

### **III. Existing Sewage Facilities in the Planning Area – Identifying the Existing Needs**

#### **A. Identify, map, and describe municipal and non-municipal, individual, and community sewerage systems in the planning area including:**

- 1. Location, size and ownership of treatment facilities, main intercepting lines, pumping stations, and force mains including their size, capacity, point of discharge. Also include the name of the receiving stream, drainage basin, and the facility's effluent discharge requirements.**

##### **(a) Municipal Treatment Facilities**

###### **(i) South Middleton Township Municipal Authority Treatment Facilities – Areas I and IV**

The public sewerage system in South Middleton Township is owned and operated by the South Middleton Township Municipal Authority. The plant serves the portion of the Township comprised of Forge Road Acres and surrounding areas south to and including the Boiling Springs Area and portions of Monroe Township.

The plant, which began operations on July 20, 1977, and was subsequently upgraded in 1993, is of the extended aeration type with aerobic digestion of sludge.

The Authority has a two-tiered NPDES permit with hydraulic capacities of 0.75 MGD and 1.50 MGD, respectively. Treated effluent is discharged to the Yellow Breeches Creek, near Criswell Drive in Monroe Township.

The South Middleton Township allocation at the wastewater treatment plant is 550,000 gpd (expandable to 1.3 MGD), and the Monroe Township allocation is 200,000 gpd.

The final NPDES Renewal Permit was issued on April 23, 2010, which includes a schedule for compliance with the effluent limitations for Nitrogen and Phosphorus removal. Under this schedule, the Authority is compelled to fully complete the construction of an upgraded facility by September 30, 2014 and to achieve compliance with the effluent limitations by September 30, 2015. The permit is included in Appendix W.

Sludge is treated both by onsite reed beds and by off-site Aerobic Digesters (City of Harrisburg Treatment Plant). In 2009, the Authority completed the construction of three (3) additional sludge reed beds, at 5,000 square feet each. The total reed bed area has been increased to 65,000 square feet.

During 2009, the Authority removed approximately 650,000 gallons of sludge (32.5 dry tons) within the reed beds, and 1,716,400 gallons (85.9 dry tons) at the City of Harrisburg Treatment Plant.

The Authority is also permitted under PAG-08-3603 for the land application of sludge. This service is contracted out, and is currently done by Jones Manure Hauling. In 2009, 182,700 gallons were land applied.

During 2009, the average daily flow to the sewage treatment plant for South Middleton Township was 453,541 gallons, or 235 gallons per customer. The five-year flow per EDU was 175 gpd/EDU, which is 50% of the design flow of 350 gallons per customer. The three-month maximum daily flow of 503,539 gallons occurred during April, May, and June, which was an average of 198 gallons per EDU during the three-month period.

There is a total of 3,363 EDU's contributing flow to the system. They include 1,392 in the Boiling Springs Area (Area 1A), 129 in the Mt Holly Springs East Area (Area 4A), 1,071 in Forge Road Acres (Area 1B), and 771 in Monroe Township.

The primary interceptor for this service area is the 12" diameter gravity line that runs from the Village of Boiling Springs along the Yellow Breeches Creek to the treatment facility.

#### Pumping Stations Tributary to Treatment Plant

##### *Pump Station No. 1*

The Mt Holly Springs East Area (Area IV) is served by Pump Station No. 1. Pump Station No. 1 has two pumps with a pumping capacity of 100 GPM for one pump and 160 GPM with both pumps operating. The maximum design capacity of the pumping station is (100 GPM x 1440 minutes = 144,000 GPD x a time factor of 0.75), or 108,000 GPD. This assumes a reasonable maximum running time of 18 hours a day.

By using the design flow of the Pumping Station and subtracting an average flow of 14,342 GPD, we can determine the reserve capacity of the Pumping Station as follows:

108,000	GPD Design Flow
<u>14,342</u>	GPD Average Flows
83,658	GPD Reserve Capacity

The highest peak flow per day of 73,200 gallons occurred during December.

