



# COMMUNITY FACILITIES AND SERVICES

## PUBLIC SEWER

## **Sewer Systems**

Centre County currently has 20 existing sewer service facilities along with two (2) additional sewer service facilities for Julian/ Huston Township and Coburn/ Penn Township that have been approved but not yet constructed. There are also four smaller systems that serve manufactured housing neighborhoods (refer to County Sewer Service Area by Planning Region map for all of the system locations).

Unlike most areas experiencing increased growth in Pennsylvania, Centre County does not have major streams, rivers, or lakes to discharge wastewater. The streams where wastewater is discharged in the County are small and most are classified by the State as Cold Water Fisheries (CWF) and High Quality Cold Water Fisheries (HQCWF).

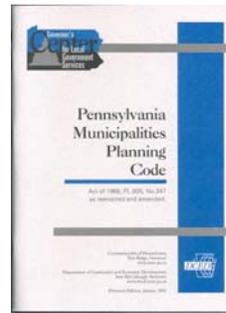
The State classifications for cold water fisheries place regulatory restrictions on the quality and quantity of the wastewater that can be discharged into the streams. This results in an increased level of treatment at the sewage facility plants, usually to a tertiary level where the discharge is close to or meets federal drinking water standards.

The development of wastewater treatment plants and their associated collection facilities are regulated by the State's Act 537 Sewage Facilities Planning regulations. The Act 537 Plan requirements are administered by the PA Department of Environmental Protection (PA DEP).

The PA DEP reviews proposals and upgrades for wastewater treatment plants. Based on the size of the plant, the treatment levels, and discharge location (usually streams), limits are established as to the quality and quantity of the discharged wastewater. Annual reports of wastewater flow from a treatment are required by the PA DEP. These reports must include five year growth projections of flows and hydraulic loading at the treatment plant.

When a treatment plant has average daily flows of treated wastewater that are 80% of the total design capacity, the PA DEP requires that

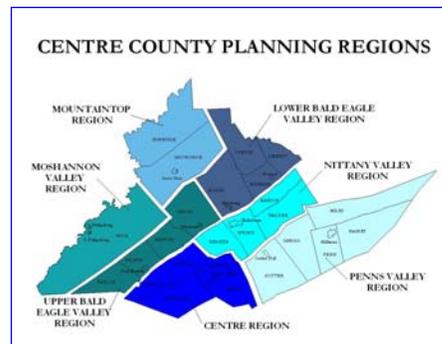
municipal authority to complete an ACT 537 plan for an upgrade to increase the plant capacity.



As has been the practice recently, due to change to Act 247, PA MPC (Municipalities Planning Code) County and municipal planning commissions and their staff have the opportunity to review the plans for new or upgraded treatment facilities.

These reviews allow local municipalities to ensure that the facilities and their collection systems are consistent with their adopted comprehensive plans and land use (subdivision/ land development and zoning) regulations).

## **Sewer Service by Planning Region**



**Figure 1:** Centre County Planning Regions

In order to adequately evaluate and provide recommendations regarding public sewer service, this plan will address the sewer service capabilities and limitations within each of the seven (7) identified planning regions in Centre County.

As stated before, these planning regions correspond nicely to the physical geographic, socioeconomic, population, and development activity differences found in the County. Important as well are the school districts within each of the planning areas that utilize these sewer facilities.

The systems with the largest customer base and collection system land coverage are located in the State College/ Centre Region and the Bellefonte/

Nittany Valley Region (see County Sewer Service Area by Planning Regions map).

These larger systems serve the largest population centers in the County - Centre Region (79,406 persons) which experienced a population increase of 10.9% (7,773) between the 1990 and 2000 US Census and the Nittany Valley (22,006 persons) with a population increase of 8.3% (1,688) between the 1990 and 2000 US Census.

It is interesting to note that both regions combined account for 75% of the County's 135,758 residents.

The service facilities and their infrastructure within the Centre and Nittany Valley Regions cover large land areas that have the capacity and ability to handle existing and future in-fill development activity beyond the 20 year planning horizon of this plan.

### **Centre Region**



**Figure 2:** UAJA Logo (Source: UAJA's Website)

In the Centre Region, the University Area Joint Authority (UAJA) is the established municipal authority that handles the collection and treatment of wastewater to a tertiary level for the Centre Region at its Spring Creek Pollution Control Facility.

