

1.0 PLAN SUMMARY

1.1 FINAL PLAN RECOMMENDATION

1.1.1 Service Areas Evaluated

This Act 537 Plan Revision addresses the entire area of Upper Milford Township. In addition, Upper Milford Township (UMiT) coordinated with both the Lehigh County Authority (LCA) and Emmaus Borough to determine if any of the municipal facilities have available capacity for transport and/or treatment of Upper Milford Township's wastewater.

The sewage needs of the entire Township were evaluated as part of this Act 537 Plan Revision. As part of this needs evaluation, the Township Sewage Enforcement Officer (SEO) performed site visitations to observe the actual operating conditions of onsite treatment systems in suspected areas with failing systems.

The results of the analysis segregated the Township into three types of sewage service areas:

Existing Sewer Service Areas – These areas of Upper Milford Township are currently serviced by sanitary sewers.

Proposed Sewer Service Areas - These areas of Upper Milford Township are currently serviced by onsite treatment systems. However, they have shown a need to be serviced by sanitary sewer either through an existing need resulting from failing onsite treatment systems or requests from developers for sewage service to proposed subdivisions.

Sewage Management District – These areas of Upper Milford Township are currently serviced by onsite treatment systems and will continue to be serviced in kind in the future.

The existing and proposed sewer service areas are illustrated on Figure 1-1.

Figure 1-1

1.1.2 Summary of Alternatives

The Act 537 Plan Revision examined alternatives that focused on both sewage collection and transport to the Township's existing wastewater treatment plant along with improving the Township management of onsite treatment systems.

No Action Alternative

Under this alternative, the Township would only provide sewage service to those areas currently serviced by sanitary sewers. The remaining portions of the Township would remain utilizing onsite treatment systems.

1.1.2.2 Sewer System Alternatives

Alternative #1 – Provide Sewer Service to the Leibert Creek Basin through Borough of Emmaus using a Gravity Interceptor - Under this alternative, the areas within the Leibert Creek drainage basin including the Village of Vera Cruz will be provided sewage service. A gravity collection system and interceptor network would be constructed to provide sewer service to this area. The gravity interceptor would be connect to an existing Borough MH #C-231 located adjacent to Leibert Creek.

Alternative #2 – Provide Sewer Service to the Leibert Creek Basin through Borough of Emmaus using pumping stations- Under this alternative, the areas within the Leibert Creek drainage basin including the Village of Vera Cruz will be provided sewage service. A combination gravity collection system and pumping station network would be constructed to provide sewer service to this area. The collection system would be connected to an existing Borough MH #C-231 located adjacent to Leibert Creek.

Alternative #3 – Provide Sewer Service to the Leibert Creek Basin through Lehigh County Authority Route 29 Facilities using a Central Pumping Station and Gravity Interceptor - Under this alternative, the areas within the Leibert Creek drainage basin including the Village of Vera Cruz will be provided sewage service. A gravity collection system and interceptor network would be constructed to provide sewer service to this area. A proposed pumping station would be located near the intersection of Vera Cruz and Mill Roads. The force main would extend from the pumping station along Mill Road to Shimerville Road, to Salem Drive. The force main would terminate on Salem Drive at the LCA MH #JS-1.

Alternative #4 – Provide Sewer Service to the Leibert Creek Basin through Lehigh County Authority Route 29 Facilities using Pumping Stations - Under this alternative,

the areas within the Leibert Creek drainage basin including the Village of Vera Cruz will be provided sewage service. A combination of gravity collection systems, low-pressure systems and pumping station network would be constructed to provide sewer service to this area. A proposed pumping station would be located near the intersection of Vera Cruz and Mill Roads. The force main would extend from the pumping station along Mill Road to Shimerville Road, to Salem Drive. The force main would terminate on Salem Drive at the LCA MH #JS-1.

Alternative #5 – Provide Sewer Service to the Leibert Creek Basin through new WWTP with stream discharge to Leibert Creek – Under this alternative, the areas within the Leibert Creek drainage basin including the Village of Vera Cruz. A combination of gravity collection system and pumping station network would be constructed to provide sewer service to this area. A central treatment plant would be constructed in the Vera Cruz area. Treated effluent from the treatment facility would be discharged directly to Leibert Creek in the vicinity of the WWTP.

Alternative #6 – Provide Sewer Service to the Leibert Creek Basin through new WWTP with land application discharge – Under this alternative, sewer service would be provided to areas of the Leibert Creek drainage basin. A central treatment plant would be constructed in the Vera Cruz area. Treated effluent from the treatment facility would be disposed of using either spray irrigation or drip irrigation distribution systems.