The force main from Pump Station No. 1 connects to the system at terminal manhole number 307-8, located along Park Drive outside of Boiling Springs.

#### *Pumping Station No. 2*

The Forge Road Acres Area (Area 1B) is served by Pump Station No. 2. Pump Station No. 2 has three pumps with a pumping capacity of 320 GPM for Pump No. 1, 500 GPM for Pump No. 2, and 325 GPM for Pump No. 3. With two pumps operating you get approximately 500 GPM. The maximum design capacity of the pumping station is (320 GPM x 1440 minutes = 460,800 GPD x a time factor of 0.75), or 345,600 GPD. This assumes a reasonable maximum running time of 18 hours a day.

By using the design flow of the Pumping Station and subtracting an average flow of 144,018 GPD, we can determine the reserve capacity of the Pumping Station as follows:

345,600	GPD Design Flow
<u>144,018</u>	GPD Average Flows
201,582	GPD Reserve Capacity

The highest peak flow per day of 226,000 gallons occurred during December.

The force main from Pump Station No. 2 discharges into the Boiling Springs Area collection system along Forge Road LR-21008, and ultimately to the main interceptor discussed above.

#### (ii) Area II – Carlisle Drainage Area

Carlisle Plaza (Area 2A and 2B) and South Spring Garden Street (Area 2C and 2D), located southeast of Carlisle, commenced operations January 1, 1983. The Walnut Bottom (Area 2F)/Rockledge Drive (Area 2G), located southwest of Carlisle, commenced operations in 1985. The Strawberry Court Drainage (Area 2H) and Forrest Meadows (Area 2E) commenced operation in 1987. Central State (Area 2I) commenced operation in 1988. The Exel/Royer Area (Area 2K) commenced operation in 2009. The Otto Tract is earmarked as a future connection point.

During 2009, the average daily flow was 320,551 GPD per month to the Carlisle Collection System. Connections to the Carlisle system are made at terminal manhole numbers 458-2 (Trindle Road, Area 2A), 454-7 (York

Road, Area 2B), 467-6 (Willow Crossing, Area 2C), 308-A (Allstate Hanover, Area 2D), 512 (Forest Meadows, Area 2E), 217-16E (Walnut Bottom, Area 2F and PS #5, Area 2L), 217-16B (Rockledge Drive, Area 2G), 600 (Strawberry Court, Area 2H), 200 (Central State, Area 2I), 331-A (PS #9, Area 2J), 166-I (Royer Tract, Area 2K), and 315 (Otto Tract, Area 2O).

*Pump Station No. 5 – Area 2L*

Area 2L is served by Pump Station No. 5. Pump Station No. 5 has two pumps with a pumping capacity of 135 GPM for one pump and 190 GPM with both pumps operating. The maximum design capacity of the pumping station is (135 GPM x 1440 minutes = 194,400 GPD x a time factor of 0.75), or 145,800 GPD. This assumes a reasonable maximum running time of 18 hours a day.

By using the design flow of the Pumping Station and subtracting an average flow of 6,065 GPD, we can determine the reserve capacity of the Pumping Station as follows:

145,800	GPD Design Flow
<u>6,065</u>	GPD Average Flows
139,735	GPD Reserve Capacity

The highest peak flow per day of 11,400 gallons occurred during May.

*Pump Station No. 9 – Area 2J*

Area 2J is served by Pump Station No. 9. Pump Station No. 9 has two pumps with a pumping capacity of 520 GPM for one pump and 730 GPM with both pumps operating. The maximum design capacity of the pumping station is (520 GPM x 1440 minutes = 748,800 GPD x a time factor of 0.75), or 561,600 GPD. This assumes a reasonable maximum running time of 18 hours a day.