Currently, the UAJA system serves approximately 50,000 residents in addition to the business, industrial and institutional users. UAJA has a rated capacity of six (6) million gallons of wastewater per day

(mgd) with an average daily flow of five 5.2 mgd. An expansion to nine (9) mgd using innovative technology is currently under construction. This innovative technology, which is



**Figure 3:** Beneficial Reuse-Construction Phase (Source: UAJA Website)

called "Beneficial Reuse" involves treating and then returning or recharging the treated wastewater back into the groundwater system near the headwaters of the Spring Creek watershed in Ferguson township via pumps and piping. Once treated, the wastewater will exceed US EPA (United States Environmental Protection Agency) standards. The first phase of the Beneficial Reuse project will involve piping the treated wastewater to the industrial area near Dale Summit in College Township.

Penn State University also has a collection system and wastewater treatment facility that is located within the boundary of the UAJA service area. This is a unique system that provides a secondary level of treatment, which has a rated capacity of four (4) mgd with an average daily flow of approximately 2.5 mgd.

The treated effluent from this PSU facility is then pumped to several large land areas encompassing approximately 500 acres where the effluent is spray irrigated. This spray irrigation system allows the effluent to be filtered through the soil and then recharge in the groundwater aquifer. In operation approximately 40 years, this system is monitored closely by University and PA DEP officials.

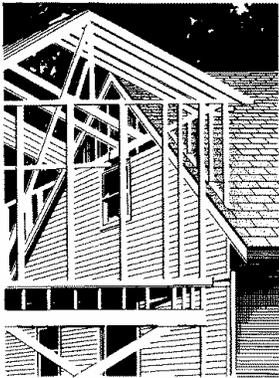
State College Borough has an established municipal authority that collects wastewater within

its municipal boundary and then discharges the effluent into the UAJA system for treatment.

Halfmoon Township, which in its own right has experienced rapid rural residential development activity in the last 10 years (60% population increase), does not have public sewer service. Given its location away from the current UAJA collection and treatment system, there are no immediate plans to extent sewer service to that municipality.

In total, the Centre Region has treatment facilities that are currently rated to process 10 mgd with average daily flow of almost eight (8) mgd. The current expansion under construction at UAJA will increase the permitted total capacity to 13 mgd.

### **Centre Region Growth Issues**



The Centre Region Planning Agency completed a Region Comprehensive Plan in 2000. The major element of that plan was the designation of a Regional Growth Boundary (RGB) that closely corresponds to the existing sewer service area.

In addition to that Regional Plan, a Vacant Land Analysis was recently completed that identified where vacant was located, what the carrying capacity of this land is based on current zoning, and the timing of that development potential. This information is then used to determine future growth and what impacts that growth will have on the sewer and water systems. Based on this recent study and known sewer capacity, it was determined that the Centre Region can accommodate growth into the foreseeable future, approximately 20 years.

### **Nittany Valley**

In the Nittany Valley, the Spring, Benner, Walker Joint Authority (SBWJA) is the established municipal authority for Spring, Benner, and Walker Townships. This system serves as the collection and infrastructure development entity for these municipalities and provides service to approximately 10,000 residents.

Bellefonte Borough Municipal Authority also has a collection system which provides connections to the SBWJA and operates the only wastewater treatment facility in the region that serves 6,400 Bellefonte residents and the 10,000 SBWJA customers. The Bellefonte Borough Wastewater Treatment Facility has a design capacity of 3.2 mgd with an average daily flow of 2.4 mgd. This treatment facility also handles the collection and processing of wastewater from the Spring Benner Walker Authority system (approx. 1.0 mgd), the State Correctional Institution at Rockview (370,000 gpd) land Bellefonte Borough (approx. 1.0 mgd).

Marion Township, which is also part of the Nittany Valley family of municipalities, does not have public sewer service. There are no immediate plans to extend service there based on the recent changes to the SBWJA Sewage Facilities Plan as required by the State's Act 537 sewage planning legislation. Future highway interchange development at two locations in Marion Township may necessitate consideration for service which is dependent upon future land use planning.

In the community of Nittany, which is located at the eastern edge of Walker Township along Route 64 near Clinton County, a sewer collection system is currently being constructed. Sewage from the East Nittany Valley Joint Municipal Authority (ENVJA) collection system will be treated at the City of Lock Haven sewage treatment plant. At the present time, this treatment plant is experiencing hydraulic overloading problems with infiltration problems due to stormwater inflows. Connections to this plant are being severely limited by the PA DEP until the problems are corrected.

### **Nittany Valley Growth Issues**

The Nittany Valley Planning Region has the largest sewer collection system in Centre County (SBWJA) in terms of land coverage but it accounts for less than 20% of the total treated wastewater that is discharged daily in the County.

