent public health problems that could result from inadequate or non-existent sewerage systems.
- to plan and develop the lowest cost and most efficient sewerage systems regardless of municipal boundaries,
- to utilize and expand existing sewerage systems where possible.
- to insure that the construction of sewerage systems is coordinated with the development of water lines and water systems,
- to promote the economic use of land and financial resources by planning new development in areas which are closest to existing sewerage systems,
- to foster cooperation between local municipalities in the development of integrated sewerage systems, and
- to coordinate the plans of the municipalities with those of the County, the Region and the Commonwealth.

The 1972 Plan was developed, in part, to provide guidance to Washington County municipalities for future development of their individual sewage facilities plans. The responsibility for SFP development falls on the municipalities in cooperation with the provider/authorities. The 2005 Washington County Comprehensive Plan, Chapter 5, Public Infrastructure Section contains a brief overview and update of the 35 sewerage districts developed in the 1972 plan.

From 1972-2005 there were approximately 38 municipal SFP's completed many of which have been implemented or are currently advancing. Since the County Comprehensive Plan was adopted, there have been an additional 27+ municipal SFP's developed for various service areas throughout our municipalities. Prior to 2005, the majority of the SFPs were developed as the planning tool to extend or provide sewage systems to higher density residential areas (300-700 residences) which previously did not have public sewers.

WCSP INVENTORY SHEET EXISTING CONDITIONS

2014

EXISTING CONDITIONS

Targeted Areas for Investment

The majority of the remaining unsewered areas are designated “Village Development-Targeted Areas for Investment (VD-TAI) or extensions into higher density Transition Areas (TA-TAI) as identified in the County Comprehensive Plan. These areas primarily relied on malfunctioning on-lot systems or a combination of on-lot and wildcat systems which typically provide no sewage treatment.

The remaining unsewered VD-TAI typically have limiting factors such as topography, distance to existing conveyance system, small number of EDU/residents, payer-to-debt ratio, etc., which make these projects very expensive and difficult to advance. Despite these obstacles, many of these projects are advancing through planning and will need to secure substantial grants (60-70%) to make them affordable to the residents and businesses in the remaining unsewered VD- or TA-TAI’s.

There are approximately 11 TAI locations remaining in the County which do not have public sewage or treatment plants. They are:

VD-TAI	Municipality	EDU
Lawrence	Cecil Township	336
Lagonda (Route 18)	South Franklin Township	314
Hickory	Mt. Pleasant Township	290
Hendersonville	Cecil Township	190
Scenery Hill*	North Bethlehem Township	137
VanVoorhis/Griffith Manor	Fallowfield Township	117
Taylorstown*	Blaine Township	106
Independence	Independence Township	103
Westland	Mt. Pleasant Township	102
Southview*	Mt. Pleasant Township	92
West Middletown+	W. Middletown Borough	75

* - on hold
 + - no planning
 (Please refer to provider inventory sheets.)

Long Term Control Plans

More recently, several of the SFP have been developed to facilitate implementation of the four (4) federal Long Term Control Plans (LTCP) and Corrective Action Plans (CAP) in the County that the providers are mandated to implement. Implementing the LTCP and CAP will have a major impact on monthly rates of the authorities.

The four (4) county LTCP are:

	Phase
Authority of the Borough of Charleroi	Planning/Construction
McDonald Sewage Authority	Construction Completed
Monongahela City Municipal Authority	Planning/Construction
Mon Valley Sewage Authority	Planning/Construction

Please see the provider’s inventory sheets for specific LTCP information. The four authorities are in various phases of implementing their LTCP, from finishing construction to implementing phased construction over the next 10 years.



Completed Projects and Funding Since 2005

Since 2005, the Washington County Commissioners have placed a major emphasis on improving and upgrading public infrastructure in Washington County. This has been consistent with the state emphasis on the keystone Principles for Growth, Investment, and Resource Conservation which also place an emphasis on maintaining and upgrading our existing infrastructure. With state sewer and water infrastructure programs such as H2O, Pennworks, PENNVEST (ARRA) and Growing Greener, coupled with county funding sources (LSA, County allocation of Growing Greener, and Act 13), Washington County providers have been able to construct over 25 Capital and Capital Maintenance sewage projects since 2005. The fourteen capital projects expanded public sewers to over 6,622 unsewered residents and businesses. Many of these projects would not have advanced due to financial constraints without the funding commitment of the County Commissioners and the numerous state/federal programs. (Please see the charts below and on following page). Many of these projects received well over 50 percent in grant, in order to be affordable to the sewage customer base. Additionally there have been a substantial number of projects under one million dollars that are not reflective in these numbers.

COUNTY TOTALS BY PROJECT TYPE

ALL PROJECT TYPES (over \$1,000,000)

# of Projects	Total Project Cost	Total Loan	Percent Loan	Total Grant	Percent Grant	Capital Projects EDU
25	\$188,640,575	\$103,807,285	55%	\$80,986,146	43%	6622

CAPITAL MAINTENANCE PROJECTS (over \$1,000,000)

# of Projects	Total Project Cost	Total Loan	Percent Loan	Total Grant	Percent Grant	EDU
11	\$54,260,450	\$34,551,900	64%	\$19,798,048	36%	N/A

CAPITAL PROJECTS (over \$1,000,000)

# of Projects	Total Project Cost	Total Loan	Percent Loan	Total Grant	Percent Grant	Capital Projects EDU
14	\$134,380,125	\$69,255,385	51%	\$61,188,098	45%	6622

CAPITAL PROJECT COST PER EDU

Total Average Cost	\$ 20,050
Total Average Loan	\$ 10,333
Total Average Grant	\$ 9,129

Due to soft cost some project cost analysis will not equal 100%
 Please see inventory sheets for additional historic projects.
 CP - Capital Projects CM - Capital Maintenance Projects



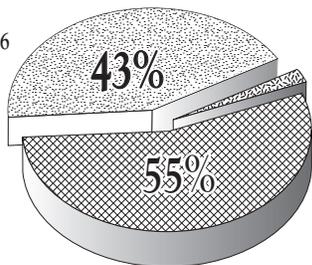
Sewer Projects Since 2005 - Debt to Grant Ratio

Total Project	Project Type	Total Project cost	Total Loan	Percent Loan	Total Grant	Percent Grant	EDU
Completed 2005-2013							
Vestaburg/New Hill Joint Authority Sanitary Sewer System	CM	\$4,172,209	\$0	0%	\$4,172,209	100%	
Canton/Chartiers Townships Sewer System Route 18 Corridor	CP	\$5,620,000	\$2,027,008	36%	\$3,592,912	64%	266
Center-West JSA Sanitary Collection and Treatment System	CP	\$21,283,660	\$9,012,000	42%	\$12,271,660	58%	1028
Midway Treatment Plant and Collection System (\$3,482,000 tap-inn 19%)	CP	\$18,110,000	\$8,781,000	48%	\$5,846,000	32%	1400
Cross Creek/Independence Townships	CP	\$15,419,000	\$3,675,000	23%	\$11,744,000	76%	611
Donora Place Plan Unsewered Area	CP	\$2,600,000	\$261,000	10%	\$2,339,000	89%	182
Pigeon Creek Sewage Authority Sewer rehab/plant upgrade	CM	\$3,900,000	\$3,280,000	84%	\$620,000	15%	
Chartiers Parallel Interceptor	CM	\$710,000	\$210,000	30%	\$500,000	70%	
Carroll Township Authority - Phase III Toll 43 Corridors Sanitary Sewer Rehabilitation	CM	\$1,884,933	\$1,501,154	79%	\$383,779	21%	
McDonald Sewage Authority - Sewer Separation Project	CM	\$5,180,000	\$4,221,746	82%	\$958,254	18%	
Union Township - Erama Sanitary Sewer Project	CP	\$4,125,297	\$1,841,089	44%	\$2,168,650	52%	240
Hanover Township SA (Washington County) Wastewater Capital Improvement Project	CP	\$20,218,000	\$12,165,172	60%	\$8,052,824	40%	650
MVSA CSO/ITCP Phase I Donora Borough	CM	\$4,860,000	\$4,850,000	99%	\$100,000	1%	
California Borough - STP - and extension improvements	CM	\$12,500,000	\$7,500,000	60%	\$5,000,000	40%	
Cecil Township MA - Millers Run Project	CP	\$20,090,566	\$13,645,666	67%	\$6,444,900	33%	1100
North Strabane Township MA Linden Creek/Fifeshire Sewer Project	CP	\$7,405,000	\$4,945,000	67%	\$2,460,000	33%	220
Charleroi Borough - Stormwater Separation System	CM	\$7,764,502	\$7,139,000	92%	\$625,000	8%	
PISA Brush Run Treatment Plant	CM	\$1,500,000	\$900,000	60%	\$600,000	40%	
West Alexander Sewage Plant/Collection	CP	\$3,767,643	\$1,314,091	35%	\$2,453,552	65%	268
Amwell Township Waynesburg Rd. Sewer Project	CP	\$2,750,000	\$400,000	15%	\$2,012,000	73%	88
WEWJA - Wastewater Treatment Plant and Chartiers Creek Interceptor Upgrades	CM	\$2,600,000	\$2,150,000	83%	\$450,000	17%	
Lower Ten Mile JSA Phase II System Rehabilitation	CM	\$9,188,806	\$2,800,000	31%	\$6,388,806	69%	
North Strabane Township Sewer Extensions (est.) Route 519, Rt. 19 Pump Station, Thomas 84 Rd., Linden Creek	CP	\$7,675,000	\$7,533,400	98%	\$141,600	2%	230.
Burgettstown-Smith Twp. JSA- Plum Run Sewer Extension	CP	\$1,654,959	\$1,659,959	100%	\$0	0%	51
Chartiers Township - Midland Sewer System Project	CP	\$3,661,000	\$2,000,000	56%	\$1,661,000	45%	288

DEBT TO GRANT

Total Project Cost \$188,640,575

GRANT
\$80,986,146

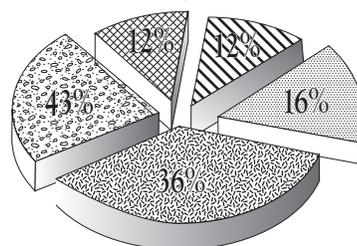


OTHER
\$3,847,144
2%

LOAN
\$103,807,285

CHART 3 - PROJECT COSTS

Total Projects since 2005 - 25



- Less than \$2 million (Total projects - 4)
- \$2 million to \$5 million (Total projects - 9)
- \$5 million to \$10 million (Total projects - 6)
- \$10 million to \$20 million (Total projects - 3)
- \$20 million + (Total projects - 3)

SYSTEMS INVENTORY

The Washington County Sewage Provider Inventory Study was created to better prepare for the short-term and long-term projects of the sewage providers in the county. A sewage provider in Washington County is typically a municipal authority or municipality with one non-public owner (e.g., PA American Water owns the Claysville-Donegal Sewage System.) There are 26 authorities and approximately 20 municipalities which own and operate the roughly 1,042 miles of sewer conveyance system, 133 pump stations and 30 WWTPs. See Table 2 (System Inventory, page 7) for details. Many of the systems ownership overlaps between the municipal authorities and municipalities so it is difficult to determine the exact number of active providers.

COUNTY TOTALS SYSTEM INVENTORY (Table 2)

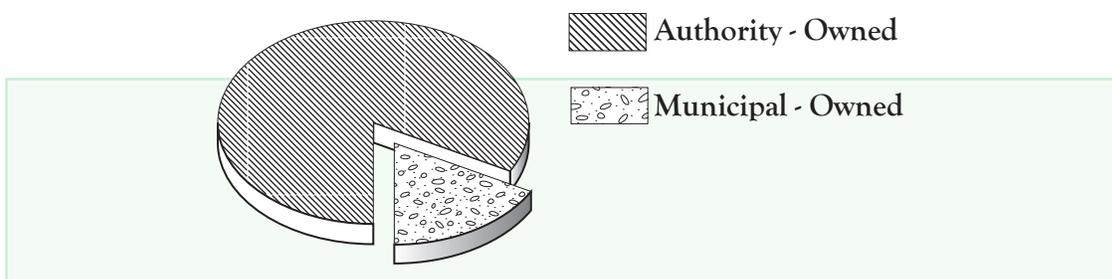
# of Providers	Service Areas	Total WWTP/STPs	Total Miles of Conveyance...		Total Pump Stations	Total Customers
			...for Authority	...for Municipality		
Est. 45	See Table 2	30	871.65'	180.70'	134	75,661

Totals do not reflect privately owned systems

Eight (8) of the authorities provide treatment and interceptor conveyance for 13 municipal providers. The municipal providers convey sewage through the municipal-owned sewage conveyance system to the authority's system and, ultimately, to the authority treatment facility. Many of the municipal providers will actively develop projects through planning and construction. When completed, the system is turned over to the Authority who will then own and maintain the system.

CHART 2 - Conveyance by Ownership in Miles

Total Miles - 1,042.35 (Estimated)



As described in this narrative, Washington County has an ever-evolving, complex network of sewage providers. The number of active providers will change from year to year but should stay around 45, based on projects completed and the future 10 year plans of all the providers.

FINANCIAL INVENTORY

The System and Financial Inventory information was developed to act as a reference source for the various entities related to sewage planning funding and management. Through the interview process with State and Federal agencies, engineers and providers, it was identified that this type of information would be a valuable tool used in many aspects of sewage planning, funding and management. The System and Financial Inventory was not necessarily developed to compare individual system and financial statistics between authorities, but the relationship between financial and system statistics to their overall systems.

The wastewater professionals representing our providers have had minimal comparisons to help educate the public and board members. Using the information provided in Table 2 (Systems Inventory - page 7) and Table 3 (Financing Inventory - page 8), combined with the sewage inventory sheets, the professionals should be able to build scenarios based on similar providers/authorities in the County. The information will assist wastewater engineers, managers and boards in making better decisions on the long-term management of the provider's wastewater system.

For example, comparing the monthly rate of an Authority with 14,000 customers to a provider with 610 customers is not a valid comparison. Spreading debt service and operation/maintenance cost over 14,000 customers as opposed to 610 customers will show a large difference in monthly rates. The information provided in the inventories will help providers develop accurate comparisons based on the systems and associate finances of each provider to those that have similar attributes.

COUNTY TOTALS - FINANCIAL INVENTORY (Table 3)

Average per EDU customer			Total per providers		
Monthly Rate	Debt Service	O/M Treatment	Debt	Budgets	EDU Customers
\$41.27	\$20.07	\$27.03	\$149,163,428	\$36,954,980	75,537

Totals do not reflect privately owned systems

TABLE 2 - SYSTEM INVENTORY

Avg. Monthly Rate (Per Customer)
 Avg. Monthly Rate (Per Authority)
 estimated MOC *



Provider	Service Area	WWTP/STP (public)	Miles of Conveyance (estimated *)		pump stations	No. of customers	
			Authority	Municipality			
Beallsville Borough		0		3	2	186	
Burgettstown-Smith JSA	Burgettstown Borough	1	50				
	Smith Township						
	Mount Pleasant Township						
California Municipal	California Borough	1		16	6	1,577	
	Coal Center Borough						
Canonsburg-Houston JSA	Canonsburg Borough	1	10	37	2	14,181	
	Houston Borough						
	Chartiers Township*			6			
	Cecil Township*						
	North Strabane Township*						
Carroll Township Authority	Donora Borough	0	42		15	2,500	
	Carroll Township						
Cecil Township Municipal Authority	Cecil Township (Cherrybrook STP and Tedori STP)	3	50		8	3,163	
	Cecil Township (Millers Run STP)						
Center-West Joint Sewage Authority	Centerville Borough	1	25		4	1,100	
	West Brownsville Borough						
Centerville Sanitary Authority	Centerville Borough	1	17		2	614	
	Beallsville Borough						
Authority of the Borough of Charleroi (ABC)	Charleoi Borough	1	6	18*	8	4,319	
	North Charleroi Borough			6*			
	Speers Borough			5*			
	Dunlevy Borough			2*			
	Twilight Borough			1*			
	Fallowfield Township			46.7			
				4			
Chartiers Township	WEWJA	0		0	0	265	
	CHJA	0		30		1,822	
Claysville-Donegal (PA American)		1	12		1	500	
Donegal Township - West Alexander Village	Donegal Township	1	10		3	289	
East Bethlehem Sanitary Authority	V-NHJSA	1	18		3	725	
	East Bethlehem Township						
Hanover Township Sanitary Authority	Hanover Township (Paris Area)	1	14.25		3	650	
	Hanover Township (Florence Area)						
Independence Cross Creek Sewage Authority	Independence Township	1	20		1	611	
	Cross Creek Township						
Lower Ten Mile Sewage Authority	Greene County	1	2		6	1,450	
	Washington County						
Marianna-West Bethlehem JSA	Marianna Borough	1	25		2	430	
	West Bethlehem Township						
McDonald Borough		0	10.4		0	992	
Mid Mon Valley WPC Authority	Elco Borough	1	5.5	3*	6	1,001	
	Roscoe Borough			6*			
	Stockdale Borough			4*			
	Allenport Borough			4*			
Midway Sewage Authority	Midway Borough	1	30		4	1,400	
	Smith Township						
	Robinson Township						
	Mount Pleasant Township						
	Cecil Township						
Mon Valley Sewage Authority	Monessen Borough	1	5.5	20	6	2,000 (Wash. Co.)	
	Donora Borough						
	Carroll Township						
Municipal Authority of the City of Monongahela	MCAM	1	5		3	2,057	
	City of Monongahela	0		15	0		
New Eagle Sewage Authority	New Eagle Borough	1	15		3	908	
North Strabane Municipal Authority	North Strabane Township	2	98		11	4,600	
Peters Creek Sanitary Authority	Peters Township	0	96		2	3,900	
	Nottingham Township						
	Union Township						
	North Strabane Township						
	Finleyville Borough						
Peters Township Sanitary Authority	Peters Township	2	120		8	5,929	
Pigeon Creek Sanitary Authority	Bentleyville Borough	1	43		0	2,517	
	Cokeburg Borough						
	Ellsworth Borough						
	Fallowfield Township						
	North Bethlehem Township						
	Somerset Township						
South Franklin Township	South Franklin Township	1		2	0	183	
South Strabane Municipal Authority	South Strabane Township	0			0		
Union Township	Union Township	0		5	1	240	
Vestaburg-New Hill Joint Authority	Centerville Borough	0	7		2	272	
	East Bethlehem Township*						
Washington-East Washington Joint Authority	Washington City	1	130		10	14,288	
	East Washington Borough						
	South Strabane Township						
	North Franklin Township						
	Canton Township						
	Chartiers Township						
Amwell Township							
West Pike Run Municipal Authority	West Pike Run Township	2	5		1	232	
Total		30	871.65'	180.70'	129	75,661	



TABLE 3 - FINANCIAL INVENTORY

Provider	Service Area	Monthly Rate	Debt Service	O/M Treatment	Total Debt	Annual Budget		
Beallsville Borough		\$45.00	\$0	\$22.00	\$0	\$100,440		
Burgettstown-Smith JSA	Burgettstown Borough	\$45.00	\$20.00	\$25.00	\$11,862,040	\$1,423,194		
	Smith Township							
	Mount Pleasant Township							
California Municipal	California Borough Coal Center Borough	\$42.00	\$20.00	\$20.00	\$7,190,000	\$1,857,500		
Canonsburg-Houston JSA	Canonsburg Borough	\$20.70	\$14.40	\$6.30	\$6,100,000	\$3,341,000		
	Houston Borough							
	Chartiers Township*							
	Cecil Township*							
	North Strabane Township*							
Carroll Township Authority	Donora Borough Carroll Township	\$68.60	\$18.00	\$20.80	\$400,000	\$2,500,000		
Cecil Township Municipal Authority	Cecil Township (Cherrybrook STP and Teodori STP)	\$38.00	\$0	\$38.00	\$13,951,084	\$2,650,289		
	Cecil Township (Millers Run STP)	\$51.00	\$11.25					
Center-West Joint Sewage Authority	Centerville Borough West Brownsville Borough	\$55.00	\$35.00	\$20.00	\$5,857,000	\$170,000		
Centerville Sanitary Authority	Centerville Borough	\$39.00	\$2.00	\$37.00	\$36,090	\$300,000		
	Beallsville Borough							
Authority of the Borough of Charleroi (ABC)	ABC	\$15.00	\$5.87	\$9.13	\$10,044,275	\$2,500,000		
	Twilight Borough							
	North Charleroi Borough							
	Speers Borough							
	Dunlevy Borough							
	Charleroi Borough						N/A	\$6,155,724
	Fallowfield Township						\$40.00	\$35.00
Chartiers Township	WEWJA	\$31.00						
	CJA	\$33.00						
Claysville-Donegal (PA American)	Claysville Borough Donegal Township	\$47.00	Tariff		\$825,000			
Donegal Township - West Alexander Village	Donegal Township	\$31.00	\$6.00	\$25.00	\$1,375,242	\$203,000		
East Bethlehem Township Municipal Authority	V-NHJSA* East Bethlehem Township	\$63.00	\$27.00	\$27.00	\$5,500,000	\$20,000		
Hanover Township Sewer Authority	Hanover Township (Paris Area)	\$75.00 - \$80.00	\$51.00	\$24.00	\$10,044,275	\$700,000		
	Hanover Township (Florence Area)	\$78.00	\$43.00	\$32.00				
Independence-Cross Creek Sewage Authority	Independence Township Cross Creek Township	\$55.00	\$27.80	\$27.20	\$3,600,000	\$346,000		
Lower Ten Mile Sewer Authority	Greene County Washington County	\$45.00	\$10.00	\$35.00	\$2,913,308	\$833,700		
Marianna -West Bethlehem JSA	Marianna Borough West Bethlehem Township	\$38.00	\$0	\$38.00	\$0	\$176,000		
McDonald Borough		\$51.00	\$24.70	\$26.30	\$5,027,000	\$762,462		

Avg. Monthly Rate (Per Customer)
Avg. Monthly Rate (Per Authority)
estimated MOC*

TABLE 5 CONTINUED ON NEXT PAGE



TABLE 3 - FINANCIAL INVENTORY (continued)

Provider	Service Area	Monthly Rate	Debt Service	O/M Treatment	Total Debt	Annual Budget
Mid Mon Valley WPC Authority	Elco Borough Roscoe Borough Stockdale Borough Allenport Borough	\$26.27	\$11.52	\$15.15	\$1,617,191	\$398,350
Midway Sewage Authority	Midway Borough	\$56.00	\$31.00	\$25.00	\$8,432,641	\$999,000
	Smith Township					
	Robinson Township					
	Mount Pleasant Township					
	Cecil Township					
Mon Valley Sewage Authority	Monessen Borough Donora Borough Carroll Township	\$43.00	\$14.24	\$28.76	\$14,670,000	\$3,395,000
Municipal Authority of the City of Monongahela	MACM	\$46.74	\$15.58	\$31.16	\$7,729,655	\$2,133,070
	City of Monongahela				\$200,000	
Mount Pleasant Municipal Authority						
New Eagle Sewage Authority	New Eagle Borough	\$51.00	\$30.00	\$21.00	\$4,100,290	\$590,175
North Strabane Municipal Authority	North Strabane Township	\$40.00	\$8.90	\$31.10	\$8,505,000	\$2,600,000
Peters Creek Sanitary Authority	Peters Township	\$35.00	\$8.00	\$27.00	\$10,645,000	\$1,600,000
	Nottingham Township					
	Union Township					
	North Strabane Township					
	Finleyville Borough					
Peters Township Sanitary Authority	Peters Township	\$36.93	\$10.33	\$24.41	\$3,300,000	\$2,600,000
Pigeon Creek Sanitary Authority	Bentleyville Borough	\$35.00	\$19.05	\$16.00	\$4,390,000	\$663,800
	Cokeburg Borough					
	Ellsworth Borough					
	Fallowfield Township					
	North Bethlehem Township					
	Somerset Township					
South Franklin Township	South Franklin Township	\$40.00	\$20.00	\$20.00	\$260,000	
South Strabane Municipal Authority		\$15.00			\$0	
Union Township		\$62.00	\$29.00	\$33.00	\$1,841,089	\$86,000
Vestaburg-New Hill Joint Authority	Centerville Borough East Bethlehem Township*	\$45.00	\$0	\$45.00	\$0	\$140,000
Washington-East Washington Joint Authority	Washington City	\$15.00			\$5,000,000	\$3,500,000
	East Washington Borough	\$15.00				
	South Strabane Township	\$15.00				
	North Franklin Township	\$15.00				
	Canton Township	\$52.00				
	Chartiers Township	\$15.00				
	Amwell Township					
West Pike Run Township Municipal Authority	West Pike Run Township	\$30.00	\$0	\$30.00	\$0	\$86,000
	Abraham Plant	\$40.00		\$40.00		

Avg. Monthly Rate (Per Customer)
Avg. Monthly Rate (Per Authority)
estimated MOC*

TOTAL

\$160,299,129 \$37,254,980

PLANNED PROJECTS

WASTEWATER IMPROVEMENT PLANS

To help better understand the overall flow and funding needs of sewage projects in the County, the Waste Water Improvement Plan (WWIP) for Washington County was developed. The WWIP is a combined list of all the short-term (0-5 years) active projects in the County. The WWIP is broken into two (2) categories: WWIP - Capital Projects (WWIP - Capital) and WWIP - Capital Maintenance Projects (WWIP - CM).

