



A. Background

Public utilities are regulated under Title 52 (Public Utilities) of the Pennsylvania Code.

The Pennsylvania Public Utility Commission balances the needs of consumers and utilities to ensure safe and reliable utility service at reasonable rates; protect the public interest; educate consumers to make independent and informed utility choices; further economic development; and foster new technologies and competitive markets in an environmentally sound manner.

Pennsylvania consumers may have the opportunity to choose who generates their electricity, supplies their natural gas and provides their local telephone service. In 1996, the electricity market in Pennsylvania was deregulated and the Federal Communications Commission (FCC) issued an Order that established competition in the local telephone market. Competition for all gas customers in Pennsylvania began November 1, 1999, after House Bill 1331 became law (Act 21). Act 21 allows all gas customers the option of purchasing natural gas services from a natural gas supplier, just as customers currently purchase electricity from an electric supplier under the Electric Choice Program.

Existing Studies

Greene County Comprehensive Plan (Candeub, Fleissig and Associates, 1979)

The 1979 Greene County Comprehensive Plan included a review of the five school districts and vo-technical schools to address public education. Recreation facilities were inventoried and assessed. The 1979 Comprehensive Plan included an inventory of public buildings, both County and Municipal. Volunteer Fire Departments, Hospitals, Libraries, Museums, and cultural facilities were listed and assessed. Finally, the 1979 Plan provided a review of existing public water and sewerage providers, and solid waste management.

East Dunkard Water Association Monongahela River Source Water Assessment Report (2002)

This study was conducted to meet the 1996 Safe Drinking Water Act that requires a Source Water Assessment and Protection Program (SWAP) to evaluate all drinking water sources that serve public drinking supplies and to provide a mechanism for development of local protection programs. East Dunkard Water Association (EDWA) provides water to the town of Dilliner and Dunkard Township and serves a population of approximately 4,000. EDWA is permitted to withdraw up to 1.15 MGD.

The study found that potential sources for contamination (PSOCs) include point (water and sewer treatment plants, "wildcat sewers," mining, power plants, chemical plants and non-point sources (major transportation corridors and run-off from urban/developed areas. The most serious PSOC is accidental release of materials along the transportation corridor. The study recommended the development of a community based source water protection

program to safeguard the public drinking supply based on the threats identified in the assessment.

Southwestern Pennsylvania Water Authority Monongahela River Source Water Assessment Report (2002)

This study meets requirement under 1996 Safe Drinking Water Act that requires a Source Water Assessment and Protection Program (SWAP) to evaluate all drinking water sources that serve public drinking supplies and to provide a mechanism for development of local protection programs. The Southwestern Pennsylvania Water Authority provides water to the Boroughs of Clarksville, Rices Landing, Jefferson and Waynesburg and Center, Cumberland, Franklin, Jefferson, and Morgan Townships in Greene County and has 11,000 customers serving a population of about 45,000. The SPWA is permitted to withdraw up to 10.0 MGD. This study contains the same findings and recommendations as the East Dunkard Water Association Monongahela River Source Water Assessment Report.

Public Utilities Resources

PA Department of Environmental Protection (PA DEP)

PA DEP is the primary agency in Pennsylvania responsible for administering environmental laws and regulations and thereby protecting water quality and supply and making sure waste is disposed of and handled properly. Among other things, PA DEP is responsible for coordination of the State Water Plan as required by Act 220 of 2002, timely and effective planning and management of domestic wastewater treatment needs, assures a safe and reliable supply of drinking water through the regulation of over 10,000 public water systems, and builds financial management and technical capability through the administration of licensing and certification programs covering over 25,000 water supply and wastewater treatment plant operators and sewage enforcement officers (SEO).



Public Utilities Snapshot

Public utilities play a vital role in the daily lives of residents as well as affecting development patterns. The availability of public utilities influences where people live and work and is one of the key factors that attract companies and developers to an area. In today's world, the accessibility of high speed internet service and reliable cellular phone service coverage are necessary rather than perks. Greene County has widespread access to high speed internet but there are portions of the County without cellular phone service. However, the overwhelming impediment to development is the inefficient provision of water and sewerage service.

In Greene County, public water and sewerage service is not widespread. It is predominantly found in the central and eastern portions of the County; there is no public service in the western municipalities. The lack of dense development throughout the County and the steep and varying topography prohibits the extension of public water and sewer lines, as it would not be cost-effective.