The reason for this large service area is the recent increase in the amount of development activity along with the need to provide public sewer service to older communities with failing on-lot septic systems. Unless carefully managed, this expansion of sewer service will encourage development of large areas of agricultural land between these communities to develop in the future.

The completion of Interstate I-99 through the Nittany Valley to I-80 will undoubtedly increase development pressures. Taking into account the remaining capacity at the Bellefonte treatment plant (0.8 – 1.0 mgd) it can be determined that the majority of future growth will be medium to low density residential development with some commercial and industrial development locating near the highway interchanges in Benner and Spring Townships.



**Figure 4:** SBWJA's Rockview Flow Management Facility (Source: HRG's Website)

### **Nittany Valley Future Sewer Considerations.**

In a cooperative effort with Walker Township, SBWJA, Centre County, and the PA DEP, it is recommended that the community of Hublersburg be provided with public sewer service with a package treatment system. This facility could be managed by either SBWJA or ENVJA.

This recommendation is consistent with the Walker Township Comprehensive Plan and Zoning Ordinance. When considering the effects of sprawl development elsewhere in the region due to sewer extensions, Walker Township would have the ability to manage development along Route 64 where rural/ agricultural preservation has been identified through the comprehensive planning process.

Important as well is the fact that there is a watershed divide located between Zion and Hublersburg. Withdrawing and recharging/ discharging our water resources within each respective watershed will help maintain to groundwater and stream levels.

### **Lower Bald Eagle Valley**

The Lower Bald Eagle Valley, which includes Milesburg and Howard Boroughs, Boggs, Curtin, Howard, and Liberty Townships has experienced modest growth in the last 10 years. Between 1990 and 2000, the US Census recorded a population increase of 2.3% (179 persons). Within the same 10 year time-frame, the number of housing units in this region increased by 10.5% (365 units).

Currently, there are two wastewater treatment plants in this region; the largest is the Mid-Centre County Authority located east of Milesburg, the other is the Bald Eagle State Park Sewer System located west of Blanchard.

The Mid-Centre County facility serves all of Milesburg and Unionville Boroughs, and portions of Boggs and Union Townships. It has a rated capacity of 800,000 gpd with an average daily flow of 700,000 gpd (gallons per day) with tertiary treatment and discharge to Bald Eagle Creek. Based on the estimated edu's (equivalent dwelling units) the system serves a population of approximately 4,000 residents.

Currently, this system is experiencing problems with inflow and infiltration to the collection lines which overloads the treatment plant during storm events. PA DEP has required corrective action with an updated Act 537 Sewage Facilities Plan to eliminate the pollution problems before allowing additional connections to the system. Pending

approval of that plan, a moratorium on connections is still in effect. Once this plan is approved and the repair work to the collection system is completed, the rated capacity will not increase significantly (1.4 mgd), but the ability to add some new connections will allow for reasonable growth.

The Bald Eagle State Park Wastewater Treatment System is owned and operated by the Bald Eagle State Park and is located near the communities of Eagleville and Blanchard in Liberty Township. This facility does secondary treatment using extended aeration of the wastewater with discharge to Bald Eagle Creek. The rated capacity of the plant is 450,000 gpd and the average daily flow is 210,000 gpd. Wastewater flows received at the Bald Eagle plant include the State Park (60,000 gpd), Howard Borough (70,000 gpd), and portions of Liberty Township (80,000 gpd).

Howard Borough Sewer Authority operates a collection system that is connected to the Bald Eagle plant that serves approximately 700 people. US Census figures indicate that Howard Borough experienced a 6.7% decrease in population from 1990 to 2000 (50 people).

Liberty Township Sewer Authority also operates a collection system that is connected to the Bald Eagle Plant, which serves approximately 900 people. This service area is mainly limited to the Blanchard and Eagleville communities. Unlike Howard Borough, Liberty Township experienced a population increase of 4.8% (83 people) based on US Census figures from 1990 and 2000.

Curtin Township located north of Howard Township does not have public sewer. However, based on recent projects to upgrade the public water systems and housing rehabilitation in the communities of Orviston and Monument (Liberty Township), public sewer may be necessary in the form of a small package treatment system(s) with discharge to Beech Creek.

In the Lower Bald Eagle Valley Region, there is a combined rated treatment capacity of 1.45 mgd.

### **Lower Bald Eagle Valley Growth Issues**

With the majority of the treatment capacity and growth potential at the Mid Cente County Treatment facility, it is anticipated that much of the growth in this region will occur in Boggs and Union Townships between Milesburg and Unionville Boroughs. The majority of that growth will be from communities located north of Route 220 where the existing on-lot systems are experiencing non-repairable problems. Limiting factors for growth in this planning region include large areas of state owned public lands, strip-mined areas, steep slopes, and poor soil suitability (see the Lower Bald Eagle Valley Planning Region map that identifies these limitations).