By using the design flow of the Pumping Station and subtracting an average flow of 18,206 GPD, we can determine the reserve capacity of the Pumping Station as follows:

561,600	GPD Design Flow
<u>18,206</u>	GPD Average Flows
543,394	GPD Reserve Capacity

The highest peak flow per day of 44,000 gallons occurred during August.

(iii) Area III – Mt. Holly Springs West Drainage Area

Area III, located northwest of Mt. Holly Springs, commenced operations on June 1, 1982. All of the flow from Area III flows to and is conveyed through Pumping Station No. 3. During 2009, Pumping Station No. 3 discharged an average of 91,376 GPD per month to the Mt Holly Springs collection system.

*Pump Station No. 3 – Area 3*

Area 3 is served by Pump Station No. 3. Pump Station No. 3 has two pumps with a pumping capacity of 245 GPM for one pump and 285 GPM with both pumps operating. The maximum design capacity of the pumping station is (285 GPM x 1440 minutes = 410,400 GPD x a time factor of 0.75), or 307,800 GPD. This assumes a reasonable maximum running time of 18 hours a day.

By using the design flow of the Pumping Station and subtracting an average flow of 91,379 GPD, we can determine the reserve capacity of the Pumping Station as follows:

307,800	GPD Design Flow
<u>91,379</u>	GPD Average Flows
216,424	GPD Reserve Capacity

The highest peak flow per day of 189,040 gallons occurred during December.

Connection to the Mt. Holly system is made at terminal manhole number 243 located at the Borough Line on Rt. 34.

(iv) Area IV – Mt Holly Springs Gravity Drainage Area

Area 5A has been established in order to tabulate the number of customers contributing flow into the Mt. Holly Springs Area on an EDU basis. At present, there are eleven (11) customers connected that generated an average daily flow of 1,088 gallons in 2009. Water consumption was used as the basis for sewage flow treated at the Mt Holly Springs plant.

The point of connection is the Mt. Holly Springs Manhole No. 310.

(b) Non-Municipal Treatment Facilities

There is one non-municipal treatment facility owned and operated by Land O' Lakes Inc. at 405 Park drive for the purpose of dairy processing.

(c) Individual Sewerage Systems

There are no sewerage facilities in the Township that are individually owned and operated, other than private on-lot systems.

(d) Community Sewerage Systems

Two community systems along South Spring Garden Street, at Mixell's and Sigmund's mobile home parks were recently placed on public sewer.

There are four (4) community sewerage systems within South Middleton Township. One system serves a campground called the Western Village RV Park, and one serves the Diakon Wilderness Center (formerly Tresslercare), and two of these systems serve mobile home parks

The facility serving the campground is on a schedule for being converted to public sewer as per the agreement contained in Appendix V.

The system serving the Diakon Wilderness Center is an alternate system (Non-Infiltration, Evapotranspiration bed contained within a greenhouse).

The two other facilities serve the Pine School Mobile Home Park and the Lehr Mobile Home Park, and consist of multiple homes on shared on-lot systems. These systems are part of the sewage management program.

**2. Narrative and Schematic Diagram of the facility's basic treatment processes including the facility's NPDES permitted capacity and the Clean Stream Laws permit number.**