While public water is much more widespread than the provision of sewerage service, this causes a problem as in most areas of Greene County; soil conditions do not support on-lot systems. Sewage enforcement officers (SEO) cannot issue building permits based on lack of suitable soils, even that for an alternative system. Wildcat sewers (sewer lines running directly to the ground or streams) can be found throughout the County and pose a health and safety hazard to residents. It is vital that Greene County develop a plan that effectively and efficiently addresses the treatment of sewage throughout the County and work with the local municipalities to identify priority areas and address these issues.

THIS PAGE INTENTIONALLY LEFT BLANK



B. Data & Analysis

The following provides a summary of public utilities available in Greene County. For an up to date lists of providers, see the following website:

<http://www.puc.state.pa.us/utilitychoice/listofsupp.aspx?ut=ec&ShowSupp=1>.

Electricity

Electric customers in Pennsylvania were among the very first in the United States to be able the ability to choose the company that generates their electricity. In 1996, the state legislature passed, and Governor Tom Ridge signed into law, the Electricity Generation Customer Choice and Competition Act, which gives Pennsylvanians this right. As of 2007, there was just one electric company providing service to Greene County.

Allegheny Power

Allegheny Energy is an investor-owned utility with over \$3 billion in annual revenues and more than 4,000 employees. The company has two major businesses, Allegheny Energy Supply Company, LLC, and Allegheny Power. It owns and operates generating facilities and delivers electric service to over 1.5 million customers in Pennsylvania, West Virginia, Maryland, and Virginia.

Natural Gas

On June 22, 1999, the Natural Gas Choice and Competition Act was signed into law. Now, all Pennsylvanians, even residential and small commercial customers, can choose who supplies their natural gas. Choice can be based on price, services and incentives. Competitive offers from natural gas suppliers do not exist in all areas of Pennsylvania. As of 2007, there were two gas companies providing service to Greene County.

Columbia Gas Company

Columbia Gas of Pennsylvania and Columbia Gas of Maryland bring expert service to more than 410,000 customers in 452 Pennsylvania communities in 26 counties and 32,000 customers in 40 communities in three Maryland counties.

Equitable Gas Company

Equitable Gas Company provides natural gas distribution services to over 260,000 residential, commercial and industrial customers located mainly in the city of Pittsburgh and surrounding municipalities in southwestern Pennsylvania, plus a few municipalities in northern West Virginia and field line sales in eastern Kentucky.

Telephone & DSL Communications

Changes in federal telecommunications law have opened the local telephone service market, and you can choose your local service provider (LSP) in Pennsylvania. LSPs will offer customers the basics – dial tone, 911 emergency access, directory assistance, etc. Each LSP may offer optional services and calling plans in addition to basic service.

Windstream Communications

Windstream Communications (formerly Alltel and VALOR Telecom) provides local phone service, digital television, and DSL high speed Internet service to many rural areas in Greene County.

Comcast

Comcast Fiber also offers a high-speed Internet line that was originally meant to connect businesses at EverGreene Technology Park, but is now open to other businesses so they can access the high-speed line without being physically located at EverGreene.

Atlantic Broadband

Atlantic Broadband provides cable and high speed internet service to many areas within Greene County.

Cable Television

As of 2007, there were four cable television companies providing service to Greene County including DuCom, Inc., Comcast, Helicon Cablevision, and Cablevision Communications.



Public Water Service

Public water supply systems can range from large regional systems (common in urban and suburban areas) to small systems (serving less than 3,300 persons), which may serve individual developments or mobile home parks. Smaller systems typically use groundwater for their water supply, while larger systems may use surface water. Water supply systems can be either public or private and can also be implemented on a municipal, multi-municipal, or county level (Local Governor's Services, 2000).

Existing service areas for public water service are shown on *Figure 7-1: Infrastructure*. Public water service areas are primarily located in the eastern portion of the county from I-79 to the Monongahela River. Linear extensions of public water service are located west of Waynesburg along major transportation routes of SR 21, SR 18, SR 218, and portions of US 19. The immediate area surrounding Waynesburg Borough and the borough itself also has public water service.

Public water facilities are usually under the oversight of an authority or the municipality itself. Authorities are not governmental entities, but do have the ability to borrow money and provide services to residents on behalf of the municipality. It should be noted that authorities are established by the action of a governing body, which remains ultimately accountable for actions taken by the authority.

In Greene County, there are eight authorities that provide public water service to Greene County.