WWIP - Capital

Year-to-year estimated list of all capital projects that will expand existing system. (Please see Table 4 on page 11 of this Study)

WWIP - Capital Maintenance

Year-to-year estimated list of all capital maintenance projects typically associated with capacity, wet weather issues, and/or replacement of deficient or aging systems. Often associated with LTCP or CAPs. (Please see Table 5)

The WWIP is not a fiscally constrained projection; which means that many of the projects will need to secure substantial grants or favorable loan terms to advance to the project as scheduled. The WWIP-Capital has an estimated \$55,308,487 worth of projects which may be constructed over the next 5+ years, providing public sewers to an additional 2,300 Washington County residents and businesses.

The WWIP-CM has an estimated \$96,644,591 worth of project which may be constructed over the next 5 years. Many of the projects are due to the implementation of mandated LTCPs of CAPs. Construction cost will cause substantial monthly rate increases for residents and businesses. In many cases the monthly rate will triple over the next 5-10 years.

PLANNED PROJECTS TOTALS BY PROJECT TYPE (over \$1,000,000)

WWIP - ALL PROJECTS

# of Projects	Total Project Cost	EDU'S	
		Capital	Capital Maintenance
47	\$204,404,084	2298	N/A

WWIP - CAPITAL MAINTENANCE PROJECTS

# of Projects	Total Project Cost	EDU	Estimated Grant Total Needed
25	\$155,944,591	N/A	*Determined as Project develops

WWIP - CAPITAL PROJECTS

# of Projects	Total Project Cost	EDU	Estimated Grant Total Needed
22	\$48,459,493	2298	\$22,545,068



**TABLE 4A- WASTEWATER IMPROVEMENT PLAN (WWIP)
CAPITAL PROJECTS*
ACTIVE ** (0-5 YEAR TIME FRAME)**

Provider	Service Area	Project	537?	Permit	Construction	Cost	EDU	Needed Grants	
Burgettstown-Smith JSA	Burgettstown Borough								
	Smith Township	Plum Run Extension	2008	2013	2014	\$1,600,000	51	Secured	
	Mount Pleasant Township								
Canonsburg-Houston JSA	Canonsburg Borough								
	North Strabane Township	See NST							
	Houston Borough								
	Cecil Township	See Cecil							
	Chartiers Township	See Chartiers							
Cecil Township Municipal Authority	Lawrence	Lawrence Sewage Project (336 New EDU)	2014	2014-15	2017-18	\$8,698,270	804	\$2,940,800 Secured \$1,500,000 Needed	
Center-West JSA	Centerville Borough	Phase III- Extension Malden/Binnstown	2002	2013-14	2015-16	\$1,824,525	50	Secured	
	West Brownsville Borough								
Chartiers Township		Midland Area Ext.	2011	2013	2014-15	\$2,800,000	288	Secured	
		McClane Farm Road Ext.	2014	2015	2015-16	\$1,200,000	60	\$500,000	
Hanover Township Sewage Authority	Hanover Twp. (Paris Area)	Whipper Drive Ext.					7		
	Hanover Twp. (Florence Area)	Steubenville Pike Ext.	2013	2014	2015-16	\$1,200,000	35	\$700,000	
Independence - Cross Creek Sewage Authority	Independence Township	Village of Independence Ext.	2010	2014	Contingent on Grant	\$3,288,900	103	\$2,849,000	
	Cross Creek Township	Village of Cross Creek Ext.				\$2,114,100	33		
Marianna West-Bethlehem JSA		Fairfield Extension	2015	2015	2016-17	\$1,670,000	50	\$1,250,000	
Midway Sewage Authority	Midway Borough								
	Smith Township								
	Robinson Township	980 Corridor	2002	Contingent on Grant	Contingent on Grant	\$3,894,442	120	\$2,900,000	
	Mt. Pleasant Township								
Mount Pleasant		Southview and Antil Street Conveyance System	2002	2014-15	2016-18	\$19,262,250	570	\$1,250,000 Secured	
		Westland Conveyance and STP Project						\$7,314,068 Needed	
		Hickory Conveyance System							
North Strabane Municipal Authority	North Strabane Township	Thomas Road Extension	2000	2013-14	2015	\$2,042,000	200	\$3,932,000	
		Linden Creek Extension	2000	2013-14	2015	\$2,740,000			
		Rt. 519 Sewage Extension	2000	2013	2014-15	\$2,050,000			
South Franklin Township		Rt. 18/Airport SA Phase I	2014	2014-15	2015-16	\$1,750,000	89	\$1,100,000	
		Rt. 18 Franklin Manor Phase III	2014	2014-15	2015-16	\$774,000	40	\$500,000	
						TOTAL COST FOR ALL PROJECTS	\$55,308,487	2298	\$22,545,068 NEEDED

* Scheduling will vary based on Funding and Grant availability

** See website for complete list of Provider Information

PLEASE CHECK WITH PROVIDER FOR UPDATED PROJECT SCHEDULING AND FINANCIAL INFORMATION.

NEEDED GRANT

For Capital projects, needed grant is an estimate based on securing enough grant to end up with a monthly customer rate of \$50 - \$55. The monthly rate includes an O/M rate of \$25 and estimated debt service of \$20 - \$35. These figures are rough estimates; actual needed grant will be determined for each project as the project develops.

**TABLE 4 - WASTEWATER IMPROVEMENT PLAN
WET WEATHER AND CAPITAL MAINTENANCE PROJECTS*
ACTIVE** (0-5 YEAR TIMEFRAME)**

2 of 2

Provider	Service Area	Project	Planning	Permit	Construction	Cost
California Municipal	California Borough	New Wastewater Treatment Facility	2009	2013	2014-15	\$6,500,000
		Peach Alley Sanitary Sewer Renovation	2012	2013	2013-14	\$512,000
	Coal Center Borough	Coal Center Borough Station	2012	2014	2014-15	\$350,000
Canonsburg-Houston JSA	Canonsburg Borough	Phase I WWTP Upgrade	2010	2013	2014-15	\$20,000,000
	North Strabane Township					
	Houston Borough					
	Cecil Township					
	Chartiers Township					
Carroll Township Authority	Donora Borough	Upgrade to Eldora Pump Station	CAP	2014	2015	\$600,000
	Carroll Township	CAP Implementation Phase III	2011	2011-12	2013-14	\$940,000
Cecil Township Municipal Authority	Cecil Township (Cherrybrook STP and Teodori STP)	Sandlewood Drive Pump Station Elimination	2013	2013	2013-14	\$362,086
	Cecil Township (Millers Run STP)	Timber Crest Pump Station Elimination	2013	2013	2013-14	\$128,713
Centerville Sanitary Authority		Richeyville WWTP Aerobic Digestion Improvement Project	N/A	2014	2015-16	\$514,300
Authority of the Borough of Charleroi (ABC)	ABC	Speers Dunlevy CSO Management Facility	LTCP	2014	2014-15	\$9,900,000
	Charleroi Borough					
	North Charleroi Borough					
	Speers Borough					
	Dunlevy Borough					
	Twilight Borough					
Fallowfield Township						
Claysville-Donegal (PA American)		Wet Weather Storage Tank	2013	2014	2014-15	\$825,000
Mid Mon Valley WPC Authority	Elco Borough	Interceptor/Pump Station #5 Replacement to Mon Valley Industrial Park	N/A	2014	2015-16	\$1,372,492
	Roscoe Borough					
	Stockdale Borough					
	Allenport Borough					
Mon Valley Sewage Authority (MVSA)	MVSA	Phase II LTCP	2008	2013-14	2015-2020	\$16,400,000
	Donora Borough	Donora Sewage Separation	2008	2013	2014-16	\$3,600,000
	Carroll Township					
Municipal Authority of the City of Monongahela		West Valley Interceptor Improvement	LTCP	2014	2015-16	\$2,200,000
New Eagle Sewage Authority		Capital Maintenance & I/I Removal	On-going	On-going	On-going	\$1,000,000
North Strabane Municipal Authority	North Strabane Township	Rt. 19 Pump Station Upgrade	2000	2013-14	2015	\$790,000
Peters Creek Sewage Authority	Peters Township	Venetia Road and Bower Hill Road Capacity Augmentation	2011	2014	2014-15	\$630,000
	Nottingham Township	PCSA Interceptor Refurbish	2011	2014	2015	\$640,000
	Union Township	Clairton MA-STP/Peters Creek Interceptor Upgrade	2014	2014-15	2016-18	\$10,400,000
	North Strabane Township					
Peters Township Sanitary Authority	Peters Township	Donaldson's Crossroads WPCP Upgrade	2012	2013-14	2015-16	\$23,300,000
		Oakwood Road/Giant Oak Interceptor Capacity Augmentation	2012	2014-15	2016-17	\$2,330,000
		Yearly Capital Improvements	On-going	On-going	On-going	\$700,000 (Annual)
Pigeon Creek Sanitary Authority	Bentleyville Borough Cokeburg Borough Ellsworth Borough Fallowfield Township North Bethlehem Township Somerset Township	Capital Maintenance of Collection System	On-going	On-going	On-going	On-going
Washington-East Washington Joint Authority	Washington City East Washington Borough South Strabane Township North Franklin Township Canton Township Chartiers Township	Chartiers Creek Interceptor Replacement	N/A	2014	2014-15	\$1,150,000

Grant will be determined for each project as the project develops.

TOTAL COST for all Projects

\$104,244,591

* Scheduling will vary based on Funding and Grant availability

** See website for complete list of Provider Information

PLEASE CHECK WITH PROVIDER FOR UPDATED PROJECT SCHEDULING AND FINANCIAL INFORMATION.

Conclusion and Recommendations

Over the last 10-15 years the Washington County Board of Commissioners have been proactive in assisting sewage providers in advancing wastewater projects from the planning stage and securing funding through permitting and construction. The intent of this document to develop a capital needs assessment and system inventory of wastewater providers in Washington County. The Plan will not only help to guide wastewater funding needs in our county but identifies many issues which our providers, their staff and engineers will have to mitigate in the upcoming years.

From the start it was evident that each wastewater provider is very diverse in their needs ranging from mitigating wet weather issues and maintaining aging malfunctioning plant and conveyance systems to providing public sewers for unsewered Targeted Areas of Investment as previously discussed. Overall, many of the providers have done an excellent job taking advantage of the historic funding levels which were available since 2005. County-wide, 25 capital wastewater infrastructure projects at a cost of over \$188,000,000 have been completed since 2005.

To satisfy the Clean Streams Act (State) and the Clean Water Act (Federal), mandated regulations and county development needs, similar historic County, State and Federal funding levels will need to continue. As in the past, most projects will need to secure over 45 percent in grants to be completed through construction, while maintaining an affordable monthly rate for customers.

General Recommendations:

- A Present and review the Washington County Sewage Inventory Study with State and Federal Legislators, Regulatory agencies and funding sources.*
- B Maintain and update the information developed in the study on the Washington County Planning Commission website (www.co.washington.pa.us)*
- C Contact providers when potential local, state and federal funding sources are announced, **concentrating on project specific opportunities.***
- D Create a sewage provider email address list to announce educational opportunities and promote better communication between providers and local, state and federal legislators and agencies.*
- E Work with DEP to promote the planning and advancement of Capital Sewage Projects in the Village Development - Targeted Areas of Investment.*
- F Coordinate and Prioritize projects to ensure funding opportunities are available and projects are not competing.*

County-wide Issues and Recommendations

1. The overall system is aging and requires substantial upgrades or complete replacement of the wastewater treatment plant and conveyance systems.

Recommendation:

1. **A** Provide educational opportunities for providers and municipalities concentrating on planning and funding for long term improvement upgrades of aging wastewater systems.
 1. **B** Identify and coordinate the use of federal and state funding opportunities for providers.
 1. **C** Coordinate wastewater improvements projects with other infrastructure (PennDOT, Columbia Gas of PA, water providers, etc.) improvement plan and construction. Primary goal is to limit project disturbances and optimize cost savings associated with restoration of project areas.
 1. **D** Educate county, state and federal officials as to the continued need for substantial grant and creative financial opportunities, which will be needed to advance wastewater Capital and Capital Maintenance projects in the County and Commonwealth.
2. The majority of remaining capital projects will need 50-70% of the total cost to be funded through grants (based on a \$50-\$55 monthly rate) to advance through construction.

Recommendation:

2. **A** Identify and coordinate the use of state and federal funding sources for providers.
 2. **B** Continue the proactive approach of assisting providers in planning and funding of wastewater projects in the County.
Example: The use of **Local Share Funds** and county allocated **Growing Greener Funds** as gap funding to make projects affordable.
 2. **C** Continue County Wastewater Planning Partners meetings with DEP, PENNVEST and RUS concentrating on affordable project development and funding.
3. The municipal systems are typically older with minimal information about condition and location of the conveyance systems. They are maintained reactively with no planned upgrades.

Recommendation:

3. **A** Develop educational and outreach programs for customer municipalities concentrating on Long Range planning for aging systems.
 3. **B** Promote consolidation planning between providers and customer municipalities.
 3. **C** Coordinate with Columbia Gas of PA Cross Bore Program to take advantage of mapping and video.
4. Many of the municipal providers have no direct operation and maintenance (O/M) monthly fee for yearly capital maintenance charged to customers.

Recommendation:



5. Due to the advancement of LTCP, monthly rates throughout the Monongahela Valley will substantially increase over the next 10 years. Attracting and retaining businesses and residents to the valley could be impacted by advancement of LTCP.

Recommendation:

5. A Explore creative financing opportunities using county, state and federal grant resources to help maintain affordable monthly rates. Example: Cecil Township Municipal Authority's "Rate Subsidy Plan".
6. Addressing mandated wet weather issues (sanitary sewer overflows, combined sewer overflows, and inflow and infiltration) when systems have multiple owners is exceptionally difficult. Typically, the Authority owns the plant and main interceptor and municipal providers own the conveyance system to the interceptors.

Recommendation:

6. A Promote consolidation planning between providers and customer municipalities.
6. B Educate customer municipalities as to the value of long term planning.
7. Board representation for all service areas is lacking. Municipal authorities were formed to address the sewage needs of a growing community. The Boards that govern these authorities were largely made up of residents of that specific community. As communities grew and population trends changed, sewer lines were extended into neighboring communities in a collaborative effort to provide for sewage needs, which in turn provided new customers for the Authority. These arrangements worked well for many years, but as those customer bases enlarged to new service areas proper board representation was not afforded to these new areas. This issue is not only on the local level but is seen regionally and will have a large impact on systems that cross county lines:

McDonald Borough - Alcosan

Peters Creek SA - Clairton

Elrama/Union - West Elizabeth

Hanover Township Sewage Authority - Weirton

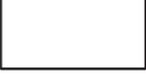
Hanover Township Sewage Authority - Paris Service Area

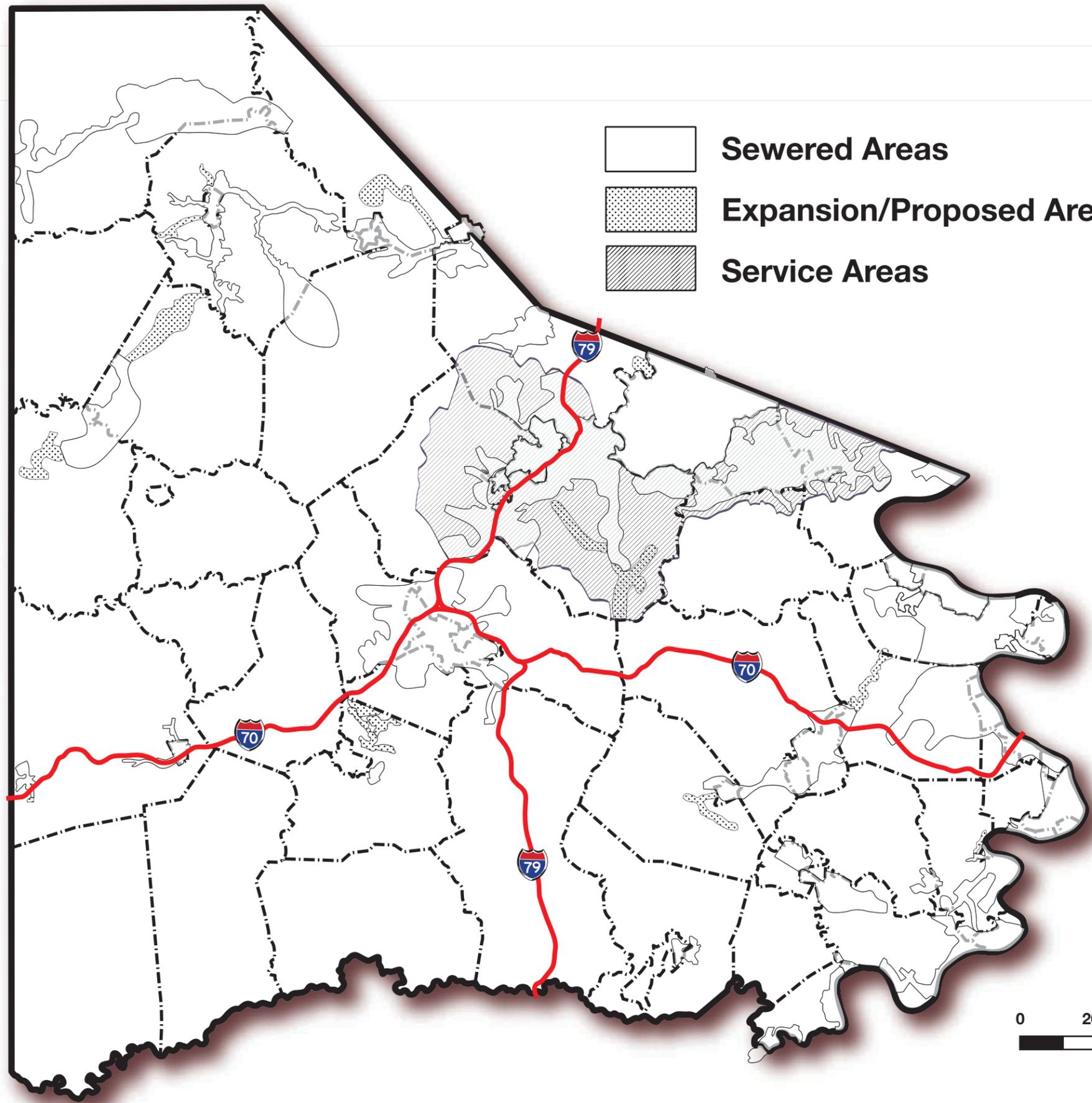
Recommendation:

7. A Promote Regional Inclusion in brand selection based on the service area.

SEWAGE/MUNICIPAL AUTHORITY SERVICE AREAS AND PROPOSED EXPANSION WASHINGTON COUNTY



-  Sewered Areas
-  Expansion/Proposed Areas
-  Service Areas



LEGEND

-  Municipal Boundary
-  Interstate

*This map was originally created for Washington County's Geographic Information System (GIS) and include data from various municipal, county, state and federal sources, which may contain errors. Maps should not be used for exact measurement of distance, direction, ground, position, precise location of geographic features, or a vulnerability assessment at a specific location. Maps are provided "As-Is" without warranties of any kind, either expressed or implied, and are intended for use only at the published scale. Detailed on-the-ground surveys and historical analyses of sites may differ from this map.





SEWAGE PROVIDER INVENTORY PROJECT SUMMARY SHEETS

Inventory sheets were developed from 2013 to the summer of 2014.

Information varies based on provider input and resources.

As with all time sensitive information, please contact
the sewage provider for up-to-date information.

The County Planning Department will be periodically updating
information on the county website.

Please see:

www.co.washington.pa.us

WASHINGTON COUNTY SEWAGE PROVIDER INVENTORY SHEET USERS GUIDE



The Information provided is based on active Act 537 Plans, Long Term Control Plans, (LTCP), Corrective Action Plans, (CAP), interviews with provider engineers, managers and staff as well as Board Members. A general information survey was sent to all providers in the fall of 2012. Inventory sheets were developed from 2013 to the summer of 2014. Information varies based on provider input and resources. As with all time sensitive information, please contact the sewage provider for up-to-date information. The County Planning Department will be periodically updating information on the county website. Please see www.co.washington.pa.us

Narrative

The inventory sheet narrative is broken into four categories based on available information: a general overview of the provider, services provided and system inventory (miles of line, # of pump stations, Wastewater Treatment Plant (WWTP) etc.), a brief history of recent projects, a short (0-5 years) and long (5-10)-term plans/projects of the providers. When available, a description of yearly capital maintenance programs and projects is included.