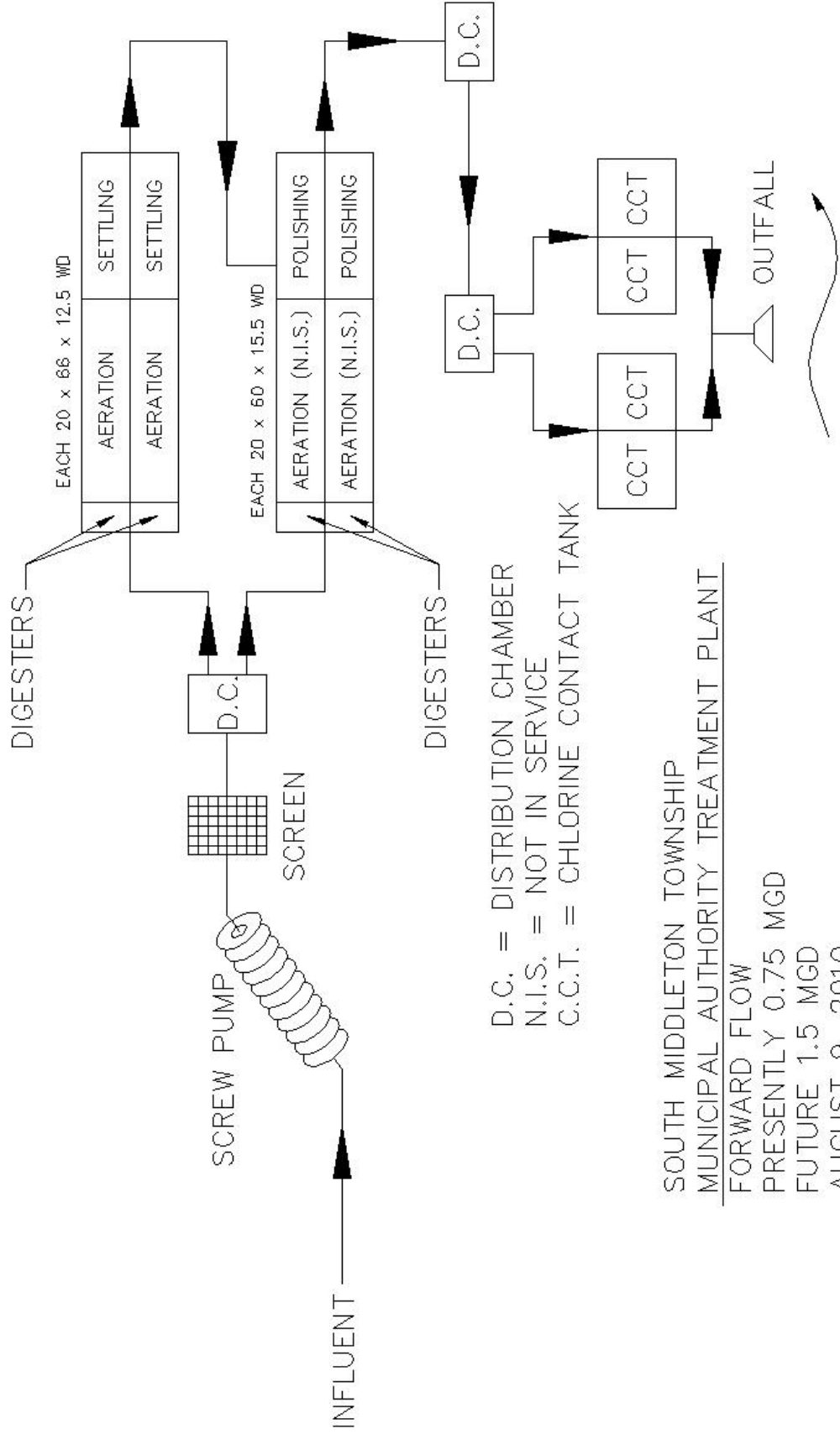
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Sludge is treating both by onsite reed beds and by off-site Aerobic Digesters (City of Harrisburg Treatment Plant). In 2009, the Authority completed the construction of three (3) additional sludge reed beds, at 5,000 square feet each. The total reed bed area has been increased to 65,000 square feet. A schematic of the plant is on the next page.



**Plant Schematic**



**3. A description of problems with existing facilities (collection, conveyance, and/or treatment), including existing or projected overload under Title 25, Chapter 94 or violations of the NPDES permit, Clean Streams Law permit, or other permit, rule, or regulation of DEP.**

South Middleton Township Municipal Authority Water Pollution Control Facility

Over the past years, sludge treatment, storage and disposal have created major operational problems at the facility. During 1993, new treatment units were completed, which essentially mirror the existing units, thereby providing two additional aerobic digesters, two aerated sludge holding tanks and two polishing clarifiers. This process was selected for its economy of scale and related ease of operations.