Brave Water & Sewer Authority

The Brave Water Authority serves approximately 200 persons and purchases water from the Morgantown Utility Board, which draws raw water from the Monongahela River and Cobun Creek Reservoir. The Morgantown Utility Board is responsible for providing the primary water treatment of water and monitoring of water quality.

Carmichaels Municipal Authority

The Monongahela River serves as a municipal water source for the Carmichaels Municipal Authority. Although no areas of concern were identified, possible sources of water contamination include discharge from local power plants, cumulative release of petroleum products from marinas along the river and storm water runoff (Natural Resources Defense Council, 2004).

The Authority provides water service to approximately 1,800 customers in Carmichaels Borough and Cumberland Township. Of the 1,800 customers, the majority are residential (1,519) while 91 are commercial and 42 are industrial. There is no mandatory tap-in in either community and the cost of a tap-in to the consumer is \$1,000. Costs are six dollars per 1,000 gallons, which provides average monthly costs of \$22.20 for residential, \$89.40 for commercial, and \$38.50 for industrial and public customers. The treatment plant was

constructed in 1949 and is located at the end of Browns Ferry Road on the Monongahela River in Cumberland Township. The plant was upgraded in 1978 and most recently in 1994. Since the water source is the Monongahela River, the Authority has concerns with water contamination of the River and drought.

Clay Battele

No information was provided.

Dunkard Valley Joint Municipal Authority

The Dunkard Valley Joint Municipal Authority provides public water service to approximately 500 customers in Greensboro Borough and portions of Monongahela Township. There is no mandatory tap-in however residents pay \$400 plus any additional costs to tap into the public water system. Average monthly cost to consumers are \$25.00 for residential and commercial customers and \$40.00 for industrial. The water treatment plant was constructed in 1945 and planned improvements include the replacement of the main water line.

The Dunkard Valley Joint Municipal Authority uses the Monongahela River as its source water to provide drinking water to approximately 1,400 customers in Greensboro Borough and Monongahela Township. Although no areas of concern were identified, possible sources of water contamination include wildcat sewers (Natural Resources Defense Council, 2004).

East Dunkard Water Association

The East Dunkard Water Association draws water from the Cheat River and serves approximately 3,400 people in Dunkard Township, Monongahela Township, Greene Township, and Cumberland Township. Identified concerns include unacceptable filtration and treatment of water, possible water contamination from wildcat sewers and the need for water lines along the length of Walnut Hill Road. There is a \$40,000 upgrade to the pump station planned for 2007.

Mount Morris Water/Sewage Authority

The Mount Morris Water/Sewage Authority serves approximately 1,500 residents in Perry Township. There is a mandatory tap-in fee of \$1,000 and customers pay a minimum of \$19.00 per month for service and an additional \$8.50 per 1,000 gallons over 3,000 gallons. Source water is purchased from the Morgantown Utility Board whose water sources are the Monongahela River and Cobun Creek Reservoir. No concerns were identified for this water provider. Planned expansions include an 8.3 mile waterline extension along Big Shannon Run Road.



Morgantown Utility Board

Morgantown Utility Board is a large water and sanitary sewer utility provider with over 22,000 water customers primarily in Morgantown and Monongalia County West Virginia. In the Planning Area the Morgantown Utility Board provides public water service to a small portion of southern Wayne Township along Rush Run Road and Smith Creek Road. There is a planned extension along Sheppards Run Road.

Southwestern Pennsylvania Water Authority

Jefferson Borough and Jefferson Township created the Southwestern Pennsylvania Water Authority (SPWA) in December of 1951 and its headquarters remain located in Jefferson Borough. Since that time, the Authority has acquired numerous water companies and authorities and now serves 22 municipalities in Fayette, Greene, and Washington Counties. The SPWA currently serves approximately 12,500 households in the three-county region. The water treatment plant is located in Cumberland Township on the Monongahela River and serves the entire system (<http://www.spwawater.com/index.htm>). The municipal water source is the Monongahela River and although no areas of concern were identified, possible sources of water contamination include agricultural activity, storm water runoff of developed areas, sewage treatment plants, and wildcat sewers (Natural Resources Defense Council, 2004).