### **Lower Bald Eagle Future Sewer Considerations**

The communities of Orviston and Monument should be evaluated in the future for public sewer service.

### **Penns Valley**

The Penns Valley Region is home to Potter, Gregg, Penn, Miles, and Haines Townships and includes Centre Hall and Millheim Boroughs. With a 2000 US Census population of 11,382 in the Penns Valley, the overall increase from 1990 to 2000 was 7.2% or 732 people. This population increase is consistent with the previous 10 year period (1980 to 1990). It is interesting to note that all of the Townships showed an increase while both boroughs (Centre Hall and Millheim) experienced a population decrease.

Currently there are four (4) public wastewater treatment facilities in the Valley. The development of three municipal sewer systems occurred within the last 10 years with an additional system in Penn Township (Coburn) proposed for construction soon.

These systems include the Centre Hall Borough Sewer System, Gregg Township Sewer System, Millheim Borough Sewer System, and the Country

Club Park Sewer System in western Potter Township along the north side of Route 45 which is operated and maintained by Potter Township.

The largest treatment system is operated by the Centre Hall Borough–Potter Sewer Authority. This collection and treatment system serves approximately 2,200 residents and has a design capacity of 280,000 gpd with a daily flow of approximately 115,000 gpd that provides secondary treatment using a sequencing batch reactor. Discharge of the wastewater from the plant near Old Fort is transferred via an approximately two (2) mile long pipe (10,100 feet) south along Route 144 to an outfall at Sinking Creek near Potters Mills.

Millheim Borough's sewer collection and treatment system serves approximately 750 residents based on the 2000 US Census. This small system has a secondary treatment design capacity of 100,000 gpd. Daily wastewater treatment flow averages 50,000 gpd with discharge to Elk Creek. The collection system in Millheim is located mainly in the developed areas of the Borough. With three (3) large areas of prime agricultural farmland located within the Borough limits around the developed area, some development activity in accordance with Millheim's historic character can be expected and is encouraged.

Gregg Township has a Sewer Authority with a system that serves the community of Spring Mills. This recently constructed secondary treatment system with aeration and has a design capacity of 90,000 gpd with an average daily flow of approximately 50,000 gpd. Wastewater from the plant is discharged into Penns Creek. Future expansion of the collection system and development activity will be limited due to the size of the plant, topography, and allowable zoning densities.

The County Club Park sewer system, which is 30 years old, is the oldest wastewater treatment plant in the Penns Valley. Originally designed and built as a private collection and treatment system, the developer also included

a water system for the neighborhood. Due to the lack of maintenance by owner, problems with both the sewer and water systems forced Potter Township to take ownership and maintenance responsibilities. This secondary treatment facility with extended aeration has a design capacity of 35,000 gpd and an average daily flow of approximately 15,000 gpd. Upgrades to this system will be required in the next several years.

The Valley's newest sewer system, which is located in Penn Township's community of Coburn, is in the final stages of approval. This proposed secondary treatment system with extended aeration and ultraviolet disinfection will have a design capacity of 23,000 gpd. A total of 87 dwelling units (approximately 235 residents) and 3 non-residential uses are to be served by the new system.

Similar to the Spring Mills system in terms of treatment and topography, future expansion of the collection system should be limited. However, there is an existing farm adjacent to the community that could be developed and connected to the sewer system. This farm is currently entered into the Penns Township Agricultural Security Area program. Although this designation does not prevent development activity, it provides an intent to maintain the agricultural activities which would be encouraged in terms of the County's future growth and preservation perspective.

### **Penns Valley Growth Issues**



**Figure 5:** Round Barn, Potter Township

When compared to the sewer systems in the Centre and Nittany Valley Regions, the Penns Valley sewer systems have the greatest ability to preserve the agricultural and community character that has been identified as an attractive feature of Centre County. The reason for this is that the sewer service areas are compact and closely match the established developed areas in the municipalities and respective communities. Large and elongated sewer service areas can create additional development pressures that often lead to sprawl develop activities in the agricultural and rural areas and must be avoided in the Penns Valley.

The Meadows Clinic, located east of Country Club Park along Route 45, was found to have an on-lot sewage system malfunctioning. An opportunity to solve the problems at the Meadows Clinic would be to have that facility connect to the Country Club Park treatment facility. The Country Club Park facility can accommodate the additional wastewater flows with some upgrades and maintenance possibly through an arrangement with the Centre Hall-Potter Sewer Authority.