The treatment plant additions provide up to three months of liquid storage capacity and give more flexibility with process control. In addition, 50,000 square feet of sludge bed facilities equipped with a reed system were constructed and placed in operation. This facility was expanded to 65,000 square feet in 2009. The process utilizes aquatic plants that permit multiple sludge applications to the beds and up to eight years of sludge processing without need of removal. The method of sludge dewatering was selected over other forms of dewatering equipment because of its economic operation, minimum operating attention and a long-term solution that it provides.

There are no current or projected overload conditions at the treatment facility. Ongoing efforts in I/I removal have been moderately effective in maintaining the three month maximum flows at manageable levels. However, additional I/I removal is contemplated under an ongoing maintenance program. With the original collection and conveyance system now 35 years old, this program will need to continue indefinitely.

**4. Details of scheduled or in-progress upgrading or expansion of treatment facilities and the anticipated completion date of the improvements. Discuss any remaining reserve capacity and the policy concerning the allocation of reserve capacity. Also discuss the compatibility of the rate of growth to existing and proposed wastewater treatment facilities.**

The Authority has been planning for the upgrade/expansion of the facilities for the past three+ years and is now in the design phase for construction to occur in late 2011 or early 2012. The existing 0.75 mgd extended aeration facility will be upgraded and expanded into a 1.5 mgd Biological Nutrient Removal facility incorporating the IFAS (Integrated Fixed-Film Activated Sludge) technology, with further upgrade potential to Enhanced Nutrient Removal. The anticipated completion date is September 30, 2014.

The plant upgrade will bring the Authority into compliance with the NPDES Permit issued on April 23, 2010 and the expansion to 1.5 mgd will provide South Middleton Township with 1.3 mgd of capacity which will be sufficient to meet the needs of the planned and projected growth in the service area.

**5. A detailed description of the municipality’s operation and maintenance requirements for small flow treatment facility systems, including the status of past and present compliance with these requirements and any other requirements relating to sewage management programs.**

There are no small flow treatment facilities within the planning area.

**6. Disposal Areas, if other than stream discharge, and any applicable groundwater limitations.**

There are several farms in South Middleton Township that are permitted for the land application of sewage sludge.

**B. Sewage Disposal Needs Identification**

As stated previously, the areas of South Middleton Township outside the public sewer service areas are currently served by on-lot systems. These systems include elevated sand mounds, seepage beds and trench systems.

South Middleton Township has in place a rigorous on-lot system management program that requires these systems to be pumped and inspected every three years. This program began in 1999, one “illegal” system (an outhouse) was noted.

**1. The types of onlot systems in use**

Over the past twenty years, there has been limited development in the on-lot service areas of the Township. Therefore, the vast majority of the on-lot systems in the municipality predate current regulations. As a result, the older systems in the Township tend to be in-ground systems. The newer systems, those approved and permitted since 1988, are nearly all elevated sand mounds. A summary of the systems utilized in South Middleton Township is as follows:

In-Ground	1128
Elevated Sand Mound	311
Cesspool	10
Trench	6
Holding Tank	6
Outhouse	4
Peat Filter	2

Eco-Flow	2
Drip Irrigation	1
Alternate (Greenhouse)	1

Installation agreements for the Greenhouse, Drip Irrigation, and a Peat Option 1 using a shallow limiting zone at-grade absorption bed are included in Appendix X. These agreements call for maintenance and inspection of these systems.

## 2. Sanitary Survey

Ordinance No. 21 of 1998, as amended by No. 02 of 2000, contains an on-lot system operation and maintenance program for all on-lot systems with South Middleton Township. A copy of the Ordinance can be found in Appendix H.