Within Greene County, SPSW provides service to Center Township, Clarksville Borough, Cumberland Township, Franklin Township, Jefferson Borough, Jefferson Township, Morgan Township, Rices Landing Borough, and Waynesburg Borough. There is no mandatory tap-in; however customers must pay a tap-in fee of \$1,500 to connect to the public water systems and approximately \$25.00 per month for service. Planned water line expansions in Greene County can be found in Wayne Township along Jay Phillips Hill Road and Yeager Road. SPWA also plans to expand distribution to Mt. Morris over the next 5-10 years

Sewerage Service

Domestic sewage and wastewater are treated and disposed of by various methods, ranging from large municipally-owned sewage treatment plants to community or individual onlot disposal systems (OLDS), also called "septic systems," (DEP, 2006). Table 7-1: Methods of Sewage Disposal in Southwestern Pennsylvania, 1990 shows how Greene County compares to its counterparts. According to the 1990 Census, 46 percent of Greene County households utilized public sewerage services. Compared to the other counties in southwestern Pennsylvania, Greene County is comparable to Armstrong, Indiana, and Somerset; but significantly lower than Allegheny, Beaver, Lawrence, Washington, and Westmoreland.

However, a reported four percent of households disposed of sewage using methods other than public sewerage systems or on-lot septic systems. According to the PA DEP, homes without public sewers or on-lot septic systems typically use sewer pipes that are not connected to a sewer system, which create cesspools. This figure is the highest of all the counties, with Fayette, Indiana, and Somerset at three percent. Raw sewage can have a significantly negative impact on water quality and its surrounding environment.

Table 7-1: Methods of Sewage Disposal in Southwestern PA, 1990

County	Public Sewage		On-lot Septic Systems		Other*	
	Households	Percent	Households	Percent	Households	Percent
Allegheny	553094	95	26163	5	1481	0
Armstrong	12,983	41	18068	57	706	2
Beaver	52,708	69	23265	30	363	0
Butler	29,616	50	28602	48	843	1
Fayette	30,241	49	29510	48	1655	3
Greene	7,321	46	7963	50	698	4
Indiana	14762	42	18993	55	1015	3
Lawrence	24,523	63	13862	36	459	1
Somerset	15,164	42	19353	54	1196	3
Washington	59,397	63	29434	35	1282	2
Westmoreland	102768	67	49195	32	1591	1
TOTAL	896577	76	264408	23	11289	1

Source: 1990 Census

* Homes without public sewers or on-lot septic systems typically use sewer pipes that are not connected to a sewer system, or cesspools.



Public Sewerage Service Providers

Figure 7-1: Infrastructure graphically displays the public sewerage coverage areas in Greene County. As can be seen, the availability of sewerage is much more limited than water. Locations of sewerage are constrained to areas of concentrated population. For instance, Waynesburg Borough has the largest sewerage service area with the Carmichael's-Cumberland Joint Sewer Authority having the second largest capacity. Reflective of public water service locations, sewerage is concentrated on the eastern portion of the county and at the County Seat of Waynesburg, though there is much less availability throughout the County for public sewerage service.

According to the Pennsylvania Department of Environmental Protection (PA DEP), there are ten sewage treatment plants located in Greene County.

Table 7-2: Sewage Treatment Plants					
Facility Name	Present Population	Future Population	Existing Flow	Present Design Flow	Future Design Flow
	Receiving Collection	Receiving Collection			
			* Millions of Gallons per Day *		
Brave STP	398	423	0.03	0.05	0.05
Carmichaels STP	4,156	4,659	0.39	0.6	0.44
Dunkard Township STP	1,055	1,050	0.18	0.1	0.1
Franklin Township STP	3,004	4,659	0.3	0.5	0.5
Greensboro STP	1,440	3,145	0.3	0.3	0.3
Mather STP	1,737	2,212	0	0.2	0.3
Nemacolin STP	274	1,112	0.03	0.15	0.11
Rices Landing STP	2,044	2,044	0.2	0.25	0.25
Waynesburg STP	5,208	9,018	0.63	0.8	0.8
Center Township		210			0.02

Source: PA DEP

In Greene County, there are twelve authorities that provide public sanitary sewage services to Greene County. Of the twelve, three are joint authorities that provide service to more than one municipality.

Brave Water & Sewer Authority

The Brave Wastewater Treatment Plant provides service to the village of Brave in Wayne Township with a service area of approximately two miles. The biggest concern of the Authority is the condition of the treatment plant and old sewage lines that need to be replaced.

Carmichaels – Cumberland Joint Sewer Authority

Carmichaels – Cumberland Joint Sewer authority serves 1,514 customers in Carmichaels Borough and Cumberland Township. There is a mandatory tap-in fee of \$300 plus the cost of installation for the service area. The Authority's sewage treatment plant was built in 1976 and is currently operating under capacity. The system utilizes nine (9) pumping stations all of which are reported to be in good working condition. Current plans for expansion include a line extension along SR 88 north towards Dry Tavern at a cost of approximately \$2,000,000.

