

V. Identify Alternatives to Provide New or Improved Wastewater Disposal Facilities

A. Conventional collection, conveyance, treatment, and discharge alternatives including:

1. The potential for regional wastewater treatment.

The existing wastewater treatment plant is a regional plant in that it serves two Townships (South Middleton and Monroe Townships). In addition, the Carlisle Sewer Service Area (Area II) is served by a regional plant within the Borough of Carlisle. Sewer Services Areas III and V are areas within South Middleton Township served by the plant within the Borough of Mt. Holly Springs. Thus, regional wastewater treatment is already occurring.

2. The potential for extension of existing municipal or non-municipal sewage facilities to areas in need of new or improved sewage facilities.

The need for new facilities to accommodate future growth was discussed in the previous section. Sewage collection and conveyance will be extended by developers, as needed, into areas of future growth.

There is one area that is not presently sewered and should be considered for a future sewer expansion. This extension may be done in conjunction with an adjacent future development or it may occur independently. The area in question contains twelve homes on the west side of Fairview Street south of Manhole CC-10 (see map in Appendix E). This would include an extension of approximately 1,150 feet of main and three manholes.

The homes in question are currently in compliance with our sewage management program. The pumping reports for those homes are included in Appendix HH. Those reports indicate that there are no major malfunctions in the area. The homes in question are serviced by public water. Thus, the South Middleton Township Municipal Authority has decided to wait to determine if a large adjacent parcel will result in this area being sewered when that parcel is developed. If this does not occur before 2021, the Authority intends to construct the extension themselves.

3. The potential for the continued use of existing municipal or non-municipal sewage facilities through one of the following:

a. Repair

The existing collection and conveyance system will continue to support the flows generated in South Middleton Township with a comprehensive maintenance and repair program. Any expansion to the collection / conveyance system will be driven by new development and will be funded by developers.

The upgrade/expansion project presently in the design phase will utilize as much of the current facility as possible, included but not limited to:

- Treatment tanks, which will be utilized to contain the proposed BNR facilities.
- Operations Building
- Blower Building
- Garage Building
- Tertiary Filter Building (presently unused)

b. Upgrading

As outlined in previous sections, an upgrade for enhanced biological nutrient removal has been approved under the final NPDES Renewal Permit, which was issued on April 23, 2010. The permit 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.

c. Reduction of hydraulic or organic loading to existing facilities.

The 2009 Chapter 94 Wasteload Management Plan detailed the hydraulic and organic loading projections for the next five years. No overload condition is anticipated. With the planned upgrade/expansion project presently in the design phase and construction required to be completed by September 30, 2014, the plant should not experience any overloaded conditions.

d. Improved operation and maintenance.

This is not an option due to the need for construction of a plant upgrade and expansion.

e. Other applicable actions that will resolve or abate identified problems.

This is not an option due to the need for construction of a plant upgrade and expansion.

4. Repair or replacement of existing collection and conveyance system components.

There are no sections of the collection and conveyance systems that are in need of repair or replacement.

5. The need for construction of new community sewage systems including sewer systems and/or treatment facilities.

The existing community systems are on-lot systems which fall under the sewage management program. There is no indication of any of those systems need to be replaced. Thus, there is no need for new community systems.

6. Use of innovative/alternative methods of collection/conveyance to serve needs areas using existing wastewater treatment facilities.

There are no areas identified in the planning area in need of sewage facilities, other than the plant upgrade and those areas of appropriate future growth. All of these areas can be treated by conventional methods.

B. The use of individual sewage disposal systems including individual residential spray irrigation based upon:

- 1. Soil and slope suitability.**
- 2. Preliminary hydrogeologic evaluation.**
- 3. The establishment of a sewage management program.**
- 4. The repair, replacement or upgrading of existing malfunctioning systems in areas suitable for onlot disposal considering:**
 - a. Existing technology and sizing requirements of Title 25 Chapter 73.**
 - b. Use of expanded absorption areas or alternating absorption areas.**
 - c. Use of water conservation devices.**

In those areas outside proposed sewer service areas, individual sewage disposal, including spray irrigation, can be utilized in areas that comply with DEP regulations, policies and guidances. The permitting agency will need to have the proper training to issue such permits other than conventional methods.

The need for preliminary hydrogeologic studies within the Township was previously discussed.