Under the program, each on-lot system is required to be pumped and inspected every three years. The Township began in 1999 with enforcing the ordinance on approximately one third of the systems, with another third the next year, and then the remaining third in the third year. Since that time, the Township has maintained that three year cycle. During the initial cycle, the Township Sewage Enforcement Officer conducted the inspections on each system. Since that initial round, registered haulers have completed the inspections as per the following form. The results of these inspections specifically identify those systems that need repair.

Therefore, no Sanitary Survey is necessary

## 3. A comparison of the types of onlot sewage systems installed in an area with the types of systems which are appropriate for the area according to soil, geologic conditions, topographic limitations sewage flows, and Title 25 Chapter 73 (relating to standards for sewage disposal facilities).

Nearly all of the on-lot systems installed in the past 10 years have been elevated sand mounds. This is due to the geology and soils within the Township. In general, the northern 2/3 of South Middleton Township is underlain by limestone. Soils are generally of the Hagerstown Duffield group, which are not well suited for in-ground on-lot systems. The combination of the sensitive geology and the limiting soils almost always result in the need for an elevated sand mound.

Pa. Code § Chapter 71.62 (c) (2) states the following:

A preliminary hydrogeologic evaluation is required when the use of subsurface soil absorption areas is proposed and one of the following exists:

- (i) A large volume onlot sewage system will be used.
- (ii) A subdivision of more than 50 equivalent dwelling units with a density of more than one equivalent dwelling unit per acre is proposed.
- (iii) The Department has documented that the quality of water supplies within  $\frac{1}{4}$  mile of the proposed site exceed five parts per million (ppm) nitrate-nitrogen.
- (iv) The Department had determined that known geological conditions for the proposed site may contribute to the potential for groundwater pollution from the systems.

As discussed in the Geology section of Chapter II, areas of karst topography (limestone or carbonate geology), due the nature of pathways created by the dissolution of limestone, may contribute to the potential for groundwater pollution from on-lot systems. As such, and as per the approval of the 1992 Act 537 Plan (see Appendix J ), those areas identified as underlain by limestone geology have been required to submit hydrogeological evaluations since 1992 and this will continue. A map showing those areas of limestone geology, and subject to the requirement, is included in Appendix Y.

South of South Mountain, the geology is considered to be shale. The predominant soils groups are the Murrell-Laidig-Buchanan, Hazelton-Clymer and Highfield-Glenville Associations. These associations have moderate to sever limitations for use in on-lot sewage disposal due to their slow percolation rates and depth to bedrock. Where enough soils does exist, elevated sand mounds are almost always required.

In those areas, as per Pa. Code § Chapter 71.62 (c) (2) (iii) above, a hydrogeologic evaluation will be required when The Department has documented that the quality of water supplies within  $\frac{1}{4}$  mile of the proposed site exceed five parts per million (ppm) nitrate-nitrogen.

A map showing where preliminary hydrogeologic studies are required; by mapping limestone geology and  $\frac{1}{4}$  radii around the high nitrate tests from both 2000/2001 and 2010, is included in Appendix Z.

#### **4. An individual water supply survey.**

In 2000 and 2001, the Township conducted random well sampling of 202 private wells for an anticipated Act 537 Plan update that never materialized.

As part of this plan update, another 178 wells were sampled in July/August 2010.

We estimate that this total is approximately 15% of the properties served by on-lot systems in the Township.

The full results of this testing can be found in Appendix AA, and are summarized below:

Summary of 2010 Well Test Results Based Upon Number of Samples Total = 171 Wells			E. Coli Bacteria <u>&gt;0 col. / 100 ml</u>	Total Coliform <u>&gt;0 col. / 100 ml</u>
Nitrate as N				
<u>0 – 5 ppm</u>	<u>5 – 10 ppm</u>	<u>&gt;10 ppm</u>		
112	52	7	20	103
Total Number of samples which are not drinking water quality based on EPA and DEP standards: 102 or 60%				

The well testing results are mapped in Appendix BB.

