

CHAPTER I

PLAN SUMMARY

This plan represents the Official Sewage Facilities Plan (Act 537 Plan) for Westtown Township in Chester County, Pennsylvania. The purpose of any Act 537 Plan, which is a requirement of the Pennsylvania Department of Environmental Protection (DEP), is to protect the health, safety and welfare of the residents of the Township by providing for the long term wastewater needs of those residents. An Act 537 Plan should be consistent with the Comprehensive Plan and other land use regulations of the Township and should be crafted to meet the specific wastewater needs of the municipality. All Act 537 Plans must follow the same general format and include certain information as required by DEP. In accordance with DEP guidelines, the Westtown Township Act 537 Plan includes the following:

- Chapter 1 – Plan Summary
- Chapter 2 – Description of Previous Planning
- Chapter 3 – Physical and Demographic Analysis
- Chapter 4 – Description of Existing Sewage Treatment Facilities
- Chapter 5 – Identification of Future Development and Growth Areas
- Chapter 6 – Alternatives to Provide New or Improved Sewage Facilities
- Chapter 7 – Evaluation of Alternatives
- Chapter 8 – Institutional Evaluation
- Chapter 9 – Justification of Selected Alternative

Specific to the needs of Westtown Township, the primary purpose of this Act 537 Plan is to evaluate the need to extend the existing centralized sewer service into areas currently served by individual on-lot systems, evaluate sewage collection and conveyance alternatives, evaluate sewage treatment and disposal alternatives and evaluate various management programs for those areas that will continue to rely on individual on-lot systems now and into the future.

Existing Situation

While the majority of lots in the Township rely on individual on-lot systems, portions of the Township are served by two wastewater treatment plants. In the western part of the Township, the area generally between Route 202 and Concord Road is served by the West Goshen Sewer Authority Treatment Plant. Pursuant to an Inter-Municipal Agreement between Westtown Township and the West Goshen Sewer Authority, Westtown Township is permitted to discharge up to 530,000 gpd into the West Goshen treatment plant. Westtown currently discharges approximately 350,000 gpd into this system.

The eastern portion of the Township north of Johnny's Way and the area along the Route 3 corridor is served by the Westtown-Chester Creek treatment plant. This treatment plant, which was purchased by the Township in 1997, is currently experiencing hydraulic overloads. The treatment plant, which is currently permitted to treat and discharge 290,000 gpd, is receiving approximately 360,000 gpd (year 2000 average daily flow). The Township received a construction permit from DEP in January 2001 to upgrade the treatment plant capacity to 495,000 gpd. Construction of the upgrades is currently underway (April 2002).

The areas not served by these treatment plants are served by individual on-lot systems. The Township tracks permits issued by the Chester County Health Department for repairs to individual on-lot systems. Between 1982 and September 1999, 354 permits for repairs or replacement of on-lot systems were issued by the Health Department. In addition, a report entitled, *Regional Sewage Study* prepared by the West Chester Regional Planning Commission (Fall 2000 Draft) indicates that between 1997 and January 2000, 133 permits were issued by the Chester County Health Department for the replacement of on-lot systems that had failed in Westtown Township.

Due to the nearly built-out nature of the Township, the extent of problems with on-lot systems as evidenced by the Health Department permit information and the fact that the majority of soils in the Township can be classified as conditionally suitable for on-lot systems, this Act 537 Plan evaluates alternatives to provide central sewer service to the majority of the Township. With treatment and disposal occurring at either the Westtown-Chester Creek or West Goshen Sewer Authority Treatment Plants, three collection and conveyance alternatives were evaluated.

Mostly Gravity

The mostly conventional gravity collection system would rely primarily on conventional gravity sewers to convey wastewater from individual lots to a pump station, or directly to a treatment plant. Existing on-lot systems would be discontinued and one of two on-lot methods will be used to convey sewage from the home to the sewer main, as follows:

1. Most individual homes would be retrofitted with a 4" diameter conventional gravity lateral, or
2. If topography prevents flow from the home to the gravity sewer main by gravity, then a grinder pump and 1¼" diameter grinder pump force main lateral would be used to reach gravity sewer main.

Further, on roads where topography prohibits use of conventional gravity sewer main, grinder pump force mains would be used to convey flow from individual homes up to where the wastewater can meet a gravity sewer main. Conventional gravity sewer systems typically use sloped 8" diameter or larger pipe aligned under the roadway between manholes spaced no more than 400' apart.

Grinder Pump

The grinder pump force main system would rely completely on grinder pumps and grinder pump force mains to convey wastewater from individual lots to a pump station, or directly to a treatment plant. Existing on-lot systems will be discontinued and grinder pumps and 1¼" diameter grinder pump force main laterals would be used to reach the grinder pump force main. Grinder pump force mains typically utilize 2-4" diameter force main laid 3' deep along the side of a road.