This Country Club Park option would eliminate the need to extend sewer service from the Centre Hall/ Potter Treatment Plant west along Route 45. With development pressures moving into the Penns Valley from the Centre Region, sewer service along Route 45 will create residential sprawl and strip commercial development activity that is in direct conflict with Potter Township's Comprehensive Plan and Zoning Ordinance.

### **Penns Valley Future Sewer Considerations**

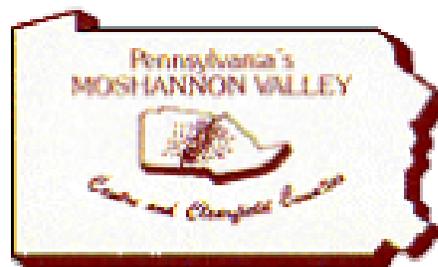
The previous ten (10) years marked considerable change in the Penns Valley in terms of sewer service. That trend may continue if and when the communities of Aaronsburg and Woodward in Haines Township and the communities of Rebersburg and Madisonburg in Miles Township are inspected and evaluated by the PA DEP.

Because all four (4) of the communities have public water service and on-lot septic system

problems are not readily apparent, these communities should be considered for Act 537 plan reviews within the next ten (10) years.

Should package treatment plants be required, the potential wastewater flows from Aaronsburg with approximately 210 homes would generate 42,000 gpd – Woodward with 70 homes would generate 14,000 gpd – Rebersburg with 200 homes would generate 40,000 gpd – and Madisonburg with 60 homes would generate 12,000 gpd (based on 200 gpd/ home)

### **Moshannon Valley**



**Figure 6:** Map (Source: Moshannon Valley Economic Development Partnership's Website)

The Moshannon Valley covers a vast area of Centre and Clearfield Counties (approximately 24 municipalities). In Centre County, the Moshannon Valley municipalities include the Boroughs of Philipsburg (pop. 3,056) and South Philipsburg (pop. 438) along with Rush Township (pop. 3,466) with a total population of 6,960 persons. The overall population in this planning region has increased by only 0.9% (63 persons) between the 1990 and US Census 2000 counts. Between 1980 and 1990 the population decreased in the planning region by a dramatic 8% (593 persons).

Currently there are five (5) sewer systems that provide service within Centre County's portion of this planning region. These systems include the Black Moshannon State Park System, Moshannon Valley Joint Sewer Authority, Philipsburg Borough Sewer Department, Rush Township Sewer (Philipsburg Area), Rush Township Sewer (Black Moshannon/ Mid-State Airport), and South Philipsburg Borough.

Of the five (5) systems in this planning region, only one of them handles both collection and treatment of wastewater - Black Moshannon State Park. The Moshannon Valley Joint Authority handles sewer treatment only and receives collected wastewater from Philipsburg, South Philipsburg, a portion of Rush Township, and portions of Morris and Decatur Townships, and Chester Hill Borough in Clearfield County.

The Moshannon Valley (MV) Joint Sewer Authority treatment facility, which is the largest facility that serves this planning region, has a design capacity of 1.73 mgd using secondary treatment and discharge to Moshannon Creek. Daily wastewater usage at the plant fluctuates between 900,000 gpd and 1.2 mgd with 4,350 edu's (equivalent dwelling units) connected to the system.

It was known early on that that the collection system from Philipsburg Borough was antiquated and included storm sewer flows due to the connected storm and sewer piping systems. The resultant infiltration and inflow problem has created peak overloading conditions at the plant. This overloading creates pollution into Moshannon Creek and also backs up into resident's basements.

Recently, the PA DEP has required Philipsburg Borough to correct the problem by separating storm flow from the sewer collection system. Additional tap-on connections will be restricted at the treatment plant until the problem is corrected.



**Figure 7:** Black Moshannon State Park  
(Source: DCNR Website)

The Black Moshannon State Park treatment facility has a design capacity of 200,000 gpd and provides secondary treatment through a modified activated sludge (contact stabilization) treatment system. Current daily flows average approximately 4,000 gpd with Rush Township providing approximately 3,000 gpd (43 edu's and two (2) connections at Mid-State Airport). The remaining 1,000 gpd is generated at the Park from recreational users. This system has ample capacity to serve the future needs of the park and limited areas of Rush Township near the park and Mid-State Airport (see the Moshannon Valley Planning Region map that identifies these limitations).

A sewage collection system has recently been proposed and approved by PA DEP for the communities of Edendale and Newtown. The proposed treatment plant at Osceola Mills in Clearfield County, which is located one (1) mile north of Edendale, will handle the sewage treatment for these Rush Township communities.