Crucible Sewer Authority

The Crucible sewage treatment plant currently serves 200 customers in the village of Crucible, located in northern Cumberland Township. There is a mandatory tap-in fee of \$500 and average monthly cost to consumers is \$17.00. The plant currently requires two (2) pumping stations which are reported to be in good working condition with no operational problems. The Authority recently extended service to the village of Serbiantown, serving approximately 20 additional homes. The system is operating under capacity and there are no plans for additional expansions.

Dry Tavern Sewer Authority

Dry Tavern Sewer Authority has a two square mile service area and provides sanitary sewerage service to 200 customers, 180 residential and 20 commercial, in and around the village of Dry Tavern in Jefferson Township. There is a mandatory tap-in fee of \$1,500. Monthly cost to residential customers is \$50 / month while commercial customers pay by consumption. The treatment facility was built in 1992 and is currently working with DEP to complete an upgrade to the plant so as to remedy existing environmental concerns. The plan is hydrologically and organically overloaded every month and must construct a new facility to accommodate the existing customer base. The authority is applying for Penn Vest funds.



Dry Tavern Sewer Authority is not in compliance with the Pennsylvania Sewage Facilities Act (Act 537). Future plans will be to prepare an Act 537 Plan once the existing plant is in compliance. Following the completion of an Act 537 Plan, the authority expects to extend new sewer lines to connect existing residential development that currently relies on septic-systems. The Authority plans to expand service in the future to Fern Cliff Road and the Szojka Plan subdivisions.

Dunkard-Bobtown Municipal Authority

Dunkard-Bobtown Municipal Authority has a one square mile service area with 354 customers. There is a mandatory tap-in fee of \$500.00 and customers pay \$25.00 monthly. The current treatment plant was constructed in 1992, is considered to be in good condition, and operates under capacity.

Dunkard Township is in the process of undergoing an Act 537 Study for the expansion of sewer service into the Budapest and Dillner communities. The study will determine if these adjacent villages can be incorporated into the existing plant or if alternatives will be needed.

Franklin Township Sewer Authority

The Franklin Township Sewer Authority provides service to approximately 1,600 customers in Franklin Township. Mandatory tap-in fee is \$1,300 and customers pay \$4.90 for every thousand gallons used. The sewage treatment plant was constructed in 1979, with updates and expansions most recently occurring in 1993. The Authority recently completed a feasibility study that will allow for the extension of sewage service to Sugar Run in 2009 and plans to replace the East Franklin Pumping Station in 2008. The biggest concern for the Authority is meeting effluent limits set by the PA DEP and replacing old lines around the Bonner District in West Waynesburg that have old terra cotta lines.

Greensboro-Monongahela Joint Sewer Authority

Greensboro-Monongahela Township Joint Sewer Authority provides public sewerage service to approximately 270 residents of Greensboro Borough, and the communities of Glassworks, Hillman, Penn Pitt (Dora Village) and Seventh Pool in Monongahela Township. There is a mandatory tap-in with a fee of \$1,000 and average monthly cost to consumer is \$33.00. The sewage treatment plant was constructed in 1997 and most recently expanded service to include Seventh Pool in July of 2005. The system operates (3) pump stations and frequent replacement of the pumps has become a concern. There are concerns regarding the lack of public sewerage in the village of Alicia, which sits on the Monongahela River north of Greensboro. Planned projects include the extension of sewage lines to provide service to Cabbage Flats / SR 88 and the Mapletown area in Monongahela Township by 2008-2009, however funding is not yet secured for the entire project.

Lower Ten Mile Joint Sewer Authority

The Lower Ten Mile Joint Authority provides sewage treatment services to 1,391 dwelling units within East Bethlehem, Jefferson, and Morgan Townships, and Clarksville and Jefferson Boroughs. Tap in fees are \$1,500 with a monthly consumer cost of \$40.00. The physical sewage treatment facility was built in 1989 and has an Act 537 plan that was adopted in 2002. The Lower Ten Mile Joint Sewer Authority has two plants to accommodate the service area — Mather Wastewater Treatment Plant and the Williamstown Wastewater Treatment Plant. Both treatment facilities are under a DEP mandated ban on new tap-ins.

There were no reported concerns relating to the authority. Future plans will include improvements to both treatment facilities and, depending upon funding, a planned extension of lines along SR 188. These extensions will provide sewerage to an additional 664 dwelling units. Currently, old sewage lines are being replaced in the Pitt Gas area.