Alternative #7 – Provide Sewer Service to the Leibert Creek Basin through Lehigh County Authority Route 29 Facilities using Low Pressure Collection Sewers- Under this alternative, the areas within the Leibert Creek drainage basin including the Village of Vera Cruz will be provided sewage service. A low-pressure system would be constructed to provide sewer service to this area. The low-pressure system would terminate on Salem Drive at the LCA MH #JS-1.

Alternative #8 – Extending Sewer Service to the South Fifth St. Area - Under this alternative, gravity sewers would be extended along South 5th Street. Sewers would also be extended to provide sewer service to Plain View Rd, Columbus Drive, Knoll Wood Drive and Hillary Drive. The sewers would connect to the Borough of Emmaus collection system at Borough MH #C-1 located on South 5th St.

Alternative #9 – Extending Sewer Service to Indian Creek Drainage Basin - Under the alternative, this area would be serviced by a gravity collection system and a community septic disposal system. The community disposal system designed to process sewage from the St. Peters Road and the Schantz Road areas (PSA-7) would have a capacity of 36,000 gpd. Two central pumping stations, one located on St. Peters Road and the second located on Schantz Road, would transfer the sewage to the community system. The treatment system and absorption bed would be located adjacent to St. Peters Road in a vacant field.

Alternative #10 – Extending Sewer Service to the Hosensack Creek Drainage Basin -

Under this alternative, each of the three sub-drainage basins within this area would be serviced by a gravity collection system, central pumping station, and a community septic disposal system.

Churchview Road Area (PSA-8) - The community disposal system would be designed to process sewage from the Church View Road Area (PSA-8). A central pumping station located along Church View Road would transfer the sewage to a community system located adjacent to Church View Road in a vacant field.

Old Zionsville Area (PSA-9) - The community disposal system would be designed to process sewage from Old Zionsville (PSA-9). A central pumping station located adjacent to Kings Highway would transfer the sewage to a community system located adjacent to Kings Highway in a vacant field.

Zionsville Area (PSA-10) - The community disposal system would be designed to process sewage from Zionsville (PSA-10). A central pumping station located on Kings Highway south of the former Reading Railroad right of way would transfer the sewage to the community on-site septic system located adjacent to Kings Highway in a vacant field.

Alternative #11 – Extending Sewer Service in the Swabia Creek Drainage Basin -

Under this alternative, the gravity collection system servicing ESA-8 would be extended to provide sewer service to this area. The majority of the area would be serviced by gravity sanitary sewers that connect to existing LCA MH #B-8. The gravity sewer would be extended from MH #B-8 along the unnamed tributary to Swabia Creek to Mill Road. Sewers would then extend along Mill Road and provide sewer service to Homestead Circle and Flora Drive. Gravity sanitary sewers that also provide service to the Ford Drive area would service the area along Tank Farm Road north of Mill Road. A small portion of Tank farm Road would be serviced through existing MH #B-12. The sanitary sewers servicing the Chestnut Street area would extend along both sides of the highway and connect to existing LCA MH #R-20.

1.1.2.3 Onsite System Treatment Alternatives

Formation of Sewage Management District - Under this Alternative, Upper Milford Township would form a sewage management district within the Township to manage all on-site treatment systems. The management district would encompass the entire Township and include all homes or other facilities serviced by on-site treatment systems.

Incorporation Into County System - Under this Alternative, the Township would turn over all responsibility for management of on-site systems to a county level health department. Although Lehigh County does not currently have a health department, such an agency may be planned in the future. Until this agency would be formed and operational, the Township would be required to continue to implement its own management program.

1.1.3 Recommended Plan

1.1.3.1 Sewer System Alternatives

The results of the current needs study indicated that the need for sanitary sewers in the proposed sewer service areas was not as great as found during previous Needs Surveys. This difference in findings can be attributed to several factors including the ongoing drought conditions that impacted the entire Lehigh Valley area during 2002 and previous years.

Therefore, it is recommended that the Township proceed as follows:

Construction of the collection system to service the Village of Vera Cruz –The Township should proceed with construction of collector sewers to service portions of the Leibert Creek drainage basin as outlined in Alternative #4. The specific areas to be serviced at this time should include a majority of the areas within PSA–1 through PSA-4. The remaining areas of this basin should be serviced at a future date. Based on the results of the needs survey, there is no immediate requirement for the installation of sanitary sewers in these remaining areas. However, the remaining areas identified in the Needs Survey had potential needs due to area restrictions such as bad soils, high groundwater table, or other limiting factors impacting the satisfactory operation of an onsite treatment system. The Township should assure that it has sufficient capacity in both any proposed interceptors and LCA facilities to provide sewage service in the future when required.