Inventory Sheet Summary Map

The map delineates the service area of the provider. Date findings vary based on available information from the providers. When applicable, short term project areas are delineated. Maps are based on 2013 information.

General Information Summary

The summary Information included gives a brief overview of relative information which is common to all providers.

General Information:	Authority Information: (5)
Authority Membership: (1)	No. of Employees
	Annual Budget
	Total Debt
Service Areas (Municipalities) (2)	Sewer System: (6)
	Treatment
Number of Customers/EDU: (3)	Collection/Conveyance
Average Monthly Rate/EDU: (4)	Treatment Plant:
O & M	Type of Treatment
Debt Service	Rate Capacity
	Available Capacity
	Overload Issues
	Tap Restriction

- 1 **Provider membership**
of Board Members and representation
- 2 **Service Area**
Municipalities/Areas which the provider provides treatment and/or collection/conveyance.
- 3 **Number of EDU's**
- 4 **Average Monthly Rate/EDU**
Include O&M and Debt Service for provider.
- 5 **Authority Information**
Employees and General Financial Information
- 6 **Sewer System**
Services provided

Contact Information

Provider's office location and contact information.

Washington County Sewage Providers with Service Communities

Multi County (+)

Portions of (P)



1. **Authority of the Borough of Charleroi (ABC)**
 - Charleroi
 - North Charleroi
 - Speers
 - Dunlevy
 - Fallowfield
 - Twilight (P)
2. **Beallsville Borough**
3. **Burgettstown-Smith Joint Authority (BSJSA)**
 - Smith
 - Mt. Pleasant (P)
 - Burgettstown
4. **California Borough**
 - California
 - Coal Center
5. **Canonsburg Houston Joint Authority (CHJSA)**
 - Canonsburg
 - Houston
 - North Strabane
 - Chartiers
 - Cecil
6. **Carroll Township Authority (CTA)**
7. **Cecil Township Municipal Authority (CTMA)**
8. **Center-West Joint Sewage Authority (CWJSA)**
 - Centerville
 - West Brownsville Borough
9. **Centerville Borough Sanitary Authority (CBSA)**
 - Centerville
 - Beallsville
10. **Chartiers Township**
11. **Claysville -Donegal Sewage Treatment Plant and Service Area**
 - Clasville Borough
 - Donegal Township
12. **Donegal Township/West Alexander Village**
13. **East Bethlehem Township Municipal Authority (EBTMA)**
 - East Bethlehem
 - Centerville (P)
14. **Hanover Township Sewer Authority (HTSA)**
15. **Independence-Cross Creek Joint Sewage Authority (I-CCJSA)**
 - Independence
 - Cross Creek
16. **Lower Ten Mile Joint Sewage Authority (LTMJSA) (+)**
 - East Bethlehem
 - Clarksville (Greene County)
17. **Marianna-West Bethlehem Joint Authority**
 - Marianna
 - West Bethlehem
18. **McDonald Sewage Authority**
19. **Mid Mon Valley Water Pollution Control Authority (MMVWPCA)**
 - Allenport
 - Elco
 - Roscoe
 - Stockdale
20. **Midway Sewage Authority (MSA)**
 - Midway
 - Cecil, Mt. Pleasant, Robinson, Smith (P)
21. **Mon Valley Sewage Authority (MVSA) (+)**
 - Donora
 - Carroll (P)
 - Monessen (Westmoreland County)
22. **Mount Pleasant Township Township Municipal Authority (MPTMA)**
 - Mt. Pleasant
 - Cecil (P)
23. **Municipal Authority of the City of Monongahela (MACM)**
 - Monongahela City
 - Carroll (P)
24. **New Eagle Municipal Sewage Authority (NEMSA)**
25. **North Strabane Township Municipal Authority (NSTMA)**
26. **Peters Creek Sanitary Authority (PCSA)**
 - Finleyville
 - Peters
 - Nottingham
 - Union
27. **Peters Township Sanitary Authority (PTSA)**
28. **Pigeon Creek Sanitary Authority (PCSA)**
 - Bentleyville
 - Ellsworth
 - Cokeburg
 - Fallowfield, North Bethlehem, Somerset (P)
29. **South Franklin Township**
30. **South Strabane Township Municipal Authority (In Development; See Website)**
31. **Union Township**
32. **Vestaburg-New Hill Joint Authority (VNHJA)**
 - East Bethlehem, Centerville (P)
33. **Washington East Washington Joint Authority (WEWJA)**
 - Washington City
 - South Strabane, Canton, North Franklin, Chartiers, (P)
 - East Washington
34. **West Pike Run Township Municipal Authority (WPRTMA)**

*Please see service provider Inventory Sheet for customer municipalities which are not included. Additional information is included on Tables 1 - 4.

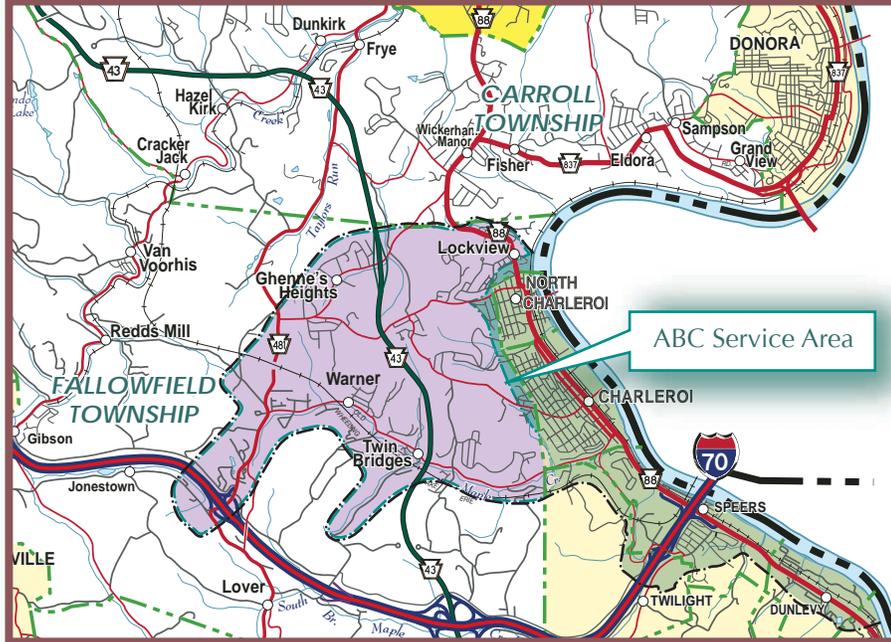
Authority of the Borough of Charleroi ABC



The Authority of the Borough of Charleroi (ABC) provides wastewater treatment and conveyance for 6 municipalities in the Charleroi area. Additionally, ABC provides water service to all or portions of 13 municipalities in the Monongahela River Valley.

The Authority owns and operates the Charleroi Sewage Treatment Plant, 12 CSO and 1 SSO, 6 miles of interceptor and 8 pump stations. The 5 contributory municipalities own and maintain their own collection systems, with ABC owning and operating the Fallowfield collection system.

Additional studies have indicated extensive additional facilities will be needed to manage flows from the contributory municipality's conveyance systems. The resulting Long Term Control Plan update will identify and recommend specific improvements to correct CSO and SSO conditions throughout the system. Four of the systems are over 80 years old and have been maintained on an as-needed basis only. The Fallowfield system was constructed less than 20 years ago and has had minimal maintenance to date.



The Authority and its customer municipalities are in the process of implementing the ABC Long Term Control Plan (LTCP). Implementation is advanced through major capital projects and the Authority's Capital Maintenance (CM) plan which averages \$250,000/year. Design and construction of the combined sewer overflow control facilities to be identified in the LTCP update will eliminate the 12 CSO points and 1 SSO point as mandated by the EPA. The plan, estimated at \$65 million, will result in extreme rate increases if substantial grants are not secured. The LTCP update will be implemented over the next 10 years.

In 2006, Charleroi Borough implemented the first step of the plan by completing a \$7.9 million stormwater separation project in the Borough. Stormwater was reduced from the sewer system and diverted to the new stormwater system.

In 2012 the Authority began the process to implement the next phase of the original LTCP, the Speers/Dunlevy Combined Sewer Overflow Management Facilities. The \$7 million dollar project consists of a new 1 million-gallon storage tank to contain combined sewer overflows in the Speers/Dunlevy area of Washington County. This plan was adjusted in the 2015 LTCP update to consolidate this tank with others in a more beneficial location. The 2 new combined dry weather/wet weather pump stations are required to replace the outdated and undersized existing facilities as well as new wet- weather force mains will also be required to transport excessive flows to the relocated storage tank for off-peak treatment at the sewage treatment plant. This portion of the project is necessary to manage CSOs to the Monongahela River in an area designated "sensitive" due to recreational activity and use as a municipal water supply.

Schedule

Site Selection and Preliminary Engineering	2012-2014	Detailed Design Phase 1	2015-2016
Construction - Phase 1	2017-2018	Phases 2 & 3	would follow starting in 2019 thru completion in 2024

The estimated monthly rate based on typical PennVEST rates (if available) would result in a surcharge of approximately \$50.00/month in addition to the basic sewage bill (currently \$33/month). The Authority will need to secure substantial grants to maintain an affordable project.

General Information:

Authority Membership:

Members from Charleroi (appointing body) or service area municipalities

5

Service Area (Municipalities)

Charleroi, North Charleroi, Speers, Dunlevy and portions of Twilight and Fallowfield Township

Number of Customers/EDU:

5,200

Average Monthly Rate/EDU:

\$33.00*

O&M

\$ 26.75

Debt Service

\$ 3.10

Authority Information:

No. of Employees	39
Annual Budget	2.2 million
Total Debt	\$3,792,000

Sewer System:

Treatment	Y
Collection/Conveyance	Y

Treatment Plant:

Type of Treatment	Charleroi STP
Rate Capacity	Active Sludge
Available Capacity	3.0 MGD
Overload Issues	1.5 MGD
Tap Restrictions	CSO
	N

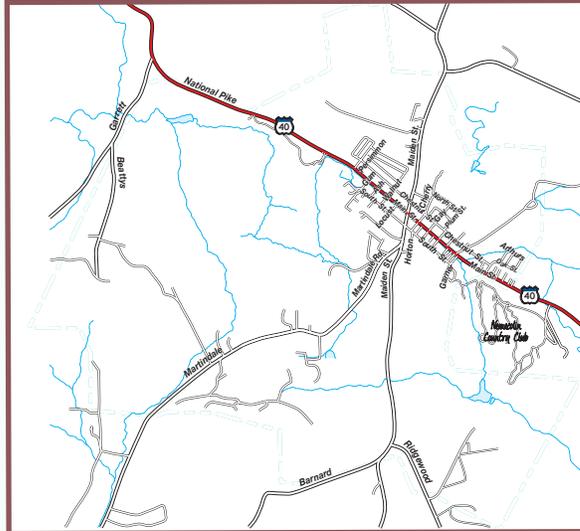
* substantial increase is projected.

Beallsville Borough



Beallsville Borough operates and maintains a vacuum collection system comprised of 3 miles of sanitary sewer lines and 2 pump stations. Wastewater is conveyed to the Centerville Borough Sanitary Authority for treatment at the Richeyville Wastewater Treatment Plant.

The sewage conveyance system is a vacuum system which draws sewage to a 12,000 gallon tank. The wastewater is then pumped into the CBSA conveyance system. The system was built in 1991 and has been well maintained; however, many of the mechanical systems are well beyond their shelf life and in need of repair/replacement.



The system also has some wet weather issues which will need to be addressed in the future.

No planning studies have been completed to determine the extent of needed repairs and replacement. System studies will be needed to determine the extent of upgrades and repairs. The study will identify major issues related to the conveyance system and develop a plan to mitigate the deficient sections of the conveyance system.

The majority of the residents in the Borough are connected to public sewage. In 1991 when the conveyance system was put in, it was not financially feasible to connect some of the residents outside of the village area.

The Borough will continue to explore funding alternatives to provide sewage to the remaining unsewered residents. Any additional projects will have to be grant-based due to excessive projected monthly rates.

General Information:

Provider Membership

Council

Service Areas (Municipalities)*

Beallsville Borough

Number of Customers/EDU:

186

Average Monthly Rate/EDU:

\$45

O & M

\$22

CBSA Treatment

\$23

Provider Information:

No. of Employees

Borough Staff

Annual Budget

\$100,440

Total Debt

\$0

Sewer System:

Treatment

N

Collection/Conveyance

Y

Treatment Plant:

CBSA - Richeyville - WWTP

Burgettstown-Smith Township Joint Sewage Authority BSJSA



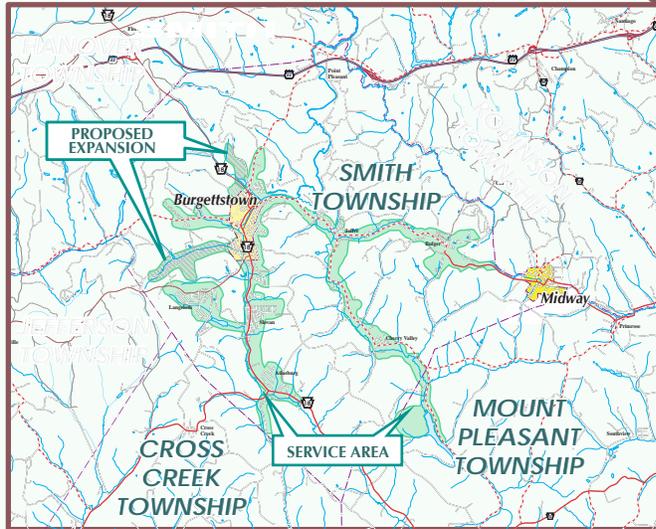
2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

Burgettstown-Smith Township
Joint Sewage Authority

P.O. Box 389
Burgettstown, PA 15021
724-947-9609

The Burgettstown-Smith Township Joint Sewage Authority (BSTJSA) is a multi-municipal authority which provides sewage collection and treatment to three municipalities in the Burgettstown area. The Authority owns and operates the Sewage Treatment Plant (STP), two pump stations and 260,000 linear feet of interceptor and conveyance systems.

In the 1990's the Authority developed and implemented the BSTJSA Act 537 Plan. The Plan resulted in the construction of a centrally-located STP and conveyance system which provides sewage treatment for eight villages along Route 18, the Borough of Burgettstown and the Village of Langeloth. The areas served had malfunctioning on-lot systems and wildcat systems, all of which resulted in raw untreated sewage being conveyed directly into nearby streams. [The existing deteriorating collection systems in Langeloth and Burgettstown were rehabilitated as part of the 1999 project.]



In 2008, the Authority completed the revised BSTJSA Act 537 Plan (September, 2008). The plan has 3 primary goals:

1. Developing a plan for correcting malfunctioning on-lot septic systems.
2. Eliminate discharge from wildcat sewers.
3. Preventing the existing treatment plant and existing sewer lines from becoming overloaded.

The goals are developed in the Plan to prevent future sewage disposal problems from occurring and provide for sustainable growth by directing new land development to areas where adequate sewage disposal facilities are planned. The plan establishes short- and long-term alternatives to provide adequate sewage facilities to ten service areas in need and allows for future development as the need arises.

	SERVICE AREA	TOTAL NUMBER OF EDUS	2008 ESTIMATE	2014 CONSTRUCTION
Short Term	Plum Run	51	\$2,600,000	✓
	Village of Cross Creek	78	\$1,226,326	(see I-CCJSA provider sheet)
	Union Electric Steel	8	\$1,480,000	✓
Long Term	Vance Road	16	\$ 700,000	
	Joffre	11	\$ 439,000	
	Medical Center	28	\$1,995,000	
	O-Stop Road	13	\$ 863,000	
	Keys Road	3	\$ 168,000	
	Pleasant Valley	16	\$1,387,000	
	Atlasburg	8	\$ 809,000	
	Cherry Run	37	\$2,492,000	
	TOTAL		289	\$15,933,000

General Information:

Authority Membership	6
Smith	3
Burgettstown	3
Service Areas (Municipalities)*	3
Smith	Burgettstown
Mt. Pleasant	Cherry Valley
Number of Customers/EDU:	2,760
Average Monthly Rate/EDU:	\$45.00
O & M	\$25.00
Debt Service	\$20.00

Authority Information:

No. of Employees	6
Annual Budget	\$1,423,194
Total Debt	\$11,862,040

Sewer System:

Treatment	Yes
Collection/Conveyance	Yes

Treatment Plant:

Type of Treatment	George Martin STP sequencing batch reactor
Rate Capacity	800,000 MGD
Available Capacity	377,000 MGD
Overload issues	No
Tap Restriction	No

California Borough

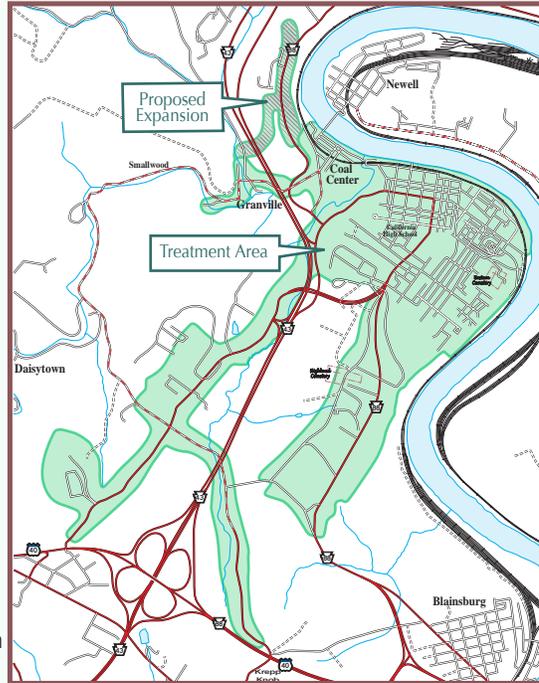


California Borough provides sanitary sewage transmission and treatment to 1,577 customers within the Borough of California, Pennsylvania. In addition, the Borough provides sanitary sewage transmission and treatment to California University of Pennsylvania and Coal Center Borough. The Borough owns and operates six pump stations (PS), 83,000 LF of conveyance system and the California Sewage Treatment Plant (STP).

The Borough is in the process of implementing the Borough of California's Act 537 Sewage Facilities Plan Update (2009). The plan is being implemented in two phases. Phase I, which involves various system improvements and extensions began in 2008. As a result of the implementation all of the hard infrastructure (STP, PS, etc.), will have been renovated or replaced by summer of 2014.

Since 2008, California Borough has completed a number of sanitary sewer improvement projects as follows:

- Granville & Malden Sanitary Sewer Improvement Project
- Transmission Lines and Pump Stations
- Main Pump Station
- Main Pump Station Design and Construction
- Technology Park Pump Station
- Renovation of the Pump Station that serves the California Technology Park
- Sanitary Sewer Improvement Projects
- Third Street Sanitary Sewer Extension Project
- SR 0088 Sanitary Sewer (Emergency Repair)



Projects have been funded through PENNVEST Loans, Bond Issues, H2O Grant and the Borough's General Fund.

The Borough is currently implementing Phase 2 which is the construction of a new wastewater treatment facility. The project is permitted and construction should run from summer 2013 – 2014. The project is estimated at \$6.5 million.

The final Phases of the overall system renovation will be the replacement of the Coal Center Borough pump station and renovation of the Peach Alley sanitary sewer transmission lines.

- Coal Center Borough pump station is in design and should advance to construction in summer 2014. Estimated construction cost is \$350,000.
- Peach Alley sanitary sewer renovation is permitted and has been awarded for construction which will begin in November 2013-2014. Bid Construction cost is \$512,000.

Additionally, the Borough assesses a \$2.00 maintenance fee that is used for rehabilitation and repair of older transmission lines as needed. The fee generates approximately \$38,000/year. Preliminary discussions are being conducted to address the possibility of servicing the Highpoint section of the Borough.

General Information:

Authority Membership:	Boro Council
Service Areas (Municipalities)*	
California	Coal Center
California University of PA	
Number of Customers/EDU:	1,577
Average Monthly Rate per EDU:	\$47.00
Operations	\$ 20.00
Maintenance	\$ 2.00
Debt Service	\$ 20.00

Authority Information:

No. of Employees	2
Annual Budget	\$1,817,000
Total Debt	\$7,190,000

Sewer System:

Treatment	Y
Collection/Conveyance	Y

Treatment Plant:

California Sewage Treatment Plant	
Type of Treatment	sequencing batch reaction
Rate Capacity-New Plant	1.2 MGD
Available Capacity	700,000 MGD
Overload issues	N
Tap Restriction	N

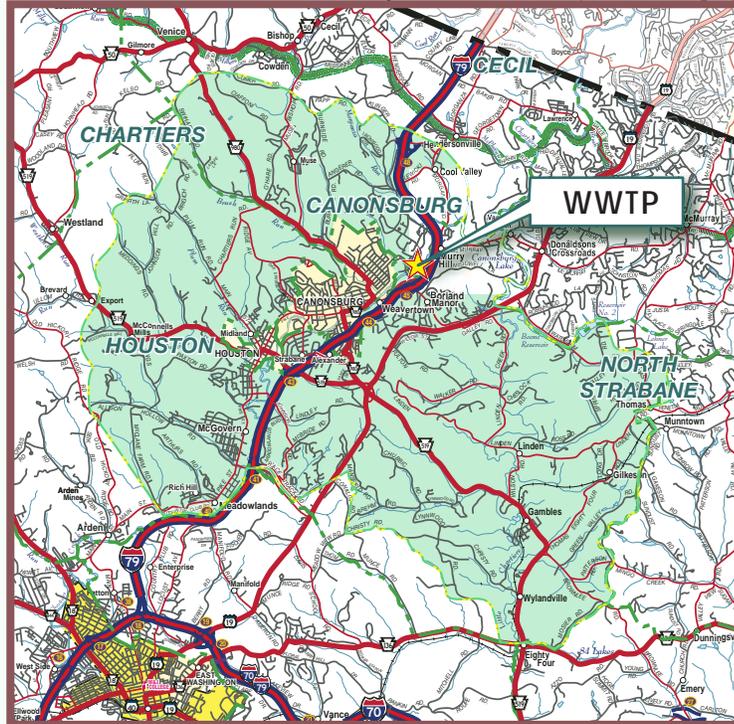
Canonsburg-Houston Joint Authority CHJA



2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

Canonsburg-Houston Joint Authority has been under hydraulic overload as defined by DEP since 1999 and has been under consent order to make repairs. Since 1999 CHJA has successfully completed \$13 million in capital improvements to eliminate I/I issues. The Authority has made major enhancements to the WWTP, interceptor improvement/upgrades and installed parallel interceptors to contain or eliminate wet weather flows.