Mount Morris Water & Sewage Authority

The Mt. Morris Water and Sewer Authority serves 350 customers in and around the village of Mt. Morris and the I-79 interchange in Perry Township. There is a mandatory tap-in fee of \$845.00 and customers pay a minimum of \$24.00 per month for service, with an additional \$9.00 for ever additional 1,000 gallons after 2,000 and \$11.00 per 1,000 after 3,000 gallons. Constructed in 1989 the sewage treatment plant operates below capacity and is considered to be in good condition.

Nemacolin Sewer Corporation

Nemacolin Inc. is the public sewerage provider for 379 customers in a 1/10 square mile area in the village of Nemacolin, Cumberland Township. The physical plant was built in 1985 and has not undergone any significant repairs because of funding shortages. The cost to tap in is unknown and the monthly residential customer cost is \$13.00. The sewerage system in Nemacolin is one of the oldest and the Corporation's biggest concern is the age of the sewage lines, which are deteriorating and in need of replacement.

Rices Landing Borough Sewage

The Rice's Landing Sewage Treatment Plant was constructed in 2000 in response to their 1997 Act 537 Plan. The facility provides sewerage to the entire Borough of Rices Landing, approximately 250 customers. The treatment facility is municipally owned and operated and operates under capacity. Monthly costs to consumers is \$45.00 and there is a mandatory tap-in fee of \$2,000.



Rogersville

No information was provided.

Wayne Township Sewer Authority of Blacksville

The Wayne Township Sewer Authority of Blacksville serves 39 customers in a 1.5 square mile area in Southeastern Wayne Township. The Authority is part of a larger system connected to the treatment plant in Blackville West Virginia. There is a mandatory tap-in fee of \$1,300 and monthly cost to consumers is \$23.50. Solids are currently collected in a 1,000 gallon tank and water is piped across the state line for treatment. Growth on the West Virginia side has placed the treatment plant at operational capacity. There may be a need to construct a second plant to adequately treat the sewage and have the ability to handle free solids. The cost to tap in is \$1300.00 and the monthly residential customer cost is \$23.50.

Waynesburg Borough Sewage Treatment Plant

The entire Borough of Waynesburg is served by the municipally owned and operated Waynesburg Borough Wastewater Treatment Plant. There are approximately 4,452 customers over 3.5 square miles. There is a mandatory tap-in fee and monthly costs to consumers is approximately \$26.00. The treatment plant was constructed in 1942 with most recent upgrades occurring in 1990. Current plans to expand include over the next five years, another biotower will be built, an additional final clarifier will be built, and the system will convert from chlorine disinfection to UV, which will increase plant capacity. The Borough's biggest concern is stormwater in-flow and over the next three years, the Borough has plans to separate the sewer and stormwater systems. In addition, there are many areas of old lines that are in need of replacement.

On-lot Disposal Systems

In areas that are not served by public sewerage facilities, on-lot disposal systems must be used. The type of system selected and permitted depends on the site conditions and the type of soil on the lot. Approximately four feet of suitable soil is needed under the gravel layer of the on-lot system in order to treat sewage effectively and meet the standards of the PA DEP. Suitable soils must be free of rock and not saturated with water. Since groundwater is the primary source of drinking water in areas served by individual and community wells, it is very important to keep groundwater free of contamination. If the soil conditions are not suitable, the sewage will only be partially treated and will enter the water supply, depositing viruses into the water supply, which can survive in groundwater in excess of one year, (PA DEP Act 537 Fact Sheet). There are five basic conventional on-lot systems permitted for use on residential lots:

- in-ground trench
- in-ground seepage beds
- subsurface sand filters
- elevated sand mounds
- spray irrigation

As part of the evaluation of a building lot to be served by a septic system, the municipal sewage enforcement officer (SEO) must examine and test the soils by conducting a soil profile on the lot. If the tests show that the soils are suitable to properly treat sewage, the SEO will issue a permit for the installation of an on-lot system. If however the soils are deemed unsuitable, the SEO will not issue a permit for an on-lot system. If there are at least 20 inches of suitable natural soil on the lot, the SEO may issue a permit for an elevated sand mound, where the remainder of the required four feet of suitable soil (28 inches) is comprised of a sandy fill material to form the sand mound.