The sanitary sewer system to be constructed under this recommended plan “The Vera Cruz Project Area” is illustrated on Figure 1-2. Fringe areas of the sewer service area that did not demonstrate any wastewater need were not provided sewage service at this time. If these properties exhibit a need in the future, sewage service can be extended when required.

Remaining Areas of the Township - The remaining areas of the Township within the Proposed Sewer Service Areas will be serviced on an as needed basis. Based on the results of the needs survey, there is no immediate requirement for the installation of sanitary sewers. However, the remaining areas identified in the Needs Survey had potential needs due to area restrictions such as bad soils, high groundwater table, or other limiting factors impacting the satisfactory operation of an onsite treatment system. These areas should be reexamined in the future if conditions determine that sewage service may be required due to malfunctioning on-site systems.

In addition, several of the proposed sewer service areas may be subject to sewer construction due to subdivision and subsequent development. Consideration should be given at that time to extending any proposed sewers to existing homes and other users to address any wastewater needs in those areas.

1.1.3.2 Onsite System Treatment Alternatives

It is recommended that the Township create a sewage management district to manage all onsite treatment systems within the Township. This management district would encompass the entire township and include those areas not serviced by sanitary sewers. In addition, any potential malfunctions of on-site systems identified during the needs survey would be addressed as part of the implementation of this management district.

1.1.4 Institution Arrangements

1.1.4.1 Sewer System Related Arrangements

The Agreement between UMiT and Lehigh County Authority (LCA) is in place that allows LCA assume the responsibility for designing, constructing, owning and operating all proposed public sewer systems set forth in this plan. The Township will be responsible for adopting all appropriate ordinances requiring abutting property owners to connect to said sewer and pay any charges levied by LCA.

Figure 1-2

1.1.4.2 Sewage Management District Arrangements

The Upper Milford Township Board of Supervisors will be required to adopt an ordinance establishing the sewage management district. A copy of the proposed ordinance is contained in Appendix I. This ordinance is scheduled for adoption within one year after approval of the Act 537 Plan Revision by PADEP.

The Township has a holding tank ordinance currently in effect. The Township Board of Supervisors adopted Ordinance No. 76 on March 19, 1988. A copy of the ordinance is contained in Appendix H.

1.2 IMPLEMENTATION

1.2.1 Summary of Project Costs

The project costs for each of the eleven sewer alternatives is presented in detail Section 3.2.3 of the study and summarized on Table 1-1.

1.2.2 Method of Funding Projects

The project will be funded by a combination of grant(s), municipal contributions, property assessment, capacity tapping fees and financing. The Township has received a Federal allocation to be used for UMiT sewer projects. The actual estimated capital contribution from an individual Township user will vary.

The Township will investigate the use of alternative funding sources such as Lehigh County Community Block Grants or other Federal or state grant and/or loan programs if they are available when a particular project is ready to be implemented by the Township.

1.2.3 User Charges

The users within the proposed sewer service areas scheduled for sewage service under this Act 537 Plan Revision will pay LCA sewer rates for sewer service within the Township. The sewer rate will vary within the Township based on those LCA facilities required to provide the service. Reference Section 4.4 for the estimated Vera Cruz Area Project user charges.

Homeowner costs associated with installation, operation, and maintenance of on-site treatment systems are not anticipated to change with the implementation of a septic management district.

Table 1-1

1.2.4 Schedule of Actions Required

The full implementation schedule for all phases of this project is contained in Section 4.0 of this document. Based on the schedule presented, the Township will be proceeding on the following items upon receipt of approval of the Act 537 Plan Revision:

- Construction of the sanitary sewers to the Vera Cruz Area including portions of Shimerville Road, Mill Road, Acorn Drive and Moyer 1 and 2 Subdivisions.

Sanitary sewer service in the South 7th St. Extension area will be addressed through a PADEP *Sewage Planning Module for a Minor Act 537 Plan Revision*. A private developer through a PADEP Planning Module will address the Golf Circle area.

The remaining items addressed in this Act 537 Plan will be implemented over the length of the planning period as outlined in Section 4.0 of the study.

1.2.5 Commitments to Implement Plan

A copy of the resolution adopted by the Upper Milford Township Board of Supervisors is included in Appendix A. The implementation schedule to be followed is outlined in Section 4.0 of this document.

1.2.6 Supporting References

All supporting reference letters and other correspondence is contained in Appendixes B and C of this document. The correspondence includes letters to the following agencies or municipal bodies:

Pennsylvania Department of Environmental Resources
Pennsylvania Historical and Museum Commission
Pennsylvania Department of Conservation and Natural Resources
Lehigh Valley Planning Commission

Correspondence to these various agencies or municipal government bodies have been referenced in the Act 537 Plan Revision as required. In addition, the public notice and its proof of publication are also included in Appendix D.