Based on the well testing and the continuation of the on-lot management program, no new “needs areas” were identified in the Township. A majority of the systems that do not meet EPA standards are located in rural, agricultural areas. It is not feasible to consider these areas as needs areas for several reasons. One, the density and rural nature of these areas do not make it financially feasible to provide public sewer to these areas. Two, agricultural activities, such as land application of animal waste and wastewater treatment plant sludge, may be the major contributing factor to the presence of contaminants.

The homes on Fairview Street that are proposed to be sewered are on public water. Therefore, they were not included in the water survey.

**5. A detailed description of operation and maintenance requirements of the municipality for individual and small volume community onlot systems, including the status of past and present compliance with these requirements relating to sewage management programs.**

Ordinance No. 21 of 1998, as amended by No. 02 of 2000, contains the on-lot system operation and maintenance requirements for all on-lot systems with South Middleton Township. A copy of the Ordinance can be found in Appendix H.

Under the program, each on-lot system is required to be pumped and inspected every three years. The Township began in 1999 with enforcing the

ordinance on approximately one third of the systems, with another third the next year, and then the remaining third in the third year. Since that time, the Township has maintained that three year cycle. During the initial cycle, the Township Sewage Enforcement Officer conducted the inspections on each system. Since that initial round, registered haulers have completed the inspections.

The pumping and inspection program has resulted in the identification of unpermitted systems, substandard systems, and repair permits.

The following form is completed after every inspection:

South Middleton Township Septic System Report			Township Use Only _____ _____
1. Date of Pumping _____			
2. Treatment: <input type="checkbox"/> Septic Tank <input type="checkbox"/> Aerobic Tank <input type="checkbox"/> Cesspool <input type="checkbox"/> Dry Well			
3. System Type: <input type="checkbox"/> Sand Mound <input type="checkbox"/> In Ground			
4. Property Owner's Name _____			
Mailing Address _____			
City State Zip Code			
5. Address of Tank Location _____			
(if different than #4) _____			
City State Zip Code			
6. Description and diagram of the location of the tank (use box below), including the location of any markers, risers, and access hatches and size of the tank. Description _____			
_____			
_____			
7. Date system was installed (if not known, approximate date) ____/____/____			
8. Date of last pump out (if not known, approximate date) ____/____/____			
9. List of other maintenance performed.			
<input type="checkbox"/> Baffle Replacement			
<input type="checkbox"/> Extensions (riser rings)			
<input type="checkbox"/> Inspection Ports			
<input type="checkbox"/> Snaked the Line			
<input type="checkbox"/> Other _____			
10. Check any of the following conditions observed.			
<input type="checkbox"/> High Water Level in Tank			
<input type="checkbox"/> Wet Areas Near System or Site			
<input type="checkbox"/> Noticeable Odors			
<input type="checkbox"/> Sewer Backup into House			
<input type="checkbox"/> Abundant Grass Growth Near System or Site			
<input type="checkbox"/> Backflush of Water from Absorption Area to Tank			
<input type="checkbox"/> Any other indication of system malfunction			
explain _____			
11. Size of tank:			
<input type="checkbox"/> 500 Gallon Tank <input type="checkbox"/> 1750 Gallon Tank			
<input type="checkbox"/> 750 Gallon Tank <input type="checkbox"/> 2000 Gallon Tank			
<input type="checkbox"/> 1000 Gallon Tank <input type="checkbox"/> 2250 Gallon Tank			
<input type="checkbox"/> 1250 Gallon Tank <input type="checkbox"/> 2500 Gallon Tank			
<input type="checkbox"/> 1500 Gallon Tank <input type="checkbox"/> Other _____			
12. Amount of septage removed (in gallons) _____			
13. List any substances or chemical compounds not considered sewage by definition of Section 10 of Township Ordinance #00-02 _____			
14. Destination of the septage (name of treatment facility, include address if private property) _____			
DEP Permit # _____			
Signature of Pumper _____ Company _____			
The hauler responsible for septage removal must provide, as part of this report, any information indicating system malfunction. I do hereby certify, that to the best of my knowledge, that the information provided herein is true and correct and that the Township may rely upon the accuracy thereof.			
A copy of this report is to be submitted to the property owner listed above and a copy mailed within thirty (30) days after pumping to: South Middleton Township, 520 Park Drive, Boiling Springs, PA 17007			
White – Township      Yellow – Pumper      Pink - Owner			
Revised 10/28/04			