CHJA has recently worked with its customers municipalities to update the Canonsburg-Houston Joint Authority Act 537 Plan (Dec 2010). The preferred alternative in the plan will eliminate any remaining CHJA wet weather issues while also building capacity for projected growth in the five municipality service areas.



Long Term Plan

The Long Term Plan, as described in detail in the Act 537 Plan is to upgrade the CHJA WWTP to an 8.4 MGD average flow and 28 MGD peak flow treatment plant. Upgrades to the plant are projected at \$40 million to expand all facilities to meet the 2028 projected flows.

Short Term

Phase I

Phase I of the WWTP Upgrade is to address the inadequacies inherent in the existing influent structures, grit collection and primary clarification processes. In Phase I the upgrades are being sized for 6 MGD average daily flow and 18 MGD peak daily flow. The Phase I improvements will include a raw sewage pump station, headworks equipment including screening and grit removal, primary clarifiers, and sludge thickener. The Phase I Project is estimated to cost \$22 million.

Project Schedule:

Planning Approved	2010
Design Finalized-Phase I	January 2013
Secure Funding	Winter 2014 -15
Construction	Fall 2013

Expenditures to Date:

Design/Permitting	\$950,000
-------------------	-----------

General Information:

Authority Membership	5
Canonsburg	4
Houston	1
Service Areas (Municipalities)*	
Canonsburg	Chartiers Township
Houston	North Strabane Township
Cecil Township	
Number of Customers/EDU:	14,181
Average Monthly Rate/EDU:	\$20.70
OM	\$ 16.30
Debt	\$ 4.40

Authority Information:

No. of Employees	14
Annual Budget	\$3,341,000
Total Debt	\$6,100,000

Sewer System:

Treatment	Yes
Collection/Conveyance	Yes

Treatment Plant:

Type of Treatment	Conventional
Rate Capacity	5.0 MGD
Available Capacity	1.0 MGD
Overload issues	wet weather
Tap Restriction	Yes

Canonsburg-Houston Joint Authority

68 East Pike Street
Canonsburg, PA 15317
724-743-3917

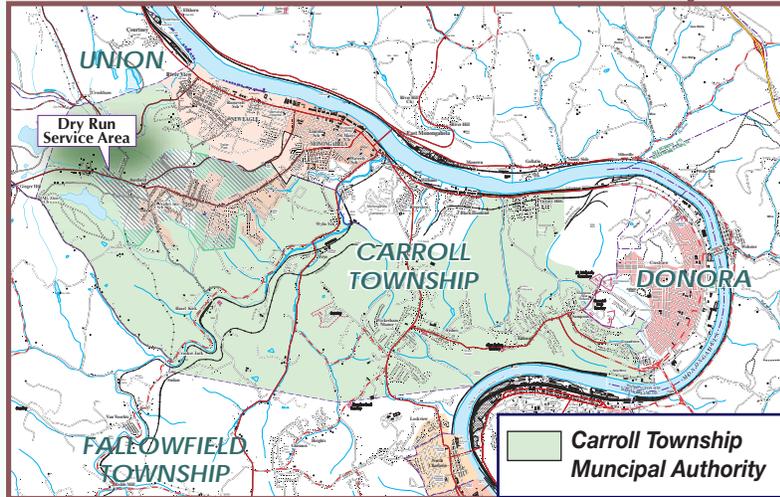
* Customer Municipalities are responsible for maintaining Municipal Conveyance systems and expansions.

Carroll Township Authority CTA



Overview Long Term Plan

The Carroll Township Authority (CTA) operates and maintains a collection system comprised of 1100 manholes, 42 miles of sanitary sewer collection/trunklines and 15 pump stations. Wastewater is conveyed from five service areas to both the Municipal Authority of the City of Monongahela (MACM) and the Mon Valley Sewage Authority (MVSA) treatment facilities.



CTA has been implementing a CAP to reduce SSO's to the MACM STP. Eliminating SSO through the lining of vitrified clay pipes and rehabilitating service connections will result in DEP removing the CAP and subsequent yearly tap restrictions.

Phase I of the three-phase project has been completed. Eliminating the SSO's in the overall project will reduce excessive wet weather treatment surcharges lowering the excessive \$68/month user rate.

In 2013 The Authority will be amending the CTA/ACT 537 to determine a preferred alternative for flow related to the expired MACM treatment Agreement. The Agreement with the MACM-STP expires in 2018. If no agreements are reached with MACM, the Dry Run Service Area flow will be diverted to the New Eagle WWTP for treatment (Borough of New Eagle Act 537 update 1996). Additional service areas will be transferred from the Monongahela Plant and added to the Mon Valley Sewage Authority. All capital improvement necessary to implement the Amended Act 537 Plan will be completed before the expiration of the current agreement.

Five Year Plan

Phase III - 2013

Phase III of the project involves the lining of an additional 5,556 LF of 8" sanitary sewer line in the Dry Run Service Area, 3,069 LF of lining in the Pigeon Creek Service Area, 1,736 LF of lining in the Victory Hill Service Area, and 7,558 LF in the Country Club Service Area. This project would also include the rehabilitation of 26 service connections. The Phase III project is estimated to cost \$940,000.

Project Schedule:

Planning Approved	2011
Toll 43 Rehabilitation Project	11/2012
Construction	Spring 2013

Expenditures to Date:

Design/Permitting	\$250,000
-------------------	-----------

General Information:

Authority Membership	5
Carroll	5
Service Areas (Municipalities)*	
Dry Run	Country Club
Pigeon Creek	Victory Hill
Number of Customers/EDU:	2500
Average Monthly Rate/EDU:	\$68.00
O & M	\$20.80
Treatment Cost	\$30.00
Debt Service	\$18.00

Authority Information:

No. of Employees	6
Annual Budget	\$2,500,000
Total Debt	\$10,044,275

Sewer System:

Treatment	No
Collection/Conveyance	Yes

Treatment Plant:

	MACM WWTP	MVSA WWTP
Type of Treatment	see MACM project sheet	see MVSA project sheet
Rate Capacity	.5 MGD	.125 MGD
Available Capacity		
Overload Issues		

Cecil Township Municipal Authority CTMA



2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

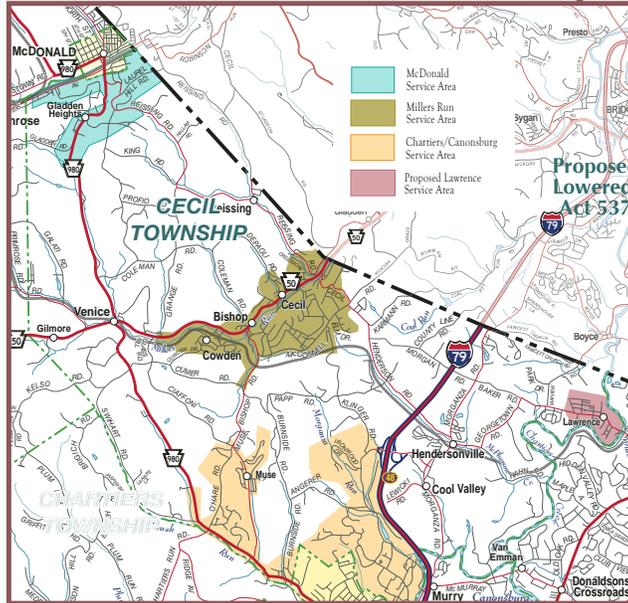
Cecil Township Municipal Authority

3599 Millers Run Road, Suite 104
Cecil, PA 15321
724-746-4848

The Cecil Township Municipal Authority (CTMA) owns and operates three sewage treatment plants and five conveyance systems consisting of eight pump stations and 50 miles of sewer interceptor/ collection lines providing sewage treatment to five service areas in Cecil Township.

Southpointe and Brush Run Service Area (BRSA) convey sewage to the Canonsburg-Houston Joint Sewage Authority-Treatment Plant (CHJSA-TP). Millers Run (MR), Teodori and Cherrybrook (T-C) Service Area's (SA) have treatment and conveyance. Millers Run SA has a different rate base.

Over the last 10 years the Authority has been implementing the Millers Run Act 537 Plan. Completed in 2008, the Millers Run Sewage Project (MRSP) initially provided sewage to 750 customers and 2 schools. The project eliminated 3 malfunctioning treatment plants owned by developments. Due to excessive debt related to the project, the Authority has developed a Rate Subsidy Plan which helps to maintain an affordable rate (\$50.00/month) in the Millers Run SA. The CTMA is continuing to improve the cost effectiveness and efficiency of the MRSA through creative financing and repair or replacement of old portions of the conveyance system to eliminate Infiltration/Inflow (I/I). Eliminating severe I/I, in the Fleehler system of the MR sewage collection system will open up capacity at the MRTP for future development.



EFFICIENCY PROJECTS – (2013-14 Construction)

- Sandlewood Drive Pump Station elimination to gravity line – Cost: \$362,086.
- Timber Crest Drive Pump Station elimination to gravity – Cost: \$128,713.

SHORT TERM

The east side of I-79 in Cecil Township has severe sewage issues related to high density residential areas which rely on malfunctioning on-lot systems or large community wildcat systems without the benefit of any formal treatment. The lack of sewage in this area is also a major impediment to future development in the I-79 corridor.

The primary areas are the Hendersonville/Cool Valley Area (190 EDU's) and the Lawrence Area (340 EDU's). The advancement of sewage in the Hendersonville area will need to be coordinated with the development of the Cool Valley Area. Planning for the entire area as a whole will help to create a financially viable project.

DESCRIPTION OF THE PROJECT

The proposed Lawrence Sewage Project involves the development of a Sewage Facilities Plan, Permitting and Construction of Facilities to service the Village of Lawrence. A Sewage Facilities Plan for the Lawrence area was initiated with the aid of a Washington County Local Share Grant. This Plan, however, was not finalized or adopted due to the lack of grant funds.

Project Schedule:

Act 537	1-2 years
Permitting	1 year
Construction	1 year

Project Funding:

In January 2013 the Authority has actively started to finalize the Act 537 Plan. The preferred alternative will need substantial grants in order to meet the goal of an average user rate of \$50/month and \$3,500.00 tap-in. Total project estimate cost \$6-7 million.

General Information:

Authority Membership:
Cecil 5

Service Areas (Municipalities)*
Southpointe SA, Millers Run SA, Brush Run SA, Teodori SA, and Cherry Brook SA

Number of Customers/EDU: 3,163

Average Monthly Rate/EDU: \$38.00

Millers Run SA	\$51.00
O & M	\$29.00
Debt Service	N/A

Authority Information:

No. of Employees	5
Annual Budget	\$2,650,289
Total Debt	\$13,951,084

Sewer System:

Treatment	Y
Collection/Conveyance	Y

Treatment Plant:

	Teodori SA	Millers Run SA	Cherry Brook SA
Type of Treatment	active sludge	active sludge	active sludge
Rate Capacity	.149 MGD	0.52 MGD	.09 MGD
Available Capacity	.08 MGD	.350 MGD	.075 MGD
Overload Issues	N	N	Y
Tap Restriction	N	N	N

Center-West Joint Sewage Authority CWJSA



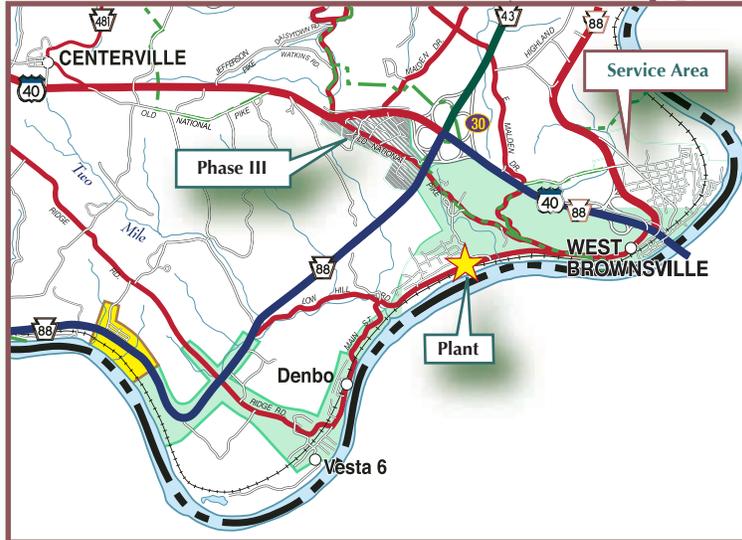
2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

Center-West Joint Sewage Authority

102 East End Road
Brownsville, PA 15417
724-785-5400

The Center-West Joint Sewage Authority (CWJSA) is a multi-municipal authority which provides sewage collection and treatment to various communities along the Monongahela River in the West Brownsville and Centerville Borough area. The Authority owns and operates a WWTP, 4 pump stations and 25 miles of line.

Over the last 10 years the Authority has been implementing the Centerville Borough Act 537 Plan (2002). The Plan is the basis for a multi-phased capital project which will provide sewage treatment to 7 different communities with approximately 1,100 residents and businesses. The majority of the residents had malfunctioning on-lot systems which typically would discharge untreated sewage directly into the Monongahela River.



The Authority has completed Phase I and II of the overall project and is actively advancing the final phase. Phase I which included the WWTP was completed in 2010 and the cost was over \$16,200,000. The \$4,500,000 Phase II project which extended the interceptor and conveyance system was completed in 2011.

Phase	EDU's	Communities Served
I	694	West Brownsville, Blainesburg, Denbo Heights
II	353	Vesta 6, Denbo, Malden, Vesta 7

The Phase III project will extend the collection system into Centerville Borough, picking up an additional 50 residences in Malden and Binnstown. The engineering and permitting will be completed in 2013, with construction in late 2014-15. The Authority has secured \$400,000 in Local Share Account (LSA) funding through Washington County and has actively been working with the USDA-RUS to secure the combination loan/grant to make the project affordable for the future customers. The initial application has been submitted to RUS in 2012 and will advance to a final application in 2013. The overall Phase III project cost is projected at \$1,824,525.

The communities of Centerville Borough and West Brownsville Borough are mature communities with a rich railroad, river and National Pike history. These assets were the guiding force in the historic development along the Monongahela River. The lack of public sewage had become a major hurdle preventing the revitalization of this area. The completion of the project has provided the remaining piece of infrastructure needed to redevelop and revitalize these communities. Complimented by access provided by the completion of the Mon-Fayette Expressway, the Borough should be able to attract, promote and support new and restored housing stock and economic growth. These improvements will also allow the communities to take full advantage of the recreational potential of the Mon River.

General Information:

Authority Membership:	7
Centerville Borough	4
West Brownsville Borough	3
Service Areas (Municipalities)	
Centerville Borough,	
West Brownsville Borough	
Number of Customers/EDU:	1,100
Average Monthly Rate/EDU:	\$55.00
O & M	\$20.00
Debt Service	\$35.00

Authority Information:

No. of Employees	1
Annual Budget/expenditures	\$170,000
Total Debt	\$5,857,000

Sewer System:

Treatment	Y
Collection/Conveyance	Y

Treatment Plant:

Type of Treatment	Center-West JSA TP*
Rate Capacity	Contract Plants
Available Capacity	MGD
Overload Issues	MGD
Tap Restriction	N
	N

Centerville Borough Sanitary Authority CBSA



RICHEYVILLE WASTEWATER TREATMENT PLANT AEROBIC DIGESTER IMPROVEMENTS PROJECT

The Centerville Borough Sanitary Authority provides sewage collection and treatment to Centerville Borough, Village of Richeyville and a portion of West Pike Run Township. The Authority also provides treatment for the Borough of Beallsville.

The Authority owns and operates the Richeyville Sewage Treatment Plant, 2 pump stations and 17 miles of conveyance system in the two municipalities. Beallsville Borough owns and maintains their conveyance system.

The majority of the conveyance system was built in the 1990's and has no major issues. The Village of Richeyville conveyance system was built in the 1920's. Minor wet weather issues do exist and are being addressed as needed. Reserve financing is being subsidized from yearly surpluses to address future capital maintenance and wet weather issues.

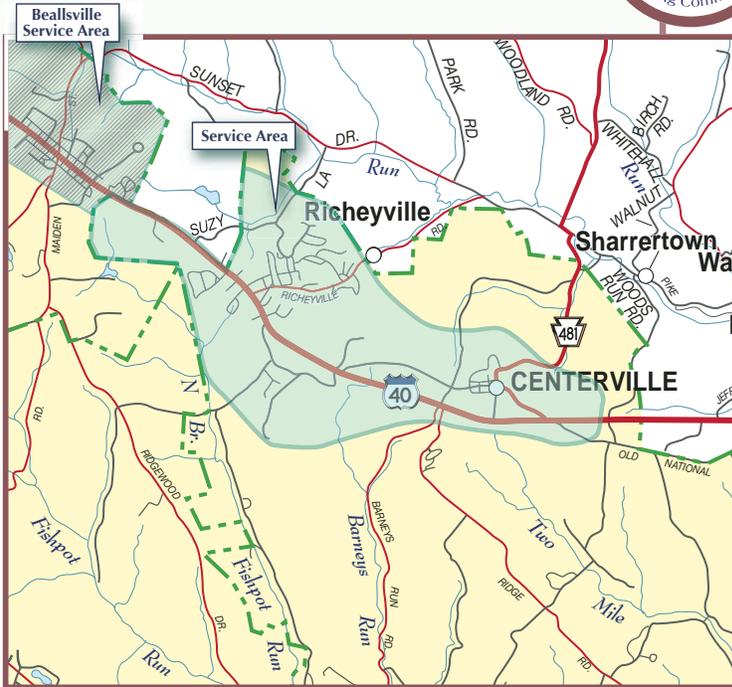
The Sequencing Batch Reactor (SBR) Wastewater Treatment Plant located in the Village of Richeyville was constructed in 1990 under PaDEP Water Quality Management Permit No. 6389402. The existing WWTP has adequately served the needs of the Authority and contributing municipalities since its inception.

Wastewater from the collection system enters the plant through a comminutor / manual bar screen chamber before entering the two (2) SBR basins. During the SBR decant phase, the effluent from the SBRs is conveyed to the ultraviolet unit for disinfection. The treated effluent is then discharged to Pike Run. Waste activated sludge generated in the SBRs is pumped to two (2) aerobic digesters. Digested sludge is then pumped to two (2) sludge drying beds for dewatering prior to final disposal at a landfill.

Submerged-type turbine aerators supply air to the two (2) aerobic digesters. The aerators are not working efficiently. Without the proper mixing, the sludge is becoming septic and emitting odors. Complaints have been received from residents in the area.

The Authority proposes to remove the existing aerators and install a coarse bubble diffused air system to eliminate the odors and provide a more efficient operation.

The total estimated project cost is \$514,300. Depending on the funding source (PENNVEST or GSR Bond Issue), the estimated debt service per customer ranges from \$4.28 to \$4.81 per month.



Scheduling
2014

Permitting
2014

General Information:

Authority Membership	5
Centerville Borough	
Service Area (Municipalities)*	
Richeyville and Centerville Area	
Beallsville Borough	
Number of Customers/EDU:	614
Average Monthly Rate/EDU:	\$ 32.00
O&M	\$ 30.00
Debt Service	\$ 2.00

Authority Information:

No. of Employees	3
Annual Budget	\$300,000
Total Debt	\$ 36,090

Sewer System:

Treatment	Y
Collection/Conveyance	Y

Treatment Plant:

Type of Treatment	Richeyville Sewage Treatment Plant
Rate Capacity	SBR
Available Capacity	170,000 GD
Overload issues	10,000 GD
Tap Restriction	N
	N

Chartiers Township Joint Authority CTJA

Sewage Provider: CHJA Treatment Plant
 Address: 68 East Pike Street, Canonsburg, PA
 Phone: 724-743-3917
 E-mail: chja.Manager@gmail.com
 Website: _____



WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

Chartiers Township owns and maintains a collection system comprised of 30 miles of interceptor and conveyance system. The Township conveys sewage to both the Canonsburg-Houston Joint Authority - Chartiers Creek interceptor and the WEWJSA interceptor for treatment.

The Township has been proactive in implementing the 2008 I/I Reduction Program to minimize wet weather issues throughout the older portions of the system. The entire CHJA Chartiers Creek interceptor service area had similar wet weather issues which have been greatly reduced or managed through similar programs by participating municipalities and the Authority. Chartiers Township implemented approximately \$100,000 per year of I/I repairs to their system.

In addition to the I/I Reduction program the Township has been developing and implementing a series of Act 537 Plans. The intent of the plans are two-fold:

1. Sewer Higher Density Areas of the township which have malfunctioning on-lot systems.
2. Provide for orderly construction and installation of public sewer as demand for public sewers increases.

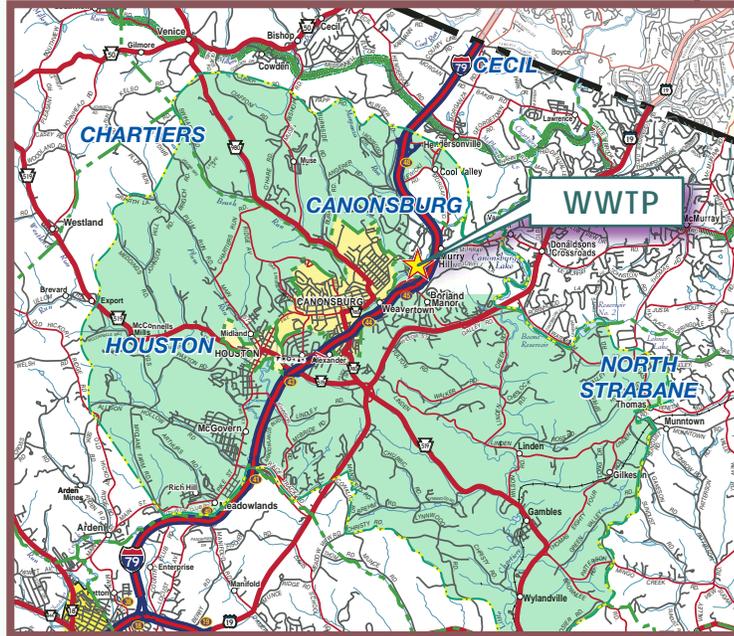
The plans identify the most cost effective way to provide sewer service to the areas while promoting economic development.