A sewage management program, as described previously, is in place.

C. The use of small flow sewage treatment facilities or package treatment facilities to serve individual homes or clusters of homes with consideration of:

- 1. Treatment and discharge requirements.**
- 2. Soil suitability.**
- 3. Preliminary hydrogeologic evaluation.**
- 4. Municipal, Local Agency, or other controls over operation and maintenance requirements through a Sewage Management Program. See Part “F” below.**

The use of Small Flow Treatment Facilities is allowed under the Township’s Sewage Management Program, but only after all on-lot alternatives have been documented to be infeasible. In general, the use of these types of facilities is limited in the Township due to the number of Special Protection Waters. Only two basins in South Middleton Township are not designated for Special Protection, Dogwood Run and Hunters Run. Small Flow Treatment Facilities are permitted to discharge to the remainder of the waters in the Township only in certain repair situations.

D. The use of community land disposal alternatives including:

- 1. Soil suitability.**
- 2. Preliminary hydrogeologic evaluation.**
- 3. Municipal, Local Agency, or other controls over operation and maintenance requirements through a Sewage Management Program. See Part “F” below.**
- 4. The rehabilitation or replacement of existing malfunctioning community land disposal systems. See also Part “F” below.**

In those areas outside proposed sewer service areas, individual sewage disposal, including spray irrigation, can be utilized in areas that comply with DEP regulations, policies and guidances. The permitting

agency will need to have the proper training to issue such permits other than conventional methods.

The need for preliminary hydrogeologic studies within the Township was previously discussed.

A sewage management program, as described previously, is in place.

In those areas outside proposed sewer service areas, any systems discovered to be inadequate or malfunctioning must be repaired in accordance with DEP regulations, policies and guidances. These repairs can include conventional, alternative and experimental technologies, or best technical guidance scenarios issued by the Department.

E. The use of retaining tank alternatives on a temporary or permanent basis including:

1. Commercial, residential and industrial use.

The use of retaining tanks within South Middleton Township is governed by the municipality's Holding Tank Ordinance, Ordinance No. 6 of 1991.

1. The referenced Ordinance allows retaining tanks to be used in the following circumstances exclusively:
 - (a) To replace a previously approved or permitted conventional sewage system which is malfunctioning and non-repairable; provided that public sewer is not available, and that the Township Sewage Enforcement Officer has determined that a conventional system cannot be utilized on the property or lot due to soil conditions or site related limitations beyond the control of the landowner; or,
 - (b) As a temporary sewage facility for the disposal of domestic sewage at a new non-industrial site which is designated by the Official Plan for installation of public sewage facilities within two years from the date the permit is requested; or,
 - (c) Institutions, recreational vehicle dump sites, commercial or industrial establishments with a sewage flow of less than 800 gallons per day.

2. Designated conveyance facilities (pumper trucks).

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.

3. Designated treatment facilities or disposal sites.

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.

4. Implementation of a retaining tank ordinance by the municipality. See Part "F" below.

The referenced Ordinance requires permits for retaining tanks in the Township. In applying for these permits, the Applicant must provide:

- (d) A detailed plan of the proposed site and facility prepared and certified as to accuracy by a Licensed Professional Engineer or Registered Surveyor; and,
- (e) A detailed plan and statement describing the methods proposed for the maintenance of the facility, and the manner in which sewage pumping, waste hauling and ultimate disposal of sewage from the facility.

- (f) An agreement on a form approved by the Township, whereby the Applicant assumes responsibility for the installation and maintenance of the proposed facility and the pumping, hauling and ultimate disposal of the sewage generated thereby.

5. Financial guarantees when retaining tanks are used as an interim sewage disposal measure.

The referenced Ordinance requires permits for retaining tanks in the Township. In applying for these permits, the Applicant must provide an agreement on a form approved by the Township, whereby the Applicant shall include bonding or other security for the installation of public sewer where applicable.