All Gravity

Similar to the Mostly Gravity Alternative, under this alternative all individual homes would be served by a conventional gravity sewer system. Force mains would only be utilized to convey wastewater from central pump stations. It should be noted that the original draft of the Act 537 Plan did not include an evaluation of an All Gravity Alternative. This alternative was evaluated upon consideration of public input provided at two public informational meetings in the Fall of 2000.

Under each alternative, the Westtown-Chester Creek Treatment Plan would need to be upgraded to accommodate flows from the Chester Creek Study Area, while the existing Inter-Municipal Agreement between Westtown Township and the West Goshen Sewer Authority is adequate to accommodate future flows from the West Goshen and Route 202 Study Areas.

Evaluation of Alternatives

A cost comparison of the alternatives is as follows:

Item	Alternative #1		Alternative #2		Alternative #3	
	Mostly Gravity		Grinder Pump		All Gravity	
	Capital Cost ²	Present Worth Cost	Capital Cost ²	Present Worth Cost	Capital Cost ²	Present Worth Cost
Collection and Conveyance	\$20,221,000 ¹	\$26,750,000	\$14,565,000 ¹	\$22,170,000	\$30,458,000	\$36,723,000
Westtown-Chester Creek WWTP Upgrades	\$3,440,000	\$4,000,000	\$3,440,000	\$4,000,000	\$3,440,000	\$4,000,000
Total	\$23,661,000	\$30,750,000	\$18,005,000	\$26,170,000	\$33,898,000	\$40,723,000

¹Includes grinder pump purchase

²Does not include any rock excavation

Selected Alternative

The selected alternative for the Township is use of either a grinder pump and/or gravity collection and conveyance system with treatment occurring at the Westtown-Chester Creek Treatment Plant or the West Goshen Treatment Plant. The implications of either system will be considered by the Township through additional planning via a Special Planning Study. Additional information is necessary regarding topography, depth of rock, environmental constraints, reliability, etc., before the Township can conclude its planning on the selected collection and conveyance alternative. Additional information on the above issues will assist in the Township’s ability to further refine the cost estimates for the collection and conveyance alternatives. Operation and maintenance costs and management and administrative considerations will also be evaluated in the special planning study.

The selected alternative for the southern portion of the Route 202 Study Area, also known as the Crebilly Farm, is the use of a new community system to be constructed by the developer if and when development is proposed.

Phasing

Information regarding soils, on-lot system repair and replacement permits, and the availability of public sewers provides the framework for evaluating the methods to provide public sewer to the entire Township. Implementation of the selected alternative will only occur when the information received from the Township-wide inventory indicates a need.

This plan contains information on phasing of the selected alternative based on the age of the subdivision and the types of on-lot systems that were in use over a particular time period. The information on phasing provided in this Plan is included for Act 537 planning purposes only. That is, by providing this information, the Township is requesting planning approval of the 0-5 year and 5-10 year wastewater needs from DEP. Planning approval does not abrogate the Township from its commitment to conduct the inventory described below and to implement an on-lot management program.

On-Lot System Survey/Management

Although information is provided in this Plan regarding phasing, implementation of the selected alternative will not occur until the Township has gathered additional information on the health of the on-lot systems. In order to gather this information, the Township will conduct a Township-wide inventory of existing on-lot systems. The inventory will involve a survey mailer coupled with statistically significant random inspections.

In addition to the survey the Township will also adopt an on-lot management ordinance (as specified in Chapter VI) for those areas that will continue to rely on such systems. Information from the certification component of the ordinance could also be used to refine the phasing schedule described below. Prior to the provision of central sewer to a particular community, the Township will hold public informational meeting(s) with that community to present the results of the certification program and the justification for providing central sewers.

Implementation Schedule

The implementation schedule can be found on the next page.

**WESTTOWN TOWNSHIP ACT 537 PLAN
IMPLEMENTATION SCHEDULE**

Public Information Meeting	Complete February 14, 2000
Public Information Meeting	Complete February 28, 2000
Public Information Meeting	Complete September 7, 2000
Public Information Meeting	Complete October 23, 2000
Public Information Meeting	Complete October 30, 2000
Public Information Meeting	Complete November 8, 2000
Public Information Meeting	Complete March 22, 2001
30 Day Public Comment Period	May 4 to June 4, 2001
Agency Review	May 2 to July 2, 2001
Public Meeting	Complete July 16, 2001
Public Meeting	Complete March 25, 2002
Township Adoption	May 6, 2002
Plan Sent to DEP	May 13, 2002
Mail-out Survey	May 2002
Follow-up Sampling	August 2002
Township Adoption of Management Ordinance	September 2002
DEP Approval	September 2002
Special Study	Spring 2003