STUDY/PROJECT AREAS

1. Chartiers/Canton Route 18 Interceptor and collection system 266 EDU.
- Project was completed in 2012. Total Cost \$4.5 million.
2. Midland Area
- In 2010 the Township approved the "Plum Run Watershed Midland Act 537 Sewage Facilities Plan Update." Construction will start 2014. The majority of the 288 homes have malfunctioning septic systems or wildcat systems with direct discharge into Plum Run. The project will also provide sewage to the 25 acre Chartiers Industrial Park allowing for the build-out of the park. The project is in the CHJA Service Area. Total Construction cost is 2.8 million.
3. McClane Farm Road Area
- Similar to the Midland Area, the residents on McClane Farm Road have malfunctioning septic systems or direct discharge. The project will provide sewage to 60 EDU's (residents). The watershed's Act 537 Plan (McClane Farm Road Act 537 Sewage Facilities Plan Update) is under review (Fall 2013) by DEP. The project is in the WEWJSA Service Area. Total Project Cost \$1.2 million.

ESTIMATED SCHEDULE

Act 537	2014	Permitting	2014-2015
Construction	2015-2016		



Chartiers Township Joint Authority

General Information:

Authority Membership

NA

Service Areas (Municipalities)*

CHJA Service Area
WEWJSA Service Area

Number of Customers/EDU:

CHJA Service Area **1,822**
WEWJSA Service Area **265**

Average Monthly Rate/EDU:

CHJA SA **\$ 31.00**
WEWJSA SA **\$ 33.00**

Authority Information:

No. of Employees 2 Road Streets Dept
Annual Budget \$
Total Dept. \$

Sewer System:

Treatment N
Collection/Conveyance Y

Treatment Plant: CHSA WWTP WEWJSA STP

Type of Treatment
Rate Capacity NA
Available Capacity NA
Overload issues NA
Tap Restriction NA

68 East Pike Street
Canonsburg, PA 15317
724-743-3917

* Customer Municipalities are responsible for maintaining Municipal Conveyance systems and expansions.

Claysville-Donegal Sewage Treatment Plant and Service Area



2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

Claysville-Donegal Sewage Treatment Plant
and Service Area

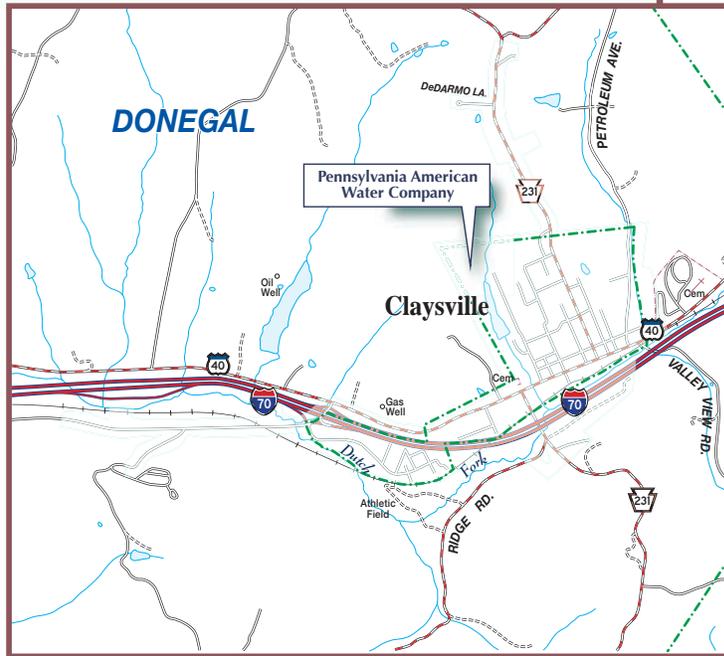
On December 6, 2006, Pennsylvania American Water Company (PAWC) entered into a Purchase Agreement with Claysville/Donegal Joint Municipal Authority (CDJMA) to purchase the assets of the CDJMA wastewater system. As part of the sale, PAWC entered into a Consent Order and Agreement (COA) dated July 31, 2008 with the PA DEP.

The PAWC provides sewage conveyance and treatment for all of Claysville Borough and portions of Donegal Township. The system consists of 60,000 L.F. of conveyance system, 1 pump station and the Claysville/Donegal Sewage Treatment Plan.

To implement the COA, PAWC developed a series of Corrective Action Plans (CAP's) to address Sanitary Sewage Overflow (SSO) at the treatment plant caused by wet weather issues and deterioration throughout the system.

Over the last 5 years PAWC has diligently worked through the requirements of the COA/CAP's to minimize I/I within the collection system. The PAWC has completed over \$950,000 of the project. The work performed has been effective at lessening the frequency and volume of the SSO overflows. However, based on analysis of overflow events within the last year as they related to rainfall amounts, the plant is still likely to have an overflow event on a frequent basis, possibly yearly.

PAWC is actively developing an "Act 537 Planning Study" which will document the background and need for the pump station to be upgraded and a wet weather storage tank at the Claysville/Donegal Sewage Treatment Plant. Total Estimated Construction Cost is \$825,000.



Schedule -

Act 537 Approval --- Fall 2013 - Pending
Permitting --- Spring 2014

Capital Maintenance Program

- upgraded to system
- yearly dollar amount

General Information:		Information:	PA America Water Company
Provider Membership		No. of Employees	3
PA American Water Company		Annual Budget	\$ N/A
Service Area (Municipalities)*		Total Debt	\$ N/A
Claysville Borough		PA American Wastewater Tariff	
Donegal Township		Sewer System:	
Number of Customers/EDU:	500	Treatment	Y
Average Monthly Rate/EDU:	\$ 47.00	Collection/Conveyance	Y
		Treatment Plant:	Claysville-Donegal STP
		Type of Treatment	RBC
		Rate Capacity	160,000 GD
		Available Capacity	10,000 GD
		Overload issues	Y
		Tap Restriction	

300 Galley Road
McMurray, PA 15317
724-743-3131

Donegal Township

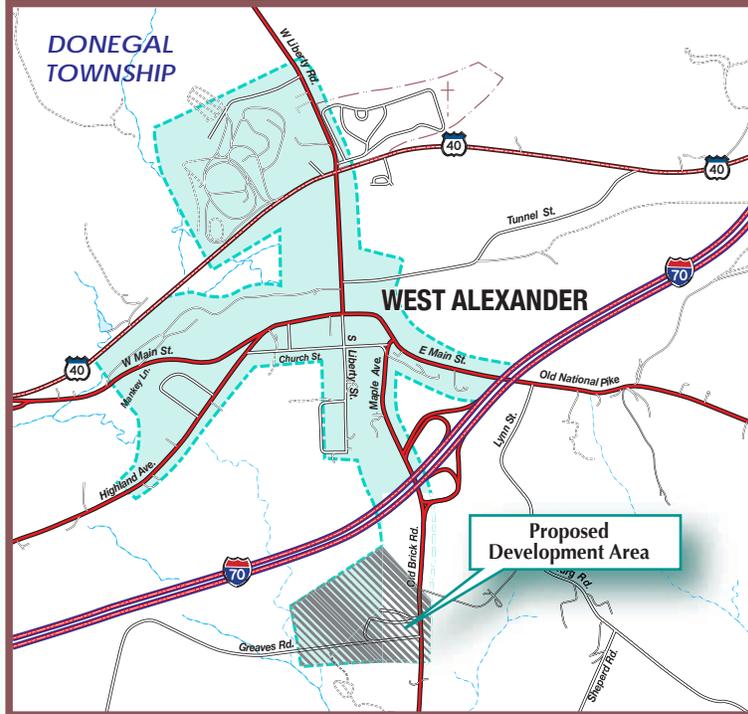


In 2010, West Alexander Borough merged into Donegal Township. Donegal Township took control of the existing West Alexander Public Sanitary System which services over 289 customers in West Alexander and Donegal. The Township owns and maintains the sewage treatment plant, three pump stations and 50,000 L.F. of collection system.

The overall system was built in 2004 at a cost of \$3,767,643. The project was financed through PENNVEST. While the system is currently functioning well, the township initially had to secure \$122,000 to complete emergency repairs and upgrades.

The improvements bring the current public sanitary system into compliance with its intended design and permitted capacity. This allows for the capacity for the current customers, and for future business development leading to job creation in the West Alexander Village Targeted Area of Investment (TAI), as identified in the Washington County Comprehensive Plan 2008.

In 2010, approximately 700 L.F. of two-inch sanitary sewer force main was added to serve three newly-created commercial parcels along Greaves Road on the Southern side of Exit 1 on both sides of the interstate for future development.



General Information:

Authority Membership:	1
Donegal Township	
Service Area (Municipalities)	
Donegal Township	
Number of Customers/EDU:	289
Average Monthly Rate/EDU:	\$31
O&M	\$ 25
Debt Service	\$ 6

Authority Information:

No of Employees	3
Annual Budget	
Total Debt	

Sewer System:

Treatment	Y
Collection/Conveyance	Y

Treatment Plant:

Type of Treatment	Donegal Township Extended Aeration
Rate Capacity	0.05 MGD
Available Capacity	0.025 MGD
Overload Issues	N
Tap Restrictions	N

East Bethlehem Township Municipal Authority EBTMA



2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

 East Bethlehem Township Municipal Authority

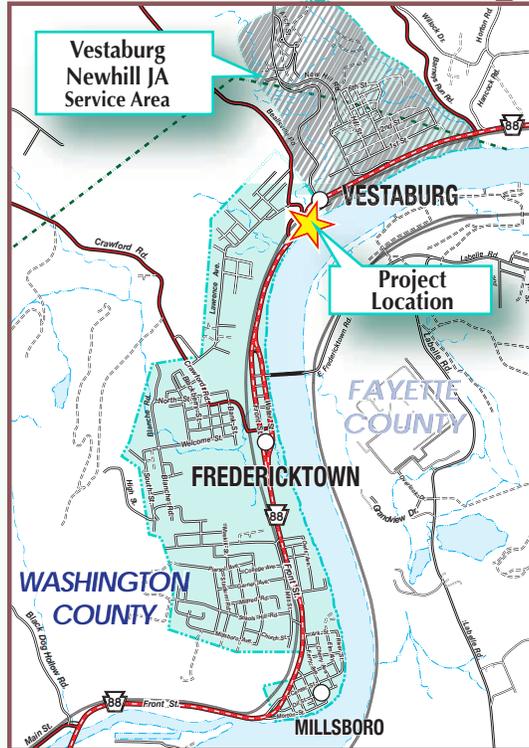
 522 Front Street, P.O. Box 136
 Fredericktown, PA 15333
 724-377-2511

Long Term Plan

The East Bethlehem Township Municipal Authority (EBTMA) provides sewage collection and treatment to Millsboro, Fredericktown and North Fredericktown. The Authority also provides treatment for Green Cove Yacht Club and Vestaburg-New Hill Joint Authority which provides sewage collection and conveyance for Vestaburg and Newhill areas.

The Authority owns and operates the EBTMA-WWTP, 17.18 miles of collection and conveyance system and 3 pump stations. The overall system was constructed in 2001 at a cost of \$10,547,700.

The sewer system is functioning as designed. The debt associated with the initial project is \$5,500,000. This is substantial for an Authority of this size. Monthly rate is \$63.00/month which is not affordable for many of the residents in this area. The Authority will continue to aggressively pursue grants and creative financing to lower the debt associated with the 2001 project.



Short Term Project

The Wastewater Treatment Plant (WWTP) was constructed in 1995 and utilized a coarse bubble aeration system for its Sequencin Batch Reactors, (SBR), which system was state-of-the-art at the time.

In 2013, the Authority's SBR system went septic. The Authority was unable to determine the exact cause of this year's upset condition. It is believed that it was a result of a combination of toxicity in the raw sewage received at the WWTP, wide ranging flows and insufficient aeration. The Pennsylvania Department of Environmental Protection (PaDEP) provided a verbal recommendation to the Authority to upgrade to the SBR aeration system from coarse bubble to fine bubble diffusers.

The project involves the replacement of the coarse bubble diffusers with fine bubble diffusers in the 2 SBR aeration tanks, which will greatly improve the oxygen transfer efficiency, improve the treatment process and aid the Authority in meeting its NPDES permit limits.

Project Schedule:

Design/Permitting	2013-14
Construction	2014-15

The Authority spends \$65,000/year on capital maintenance.

General Information:

Authority Membership:	5
East Bethlehem Township	4
Green County Yacht Club	1
Service Area (Municipalities)	
Vestaburg-New Hill Service Area	
Number of Customers/EDU:	725
Average Monthly Rate/EDU:	\$63.00
O&M	\$ 27.00
Debt Service	\$ 35.00

Authority Information:

No of Employees	1 Full Time 2 Part Time
Annual Budget	\$ 20,000
Total Debt	\$5,500,000

Sewer System:

Treatment	Y
Collection/Conveyance	Y

Treatment Plant:

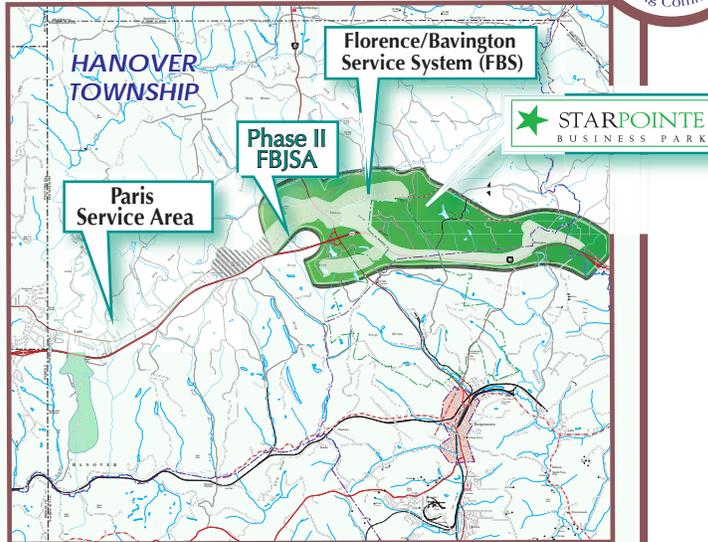
Type of Treatment	Coarse Bubble Aeration
Rate Capacity	0.35 MGD
Available Capacity	MGD
Overload Issues	N
Tap Restrictions	N

FBTMA-WWTP

Hanover Township Sewer Authority HTSA



The Hanover Township Sewer Authority (HTSA) owns and operates sewage conveyance systems in two service areas within the township. The Paris sewer system consists of two pump stations and 14.25 miles of sewer mains that convey sewage to the Weirton treatment plant in WV. The Florence and Bavington system (FBS) consists of one pump station and 6.6 miles of sewer main conveying sewage to the HTSA Wastewater Treatment Plant in Bavington. The FBS services two regional entertainment attractions (Pepsi-Cola Roadhouse and First Niagara Pavilion) as well as the 1100 acre Starpointe Business Park.



Since 2005, The Authority has been implementing the Act 537 Plan constructing the above-mentioned conveyance systems. Even with securing over \$8 million in State and Federal Grants, the customer's monthly bill ranges between \$75-80/EDU, one of the highest in the county. The Authority will be relying on increasing the customer base through the development of Starpointe and infill development to lower the monthly rates. Long term planning will be needed to ensure the STP continues to have the capacity needed for the planned development at Starpointe.

Plant Expansion Schedule
as per development
& permitting

Cost
\$2,000,000

The Authority is beginning the planning for two extensions along Whipper Dr. (Paris) and Steubenville Pike (Bavington). These two extensions will total 43 EDU's, seven in Paris and 35 in Bavington. Planning will be completed in 2013. Currently no funding is in place. (Grants and loans will have to be secured to advance the projects).

Project Funding:
Total Project Cost **\$1,200,000**

General Information:

Authority Membership

Hanover 5

Service Areas (Municipalities)*

Paris SA (PSA) 5

Florence Bavington SA (FBSA)

Number of Customers/EDU:

PSA 650

FBSA 413

237

Average Monthly Rate/EDU:

	FBSA	PSA
	\$78	\$75
O & M	\$32	\$24
Debt Service	\$43	\$51

Authority Information:

No. of Employees 1.5

Annual Budget \$700,000

Total Debt \$10,044,275

Sewer System:

	FBSA	PSA*
Treatment	Yes	No
Collection/Conveyance	Yes	Yes

Treatment Plant: Hanover Township Sewage Authority WWTP

Type of Treatment sequencing batch reactor

Rate Capacity .180 MGD

Available Capacity .04 MGD

Overload issues No

Tap Restriction No

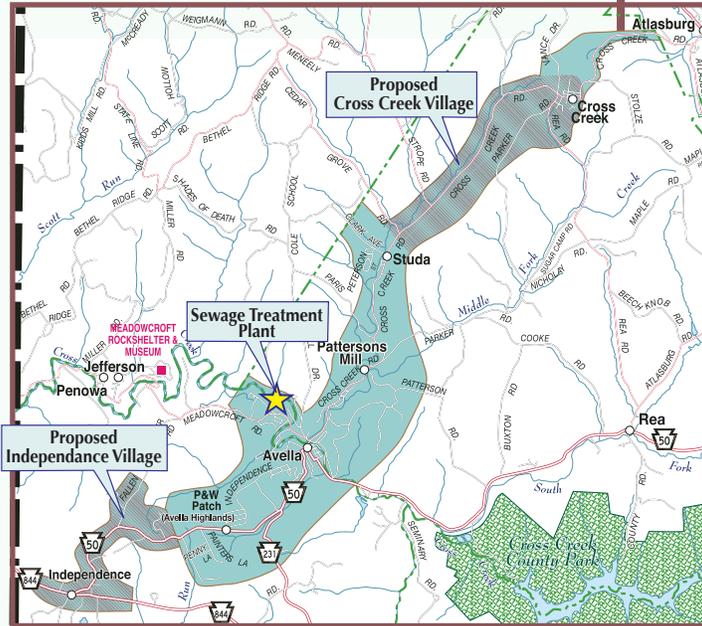
* PSA treatment is conveyed to the Weirton Sewage Treatment Plant

Independence-Cross Creek Joint Sewage Authority I-CCJSA



The Independence-Cross Creek Joint Sewage Authority (I-CCJSA) was created by Independence Township and Cross Creek Township for the purpose of providing sanitary sewage service in the two municipalities. A comprehensive sanitary sewer system has been completed for much of the developed areas in Independence and Cross Creek Townships. The Authority owns and operates one pump station and approximately 20 miles of sewer conveying sewage to their STP. The Authority is in the process of implementing their 2010 Act 537 Plan.

Phase I which was recently completed, constructed the conveyance system and STP for the Avella service area. The project received \$4,988,000 in H2O Grant which allows the Authority to advance an additional phase to provide sewage to the Village of Cross Creek.



The Villages of Cross Creek and Independence were not included in the original project for reasons of cost/affordability. There are 136 homes (Village of Independence 103 and Village of Cross Creek 33) which presently are utilizing either malfunctioning on-lot septic systems or in some cases discharging sanitary waste directly to streams, ditches or wildcat sewers.

Engineering/permitting is being prepared. The Authority is actively pursuing grant money in order to make the project financially feasible. Two million (\$2,000,000) in additional grants will enable the Authority to charge a \$55/month rate to its customers. The Authority has secured \$585,000 PA H2O funds, \$105,000 tap-in Fees and will apply for PENNVEST in 2013 for additional funds.

PROJECTS	EDU's	PROJECT COST
Village of Independence	103	\$3,288,900
Village of Cross Creek	33	\$2,114,100

General Information:

Authority Membership:	7
Independence	4
Cross Creek	3

Service Areas (Municipalities)*

- Independence Township
- Cross Creek Township

Number of Customers/EDU: 611

Average Monthly Rate/EDU:	\$55.00
O & M	\$27.20
Debt Service	\$27.80

Authority Information:

No. of Employees	2
Annual Budget	\$346,000
Total Debt	\$3.6 million

Sewer System:

Treatment	Y
Collection/Conveyance	Y

Treatment Plant:

Type of Treatment	Extended Aeration
Rate Capacity	.354 MGD
Available Capacity	.118 MGD
Overload Issues	N
Tap Restriction	N

Lower Ten Mile Joint Sewage Authority LTMJSA

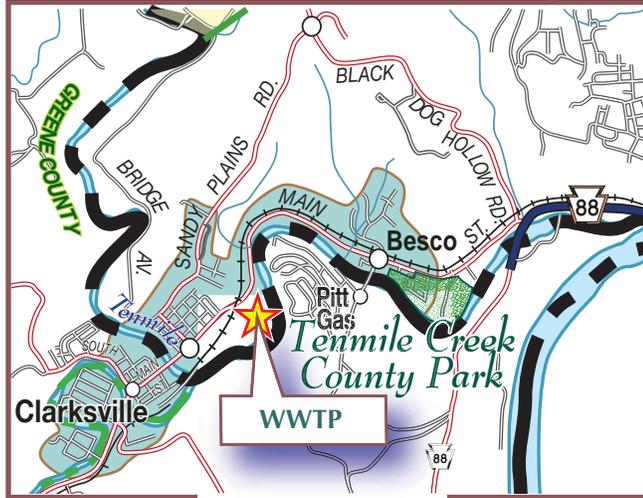


2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

Lower Ten Mile Joint Sewage Authority

144 Chartiers Road,
Jefferson, PA 15344
724-883-2743

The Lower Ten Mile Joint Sewage Authority (LTMJSA) is a multi-county sewage authority which provides sewage conveyance and treatment for five municipalities in Washington and Greene County. The Authority owns and operates a WWTP in each county - Williamstown Wastewater Treatment Plant (WWTP); Washington County, Mather WWTP; Greene County - as well as nine pump stations and ten miles of interceptor/conveyance. Six (6) pump stations and two miles of interceptor/conveyance system are in Washington County associated with the Williamstown WWTP.



The Authority and contributing municipalities have been implementing the LTMJSA official Act 537 Plan Update (revised September 2002). The Plan was developed to mitigate hydraulic and organic overload issues at both WWTPs as well as evaluate extending sewers in the Williamstown and Mather service areas.

After completing Phase I, which involved various line extensions, the Authority has advanced Phase II through permitting, secured funding, and will be advancing construction in 2013. The overall Phase II project is \$9,000,000 with improvements to both WWTPs and service areas. The Phase II Williamstown service area portion of the project is a \$3,000,000 project, consisting of the extensions of gravity sanitary sewer systems within the service area and expansion of the Williamstown WWTP from 0.12 MGD to 0.185 MGD. The Phase II project will alleviate hydraulic and organic overload issues, and is expected to bring both plants into compliance with the PADEP Chapter 94 rules and regulations. Becoming compliant with Chapter 94 will remove tap restrictions and allow growth in the service areas.