### **Moshannon Growth Issues**

Due to the large acreage of State Game Lands (No. 33 & 60) and the Moshannon State Forest in Rush Township, the location of existing sewer systems is limited to two (2) areas: Philipsburg and Black Moshannon State Park/ Mid-State Airport. As with the majority of northern Centre County, the State owned lands and the strip-mined areas limit most potential development and growth, particularly in Rush Township.

### **Moshannon Future Sewer Considerations**

The community of Sandy Ridge, located six (6) miles south of Philipsburg should be evaluated in the future for sewer service. Two options may be considered: extending a gravity flow line to the proposed sewer collection system at Edendale for treatment at Osceola Mills, or a package treatment system within the community. Discharge to the Moshannon Creek tributary at Sandy Ridge may limit the ability for the package treatment plant option. Sandy Ridge has approximately 140 homes that would generate 28,000 gpd (200 gpd/ home).

### **Mountaintop Region**

This planning region is located in northern most portion of Centre County and contains the Townships of Burnside and Snow Shoe in addition to Snow Shoe Borough. Similar to the Moshannon Valley Region, the Mountaintop Region has a majority of its land area within public ownership, State Game Lands No. 100 and the Sproul State Forest.

Due to the public lands and the region's location, it is the least populated area in the County. The recent US Census 2000 counts showed this region with a total population of 2,941 residents. This represents a 0.2 % (5 person) decrease in residents since the Census in 1990. Consistent with the other Boroughs in the County, Snow Shoe Borough lost 3.6% (29 residents) while Burnside and Snow Shoe Townships gained by 5.1% (20 residents) and 0.2% (4 residents) respectively. The majority of the growth in this region from 1990 to 2000 was due to seasonal housing units, which increased by 40% (105 units).

The Mountaintop Area Municipal Authority (MAMA) handles all of the wastewater collection and treatment needs of the Mountaintop region. Currently the communities of Snow Shoe, Clarence and Moshannon are provided with sewer service. These communities are entirely within Snow Shoe Township and Snow Shoe Borough. Burnside Township, which is home to the community of Pine Glen, does not have public sewer service within its boundaries.

Relatively new, MAMA began providing sewer service in 1996 with the Moshannon package treatment plant beginning operation first. This package system provides secondary treatment and has a design capacity of 38,000 gpd. Currently the system experiences a daily flow of approximately 13,000 gpd. The Clarence treatment plant, which is the larger of the two systems operated by MAMA, has a secondary treatment capability with a design capacity of 232,000 gpd and an average daily flow of approximately 131,000 gpd. This plant provided sewer service shortly after the Moshannon plant and replaced two

(2) package treatment systems that were operated by PennDOT at the Snow Shoe I-80 rest areas as well as the un-sewered areas in Snow Shoe and Clarence.

Most interesting and appropriate, the Moshannon treatment plant discharges effluent to the northwest into the Moshannon Creek via tributaries while the Clarence treatment plant discharges effluent to a different watershed to the southeast into Beech Creek via tributaries. A watershed drainage boundary is located between Snow Shoe and Clarence. Operating the two (2) treatment allows wastewater to be returned to the respective watersheds where the majority of the water resources were generated.

### **Mountaintop Growth Issues**

Although there is ample capacity in each treatment plant, intensive growth is not expected in these communities due to the extensive strip mining activity that has occurred in the past. In addition, large acreage of public lands near the sewer service areas will further limit future development activity (see map of the Mountaintop Planning Region that identifies these limitations). Most new development activities are seasonal homes and hunting cabins that utilize on-lot septic systems.

### **Mountaintop Future Sewer Considerations**

Burnside Township, and in particular the community of Pine Glen which currently does not have public sewer service, is currently being evaluated in accordance with the State's Act 537 Sewage Facilities Plan requirements. The Township officials, who initiated the development of the plan, noted several areas of malfunctioning on-lot systems.

As with the existing MAMA systems, a package treatment system may be identified as the best option given the long distance between Pine Glen and the Moshannon Plant. With approximately 105 homes in Pine Glen, the average daily flow generated would be 21,000 gpd (200 gpd/ home).

### **Upper Bald Eagle Valley**

Located in the western portion of the County, the Upper Bald Eagle Valley planning region includes Port Matilda and Unionville Boroughs and Huston, Worth, Taylor and Union Townships. With Bald Eagle Creek as the common bond of this area, all issues related to wastewater disposal revolve around this waterway which the six (6) municipalities are dependent upon.