F. Sewage Management Programs to assure the future operation and maintenance of existing and proposed sewage facilities through:

- 1. Municipal ownership or control over the operation and maintenance of individual onlot sewage disposal systems, small flow treatment facilities, or other traditionally non-municipal treatment facilities.**
- 2. Required inspection of sewage disposal systems on a schedule established by the municipality.**
- 3. Required maintenance of sewage disposal systems including septic and aerobic treatment tanks and other system components on a schedule established by the municipality.**
- 4. Repair, replacement, or upgrading of malfunctioning onlot sewage system through:**
 - a. Aggressive pro-active enforcement of ordinances that require operation and maintenance and prohibit malfunctioning systems.**
 - b. Public education programs to encourage proper operation and maintenance and repair of sewage disposal systems.**
- 5. Establishment of joint municipal sewage management programs.**
- 6. Requirements for bonding, escrow accounts, management agencies or associations to assure operation and maintenance for non-municipal facilities.**

As stated in this report at numerous locations, the Township currently operates an effective sewage management program under Ordinance No. 2 of 2000, the Individual and Community Sewage System Management Ordinance. This Ordinance was reviewed by the Department of Environmental Protection in September of 1998. It was originally adopted by the Township Board of Supervisors in October of 1998 and was

amended in January of 2000, based on comments from the Cumberland County Solid Waste Authority. A copy of the Township's and Community Sewage System Management Ordinance is incorporated in this report as Appendix H.

G. Non-structural comprehensive planning alternatives that can be undertaken to assist in meeting existing and future sewage disposal needs including:

1. Modification of existing comprehensive plans involving:

- a. Land use designations.
- b. Densities.
- c. Municipal ordinances and regulations.
- d. Improved enforcement.
- e. Protection of drinking water sources.

This Act 537 Official Sewage Facilities Plan is being revised to conform to the goals of the Comprehensive Plan and the Zoning and Subdivision and Land Development Regulations.

2. Consideration of local comprehensive plan to assist in producing sound economic and consistent land development.

This Act 537 Official Sewage Facilities Plan is being revised to conform to the goals of the Comprehensive Plan and the Zoning and Subdivision and Land Development Regulations.

3. Alternatives for creating or changing municipal subdivision regulations to assure long-term use of on-site sewage disposal that consider lot sizes and protection of replacement areas.

Current subdivision regulations account for on-site sewage disposal and are not in need of revision. An ordinance is in place that requires a replacement area and accounts for its protection and replacement should it be compromised.

4. Evaluation of existing local agency programs and the need for technical or administrative training.

The one area that the local agency should evaluate for improvement is the training, maintenance, and inspection for alternate systems. The local agency should ensure that their regulatory SEO's receive the training for the specific alternate systems utilized within the municipality. They should also ensure that proper maintenance and inspections are being performed as per the maintenance agreements.

H. A no-action alternative which includes discussion of both short-term and long-term impacts on:

1. Water Quality/Public Health.

The impact from a no-action alternative in regards to water quality would allow the plant to operate under existing conditions. Thus, the goals established under the Chesapeake Bay Strategy would not be met and the plant would be in non-compliance with the NPDES permit.

2. Growth potential (residential, commercial, industrial).

As demonstrated by the previous future growth discussion, the plant upgrade and expansion to 1.5 mgd is necessary to accommodate the areas designated as future growth areas within the Township. A no-action alternative would result in a plant that has achieved its capacity and no further growth would be allowed.

3. Community economic conditions.

A no-action alternative would have a negative impact on the community's economic condition. Since the plant could not accommodate future growth, the most obvious impact would be to those landowners who own property but can not build, and those in the building industry dependent on new growth. A secondary impact would reduce the community's ability to stay competitive as no new options for residential and commercial building would be available. Thus, businesses would seek locations outside the Township.

4. Recreational opportunities.

There would be two negative consequences to recreational opportunities within the Township under the no-build alternative.

One, any expansion of Township parks dependent upon public sewer service would not be able to be completed.

Two, reduced growth would decrease the amount of recreational impact fees collected by the Township. Without this income, the projects that would usually be constructed would not be completed.

5. Drinking water sources.

The Township receives its drinking water from a series of wells that are upstream of the treatment plant. So, within the planning area, there would not be a significant impact under the no-build alternative.

Several municipalities downstream use the Yellow Breeches Creek as a surface water source of drinking water. The no-build alternative would not achieve the goals established under the Chesapeake Bay Strategy would not be met and the plant would be in non-compliance with the NPDES permit. Thus, drinking water sources downstream would contain the substances that will be removed by the plant once it is upgraded.

6. Other environmental concerns.

There are no other environmental concerns to consider.