Phase II Secured Funds

Washington County LSA Grant	\$ 400,000	Greene County Grant	\$ 150,000
USACOE Grant	\$1,550,000	H2O Grant	\$4,000,000
RUS Loan (3.25% for 40 years)	\$2,739,950		

The Act 537 Plan Update also identifies various other line extensions and system recommendations that are not currently financially viable. The Authority will continue to explore funding alternatives to advance additional recommendations in the Plan. The financing of Phase II will raise monthly rates to \$55.00/EDU. Any additional project will have to be grant-based due to the excessive projected monthly rate.

Potential Project Areas

West Bethlehem Bessco Area	EDU	55	Cost	\$2,000,000
Sandy Plains Line Extensions				
Mathers Service Area Line Extensions				

General Information:

Authority Membership:		10	
Morgan Township	2	E. Bethlehem Township	2
Clarksville Borough	2	Jefferson Borough	2
Jefferson Township	2		
Service Areas (Municipalities)*			
Braden, Burson, Pitt Gas, Chartiers, Williamstown, Part of Greene & Washington counties			
Number of Customers/EDU:	1,450		
Average Monthly Rate/EDU:			
2013 Projected Phase II rate			
EDU	\$45.00	\$55.00	
O & M	\$35.00	\$35.00	
Debt Service	\$10.00	\$20.00	

Authority Information:

No. of Employees	4
Annual Budget	\$833,700
Total Debt	\$173,358

Sewer System:

Treatment	Y
Collection/Conveyance	Y

Treatment Plant:

	Williamstown WWTP	Greene Co./ Mathers WWTP
Type of Treatment		Lagoon
Rate Capacity	.2 MGD	.12MGD
Available Capacity	.12	.185 MGD
Overload Issues		Y/N
Tap Restriction		N

Marianna-West Bethlehem Joint Sewage Authority



2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

Marianna-West Bethlehem
Joint Sewage Authority

P. O. Box 428
Marianna, PA 15345-0428
724-267-4375

The Marianna-West Bethlehem Joint Municipal Authority (MWBJMA) provides sewage collection and treatment to portions of Marianna Borough and portions of West Bethlehem Township that are in close proximity to the Borough. The Authority owns and operates a WWTP, two pump stations and approximately 25 miles of conveyance system in the two municipalities.

The MWBJSJ-WWTP was constructed in 1988 and is in good condition. The Authority has been in the process of replacing and up- grading original mechanical equipment at the plant. The work will continue as needed.

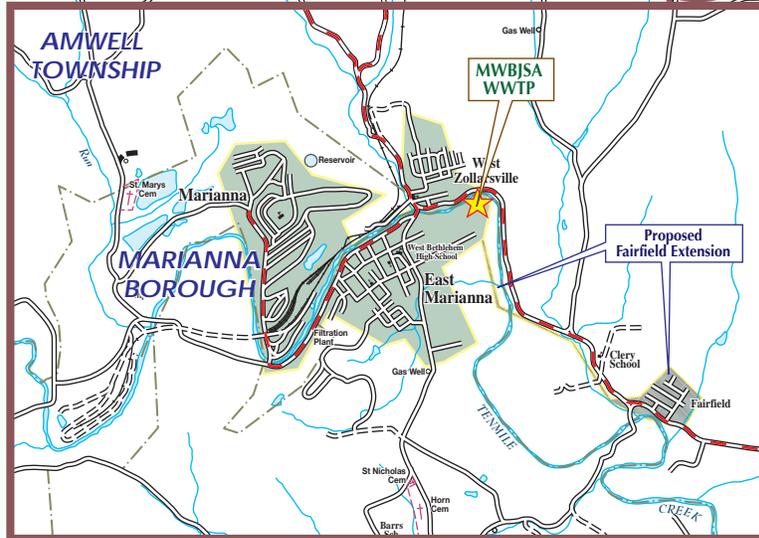
The majority of the West Bethlehem conveyance system is relatively new and does not need system improvements. Portions of the older conveyance system (particularly in the Borough) are in need of repair/replacement. No planning or studies have been completed to determine the extent of needed improvements. The Authority's yearly expenditures for capital maintenance average around \$20,000.

A system study of the old Marianna Service Area will be needed to determine the extent of system upgrades and repairs. The sewer lines are over 90 years old and have been maintained on an as-needed basis. The study will identify major issues related to the conveyance system and develop a long term plan (LTP) to repair and replace deficient sections of the conveyance system.

The 2014 Comprehensive Plan for Marianna Borough and West Bethlehem Township identifies 2 village areas which are in need of public sewage. The villages of Fairfield and Zollarsville have a high rate of malfunctioning on-lot systems or direct discharge into local streams. No Act 537 planning has been started for those projects.

Estimated Cost \$10,000 to \$15,000 for a feasibility study
Fairfield 50 EDU's.

The existing sewers could be extended to the village areas. The projects would be very costly and will need extensive grant assistance to create a financially viable project.



General Information:

Authority Membership: 5
Marianna 2
West Bethlehem 3

Service Areas (Municipalities)*

Marianna Borough
West Bethlehem Township

Number of Customers/EDU: 430

Average Monthly Rate/EDU: 38
O & M 38

Authority Information:

No. of Employees*
Annual Budget \$176,000
Total Debt \$

Sewer System:

Treatment Y
Collection/Conveyance Y

Treatment Plant: MWBJSJ-STP

Type of Treatment
Rate Capacity .2 MGD
Available Capacity
Overload Issues
Tap Restriction

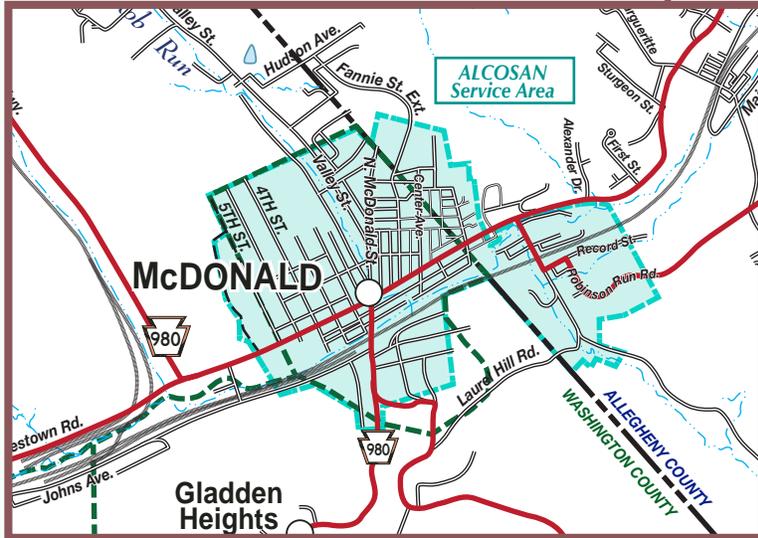
* NOTE: MWBJSJ does not have direct employees. Their system is serviced and maintained through H&H Controls.

McDonald Sewage Authority MSA



2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

The McDonald Sewage Authority (MSA) is a Multi-County sewage authority which operates and maintains the collection system for McDonald Borough. MSA conveys sewage to the Alcosan interceptor and ultimately to the ALCOSAN Treatment Facility. The collection/conveyance system is comprised of 14.3 miles of sewer line of which 10.4 miles are in Washington County.



The Authority has been implementing a "Consent Order and Agreement (COA)" signed in 2004. The COA calls for separating the sanitary sewer from the existing combined sewer system and eliminating the Combined Sewer Overflow (CSO). The final phase of the combined sewer separation project will be completed in 2014. The project replaces 30,000 linear feet of 60-80-year-old sanitary sewer and associated manholes throughout the Borough. The existing combined sewer will be converted to dedicated storm sewer and ownership will be transferred to the Borough. The total final phase cost of the combined sewer separation project is \$5,180,000.00.

The result of this project includes the complete separation of the sanitary and storm sewer systems in the Borough of McDonald, the elimination of all CSOs and eight diversion structures, and the reduction of groundwater inflow and infiltration (I/I) into the Allegheny County Sanitary Authority's interceptor sewer. The proposed project will meet the requirement of the COA entered into by the Authority with the Pennsylvania Department of Environmental Protection and the Allegheny County Health Department.

McDonald Sewage Authority

General Information:

Authority Membership:

McDonald Borough

Service Areas (Municipalities)*

McDonald Borough

Number of Customers/EDU:

992

Average Monthly Rate/EDU:

\$51.00

O & M

\$27.00

Debt Service

\$24.00

Authority Information:

No. of Employees	1
Annual Budget	\$762,462
Total Debt	\$ 5,027,000

Sewer System:

Treatment	N
Collection/Conveyance	Y

Treatment Plant:

ALCOSAN

Type of Treatment	
Rate Capacity	.250 MGD
Available Capacity	.50 MGD
Overload Issues	NA
Tap Restriction	NA

151 School Street,
McDonald, PA 15059
724-926-0133

Mid Mon Valley Water Pollution Control Authority MMVWPCA



2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

Mid Mon Valley Water Pollution Control Authority

1 Anderson Street, P. O. Box 197
Allenport, PA 15412-0197
724-326-4491

The Mid Mon Valley Water Pollution Control Authority (MMVWPCA) is a multi-municipal joint authority which provides sewage treatment for the Boroughs of Elco, Roscoe, Stockdale and Allenport. The conveyance system consists of 5.5 miles of interceptor, six pump stations, eleven CSO and the STP. The four municipalities own and maintain their own collection systems.

In 2007, the Authority completed two projects that were designed to eliminate various wet weather issues that resulted in raw sewage being discharged into the Monongahela River. The primary \$1.8 million dollar project replaced deteriorating sections of the collection/interceptor line, upgraded pump stations and made related sewage plant improvements. The project eliminated wet weather by-passes.

The next phase of the project will consist of upgrading or replacing the five pump stations and 11,500 LF of interceptor. The project is currently in the planning phase and will need substantial grants to advance. Total project cost \$3,450,000. The project will have a direct impact on the 202-acre Allenport Mill Redevelopment Project. Coordinating and incorporating the wastewater needs of the Mon River Industrial Park into the next phase of the project will help make it financially viable, optimizing economic and wastewater grant potential.

Additionally, the Authority implemented a \$400,000 combined sewage separation project. Constructing new storm sewers eliminated stormwater from the sewage system which contributed to wet weather overloading of the Authority's sewer system.

The Authority is continuing to implement a Corrective Action Plan (CAP) to eliminate I/I from the system. As discussed, the primary emphasis has been placed on wet weather issues related to the deficient conveyance system. The Authority is in the process of working with customer municipalities to eliminate I/I and SSO from their system and has initiated a capital maintenance program to facilitate repairs and improvements.

Additional studies and infrastructure improvements will be needed to determine the extent of issues related to the 4 municipal conveyance systems. The systems are over 40 years old and have been maintained on an as-needed basis. The study will identify major issues related to the conveyance system and develop a long-term control plan to repair or replace deficient sections of the conveyance system.



General Information:

Authority Membership:	7
Allenport	3
Elco	1
Roscoe	2
Stockdale	1

Service Areas (Municipalities)*
Allenport, Elco, Roscoe and Stockdale Boroughs

Number of Customers/EDU:	1,001
Average Monthly Rate/EDU:	\$26.27
O & M	\$15.15
Debt Service	\$11.52

Authority Information:

No. of Employees	2
Annual Budget	\$398,350
Total Debt	\$1,617,191

Sewer System:

Treatment	Y
Collection/Conveyance	Y

Treatment Plant:

Type of Treatment	Extended Aeration
Rate Capacity	.70 MGD
Available Capacity	.30 MGD
Overload Issues	N
Tap Restriction	N

Midway Sewage Authority MSA



2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

Midway Sewage Authority

P. O. Box 600
Midway, PA 15060
724-796-5936

The Midway Sewage Authority (MSA) operates and maintains the MSA Wastewater Treatment Plant, four pump stations and 30 miles of collection and trunk lines. In 2006 the Authority completed a project which provided sewage facilities to Midway Borough, portions of Cecil, Mt. Pleasant, Robinson and Smith Townships. The initial construction completed the collection sewer, pump station, interceptors and sewage treatment plant for the previously unsewered area.

The next phase of implementing the Authority's Act 537 Plan is to extend service into areas which have a high rate of failing on-lot septic systems. These areas are not financially feasible without the infusion of large amounts of grant monies or the development of public/private partnership related to economic development opportunities.

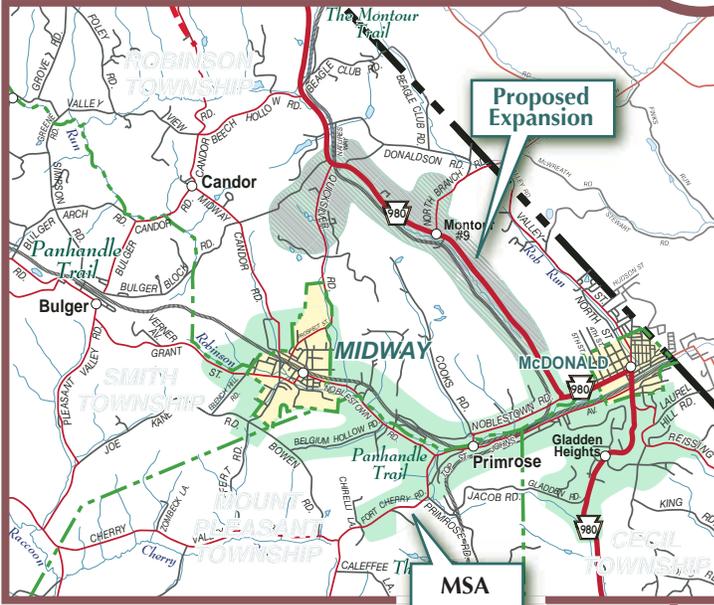
The primary area is the State Route 980 corridor. The proposed project would involve the extension of approximately 2.5 miles of collection/interceptor and a pump station. The project will provide sewer service to 100 residents with failing septic systems, Quicksilver Golf Course facilities and 5 other existing businesses in the Route 980 corridor. The total project cost is estimated at \$3,894,442.

Additionally, the proposed Southern Beltway (B-2 Alternative) of the Pennsylvania Turnpike Mon/Fayette Expressway Project (U.S. Route 22 to I-79) which will be located in the general vicinity of State Route 980, will provide increased access to developable reclaimed strip mine areas.

The project is consistent with the recently adopted Robinson Township Comprehensive Plan Update. In an effort to preserve the agricultural and rural character of the township, the plan is to direct infrastructure development extensions to the strip mined non-greenfield areas of the Township.

Project Schedule

Act 537 Approved -- The project will advance when additional private or public funds are secured.



General Information:

Authority Membership:		5
Cecil	1	Robinson
Midway	1	Smith
Mt. Pleasant	1	

Service Areas (Municipalities)*

Midway and Portions of:
Cecil, Mt. Pleasant, Robinson and Smith Township

Number of Customers/EDU:	1,400
Average Monthly Rate/EDU:	\$56.00
O & M	\$25.00
Debt Service	\$31.00

Authority Information:

No. of Employees	3
Annual Budget	\$999,000
Total Debt	\$8,432,641

Sewer System:

Treatment	Y
Collection/Conveyance	Y

Treatment Plant:

MSA - WWTP	
Type of Treatment	SBR
Rate Capacity	0.5 MGD
Available Capacity	0.3 MGD
Overload Issues	N
Tap Restriction	N

Mon Valley Sewage Authority MVSA



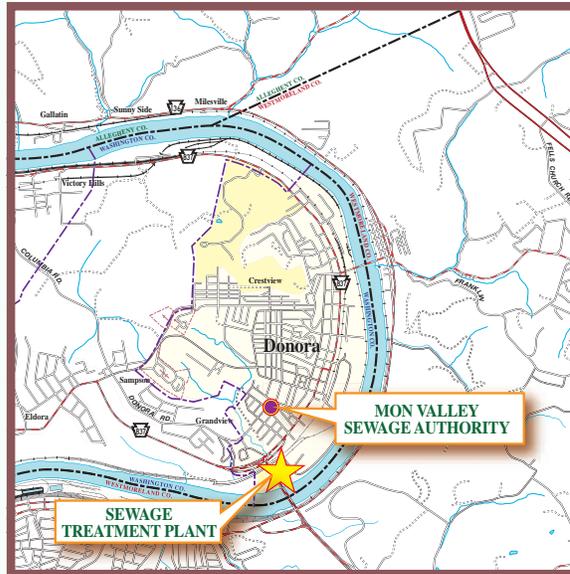
2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

Mon Valley Sewage Authority

20 S. Washington Street,
Donora, PA 15033
724-379-4141

The Mon Valley Sewage Authority (MVSA) is a multi-county/municipal joint sewage authority providing sewage treatment for the Borough of Donora, part of Carroll Township and City of Monessen, Westmoreland County. The conveyance system consists of 2 major interceptors, 28,100 feet of line, 17 Combined Sewage Overflow (CSO), 6 pump stations, and the STP. The 3 municipalities own and operate their own collection systems.

The Mon Valley Sewage Authority's CSO Long Term Control Plan (LTCP) was approved by DEP on April 30, 2008. This Plan outlined 3 phases to be implemented over a 12 year time period with a 2013 project cost of \$5,000,000. Completion of the Plan will bring the Authority into compliance with EPA's National CSO Policy by eliminating or minimizing the impacts of 17 CSO's (All service sheds).



Donora Service Area Active Project Donora Sewage Separation

This project will eliminate and minimize the impacts of 17 CSO's throughout the Donora Service Area achieving compliance with the EPA CSO Control Policy.

Total Cost - \$3,600,000 **Permitting/Service funds** - 2014 **Construction** - 2014-16.

Active Phase (All Service Areas)

Phase I: Facilities constructed as part of Phase I of the Authority's CSO-LTCP include approximately 10,000 LF of sanitary gravity sewer, 12,000 LF of sanitary force main, a 3.0 MG equalization tank and upgrades at 5 pump stations. The total estimated year 2007 project cost exceed \$13,000,000.

Phase II: Facilities to be constructed as part of Phase II of the Authority's CSO-LTCP include a 44 MGD CSO satellite treatment facility providing primary treatment and disinfection as well as 21,000 feet of sewer separation in 10 separate sewer sheds. The total estimated year 2013 project cost exceeds \$20,000,000.

Schedule: **Engineering/Permitting** - 2013 **Secure Funding and Construction** - 2015

Phase III: Facilities to be constructed as part of Phase II of the Authority's CSO-LTCP include 16 MGD, 17 MGD and 52 MGD CSO satellite treatment facilities providing primary treatment and disinfection as well as 5 additional CSO coarse screening treatment facilities. The total estimated year 2007 project cost exceeds \$20,000,000.

Schedule: **Engineering/Permitting** - 2018 **Secure Funding and Construction** - 2020

General Information:

Authority Membership:	5
City of Monesson	3
Borough of Donora	2

Service Areas (Municipalities)	
Donora	City of Monesson
Portions of Carrol Township	

Number of Customers/EDU:	5,900
Average Monthly Rate/EDU:*	\$43.00
O & M	\$28.76
Debt Service	\$14.24

* projected 2020-above \$85 without grant

Authority Information:

No. of Employees	15
Annual Budget	\$3,395,000
Total Debt	\$14,500,000

Sewer System:

Treatment	Y
Collection/Conveyance	Y

Treatment Plant:

Type of Treatment	Aerobic Contact Stabilization
Rate Capacity	4.96 MGD
Available Capacity	2.23 MGD
Overload Issues	N
Tap Restriction	N

Mount Pleasant Township Municipal Authority MPTMA



2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

Mount Pleasant Township Municipal Authority

331 McCarrell Road
Hickory, PA 15340
724-356-7974

The Mt. Pleasant Township Municipal Authority is in the process of implementing the 2002 Mt. Pleasant Act 537 Sewage Facilities Plan. Concurrently the Authority is amending the Act 537 Plan to expand the area of service and regionalize the wastewater treatment facility. The Act 537 Plan and the proposed amendment address various alternatives to provide public sewer service in three villages within Mt. Pleasant Township. The villages are:

(1.) Village of Hickory

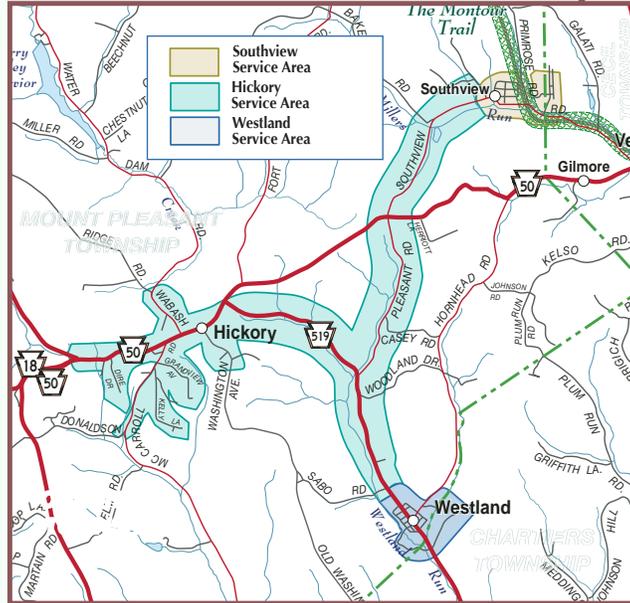
Hickory is located along Route 50 and situated in five watersheds. The project will serve 310 household and businesses.

(2.) Village of Southview

Southview is located north of Route 50. The project will serve 158 households in Southview and homes between Southview and Westland.

(3.) Village of Westland

Westland is located along Route 519 south of its junction with Route 50. The project will serve 102 households.



The Plan reviews various alternatives from regionalizing the villages with conveyance systems connecting to one of the three systems surrounding Mt. Pleasant to constructing treatment facilities for each of the villages. In all three cases regionalizing was determined to not be cost effective. The preferred alternative is to construct one sewage treatment plant in the Village of Westland serving all three areas, Hickory, Southview, and Westland. Three pump stations will be required, two pump stations will be necessary in the Hickory Service Area and one to convey flow from Southview to Westland.

The Authority will be advancing design for the plants and conveyance systems for the villages in 2014.

Southview -----	Westland -----	Hickory -----
- treatment at Westland	- treatment at Westland	- treatment at Westland
- 158 EDU -	- 102 EDU -	- 310 EDU -

Total -----

- total project cost \$19.2 million
- 570 EDU - cost/EDU \$33,684
- grant needed - \$8.6 million

To be affordable, all three projects will need substantial grants. Southview and Westland has severe on-lot malfunctioning or wildcat systems. A substantial amount of the residents have no sewage treatment.