With an overall population of 5,038 persons, this planning region technically recorded a 10.7% (485 residents) increase in the recent US Census 2000 counts. The population counts for the respective municipalities are Huston Township (1,311 residents), Port Matilda Borough (638 residents), Taylor Township (741 residents), Union Township (1,200 residents), Unionville Borough (313 residents), and Worth Township (835 residents). However, the bulk of this increase is most likely due to the significant undercount for Union Township and Unionville Borough that occurred in the 1990 census. As with the other planning regions throughout the County with incorporated Boroughs, Port Matilda Borough recorded a 4.7% (31 person) decrease in population.

Currently, the Port Matilda Borough Authority Sewer System wastewater treatment plant is the only facility operating in this planning region. This plant provides tertiary treatment using sequential batch reactors for the activated sludge and has a design capacity of 80,000 gpd. Daily usage and wastewater treatment at this facility averages 50,000 gpd. In 2002, there were 330 edu's connected to the system. Following the treatment process, the effluent is then discharged to Bald Eagle Creek. As with most of the other smaller wastewater treatment plants in the County, the Port Matilda facility began operation in the early 1990's.

The only other wastewater treatment facility that is in the approval and pre-construction process is proposed near the community of Julian in Huston Township. This 40,000 gpd tertiary level wastewater treatment system is

similar to the one in Port Matilda and is intended to address on-lot septic problems in Huston Township that cannot be easily repaired due to lot size and individual on-lot water well locations. With a 2000 Act 537 approval date, site planning and construction will begin once the Phase II and III archeological reviews are completed.

The Huston Township Municipal Authority will operate this treatment plant and the associated collection system which is to be completed and in operation in by 2004. The first phase of this new system will provide service to the community of Julian. Later phases will extend west along Route 220 near Martha's Furnace and to the four (4) populated Hollows that intersect with Route 220.

Union Township and Unionville Borough both have collection systems that are part of the Mid-Centre County Authority sewage treatment system. Additional sewer connections are not permitted until modifications and upgrades are completed at the Mid-Centre County facility.

### **Upper Bald Eagle Valley Growth Growth Issues**



The majority of the anticipated growth for the Upper Bald Eagle Valley Region is expected in Worth Township due to the completion of I-99 and the planning for the Route 322/

Corridor O alignment. The development will mainly consist of residential, commercial, and limited industrial activity. The other areas of the Valley particularly along Route 220 will experience some residential and limited commercial development activity that will utilize on-lot septic systems. With the limiting soil suitability and steep slope constraints throughout the majority of this planning region (see map of planning region that identifies these constraints), growth is expected to be minimal.

**Centre County sewer treatment/ collection facilities that have been built since 1990**

Interestingly, since 1990 ten (10) of the 22 total sewer treatment/ collection facilities have been constructed or proposed for construction in Centre County. These facilities are mostly the small flow package treatment plants serving the lesser-populated communities throughout the County. Required by the PA DEP, these systems were constructed by the communities with grants and loans and are operated by the established municipal authorities.

The main reason for their construction was that these communities had on-lot, community, and/ or no viable septic systems and as a

result were polluting the nearby groundwater areas (major source of the public water systems) and the local streams. Many of these streams have status as cold water fisheries and are afforded special protection that requires a high level of wastewater treatment.

The planning regions that have seen the most construction of new systems include Penns Valley, Upper Bald Eagle Valley, and Mountaintop where there were virtually no public sewer systems at all. Although small in size, they have the capacity and potential to allow for additional development activity and density within and adjacent to their respective communities. The list below identifies which planning region and municipality these systems are located.

**Centre County Sewer Treatment/ Collection Systems Built Since 1990**

**Nittany Valley**

\* East Nittany Valley Joint Municipal Collection System (Walker Township)

**Penns Valley**

Centre Hall Borough/ Potter Sewer System  
Gregg Township/ Spring Mills Sewer System  
Millheim Borough Sewer System  
\* Penn Township/ Coburn Sewer System

**Mountaintop**

Moshannon Treatment Plant (Snow Shoe Township)  
Snow Shoe Borough and Township/ Clarence Treatment Plant

**Moshannon Valley**

\* Rush Township/ Edendale collection system to Osceola Mills Treatment Plant

**Upper Bald Eagle Valley**

Port Matilda Borough Treatment Plant  
\* Huston Township/ Julian Treatment Plant