Under item 10, the inspector is to indicate if any conditions exist that may indicate a possible malfunction.

A list of the inspections that have indicated any of these conditions since the Township has begun the program in 1999 is included in Appendix CC.

Any of those items under item 10 that would indicate a regulatory malfunction are reported to the Sewage Enforcement Officer (SEO). Those include:

1. Wet Areas Near System or Site
2. Abundant Grass Growth Near System or Site
3. Any other indication of a system malfunction

Of the “other indication”, the items typically reported to the SEO as a possible malfunction include the pump not working and broken tank top. However, simple things like missing baffles or clogged filter are typically viewed as maintenance items.

A compilation of the repair permits issued in the past 15 years is included in Appendix DD.

As can be seen from the actions being taken, most of the permits, aside from tank replacement, are for replacement or repair of an in-ground absorption bed. Most of those are being replaced by elevated sand mounds, and most likely most should not have been approved initially or were installed prior to adoption of DEP regulations.

Continued operation under this program will assure that adequate and proper sewage disposal is provided in areas not intended to be served by public sewerage facilities, and no further action is recommended.

## **C. Wastewater Sludge and Septage Generation**

### **1. Location of sources of wastewater sludge or septage.**

Wastewater from the areas of the Township that are publicly sewer drains to three facilities. Those three facilities are the South Middleton Township Municipal Authority treatment plant, the Borough of Carlisle treatment plant, and the Mount Holly Springs treatment plant. All three plants are outside the borders of the planning area.

A large volume of septage is generated in the Township by the mandatory pumping requirements of the On-lot Management Program.

## 2. Quantities of the types of sludges or septage generated.

As noted above, there were two types of sludge generated by the wastewater from residents in the planning area. Those are municipal sludge and septage from on-lot systems.

During 2009, the South Middleton Township Municipal Authority removed approximately 650,000 gallons of sludge (32.5 dry tons) within the reed beds, and 1,716,400 gallons (85.9 dry tons) at the City of Harrisburg Treatment Plant. In 2009, 182,700 gallons were land applied.

## 3. Present disposal methods, locations, capacities, and transportation methods.

Municipal sludge was disposed off within on-site reed beds and the City of Harrisburg treatment plant. The Authority is also permitted under PAG-08-3603 for the land application of sludge.

South Middleton Township is fortunate to have a septage receiving and treatment facility within its borders. Peck's Septic Service operates its septage processing facilities under PADEP Permit PAG-08-3532.

Septage pumped from on-lot and community systems in the Township that is not treated at Peck's plant is hauled to other local municipal wastewater treatment facilities.

South Middleton Township requires all hauler's to register with the Township yearly. In 2010, the following septage haulers were registered with the appropriate approvals from South Middleton Township (SMT) and Cumberland County:

Name of Hauler	SMT License No.	Cumberland Co. Registration No.
Peck's Septic Service	10-01	922012
D & D Septic Service	10-02	922019
Oaktree Septic	10-03	932003
Rosenberry's Septic Services	10-04	922013
Groff's Septic Service	10-05	922004
Dillsburg Excavating	10-06	922003
Chamberlin & Wingert Sanitary	10-07	932000
Young's Septic Service	10-08	922017

Under the sewage management program, all pumping is required to be by a registered hauler. Thus, all septage generated by on-lot systems is disposed of by those haulers.