General Information:		Authority Information:	
Authority Membership:		No. of Employees	N/A
Mount Pleasant	5	Annual Budget	\$ 210,000
Service Areas (Municipalities)*		Total Debt	\$
- Southview	- Westland	Sewer System:	
- Hickory		Treatment	Westland SA
Number of Customers/EDU:	482 (projected)	Collection/Conveyance	
Average Monthly Rate/EDU:	\$	Treatment Plant:	
		Type of Treatment	
O & M	\$	Rate Capacity	
Debt Service	\$	Available Capacity	
		Overload Issues	
		Tap Restriction	

Municipal Authority of the City of Monongahela MACM

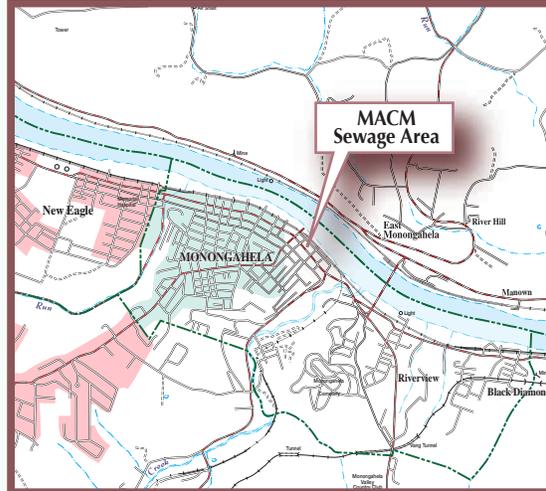


2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

Municipal Authority of the City of Monongahela

521 W. Main Street
Monongahela, PA 15063
724-258-9598

The Municipal Authority of the City of Monongahela (MACM) provides sewage treatment and conveyance for the City of Monongahela and portions of Carroll Township (Dry Run Service Area [See CTA]). The Authority owns and maintains eight pump stations, five miles of main interceptor and the MACM-WWTP. Both the City of Monongahela and Carroll Township Authority owns and maintains the municipal collection systems.



Over the last 10-15 years, MACM and the City of Monongahela have been implementing their Corrective Action Plan and Long Term Control Plan (CAP-LTCP). The CAP-LTCP primarily was developed to eliminate wet-weather issues throughout the pre-1950 conveyance and interceptor system. Implementing the CAP-LTCP will limit wet weather CSO into the Monongahela River. Ten (\$10) million dollars has been spent upgrading the WWTP, adding wet weather storage, constructing new pump stations and rehabilitating existing pump stations.

The Authority intends to complete the requirements of the CAP-LTCP in the next five years. Under the CAP-LTCP the Authority is required to reduce the CSO's to four per year during the next five years.

The Authority will be completing another \$2 million worth of projects over the next five years. Projects will include a combination of sewer separations, sanitary sewer relocation and trunk line upsizing. Projects will result in a ten percent increase in monthly sewer rates.

Projects	Phase	Estimated Cost
<ul style="list-style-type: none"> West Alley to WWTP Interceptor Improvements 	Construction 2015-16	\$2,000,000
<ul style="list-style-type: none"> Five (5) Inlet Separation Capital Maintenance 	Construction 2013	\$150,000
<ul style="list-style-type: none"> System Mapping - Developing GIS Base Mapping for the Authority and City Sewer Systems 	2014	\$75

The City of Monongahela owns and maintains the sewage collection system which consists of 15 miles of 8" to 15" diameter gravity sewer. The City works in conjunction with the MACM implementing the CAP-LTCP. Additionally, the City has been implementing the 2003 City of Monongahela Act 537 Plan which expanded the sewage system to most of the remaining unsewered residents (120 EDU's). The final phase of the City's Act 537 Plan which will eliminate SSO's in the East Main Street area will be completed in 2014.

Capital Maintenance

The City's conveyance system is funded through the public works general budget.

General Information:

Authority Membership:
City of Monongahela

5
5

Service Areas (Municipalities)*

City of Monongahela SA
Carroll Township SA

Number of Customers/EDU:

2,057

Average Monthly Rate/EDU:

\$46.74

O & M

\$31.16

Debt Service

\$15.58

Authority Information:

No. of Employees 8
Annual Budget \$2,113,070
Total Debt \$7,729,655

Sewer System:

Treatment Y
Collection/Conveyance Y

Treatment Plant:

MACM
Type of Treatment Activated Sludge
Rate Capacity 1.50 MGD
Available Capacity .25 MGD
Overload Issues N
Tap Restriction N

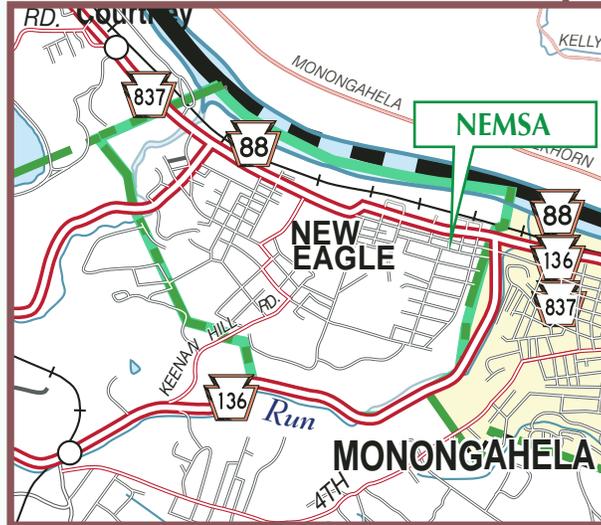
* projected 2020-2092

New Eagle Municipal Sewage Authority NEMSA



The New Eagle Municipal Sewage Authority (NEMSA) owns and operates the New Eagle Borough Wastewater Treatment Plant (WWTP), approximately 15 miles of conveyance system and three pump stations. Since 1996 the Authority has been implementing the Borough of New Eagle Act 537 Sewage Facilities Plan Update (12/20/96). The Plan was developed to mitigate WWTP violations at two deteriorating WWTP's and mitigate on-going problems with bypassing untreated sewage into the Monongahela River.

Three primary projects have been completed. In 1998 the two deteriorating WWTP's were eliminated and replaced with a single WWTP. The two additional projects rehabilitated over 7500 linear feet of the sanitary sewer system eliminating I/I and sewer wet weather issues.



- Project Name:** New Eagle Borough MSA – STP Upgrade
 Total Project Cost: \$6,096,850
 Construction: 1998 – 2000
- Project Name:** New Eagle Borough MSA – Sewer Improvements
 Total Project Cost: \$1,538,723
 Construction: 2002
- Project Name:** New Eagle Borough MSA – 2006 Sanitary Sewer Rehabilitation Project
 Total Project Cost: \$190,622
 Construction: 2006

The new WWTP was designed with capacity for the Carroll Township Authority's (CTA) Dry Run Service Area to be diverted into the NEMSA system, (Borough of New Eagle Act 537 update 1996). Please see CTA inventory sheet. The Authority has recently begun discussions with Carroll Township to convey the Dry Run flow from Carroll Township to the New Eagle WWTP once Carroll Township's contract has expired with Monongahela. Extensive 537 Plan revisions will be needed along with new service agreements. This work will continue over the next few years.

The New Eagle Authority will also continue to seek grant funds and low interest loans to continue to do capital maintenance and I/I removal work in their collection and conveyance system.

Estimated cost over next 5-10 years is ± \$1,000,000.

General Information:		Authority Information:	
Authority Membership:	5	No. of Employees	3
New Eagle Borough		Annual Budget	\$590,175
Service Areas (Municipalities)*		Total Debt	\$4,100,290
New Eagle Borough		Sewer System:	
Number of Customers/EDU:	908	Treatment	Y
Average Monthly Rate/EDU:	\$51.00	Collection/Conveyance	Y
O & M	\$21.00	Treatment Plant:	
Debt Service	\$30.00	New Eagle Waste Water Treatment Plant	
		Type of Treatment	S. B. R.
		Rate Capacity	2.4 MGD
		Available Capacity	.600 MGD
		Overload Issues	N
		Tap Restriction	N

2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

New Eagle Municipal Sewage Authority

157 North Main Street,
New Eagle, PA 15067
724-258-2393

North Strabane Township Municipal Authority NSTMA



2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

North Strabane Township Municipal Authority

1929B Rout 519 South
Washington, PA 15301
724-745-7220

The North Strabane Township Municipal Authority (NSTMA) operates and maintains a collection system comprised of 98 miles interceptor, a conveyance system and 11 pump stations. The Authority owns and operates the Willowlake WWTP and also conveys 4,600 EDU's to the CHJA WWTP.

The Authority has been proactive and has developed and implemented various Act 537 plans since 2000. The basis of the plans is to improve system-wide efficiency, eliminating existing malfunctioning residential septic systems and commercially privately owned packaging plants. Completion of the projects will improve water quality in the Little Chartiers Creek Watershed and Chartiers Creek Watershed. The proposed gravity sewers will also be capable of supporting additional future growth to all areas of this watershed. Future private development will be responsible for conveying sewage to the proposed interceptors.

ACTIVE PROJECTS 0-5 YEARS

Route 519 Sewer Extension – 40 EDU's Permitted 2013, Construction 2014.

The project will extend sewage service 14,000 LF along Route 519 providing sewage to the Municipal Park and future YMCA. Malfunctioning residential septic system will also be eliminated. Estimated project cost is \$2,050,000.

Route 19 Pump Station Upgrade – Permitting Approved 2013

The Route 19 pump station is at capacity and is subjected to periodic wet weather overflows. Upgrading and expanding the pump station will eliminate overflows and allow for future growth capacity in the watershed. Estimate project cost is \$790,000.

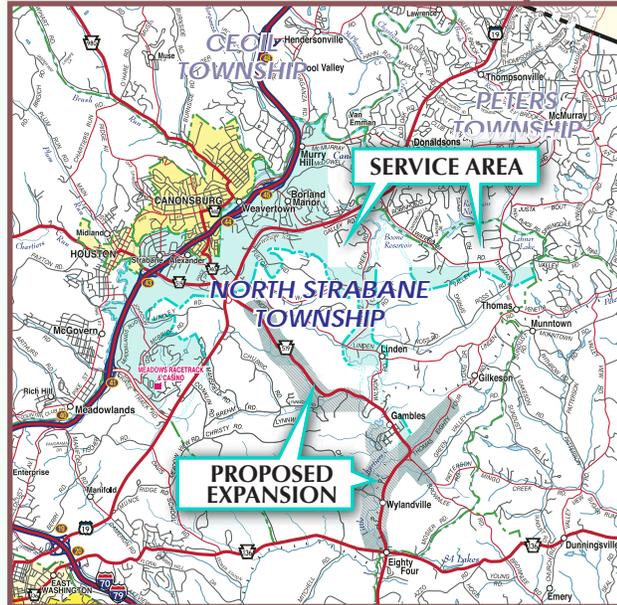
Linden Creek Extension

The Linden Creek Extension project will provide sewer service to the I-70 corridor and Eighty-Four Village Development Targeted Area Investment on identified "Growth Area" in the Washington County Comprehensive Plan. The sewer extension will initially serve approximately 40 EDU's eliminating two privately owned packaging plants. Permitting has been submitted to DEP. Estimated construction cost \$2,740,000.

Thomas Road Extension

The Thomas Road Extension project will eliminate existing malfunctioning septic systems. Permitting will be submitted to DEP in the fall of 2013. Estimated construction cost \$2,042,000.

The combined projects will serve over 200 residential EDU's and 30 businesses. The Authority has \$2,900,000 bond issuance committed to the project. It is the intent to have all the projects designed and permitted in 2013. Having the projects "shovel ready" will position the Authority to take advantage of Federal and State funding sources. The projects will advance as funding is secured.



General Information:

Authority Membership: 5

Service Areas (Municipalities)*

- Willow Lake Service Area
- CHJA Service Area

Number of Customers/EDU: 4700

Average Monthly Rate/EDU: \$ 40.00

O & M \$ 8.35

Debt Service \$ 3.00

Authority Information:

No. of Employees 6

Annual Budget \$2,600,000

Total Debt \$8,505,000

Sewer System:

Treatment Y

Collection/Conveyance Y

Treatment Plant:

Type of Treatment Willowlake WWTP

Rate Capacity Extended Aeration

Available Capacity .099 MGD

Overload Issues .030 MGD

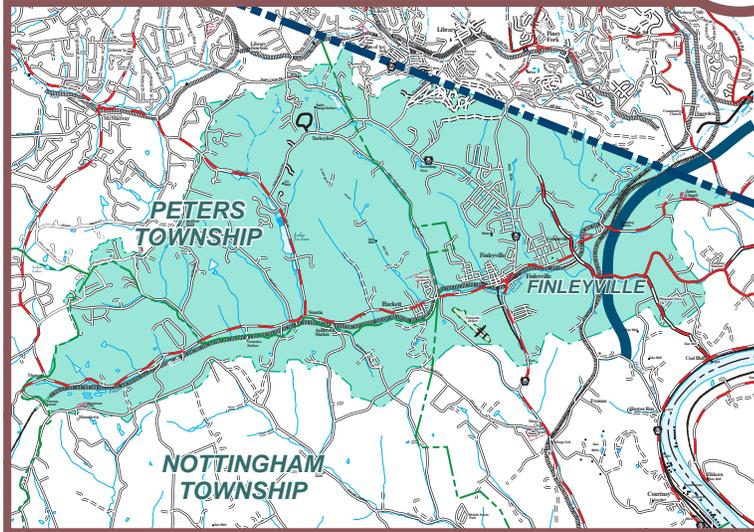
Tap Restriction N

N

Peters Creek Sanitary Authority PCSA



The Peters Creek Sanitary Authority (PCSA) operates and maintains a collection system in Washington County comprised of two pump stations and 96 miles of collection and trunkline sanitary sewer. PCSA provides services to Finleyville Borough, Nottingham Township, Peters Township, Union Township and portions of North Strabane Township.



PCSA is at the upstream end of a larger municipal sewage network that conveys sewage through the Peters Creek Interceptor (PCI) system, ultimate to the Clairton Municipal Authority Sewage Treatment Plant (CMA STP) located in Allegheny County. The Pennsylvania Department of Environmental Protection (DEP) is currently reviewing the CMA Regional Act 537 Plan which outlines the identified upgrades to the CMA STP and PCI system. PCSA will be responsible for a debt service related to 26% of the

proposed \$40,000,000 bond issuance for the implementation of the CMA Regional Act 537 plan. The debt service will more than double the current treatment cost of \$2.00 to an estimated \$4.51/1,000 gallons.

Since 2005, PCSA has operated under a DEP approved Corrective Action Plan (CAP). The CAP is due to hydraulic wet weather overloads at the CMA pump station. PCSA is taking two approaches to mitigate wet weather overloads which will result in being released from the CAP. The first is participating with the above-mentioned CMA Regional Act 537 Plan. The second is their continued reduction of Inflow/Infiltration (I/I) within their system. As PCSA pays for treatment service via metered wastewater, eliminating excess I/I will help PCSA maintain competitive charges for service sewage user rates while maintaining capacity for growth throughout the service area.

Short Term

The 2011 PCSA Act 537 Plan identifies numerous sewage improvement projects. Projects relating to I/I removal include pipe lining and interceptor piping rehabilitation. Projects relating to sanitary sewer extensions will eliminate malfunctioning septic systems and facilitate growth. Project advancement of sewer line extensions is contingent with funding assistance.

Project :	EDU's:	Cost:
State Route 88 Interceptor Sewer Improvements	770	\$126,865
Venetia Road and Bower Hill Road Capacity Augmentation	355	\$630,000
PCSA Interceptor Refurbishing related to I/I Removal	—	\$640,000
1. Washington County Line to Center Avenue to Finleyville Borough		
2. McClelland Road to Bebout Road along Venetia Road		
McChain Road Sewer Line Extension	17	\$675,000
Bower Hill Road Sewer Line Extension	14	\$402,000

General Information:

Authority Membership:	10
Finleyville	3
Nottingham	3
Peters	2
Union	2
Service Areas (Municipalities)*	
Portions of:	
--- Finleyville, Nottingham, Peters, North Strabane and Union Township	
Number of Customers/EDU:	3,900
Average Monthly Rate/EDU:	\$ 35

Authority Information:

No. of Employees	5
Annual Budget	\$1.6 million
Total Debt	\$245,000 system (CMA Regional Project) \$10,400,000

Sewer System:

Treatment	N
Collection/Conveyance	Y

Treatment Plant:

Type of Treatment	Clarion Municipal Authority Active Sludge STP
Rate Capacity	6.0 MGD
Available Capacity	1.3 MGD
Overload Issues	N
Tap Restriction	N

Peters Township Sanitary Authority PTSA



2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

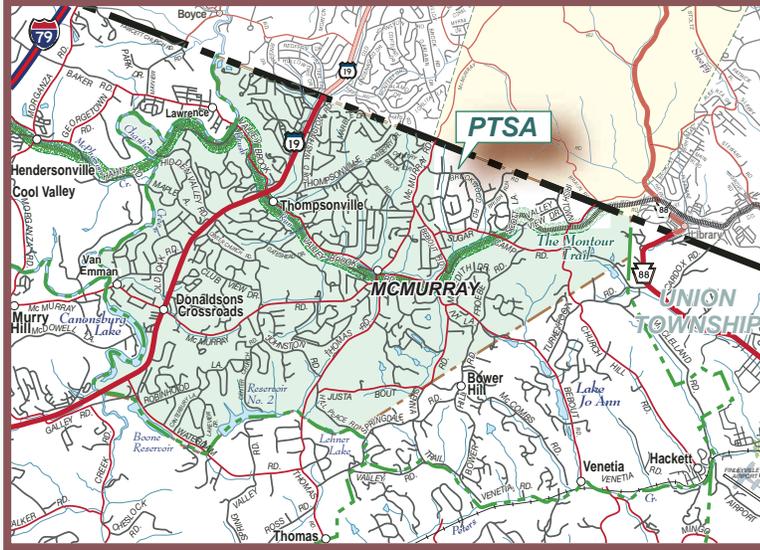
Peters Township Sanitary Authority

111 Bell Drive
McMurray, PA 15317
724-941-6709

The Peters Township Sanitary Authority (PTSA) owns and operates 8 pump stations and 120 miles of public sewers, conveying sewage to 2 Waste Water Treatment Plants (WWTP) serving the Brush Run (BR) and Donaldson's Crossroads (DC) Service Area, providing service to approximately 20,000 people. Additionally, the Marella Manor Service Area is conveyed to ALCOSAN and Lehner Lakes. Piney Fork SA's currently are not served.

PTSA has been actively upgrading both the BRSA and DCSA plants and conveyance systems to meet current and future needs. The Authority completed a \$1,300,000 upgrade to its Brush Run Water Pollution Control Plant (WPCP) in 2012 to provide wet weather capacity and extend the useful life of the treatment facility for another 20 years.

The Authority is now turning its attention to the DC Service Area. As developed in the Peters Township Act 537 Plan Update for Donaldson's Crossroads Service Area (March 2011), the Authority will be implementing a 2-phase project over the next 5 years.



Phase I

The antiquated DCWPCP will be replaced and expanded from 1.25 MGD to 1.75 MGD. The project will provide capacity for growth in the Route 19 commercial corridor as well as eliminate organic design capacity issues in the existing plant.

The \$23,300,000 WPCP project is currently in the design and permitting phase (2013) with scheduled construction in 2015/2016. The projected funding for the project is \$19,870,000 from Loans and Bonds, \$1,100,000 from PTSA and \$3,130,000 of additional grant funds for design and construction which the authority is actively pursuing.

Phase II of the project will involve additional interceptor capacity augmentation for the segment nearest the plant to the Oakwood Road and Giant Oaks interceptors. The total cost of the interceptor enhancements is estimated at \$2,330,000. The augmentation of the remaining interceptor segments would be completed pragmatically in future phases as per funding and growth.

PTSA has \$31,000,000 in net assets, and implements a 10-year capital improvement plan, as well as a strategic plan, in order to ensure timely replacement and rehabilitation of its assets. The capital improvement program is funded by a combination of budgeted annual Equipment Replacement Allowance and Non-Operating Revenue (tapping fees and investment interest). The Equipment Replacement Allowance, currently \$312,000, becomes a capital transfer to the Capital Fund at the end of the budget year. The combination of tap-in fees, investment interest, and Equipment Replacement Allowance provided \$860,000 in capital funding in 2012. Capital improvements slated for 2013 are projected to cost \$934,000, consisting of \$250,000 for sewer system improvements and rehabilitation, \$650,000 for treatment plant design engineering, and the balance in administration improvements. Capital improvements average \$700,000 over the 10-year capital budget period. The Authority also aggressively pursues grant opportunities, stressing the importance of the Route 19 commercial corridor in Peters Twp. to Washington County's economic vitality and employment opportunities.

General Information:		Authority Information:	
Authority Membership:		No. of Employees	13
Peters	5	Annual Budget	\$3,300,000
	5	Total Debt	\$3,300,000
Service Areas (Municipalities)*		Sewer System:	
Peters		Treatment	Y
--- Brush Run	--- Morella Manor	Collection/Conveyance	Y
--- Donaldson Crossroads	to Alcosan	Treatment Plant:	
Number of Customers/EDU:	5,929		
Average Monthly Rate/EDU:	\$36.93		
O&M	\$26.60	Type of Treatment	Conventional Activated Sludge, w/Aerobic Digestion
Debt Service	\$10.33	Rate Capacity	2.0 MGD 1.2 MGD
		Available Capacity	0.3 MGD 0.2 MGD
		Overload Issues	N N
		Tap Restriction	N N

Pigeon Creek Sanitary Authority PCSA



2014 WASHINGTON COUNTY SEWAGE PROVIDER INVENTORY

Pigeon Creek Sanitary Authority

508 Main Street
Bentleyville, PA 15314
724-239-2381

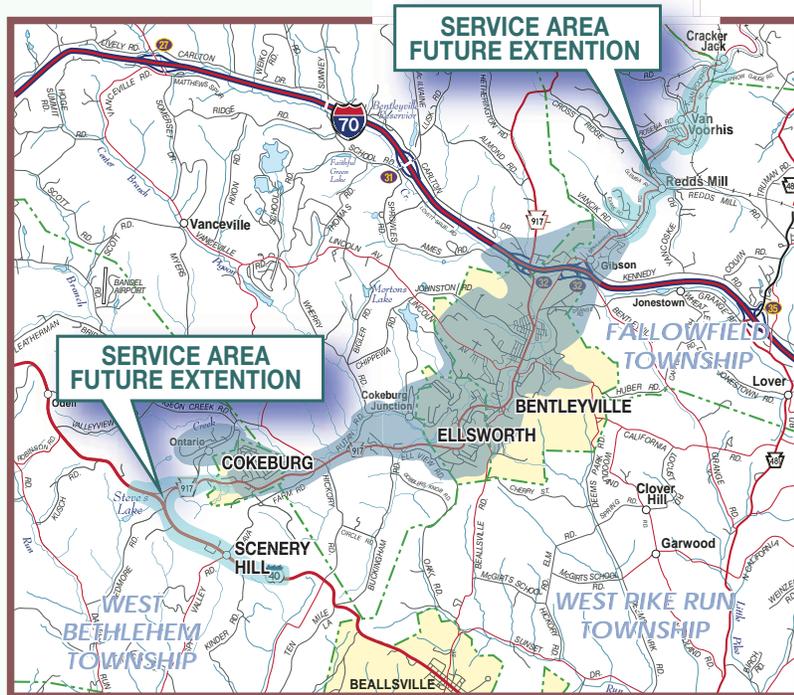
The Pigeon Creek Sanitary Authority (PCSA) provides sewage treatment and conveyance for 3 boroughs and a portion of 3 townships in the Bentleyville Borough area. The Authority owns and operates the PCSA Sewage Plant and 43 miles of interceptor and collector/conveyance system. Over the last 5-10 years the Authority has developed and started implementing their Corrective Action Plan and their 2008 PCSA Act 537 Sewage Facility Planning Study Update. The plans have been developed primarily to provide solutions for capacity and overflow issues at the plant and to correct major infiltration problems in its main interceptor.