In some cases, when a lot is not suitable for a conventional on-lot disposal system, the homeowner may consider an alternate system. It is important to note that there are specific requirements that must be met when using an alternate system. DEP-approved alternate on-lot system types include:

- elevated sand mound bed on slopes between 12 and 15 percent
- non-infiltration, evapotranspiration bed contained within a greenhouse
- separation of blackwater/greywater sewage flows
- flow equalization (commercial only)
- subsurface sand filter (trenches)
- shallow absorption area with pressure distribution
- peat based filter systems
- leaching chambers
- at-grade bed systems
- the A/B soil system
- various recirculating sand filters



However, some lots are not suitable for any type of disposal system due to inadequate soils, high water table, steep slopes, or other important factors (PA DEP, 2006).

Act 537 Program

The sewage facilities program, often referred to as simply the "Act 537 program," is largely administered by individual municipalities, groups of municipalities, local agencies including County Health Departments and groups of local agencies (known as joint local agencies). These agencies receive technical and financial assistance and oversight from the Department of Environmental Protection (DEP).

Table 7-3 lists each municipality in Greene County, along with the date that they adopted their Act 537 Plan and the current status of the plan. Act 537 requires that all municipalities must develop and implement an official sewage plan that addresses their present and future sewage disposal needs. These plans are to be modified as new land development projects are proposed or whenever a municipality's sewage disposal needs change. DEP reviews and approves the official plans and any subsequent revisions. The Act 537 plan must address existing sewage disposal needs or problems; account for future land development; and provide for future sewage disposal needs of the entire municipality. As can be seen in Table 7-3, only three municipalities have an adopted plan less than five years old, and the majority of the municipal plans are older than 20 years. Older plans may mean that sewage disposal is not adequately addressed and could pose future problems for the municipality.

Table 7-3: Greene County Status of Act 537 Plans		
Municipality	Plan Approval Date	Status
Aleppo Township	9/1/1971	Plan older than 20 years
Carmichaels Boro	9/1/1971	Plan older than 20 years
Center Township	11/1/2002	Plan less than 5 years old
Clarksville Boro	9/1/1971	Plan older than 20 years
Cumberland Township	9/1/1971	Plan older than 20 years
Dunkard Township	9/1/1971	Plan older than 20 years
Franklin Township	8/12/2003	Plan less than 5 years old
Freeport Township	9/1/1971	Plan older than 20 years
Gilmore Township	9/1/1971	Plan older than 20 years
Gray Township	9/1/1971	Plan older than 20 years
Greene Township	9/1/1971	Plan older than 20 years
Greensboro Boro	9/1/1971	Plan older than 20 years
Jackson Township	9/1/1971	Plan older than 20 years
Jefferson Boro	9/1/1971	Plan older than 20 years
Jefferson Township	12/6/2002	Plan less than 5 years old
Monongahela Township	9/1/1971	Plan older than 20 years
Morgan Township	9/1/1971	Plan older than 20 years
Morris Township	1/12/1966	Plan older than 20 years
Perry Township	9/1/1971	Plan older than 20 years
Rices Landing Boro	1/15/1998	Plan between 5 and 10 years old
Richhill Township	9/1/1971	Plan older than 20 years
Springhill Township	9/1/1971	Plan older than 20 years
Washington Township	9/1/1971	Plan older than 20 years
Wayne Township	9/1/1971	Plan older than 20 years
Waynesburg Boro	9/1/1971	Plan older than 20 years
Whiteley Township	9/1/1971	Plan older than 20 years
Source: DEP, 2006		



Infrastructure Project Funding

Greene County issued a bond in 2006 to make funding available to contribute towards local water and sewerage improvements. The following eighteen projects were submitted to the County for funding consideration:

- Ceylon Road Sewage Overload Elimination Project – Cumberland Township
- Route 88 Sewer Line Extension – Cumberland Township
- Serbiantown Sewer Line Extension – Cumberland Township
- Sewage Feasibility Study for Newtown – Dunkard Township
- Porter Street Waterline Extension – Franklin Township
- Sewage Treatment Plant Expansion – Franklin Township
- Dry Tavern Sewer Extension-Phase 2 – Jefferson Township
- Mt Morris Water and Sewer Expansion – Perry Township
- Cabbage Flats – Route 88 Sewer Extension – Monongahela Township
- Poland Mines Sewer Project – Monongahela Township
- Lower Ten Mile Joint Sewer Authority-Phase 1 – Morgan Township
- Two Waterline Extensions – Morgan Township
- Sycamore-Nineveh Waterline Extension – Morris Township
- Ruff Creek Waterline Extensions) – Washington Township
- Sewage Feasibility Study – Washington Township
- Shepherds Run Waterline Extension – Wayne Township
- Brave-Blacksville Water Project – Wayne Township
- Combined Sewer Overflow Separation Project – Waynesburg Borough

Since the total cost of each project exceeded the amount of funding available from the County, the projects were evaluated to establish funding needs and determine how best to leverage additional dollars from outside sources. The County sent questionnaires to each municipality that submitted a project to gather more information on each project. A selection committee chose projects based on funding considerations, residents' needs, and environmental impacts.

