

EXECUTIVE SUMMARY

This Act 537 Plan Update has been prepared in accordance with Act 537 entitled the Pennsylvania Sewage Facilities Act, Title 25, Chapter 71 of the Pennsylvania Code and the Pennsylvania Department of Environmental Protection Act 537 Plan Content and Environmental Assessment Checklist. This Plan is an update/refresh of the approved 2004 Act 537 Plan. This Plan addresses the planning requirements necessary to provide for the expansion and upgrade of the Amity Township Wastewater Treatment Plant. The planning area for this Plan Update is Amity Township. Given that Union Township, Earl Township and Douglas Township utilize the facility, they have provided the Township with their needs/flow requirements. Any detailed planning prepared by these municipalities will be separate from this Act 537 Plan.

The Plan is comprised of the following components addressed in the Plan of Study:

- I. Previous Wastewater Planning
- II. Physical and Demographic Analysis
- III. Existing Sewage Facilities in the Planning Area
- IV. Future Growth and Development
- V. Alternatives to provide for new or improved wastewater disposal facilities
- VI. Evaluation of Alternatives
- VII. Institutional Evaluation
- VIII. Selected Wastewater Treatment and Institutional Alternative

Expanding and upgrading the Amity Township wastewater treatment plant has been studied. Based on projected combinations of hydraulic and organic loadings, upgrades to treatment units and related interconnecting facilities have been conceived. New wastewater treatment facilities or modifications to existing facilities are required to treat an additional average annual flow of 0.70 MGD to meet the permit limitations expected from PA DEP. The resulting total average annual flow for the treatment plant will be 2.90 MGD.

This Plan identifies which existing facilities can be modified for continuing use, which facilities will be demolished and determines additional facilities that are needed to consistently produce a high-quality effluent that is in full compliance with current and anticipated effluent standards. An evaluation of the existing system, as well as the required upgrades for treatment of the additional capacity, are provided in this Plan.

The selected alternative to meet the projected future needs is Alternative 1 – Parallel Oxidation Ditch Treatment Train.

This alternative proposes to increase the WWTP's capacity by creating an additional (parallel) secondary treatment train composed of a 2-ring oxidation ditch (equal in size to the inner two channels of the existing oxidation ditch), as well as an additional final clarifier (50-ft diameter) with RAS/WAS pumping facilities. Additional upgrades include:

- Headworks: new headworks building including grit and screening equipment.
- Equalization: replace liner and aerators and construct a sectional wall.
- Primary Clarification: construct one new primary clarifier.
- Disinfection: replace existing chlorine disinfection system with a new UV system.
- Sludge Digestion: construct a new aerobic digester, convert existing anaerobic digesters to aerobic sludge holding tanks and install a new mechanical sludge thickening system.
- Sludge Dewatering: install a new centrifuge sludge dewatering system (belt press to remain for backup).
- Electrical: install a new plant-wide emergency generator.

A plan showing the proposed upgrades is included in Appendix J.

The opinion of probable construction cost is expected to be \$9,688,000 for the treatment plant upgrade. Details for the cost evaluation are found in Appendix BB.

Based upon approval of this Act 537 Plan, the implementation schedule follows:

	<u>Completion Date</u>
1. Act 537 Plan Approval by PA DEP	October 2010**
2. Authorize detailed engineering design	November 2010
3. Authorize application for Part I NPDES (Discharge Permit)	November 2010
4. Authorize application for Part II (Construction Permit)	November 2010
5. Submit Part I Permit Application	May 2011
6. Submit Part II Permit Application	July 2011
7. Secure Part I and Part II Permits	September 2011
8. Begin investigating project-financing arrangements	September 2011
9. Finalize detailed engineering design	October 2011
10. Publish invitation for construction bids	December 2011
11. Open Construction bids	January 2012
12. Consummate project financing	February 2012
13. Award construction contracts	February 2012
14. Notify construction contractors to proceed	March 2012
15. Substantial completion of construction	March 2013
16. Final completion of construction	April 2013

** This completion date may vary. A later approval date by PA DEP will require adjustments to this schedule.