Phase I of the system rehabilitation consisted of rehabilitating over 23,000 feet of the main line interceptor. Additionally, manholes were rehabilitated or replaced as needed. The \$2,000,000 project was completed in 2012. The project eliminated a substantial amount of I/I, helping to mitigate wet weather issues.

Phase II consists of a major renovation project to the 35-year-old sewage plant. Engineering and permitting was completed in 2012. This \$2,700,000 project will be constructed in 2013. The plant rehabilitation will add needed capacity for growth occurring around the I-70 Bentleyville Interchange and the 240-acre Alta Vista Business Park.

As the Authority nears completion of the major rehabilitation to the main interceptor and plant, future plans involve expanding the capital maintenance program into the collection systems of participating municipalities and potentially expanding the system to areas with major malfunctioning on-lot systems. Additional studies will be needed to determine the extent of the issues and infrastructure improvements needed relating to the aging collection systems in each municipality. Currently, the Authority dedicated \$2,700,000 to capital maintenance with a projected \$500,000 for future capital maintenance.

The Act 537 Plan identifies and provides planning for 2 village areas that DEP has designated as High Priority Areas lacking public sewage. The PCSA sewer system could be extended to these areas; however, both projects would be very costly and will need extensive grant assistance to create a financially viable project.



		EDU	Cost	Monthly Total/EDU Without Grant
Scenery Hill Village	North Bethlehem Twp.	137	\$2,700,000	\$110
Van Voorhis Area	Fallowfield Twp.	73	\$1,800,000	\$142
Griffith Manor Area	Fallowfield Twp.	44	\$800,000	\$97

*Total EDU includes \$22 monthly O/M.

Both projects would need to secure at least a 65% grant level to reach an affordable monthly customer rate of \$50 - \$55.

General Information:

Authority Membership: **6**

Bentleyville Borough	2	Ellsworth Borough	2
Cokeburg Borough	2		

Service Area (Municipalities) Portions of:

Bentleyville Borough	- Fallowfield Township
Cokeburg Borough	- North Bethlehem Township
Ellsworth Borough	- Somerset Township

Number of Customers/EDU:	2,517
Average Monthly Rate/EDU:	\$35.05
O&M	\$ 16.00
Dept Service	\$ 19.05

Authority Information:

No. of Employees	4.5
Annual Budget	\$663,800
Total Debt	\$4,390,000

Sewer System:

Treatment	Y
Collection/Conveyance	Y

Treatment Plant:

Pigeon Creek Sewage Plant	
Type of Treatment	Extended Aeration
	projected upgrade
Rate Capacity	to date 1.02 MGD
Available Capacity	0.125 MGD
Overload Issues	MGD
Tap Restrictions	N
	N

South Franklin Township



South Franklin Township owns and maintains 11,000 LF of collection system and the Franklin Manor WWTP. In 2006, the township was required by DEP to take ownership of the Franklin Manor sewage system due to numerous problems and violations of the private owners' NPDES permit. Through a DEP consent order the township was required to upgrade and repair the plant and system. Since 2008, the township has spent \$682,689 rehabilitating the collection system and upgrading the WWTP. The system is now sound and capable of handling additional flow.

Over the last 15 years the township has started three Act 537 plans. The plans were not completed primarily due to system and capacity deficiencies in portions of WEWJA downstream system and server financial constraints.

The township has again started developing an Act 537 Plan. The plan will:

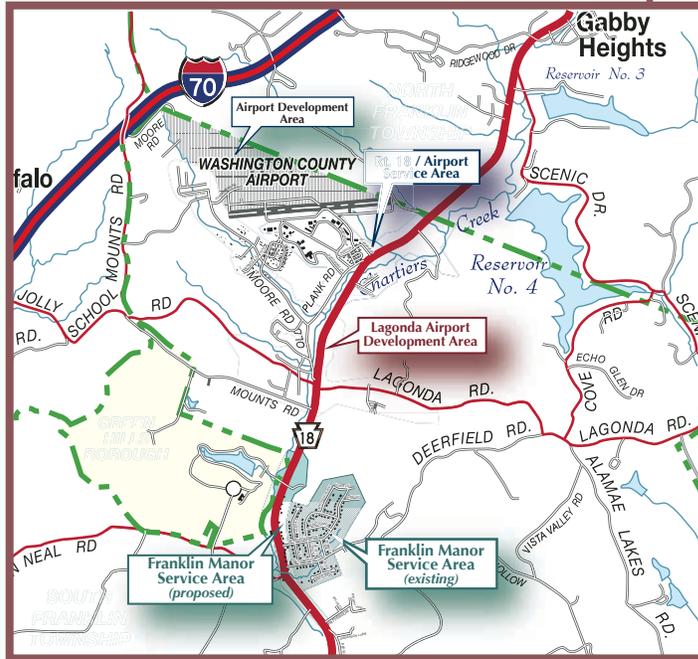
- Mitigate malfunctioning on lot systems throughout the township.
- Develop a financially feasible plan with acceptable cost to residents.
- Eliminate privately-owned holding tanks and six privately-owned package waste water treatment facilities.
- Provide treatment facilities for high-density residential areas of:
 - Lagonda Area - 170 EDU
 - Residential areas near North Franklin Township border (particularly along Route 18) - 100 EDU
 - Washington County Airport Area - 7 EDU
 - Trailer Park Areas - 144 EDU
- Address economic development potential of Washington County Airport and Route 18 corridor.

To advance the plan the township did a detailed review and cost analysis of creating a regional system conveying sewage to WEWJA for treatment. The project would cost \$20-25 million and need over \$18 million in grant to get to an acceptable monthly rate of \$50-55/month for residents. Due to the cost constraints of a regional system, the township is now advancing a more affordable three phase project which will address the sewage needs of the township.

Rt. 18/Airport SA – Take advantage of any remaining capacity in the WEWJA system. Existing residential areas along Route 18 and the North Franklin Township municipal line will connect to the WEWJA conveyance system through a 3" force main. If capacity is available, the existing airport area will convey sewage through this system. **89 - EDU \$1,466,500 - Cost \$1,100,000 - Grant needed**

Lagonda/Airport SA – If cost effective the Lagonda/Airport Development area will convey waste water to a new plant. **314 EDU \$8,300,000 - Cost \$6,500,000 - Grant needed**

Rt. 18/Franklin Manor SA – The Rt. 18 area adjacent to Franklin Manor will convey waste water to the Franklin Manor STP. **40 EDU \$ 774,00 - Cost \$ 400,000 - Grant needed**



General Information:

Provider:	5
South Franklin Township BOS	5
Service Areas (Municipalities)*	
Franklin Manor SA	
Rt. 18/Airport SA	
Lagonda/Airport SA	
Number of Customers/EDU:	183
Average Monthly Rate/EDU:	\$ 40
O & M	\$ 20
Dept Service	\$ 20

Provider Information:

No. of Employees	1 contract and municipal staff
Annual Budget	\$ 861,300
Total Debt.	\$ 260,000
Sewer System:	
Treatment	Y
Collection/Conveyance	Y
Treatment Plant:	Franklin Manor STP
Treatment	Collection
Type of Treatment	active sludge
Rate Capacity	60,000 MGD
Available Capacity	30,000 MGD

Union Township



2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

Union Township owns and maintains various collection systems throughout the township. In addition to the municipality-owned conveyance system, the township is a participating member of the Peters Creek Sanitary Authority. (Please see PCSA.)

The township owns a pump station and approximately five miles of sewerline primarily around the Village of Elrama. The township conveys sewage to the Jefferson Hills Borough interceptor and eventually the West Elizabeth Sanitary Authority (WESA) treatment plant in Allegheny County.

Over the last 15 years the township has been implementing the Union Township "Updated Official Act 537 Sewage Facility Plan 2000". The preferred alternative was to build a sewage conveyance system in the Village of Elrama conveying sewage to the West Elizabeth Sewage Treatment Plant. The \$4.1 million project was constructed in 2009, providing sewage to 226 residents and 14 business EDU's. The project eliminated direct sewage discharges into the Monongahela River.

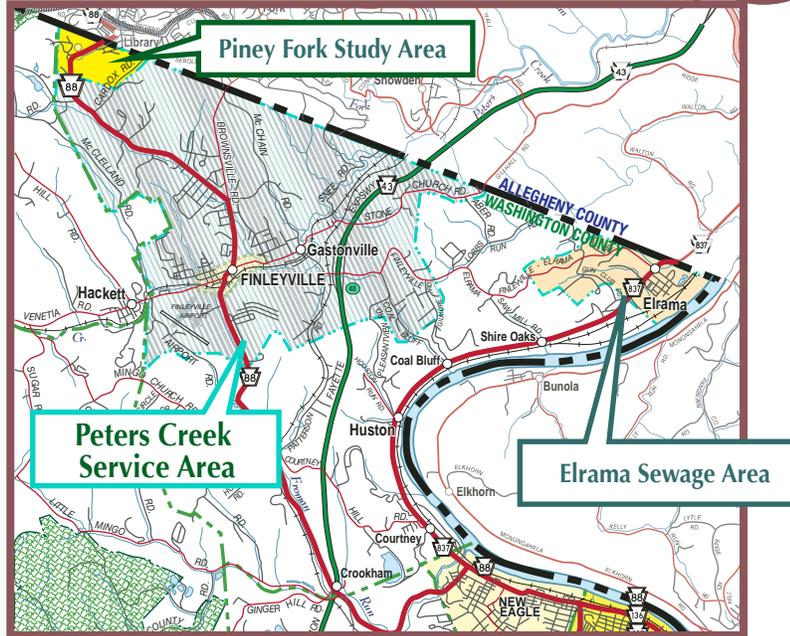
WESA and Jefferson Hills Borough are both implementing recently adopted Act 537 Plans. Future projects by Jefferson Hills Borough and at WESA will have a direct impact on future monthly rates of residents in the Elrama Service Area. WESA will be building a new wastewater treatment plant to replace the deteriorating existing WWTP which also has various wet weather and flooding issues. Service associated with Union Township capacity will be added to the monthly rate of the users.

The average monthly cost per EDU is \$62.00. The estimated monthly cost after construction of the new WESA Treatment Plant will be \$65.00.

Short Term Projects

Piney Fork Sewerage Extension

The township is beginning planning for the Piney Fork watershed. Various sewage issues have been identified which will need to be mitigated. The project will impact 25-30 existing homes.



Planning 2014 - 15

Union Township

3904 Finleyville-Elrama Road
Finleyville, PA 15332
724-348-4250

General Information:

Membership

Union Township Board of Supervisors

Service Areas (Municipalities)*

Elrama Sewage Authority
Piney Fork Sewage Authority

Number of Customers/EDU:

240

Average Monthly Rate/EDU:

\$62.00

O & M

\$33.00

Debt Service

\$29.00

Authority Information:

No. of Employees	Municipal Staff
Annual Budget	\$ 167,000
Total Debt	\$1,841,089

Sewer System:

Treatment	N
Collection/Conveyance	Y

Treatment Plant:

West Elizabeth STP

Type of Treatment	
Rate Capacity	N/A
Available Capacity	N/A
Overload issues	N/A
Tap Restriction	

Vestaburg-New Hill Joint Authority VNHJA

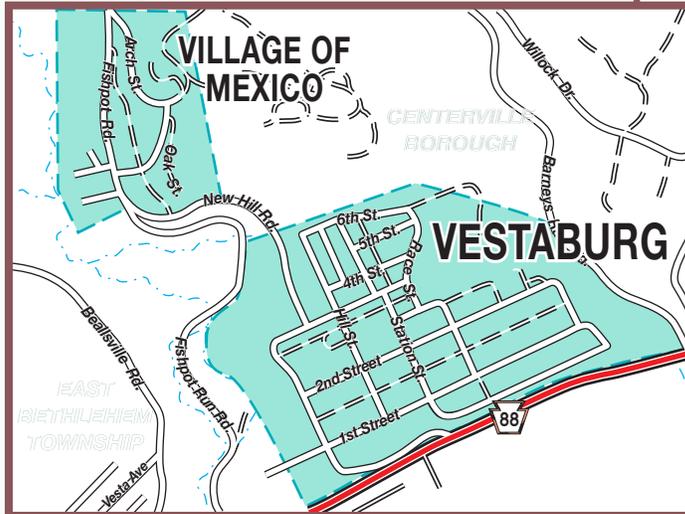


2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

Vestaburg-New Hill Joint Authority

P.O. Box 189
Vestaburg, PA 15368
724-377-1636

The Vestaburg-New Hill Joint Authority (VNHJA) provides sanitary sewage service to residents of the Villages of Vestaburg (184 customers) and Mexico (93 customers), located in East Bethlehem Township and Centerville Borough, Washington County. The Authority owns and maintains 6.6 miles of sewer line and 2 pump stations. Sewage is conveyed to the treatment plant owned and operated by the East Bethlehem Township Municipal Authority (EBTMA). The service agreement between VNHJA and EBTMA calls for VNHJA to pay a portion of EBTMA's debt service (\$24,880 annually through the year 2040) as well as treatment costs based upon total flow delivered to the plant.



In 2008, the authority began implementing the VNHJA 2008 Act 537 Sewage Facility Plan.

The old sanitary sewer system was over 66 years old, with some sections dating back to 1912. Many of the sewer lines in these "company towns" were originally installed immediately abutting the homes. Over the years some of the residents had built garages, structures and additions to their homes over their own sanitary sewers and laterals and, in some cases, over those serving their neighbors. These issues made it impossible to perform adequate maintenance and repair. Some of the sewer lines had less than the required minimum slope, which allowed the deposition of solids. The wastewater would lie stagnant in the lines and becomes septic. The result was a malodorous condition which constituted a health hazard. Safety and access issues arose for maintenance personnel when attempting to maintain the existing system.

Because of the infiltration and inflow in the old, deteriorated VNHJA sewer system, the annual treatment costs were quite high. During heavy rains, sewage would back up into basements and occasionally an un-permitted sanitary sewer overflow would discharge untreated sewage into the stream. DEP inspections had noted the problems of sewage backup into basements. DEP inspection reports urged that the replacement of this sewer system be considered a high priority for funding "...due to basement flooding and sewage overflows at manholes causing a health nuisance situation."

The preferred alternative of choice from the Act 537 was to rebuild the system to modern standards eliminating the issues discussed above. The project was advanced through permitting and construction and was completed in 2012. The total cost was \$4,172,209

This project ensured that untreated sewage would not back up into homes, spill out onto lawns or reach the streams of the Commonwealth, either through abandoned lines and laterals still connected to the collection system or as a result of overflows or bypasses during times of heavy rainfall.

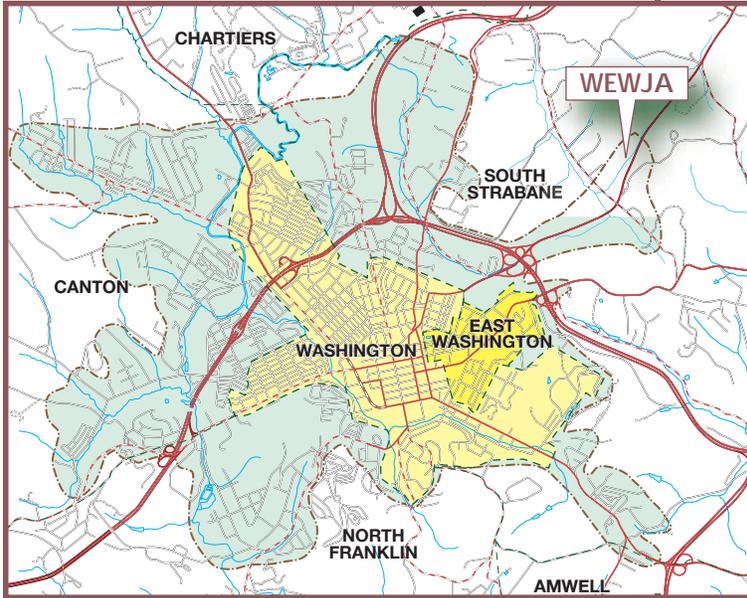
General Information:		Authority Information:	
Authority Membership:	5	No. of Employees	3 part-time
		Annual Budget	\$ 40,000
		Total Debt	\$
Service Areas (Municipalities)*		Sewer System:	
- Village of Mexico		Treatment	N
- Village of Vestaburg		Collection/Conveyance	Y
Number of Customers/EDU:	277	Treatment Plant:	EBTMA - STP
Average Monthly Rate/EDU:	\$45.00	Type of Treatment	N/A
O & M	\$ 37.00	Rate Capacity	N/A
Debt Service	\$ 8.00*	Available Capacity	N/A
		Overload Issues	N/A
		Tap Restriction	N/A

*EBTMA

Washington-East Washington Joint Authority WEWJA



The Washington-East Washington Joint Authority (WEWJA) provides sewage conveyance and treatment for six municipalities around the City of Washington. The conveyance system consists of four major interceptors, 130 miles of line and ten pump stations. The Authority maintains and operates the existing system and WWTP while the customer municipalities are responsible for planning, permitting and construction of capital/growth project. The Authority takes ownership of completed projects. Each customer's municipality has a different rate base that varies primarily due to debt service.



From 1997 – 2002 the Authority implemented a two phase project to update and modify the treatment facilities to meet USEPA and DEP effluent requirements. The total cost of the project was \$11,178,000.

Since completing the WWTP overhauls, the Authority has been concentrating on capital maintenance and I/I projects to reduce peak hydraulic loads. Major interceptor and pump station capital projects take into account capacity for future growth in the watershed where financially feasible.

The current primary project is the replacement of the deteriorating undersized 18" Chartiers Creek interceptor. The first phase of the project was completed in 2004 as a joint effort between Canton Township, North Franklin Township and the Authority. The \$965,000 project replaced 1,600 feet of the interceptor and improved capacity at the pump station. Recently (2013) the Authority committed \$250,000 of its own funds and secured a \$450,000 LSA Grant to complete the next phase of the interceptor replacement. The Authority is aggressively pursuing an additional \$1,000,000 in grant monies which will enable them to replace the entire remaining 3,000 feet of interceptor as one project (2014).

Increasing the size of the interceptor will allow for industrial, commercial and residential growth in the immediate area of the interceptor as well as future growth in the watershed which includes the Washington County Airport in South Franklin Township.

Capital Maintenance

The Authority has a \$300,000-400,000 annual capital maintenance program.

General Information:

Authority Membership:

Washington	5
East Washington	1

Service Areas (Municipalities)*

Washington	East Washington
Portions of:	
- South Strabane Township	- North Franklin Township
- Canton Township and	- Chartiers Township

Number of Customers/EDU: **\$14,200**

Average Monthly Rate/EDU: **\$14.00**

Canton **\$52.00**

Authority Information:

No. of Employees	15
Annual Budget	\$3,500,000
Total Debt	\$3,780,000

Sewer System:

Treatment	Y
Collection/Conveyance	Y

Treatment Plant:

Type of Treatment	Fixed film Tower
Rate Capacity	9.77 MGD
Available Capacity	3.97 MGD
Overload issues	N
Tap Restriction	N

Arden Treatment Plant

West Pike Run Township Municipal Authority WPR TMA



The West Pike Run Township Municipal Authority provides sewage collection for portions of West Pike Run Township.

The Authority operates the Pike Run Drive Plant, one (1) pump station and the Abraham Plan Plant on McGirts and Abraham Roads in West Pike Run Township. The Pike Run Drive plant serves approximately 240 customers. The Abraham Plan Plant serves 11 customers.

The main plant at 525 Pike Run Drive was built in the 1990's. It operates as a Secondary Air Return Activated Sludge plant. Waste water from the collection system enters the plant through a comminutor before entering two (2) basins. It is sent to a clarifier which settles the sludge out and returns activated sludge to the primary tank. Clear water from the clarifier is sent to the Chlorine contact chamber for processing prior to being discharged into Pike Run. Excess digested sludge is pumped into a holding tank prior to disposal as necessary.

The Abraham Plan Plant was built in the early 1980's to treat waste water at the Abraham Plan of houses. West Pike Run Township operated the plant until 1990 at which time it was taken over by the Municipal Authority. The plant processes waste water from approximately 11 houses. It is a Primary Air Return Activated Sludge Plant and operates the same as the WPR plant. The plant recently had its roof replaced and a new electrical entrance installed.

The Authority has no employees for plant operations. The Authority has hired H & H Water Controls, Inc. to perform the daily maintenance, repairs, testing, etc., at the two (2) plants along with the billing services.

Due to corrosion of the air lines at the main plant, the Authority will replace them in the near future. The date of this repair and estimated cost is unknown at the time. There are no current plans to extend the sewage lines to other areas of West Pike Run Township at this time.



2014 WASHINGTON COUNTY
SEWAGE PROVIDER INVENTORY

West Pike Run Township Municipal Authority

525 Pike Run Drive,
P.O. Box 222, Daisytown,
PA 15427
724-938-2248

General Information:

Authority Membership: 5
WPR TMA 5

Service Area (Municipalities)
West Pike Run Township

Number of Customers/EDU: 232
Average Monthly Rate/EDU:

WPR T		Abraham Plant	
O&M	\$ 30.00	O&M	\$40.00
Debt Service	\$ 0	Debt Service	\$ 0

Authority Information:

No of Employees 0
Annual Budget \$86,000
Total Debt.

Sewer System:
Treatment Y
Collection/Conveyance Y

Treatment Plant: West Pike Run
Type of Treatment Secondary Air ST
Rate Capacity 61,000 MGD
Available Capacity 30,000 MGD
Overload Issues N
Tap Restrictions N



APPENDICES

-Original Survey and Mailing