In September of 2006, the County announced a first round of awards, which included the following projects:

- Construction Projects:
 - Serbiantown Sewer Line Extension – Cumberland Township (\$20,000)
 - Woodies Run Waterline Extension – Morgan Township (\$200,000)
 - Route 88 Sewer Line Extension – Cumberland Township (\$50,000)
 - Lower Ten Mile Joint Sewer Authority - Phase 1 – Morgan Township (\$225,000)
- Planning Projects:

Areas that received funding for Act 537 planning are shown on *Figure 7-1: Infrastructure*.

- Act 537 Planning for Center Township (\$20,000)
- Act 537 Planning for Dilliner Area in Dunkard Township (\$20,000)
- Act 537 Planning for Poland Mines in Monongahela Township (\$20,000)
- Act 537 Planning for Alicia in Monongahela Township (\$20,000)
- Act 537 Planning for Washington Township (\$20,000)

Regional Water Management Task Force

The Regional Water Management Task Force is an 11-county effort to improve water management and water quality in Southwestern Pennsylvania. The following are the top water challenges as defined for the Regional Water Management Task Force in Greene County:

- Aging infrastructure in boroughs that need to be upgraded/replaced, as well as combined systems that need to be separated
- On-lot/alternative technologies that are prohibitively expensive for the residential property owner and have a limited service life
- Rural low-income populations that cannot afford an additional utility fee for water and sewer and municipal elected officials that cannot and should not be put in a position to make such a difficult and unfavorable decision for their people
- It all comes down to expense in Greene County- how do we build systems that meet the regulations but do not cost a burdensome amount to the land owners



C. Development Strategies

GOAL: Protect water supply & ensure quality

Strategy: Work the Pennsylvania Department of Environmental Protection (PA DEP) and the Greene County Conservation District to properly manage groundwater sources throughout the County by participating in wellhead protection programs and the master well owner network using source water protection plans and applying for grants for implementation.

Strategy: Develop a community based source water protection program to safeguard the public drinking supply based on the threats identified in watershed assessment already completed.

Strategy: Maintain an up-to-date and accurate list of all registered well drillers and inspectors for new and prospective residents within Greene County.

Strategy: Support the expansion of public water service only to areas with failing systems or areas without a dependable water supply.

GOAL: Ensure that the treatment of sewage is adequately planned for

Strategy: Continue dedicating money to the County bond issue program and direct to prioritized areas for expansion of water/sewer infrastructure.

Strategy: Review land development plans to ensure that sewage facilities planning is incorporated.

Strategy: Coordinate with the recorder of deeds to ensure that land development plans comply with sewage facilities plans.

Strategy: Incorporate watershed planning into water resource management and sewage treatment expansion decisions.

Strategy: Update the County's Act 537 Plan to include all township updates and amendments and include regulations for addressing septic system maintenance issues.

Strategy: Maintain an accurate and up-to-date GIS system containing existing water and sewer line data, proposed extensions, and parcels currently served.

Strategy: Support the implementation of the Southeastern Greene Multi-Municipal Comprehensive Plan and demonstration projects for communal on-lot sewage systems.

Strategy: Update the County Act 537 Plan to include all municipal updates and amendments to ensure consistency.

Strategy: Develop a countywide sewage agency (or support the development of regional sewage agencies) to oversee the regulations and administration of on-lot systems and sewage enforcement officers (SEO).

Strategy: Coordinate with PA DEP to provide annual training of sewage enforcement officers for the education of new regulations, alternative systems, etc.

Strategy: Lobby Pennsylvania legislators to revise the definition of sewage in Act 537 studies to include varying degrees of wastewater and thereby allow the different types to be treated differently.

Strategy: Open lines of communication with PA DEP regarding regulations for varying soil types and issues.

GOAL: Increase the capability of cellular service

Strategy: Maintain an accurate and up-to-date GIS system that maps the locations of all existing cellular towers and coverage.

Strategy: Work with telecommunications providers to expand cellular service within the County.



D. Implementation Plan