Note:\* Treatment facilities approved and planned for construction

## Centre County Sewer Treatment Capacity by Planning Region 7/02

	Design Capacity	Average Daily Flow	Current Capacity
<b>Centre Region</b>			
University Area Joint Authority	6.0 - (9.0) mgd	5.2 mgd	.8- (3.8) mgd
Pennsylvania State University	4.0 mgd	2.4 mgd	1.6 mgd
<b>Totals</b>	<b>10.0 – (13.0) mgd</b>	<b>7.7 mgd</b>	<b>2.4 – (5.4) mgd</b>
<b>Nittany Valley</b>			
Bellefonte Sewer Plant	3.2 mgd	2.4 mgp	0.8 mgd
<b>Penns Valley</b>			
Centre Hall Borough Sewer Plant	275,000 gpd	140,000 gpd	135,000 gpd
Gregg Township Sewer Plant	90,000 gpd	50,000 gpd	40,000 gpd
Millheim Borough Sewer Plant	100,000 gpd	50,000 gpd	50,000 gpd
Country Club Park Sewer Plant	35,000 gpd	15,000 gpd	20,000 gpd
*Penn Township/ Coburn	23,000 gpd	15,000 gpd	8,000 gpd
<b>Totals:</b>	<b>523,000 gpd</b>	<b>270,000 gpd</b>	<b>253,000 gpd</b>
<b>Mountaintop Region</b>			
Moshannon Plant	38,000 gpd	13,000 gpd	25,000 gpd
Clarence Plant	232,000 gpd	131,000 gpd	101,000 gpd
<b>Totals:</b>	<b>270,000 gpd</b>	<b>144,000 gpd</b>	<b>126,000 gpd</b>
<b>Moshannon Valley</b>			
Moshannon Valley Joint Sewer Authority	1.7 mgd	900,000 gpd	800,000 gpd
Black Moshannon State Park Sewer Plant	200,000 gpd	4,000 gpd	196,000 gpd
<b>Totals:</b>	<b>1.9 mgd</b>	<b>904,000 gpd</b>	<b>996,000 gpd</b>
<b>Upper Bald Eagle Valley</b>			
Port Matilda Borough Sewer Plant	80,000 gpd	50,000 gpd	30,000 gpd
*Huston	40,000 gpd	12,000 gpd	28,000 gpd
<b>Totals:</b>	<b>120,000 gpd</b>	<b>62,000 gpd</b>	<b>58,000 gpd</b>
<b>Lower Bald Eagle Valley</b>			
Mid Centre County Authority	0.8 - (1.4) mgd	700,000 gpd	0.1 – (0.7) mgd
Bald Eagle State Park Sewer Plant	450,000 gpd	210,000 gpd	240,000 gpd
<b>Totals:</b>	<b>1.25 (1.85) mgd</b>	<b>0.91 mgd</b>	<b>0.34 – (0.94) mgd</b>
<b>Centre County Total Capacity</b>	<b>17.26 – (20.86) mgd</b>	<b>12.09 mgd</b>	<b>5.17 – (8.77) mgd</b>

Legend

- mgd** - million gallons per day
- gpd** - gallons per day
- - to be constructed

## **Community Facilities and Services Goal**

Promote the appropriate location and maintenance of existing and proposed community facilities, utilities, and services for the citizens of Centre County.

### **Objectives**

Encourage the efficient use of utilities and services such as water, sewer, electric, gas, and telecommunications in existing and planned growth areas.

Reduce conflicts between utility service areas and natural resources such as prime agricultural soils, forested ridges, and sensitive plant and animal natural communities.

### **Sewer Service/ Systems Recommendations**

In cooperation with the municipalities and respective planning regions, identify future growth areas consistent with County and local plans, land use regulations, and with the efficient use of existing and proposed sewer service areas.

Identified agricultural security areas, drinking water protection areas, soils with limited suitability, in addition to natural resource areas should be utilized to determine future sewer service areas which directly impact growth and preservation in the County.

Identify appropriate sewage management district locations within each planning region for the administration and maintenance of on-lot septic systems. Proper maintenance of on-lot and community septic will reduce system failures and the need to extend public sewer service

Sewer line extensions should be completed only when found consistent with State regulations, County, planning region, and municipal comprehensive plans and land use regulations.

In order to limit sprawl development and encourage groundwater and stream recharge within the watersheds, decentralized package treatment systems that utilize new technology for high levels of wastewater treatment are recommended.

Encourage municipal authorities to administer and maintain existing treatment facilities in addition to proposed package treatment facilities within each respective planning region, municipality, and watershed.

Revise County and municipal regulations to require primary and secondary on-lot and community sewage disposal areas for each subdivided and land development activity.

Revise County and municipal regulations that require development activity based solely on the carrying capacity of the land, which is determined with soils testing prior to site design.

Coordinate human services and cultural/ historic resources planning such as housing rehabilitation, affordable housing, and adaptive historic structure reuse with utility services such as sewer and water.